Effects of Service Quality and Perceived Value on Customer Satisfaction to Mobile Internet Service: Evidence from Bangladesh

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As the use of mobile phones and mobile internet service witnessed tremendous growth in recent years in Bangladesh the mobile internet service operators are trying to make profit and even survive in a highly competitive environment. The objective of this study is to analyze the relationships between service quality, perceived value, and customer satisfaction as perceived by private university students in the mobile internet service context. In the study, service quality is conceptualized as a multi dimension concept consisting of four dimensions namely convenience, responsiveness, availability and perceived value. By examining the empirical data from 324 respondents in Dhaka, Bangladesh results reveal that convenience and responsiveness positively affect customer satisfaction; convenience, responsiveness and availability positively affect perceived value and perceived value partially mediates the relationship between service quality and satisfaction. Thus, mobile internet service providers should concentrate more on these service quality variables like convenience, responsiveness and perceived value to improve the service and make customers satisfied.

Keywords: online shopping, service quality, perceived value, customer satisfaction

Field of Research: Marketing

1. Introduction

Now-a-days the mobile internet makes internet connection accessible and universal and thus adds value to consumers' lives in line with the more mobile lifestyles of modern society. Internet has become the most powerful tool throughout the world today (Prensky 2009). Like other countries in the world, the history of internet is not old in Bangladesh. As developing country Bangladesh has adopted information and communications technologies (ICTs) as tools for development and also experiencing in the impressive growth rate of internet adoption. In recent years the use of mobile phones and mobile internet service witnessed tremendous growth in the country and the internet use in the country is becoming concentrated on mobile phones day by day. But at present world internet penetration is 55.1% as of June, 2018 whereas Bangladesh is having only 53.3% (Internet World Stats 2018). The popularity of internet has increased the number of users in 2018 to 91.194 Million (BTRC 2018). According to the authority, internet subscriber means subscribers/subscriptions who have accessed the internet at least once in the preceding 90 days and the operators are Mobile internet, WiMAX and ISP+PSTN. The majority (94%) of the total internet subscribers are using mobile internet and the Operators of WiMAX, a wireless

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broadband system lost 63.14 percent of their customers from 2013 as users opted for mobile internet for ease of use and greater connectivity (Islam, Rahman & Nahar 2015). Currently there are five Mobile Network Operators (MNOs) competing in the mobile internet market in Bangladesh. Now-a-days, like other countries, there has been a steady growth in 4G mobile adoption. As 4G succeeds the third generation (3G) standards and provides ultra-broadband internet access, it opens the door to high-definition mobile TV, video conferencing and cloud computing. It can enhance customers' daily life and improve the service quality of trade and business, e-education and e-health. Three largest operators like Grameen phone, Robi and Banglalink have launched their 4G service to their customers on February 19, 2018 (The Daily Star 2018). Although older-generation networks are not obsolete, but 4G is the pinnacle of mobile performance in the current market. Few people are availing of 4G services and that is only 10% of the total 3 crore mobile phone users can currently use 4G (Dhaka tribune 2018). Due to this noteworthy growth in mobile users, internet penetration, data usage and handset penetration mobile internet service industry has been contributing to the overall economy of the country. It has created many sub-subsectors too, such as content providers, local handset manufacturing sectors, value added services, and innovative transport services such as Uber, Pathao, OBhai or shohoj. The mobile internet users are offered with wide ranges of attractive mobile internet packages which are directed to satisfy customers by providing better service and further competitive advantage. But high subscription charges, earnings affordability, mobile network coverage and telecommunication transportation to maintain all these activities classified with regard to findings is difficult for developing or even some developed countries in the world (Abu 2010). So in the mobile internet race the country is having good position and the mobile phone service operators are trying to make profit and even survive in a highly competitive environment. The intense competition makes necessary to understand the factors affecting customer satisfaction because gaining new customers and profit in the competitive market is not an easy job. And a firm can have better market share and increased customer retention if their customers are satisfied (Fornell 1992). Although customer satisfaction is the most important goal of service organization but quality of the service is the prerequisite of customer satisfaction (Oliver 1993) also. According to Anderson & Sullivan (1993) customer satisfaction is a key source to make a positive customer relational outcomes as increased customer retention, market shares, profitability etc and they added that better service quality ensures higher customer satisfaction. Again, some authors like Chen & Chen (2010) and Raza et al. (2012) found perceived value as the important one among the determinants of satisfaction and has positive relationship with satisfaction and revisit intentions. Moreover, many authors explored that higher perceived quality typically leads to higher perceived value (Cronin, Brady & Hult 2000; Petrick 2002, 2004; Hutchinson, Lai & Wang 2009; Lai, Griffin & Babin 2009; Wu & Liang 2009). In the context of mobile services Turel & Serenko (2006) investigated that, the extent of satisfaction depends on the extent of perceived value and higher level of perceived value lead to higher level of customer satisfaction and Islam, Rahman & Nahar (2015) showed that perceived value; perceived quality; customer expectation and corporate image have a significant positive influence on customer satisfaction. But the MNOs have been facing changes driven by customers, new technology and business forces. So the provision of a satisfactory experience with the service quality factors has become critical for companies. Therefore they are currently looking for customer satisfaction models that provide insights into the experience of customers

when using the mobile internet service and by analyzing these insights; they will be able to implement strategies and mechanisms for higher customer satisfaction which will in turn ensure better revenue and sustained business. This is the reason why a few authors have recently addressed the issues of the service quality of mobile internet service as an important determinant of customer satisfaction (Islam, Rahman & Nahar 2015). Therefore providers will be interested in knowing which service quality factors determine an individual's choice of one provider over another and assessing the perceived value using the results of this study. Because, knowledge of the degree of satisfaction with various quality dimension of the service and perceived value will let the providers know their weaknesses and help them to act accordingly to achieve customer satisfaction. Therefore, this study aims to research the effects of service quality and perceived value on customer satisfaction with mobile internet services, in order to further understand and increase the knowledge needed by MNOs to enhance customer retention and customer loyalty. However, the research studies done so far have focused on the analysis of customer satisfaction on voice-based mobile services even though voice-based mobile services have been the core service for MNO. Currently, the MNOs are focusing more and more on providing high speed data and multimedia services since this kind of services are predicted to generate more revenues than voice in the near future (Debei 2012). Therefore, a research on customer satisfaction focusing on mobile internet services is an interesting area, in which this study aims to make a contribution. Additionally, because of the advance of communication technologies, customers have started using new tools such as online shopping, social media, mail service, information search etc., which allow easy contact and communication with other customers. Though this market seems to have its own idiosyncrasies compared to the fixed internet services market researchers have not systematically approached the concept of perceived quality in the context of handheld internet services (Vlachos & Vrechopoulos 2008). Moreover, there has been no research on the effects of service quality and perceived value to customer satisfaction of the mobile internet service in Bangladesh.

As the usage of 3G internet data is particularly popular among the youth in Dhaka urban metropolitan area, this study attempts to investigate the factors affecting satisfaction towards mobile internet service among the private university students in Bangladesh who are expected to be the group with great potential to adopt 3G or 4G services (Tarannum & Rasu 2015). Moreover, Mahmud (2011) explored that private university students in Bangladesh have a positive attitude towards internet. The students are more conscious about internet and they have been using internet for studying and learning frequently for getting positive benefit their future life by adapting contemporary trends. As in our country, the usage rate of internet in education is increasing day by day, so it is quite logical to study the service quality factors and satisfaction of mobile internet service among the students. Due to the inadequate number of Public Universities, Private Universities are the major arena where majority of the students receive their higher education and the number of private universities increases day by day. For this reason, in the study some private universities have been selected to judge the students' satisfaction towards mobile internet. But by searching the literature, a striking gap is found where relatively little attention has given to identify the effects of service quality and perceived value on customer satisfaction of the mobile internet service among the private university students in Bangladesh. The focus on student' perspectives will provide a better

insight with respect to the relationships between service quality, perceived value and satisfaction and mediating role of perceived value to service quality and customer satisfaction as perceived by individual users in the mobile internet market in Bangladesh. Investigating this topic would provide both the academics and practitioners ideas about customer satisfaction in the mobile internet service and take actions to satisfy them more as well as enhance the involvement of internet in education. So that, the present research study is focused on how to measure the effects of service quality factors on customer satisfaction for mobile network services. Additionally, the research further examines the relationships between customer satisfaction and the other main leading factors like service quality and perceived value. In this way, the research study aims to help MNOs to analyze and understand customer satisfaction in order to be able to apply better strategies and mechanisms to increase Customer Loyalty and Customer Retention. To reach this goal, a conceptual model for customer satisfaction, specific to mobile internet services, will be proposed.

This paper is organized as follows: the first section presents Introduction and second section deals with Literature Review. Thereafter third section contains Methodology. Findings are provided in section four and Conclusion and Implications are in section five.

2. Literature Review

Mobile internet is defined as the wireless access to internet content via handheld devices, such as mobile phones, smart phones or tablet computers which allow users to access vast amount of information and products available in the internet, anywhere and the right time (Chae & Kim 2002; Roostika 2011). The mobile internet makes internet connection accessible and universal, while adding value to consumers' lives in line with the ever more mobile lifestyles of modern society (Islam 2017). It is not only the means of communication but also the depot of data, media of promotion, creation of virtual market, means of service, distribution to customers, mode of entertainment, social networking and many more. The main reason for the rapid growth in the mobile internet market is the mobility and reach provided to the customers. Moreover, there has been a global increase in the proportion of mobile phone users who use the internet functionality on their mobile phones (Kearney 2003). The ultimate marketing goal of the service providers would be to satisfy and retain consumers. Consumer satisfaction has been one of the most important concepts in marketing thought and practice. It is defined as 'a consumer's post-purchase assessment and affective response to the total product or service experienced' (Lin & Wang 2006). Many authors found satisfaction has been significantly associated with consumers' purchase, re-purchase, attitude, and brand loyalty (Carlson & O'Cass 2010; Churchill & Surprenant 1982; Lee & Kang 2015; Yoshida & James 2010). Previous research (Ko & Pastore 2007; Kyle et al. 2010; Murray & Howat 2002) on participant satisfaction has noted that satisfaction was a consequence of service quality and strongly impacted consumer re-participation intentions that affected profitability. The research on consumer satisfaction has been extended, and the efforts have contributed to understanding consumers' decision-making processes. In the same vein, the current study examined consumer satisfaction of mobile internet service with quality constructs (convenience, responsiveness, availability and perceived value), some prior researches done on

the subject has been discussed in this segment. Moreover, this study has drawn from the previous theories to develop hypothesis with regard to the impact of service quality and perceived value on customer satisfaction and the mediating effect of perceived value to service quality and customer satisfaction towards mobile internet service in Bangladesh. The Hypothesized relationship has been discussed in the consecutive sections.

2.1 Effects of Service Quality on Customer Satisfaction

Customer satisfaction is crucial for creating long-term relationships with clients and in sustaining profitability of mobile internet service providers. But due to the relative novelty of mobile Internet service, few studies have examined the combination of consumers' perceived dimensions of mobile Internet service quality and service satisfaction. Service Quality is strongly associated to customer satisfaction, and many studies had indicated that there was strong positive relationship between service quality and satisfaction of mobile internet user. In the area of mobile services, several researchers like Deng et al. 2010; Gao, Waechter & Bai 2015 have examined the relationship between service quality and customer satisfaction and found strong relationships. Moreover, service quality is found as an antecedent of satisfaction in the area of mobile service (Deng et al. 2010; Gao, Waechter & Bai 2015; Van, Lijander & Jurriens 2001) showed in their study that customers' overall satisfaction was influenced by their satisfaction with the core service, supplementary services and the user interface of the service that can be accessed either via mobile phone or via Internet. In the context of mobile internet services, only few researchers have systematically examined the dimensions of service quality (Vlachos & Vrechopoulos 2008). Chae et al. (2002) determined four dimensions focusing on information quality for mobile internet services namely: connection quality, content quality, interaction quality and contextual quality. Connection quality deals with consumers' access to stable mobile services without interruption of connection and to speedy system responses to users' requests (clicks). Content quality refers to the inherent value and usefulness of the information provided by mobile services. Interaction quality mainly deals with the provision of easy and efficient mobile services, while contextual quality refers to the ubiquitous nature of mobile services and personalization issues. Kim & Steinfield (2004) also determined the service quality variables like information quality, connection quality, ease of use, and service charge are major determinants to overall satisfaction which affects a consumer's intention to continue using the mobile internet service in Korea. Pagani (2004) sketches a model of consumer adoption of 3G mobile multimedia services, by a qualitative exploratory study and empirically test the proposed model on the Italian market. The e-service quality literature suggests that besides information quality, there are still other dimensions that built quality in the mobile internet context such as customer service and privacy aspects of engaging with this telecommunication technology (Parasuraman et al. 2005). According to them, customer service refers to service provision that is responsive and helpful, while privacy deals with a sense of feeling safe when using the service and the privacy of shared information. Akbar and Parvez (2009) found the positive effects of service quality factors like reliability, responsiveness, assurance, empathy and tangibility to customer satisfaction towards telecommunications companies operating in Bangladesh. Roostika (2011) identified the important role of both service quality and trust in contributing positive effect on loyalty in mobile internet adoption in Indonesia. According to him, without service

quality dimensions like contextual, interaction, and privacy it will be impossible to build customer's trust. According to Mahmud (2011) private university students have a positive attitude towards internet, they are more conscious about internet and they have been using internet for studying and learning frequently and very frequently. Rahman (2012) observed that service quality has a significant influence on consumer perception in selecting a mobile telecom operator in Bangladesh. Muñoz et al. (2013) showed that, in order to increase the overall customer satisfaction of mobile Internet user's attention must be devoted to the improvement of factors like site costs and communication quality (quality of the network for data transmission) in Spain. Mahfuz & Latif (2013) found that poor network coverage came out as the main problem of using 3G followed by high rate of charging, insufficient service provider and lack of high speed. Moreover, most desired service was strong network coverage followed by low charge rate and high speed. Mia & Hasan (2014) examined factors like internet price, advantageous of using mobile internet and easy access to the mobile internet have significant relationship with the behavioral usage intention of mobile internet in Bangladesh. Various factors like speed, coverage, price, activation process, value-added service etc. affected the customer satisfaction with 3G internet usages and resulted into brand choice (Tarannum & Rasu 2015). They argued that higher satisfaction level determines the customer retention for the telecommunication companies. In order to ensure higher consumer satisfaction, the companies thus need to focus on two factors such as Product Quality and Customer Centricity as most important to influence 3G internet usage satisfaction of youth in Dhaka Metropolitan area. Good speed, consistent network, affordability, no network drop, no overcharging all together fairly describes the Product Quality. On the other hand, Customer Centricity was more strongly influenced by easy customer care, easy activation process, availability to near shop or easy distribution. According to Quach et al. (2015), the dimensions of trust, credibility, accuracy and empathy, are important predictors for customer loyalty. Credibility is related to speed of connectivity and availability based on customer experiences; easy operation hours and support are empathy dimensions. In addition, due to the complexity of information technology, customer service staff understands the needs of clients. This enables service staff to help customers easier and better. Equipment, space, staff appearance, commitment are quality indicators that impact on loyalty. Also, the company's image effects on loyalty. Ofori et al. (2016) found the effects of service quality on satisfaction significant, subsequently impacting loyalty towards 3G mobile data service (MDS) providers in an emerging market like Ghana, sub-Saharan Africa.

2.2 Effects of Service Quality on Perceived Value

Perceived value is one of the most important elements for gaining competitive edge and is considered to be a significant predictor of customer satisfaction and loyalty (McDougall & Levesque 2000; Cronin et al. 2000; Gallarza & Saura 2006). Examining the issue of perceived value is important because, compared to perceived quality; perceived value is more directly linked to consumers' willingness to buy (Dodds & Monroe 1985). In addition to that, a higher level of perceived service performance leads to a high level of perceived value (Lim & Morris 2006). Many authors explored that higher perceived quality typically leads to higher perceived value (Cronin et al. 2000; Petrick 2002, 2004; Turel & Serenko 2006; Hutchinson, Lai & Wang 2009; Lai, Giffin & Babin 2009; Wu & Liang 2009). Eggert & Ulaga (2002)

found that properly implemented service quality characteristics like reliability, responsiveness, assurance and empathy can increase individuals perceive value about the quality features. As a result, it might lead to an increased customer satisfaction. Several scholars examined association between service quality and perceived value in their studies (Hutchinson, Lai & Wang 2009; Lai et al. 2009; Wu & Liang 2009). They found high service quality is correlated with high perceived value. Moreover, many authors in different theoretical and empirical studies (Cronin et al. 2000) conceptualize a model of perceived value as the link among quality, sacrifices and satisfaction. Raza et al. (2012) found significant relationship between service quality dimensions and perceived value dimensions. Islam, Rahman & Nahar (2015) found perceived quality has a very strong effect on the customer satisfaction of 3G services in Bangladesh. So, the reviewed literature showed that service quality has emerged as a multi-dimensional construct affecting perceived value.

2.3 Effects of Perceived Value on Customer Satisfaction

According to Faber, Haaker & Bouwman (2004), the perceived value can be defined as 'the value seen as the perceived benefits and total costs (or sacrifice) of (obtaining) a product or service'. Here the costs or sacrifice incurred by a customer can be defined by the money paid for the service. So, in this case as less money is paid for a high quality product, more positively is the service perceived. Therefore, promotions and discount coupons, as an example, can be used to increase the perceived value of the service. But this approach neglects other non-monetary costs such as transaction costs, search costs, negotiation costs, and the time incurred during the purchase (Kuo, Ming & Jaw 2009). Therefore, for this research, perceived value is defined as a service evaluation affected by the benefits, the advance sacrifices and ex-post performance perceived by the customers. Examining the issue of perceived value is important because, compared to perceived quality; perceived value is more directly linked to consumers' willingness to buy (Dodds & Monroe 1985). Customer-perceived value has been found to be a major contributor to purchase intention. According to Schiffman & Kanuk (2004), the overall objective of providing value to customers continuously and more effectively than competitors is to have and to retain highly satisfied customers. There is empirical evidence that customer perceived-value has a positive effect on customer satisfaction (Anderson & Mittal 2000 & Walter, Hölzle & Ritter 2002). Takala, Bhufhai & Phusavat (2006) and Choi et al. (2018) explained that perceived value both directly and indirectly influences customer satisfaction. Petric (2004) emphasized that perceived value is important factor related with customer satisfaction and repurchase intention. Frank & Enkawa (2007) also found the relationship between perceived value and customer satisfaction. Turel & Serenko (2006) investigated that, the extent of satisfaction depends on extent of perceived value and higher level of perceived value lead to higher level of customer satisfaction with mobile services in Canada. Chen & Chen (2010) found perceived value as the important one among the determinants of satisfaction. Raza et al. (2012) found perceived value is important and has positive relationship with satisfaction and revisit intentions. Islam, Rahman & Nahar (2015) showed that perceived value; perceived quality; customer expectation and corporate image have a significant positive influence on customer satisfaction in 3G Service in Bangladesh.

2.4. Perceived Value as a Mediating Variable between Perceived Quality and Satisfaction

Perceived value is found as a mediating variable between perceived quality and satisfaction in other industries (Caruana et al. 2000; Cronin et al. 2000; Chen &Tsai 2008; Varki & Colgate 2001; Sureshchandar et al. 2002; Yunus et al. 2009; Ismail et al. 2009; Jhandir 2012; Uddin & Akhter 2012). In a pure mobile internet services context service quality positively affects value and both service quality and value affect customer satisfaction and overall, service quality, value and satisfaction have a simultaneous direct effect on behavioral intentions (Joudeh & Dandis 2018). Uddin & Akhter (2012) found that Service quality and fair price have indirect influence on customer satisfaction of a mass service industry (i.e., mobile phone operators) through perceive value and showed in their study that perceived value has mediating role between quality, charge fairness and satisfaction. Muñoz et al. (2013) showed that communication quality and cost are the main attributes of the service involved in the overall satisfaction of the individual towards the mobile Internet services in Spain. He also showed that overall, service quality, value and satisfaction have a simultaneous direct effect on behavioral intentions. Pijuan (2013) found that service quality and perceived value have positive influence on customer satisfaction, and, at the same time, customer satisfaction has a positive influence on customer loyalty on the context of mobile data services in Netherlands. The brief review presented above indicates that "service Quality", "customer satisfaction" and "perceived value" can be studied from different aspects.

From the study of the related work, it is possible to identify the gaps in the existing literature on service quality, Perceived value and Customer Satisfaction for mobile services. However, in the present study efforts will be made to find out the service quality dimensions and the customer satisfaction of the mobile internet service in Bangladesh as well as the mediating effect of perceived value to quality dimensions and customer satisfaction of the mobile internet service in Bangladesh. As we noticed that one of the fastest growing industries in Bangladesh is mobile internet industry therefore, it is important to the mobile internet service providers to analyze the variables that determine the service quality of mobile internet service in Bangladesh and to assess the influence of service quality to customer satisfaction. But no studies have been found where attention has given to identify the effects of quality and perceived value on customer satisfaction of mobile internet service in Bangladesh. In this context the present study is an endeavor to fill the above-mentioned gaps and analyze the prevailing service quality and customer satisfaction problems of the mobile internet service of Bangladesh. Moreover, the research tries to quantitatively evaluate the determinants of user satisfaction and provide policy implications for further promoting mobile internet service.

Since the number of internet users are growing rapidly in the country and mobile internet service are improving and more companies are offering this service following research questions coming up which were not addressed by the past studies:

1. What variables determine the service quality dimensions of mobile internet service provided by a mobile network operator in Bangladesh?
2 How does service quality influence customer satisfaction of mobile internet service in Bangladesh?

3. How does perceived value influence customer satisfaction of mobile internet service in Bangladesh?

4. What is the mediation effect of Perceived Value to customer satisfaction to mobile internet service in Bangladesh?

To answer the above research problem, the objectives of this study are as follows-

- To identify service quality factors of mobile internet service in Bangladesh.
- To assess the influence of service quality on customer satisfaction towards mobile internet service in Bangladesh.
- To assess the influence of perceived value on customer satisfaction towards mobile internet service in Bangladesh.
- To assess the mediating effects of Perceived Value to customer satisfaction to mobile internet service in Bangladesh.

These objectives are conceptualized into testable hypothesis in the next section of this study. Answering the three research questions will help in developing pertinent policy recommendations focusing on identifying the ways to improve service quality as well as the customer satisfaction of towards mobile internet service in Bangladesh. Based on previous literature on the relationships among service quality dimensions, perceived value, and customer satisfaction, a research model (see figure 1) is developed. The literature had been used as the foundation to develop a conceptual framework for the study which is shown in figure 1. This conceptual research framework assesses the relationship between service quality and customer satisfaction, as well as the relationship between service quality and perceived value and mediating effects of perceived value on customer satisfaction to the mobile internet service in Bangladesh. For the service quality dimensions, three dimensions of mobile Internet use are proposed: convenience, responsiveness, and network quality. The underlying logic behind the model is that a consumer's higher service quality perceptions lead to higher overall satisfaction.

Figure 1: Conceptual Model of the Research
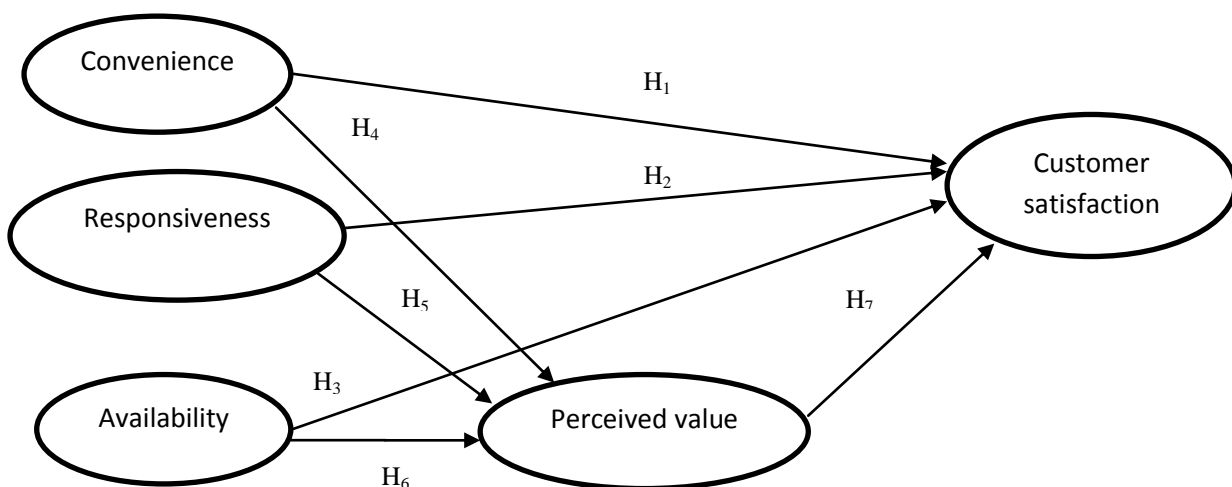
Here the service quality dimensions have been treated as the independent variables and the customer satisfaction as the dependent variable. The perceived value acts as the mediating variable between service quality dimensions and customer

satisfaction. The hypotheses for the relationships in the model have been proposed in the sections to follow:

H_1: Convenience has positive influence on customer satisfaction.
H_2: Responsiveness has positive influence have positive influence on customer satisfaction
H_3: Availability has positive influence on customer satisfaction.
H_4: Convenience has positive influence on perceived value.
H_5: Responsiveness has positive influence on perceived value.
H_6: Availability has positive influence on perceived value.
H_7: Perceived Value mediates customer satisfaction.

3. Methodology

3.1 Research Design

To conduct the study descriptive research in the form of a survey is undertaken. For a better understanding of the research problems, questions and to explore literature, secondary data were collected from different reports, articles, newspapers, journals, magazines, websites etc. To gain an understanding of the research problem and its underlying factors a qualitative research technique was undertaken first. In-depth interviews were conducted involving 30 private university students. They were selected based on purposive sampling where the interviewees have good knowledge and experiences with mobile internet service in Bangladesh. Information gathered from them helped the researcher to understand the nature of the service policies and procedure, perceptions of value about the service and customer satisfaction characteristics. After refining, categorizing and comparing the information with relevant theoretical and empirical evidence, this was used as a guideline to develop the content of survey questionnaires for pilot survey. As the objective of this study is to empirically investigate the determinants of student satisfaction of the mobile internet service in Bangladesh quantitative approaches is required. This study used 'Personal In- home interviews of survey method' to collect the necessary data where respondents are interviewed face to face in their campus or homes. Then personal interviews with 40 respondents were conducted to observe respondent' reactions and attitudes and ask them to identify any problems regarding the questionnaire format, wording and to address any comments or suggestions they had. The respondents in the pretest were similar to those were included in the actual survey in terms of university, familiarity with topic, and attitudes and behaviors of interest. Then the responses obtained from the pretest were coded and analyzed. In this way the final questionnaire was designed for this study. The questionnaire was divided into four parts. The first part includes general questions regarding the mobile internet usage like duration of use, usage per day etc. The second part of the questionnaire includes questions asking respondents to evaluate the service quality dimensions of the mobile internet service. The third part includes five questions asking respondents to describe how satisfied they are regarding the mobile internet service. The fourth part of the questionnaire contained ten questions asking respondents about different demographic and socioeconomic information. The second and third parts of the questionnaire reflected the underlying constructs that were presented in this instrument using five-point Likertscale, ranging from 1= strongly disagree to 5=strongly agree. For explaining the relationship between service quality and

customer satisfaction of the mobile internet service in Bangladesh, data analysis involved Exploratory Factor analysis and Confirmatory factor Analysis through Structural equation Modeling (SEM).

3.2 Sampling Method

In the study, the hypothesized relationships were tested using data collected from private university students of Bangladesh. Therefore, the sample of the study was private university students and data for this study were collected through a self-administered questionnaire of nine private universities in Dhaka during the period July 7 through September 23, 2018. Private university students are selected as sample in this study for three reasons. First, from the literature survey it has been found that there is no other segment of the population that is as active in terms of mobile service using behavior. Second, mobile internet users are generally younger and better educated than conventional customers, meaning that the students subject closely resemble the mobile internet service population. Finally, the use of private university students as subject in this study is logical because they are more solvent than public university students to use mobile data for internet service and this can decrease the effect of variance in mobile internet service usage. But defining the sample frame for the survey was particularly difficult because no data on mobile internet users over time in Bangladesh is readily available. The researcher used non-probability convenience sampling technique. Only Dhaka district was selected purposively due to the fact that private universities are highly centralized and city based. In this way, about 350 respondents were surveyed but among them 324 questionnaires were usable for the analysis, yielding 93% response rate. The population under investigation included those students whose are the undergraduate and graduate at various private universities in Bangladesh. Total of 324 students from nine private universities namely, Stamford University Bangladesh (55), Daffodil International University (50), State University (39), Manarat International University (30), United International University (40), American International University (25), University of Liberal Arts (30), North South University (30) and Green University (25) were selected as respondents for the survey. But there is no record exists to list the total number of private university students using mobile internet under Dhaka city.

3.3 Data Analysis

This study used Statistical Package for Social Sciences (SPSS) version 20 to analyze the quantitative data gathered from the questionnaires. SPSS was used to assess the normality, reliability and validity of the distribution of data. To gain preliminary information about the sample frequencies, mean, standard deviation, factor analysis, pearson correlation and descriptive statistics were conducted to analyze the variables and test relationship between independents variables and the dependents variables. To test the research hypothesis Structural Equation Modeling (SEM) by Partial Least Square software was conducted.

4. Findings

Analyses were obtained using both descriptive and inferential statistics. Prior to the descriptive statistic, factor analysis was performed by examining the pattern of correlation or covariance between the observed measures. The descriptive statistics

is shown that provides a general overview of demographic profile of the respondents. The data collected were checked and analyzed by using the Statistical Package for Social Sciences Programme (SPSS) version 20. To test the proposed research models, data analyses for both the measurement model and structural model were performed using Partial Least Squares (PLS). The validation of the structural model was achieved using SmartPLS (v.3.2.7). The research model is analyzed and interpreted into two stages sequentially. First is the assessment and refinement of adequacy of the measurement model and followed by the assessment and evaluation of the structural model. The assessment of the structural model includes estimating path coefficients and R-square.

4.1 Descriptive Analysis

Characteristics of the respondents are shown in table 71% respondents were male It is revealed that respondents are varied widely in terms of their age. 99% were at the age of 18-21 years; 0.6% was aged between 22 to 25; and 0.3% was aged more than 25 years. The study observed that majority of the respondents were unmarried (95.4%) and the rest were married (4.6%). The majority of the students in this sample are from department of business administration (24%), computer science (14), civil engineering (11%). They Respondents are mostly at the graduation level (60%) of their study. Most of them were Muslim (93.8%) followed by Hindu (6.2%). Majority (85%) of the respondents had monthly income of more than BDT 50,000 followed by BDT 30,001-35,000 (17.6%), BDT 35,001-40,000 (15.4%); BDT 40,001-45,000 (43%), BDT 45,001-50,000 (11.4%), BDT 25,001-30,000 (11.4%) and BDT 21,001-25,000 (4.6%). Majority (73%) of the respondents spend more than 6 hours on mobile internet in a day and they have been using for more than 5 years. The respondents were found spending BDT 650 monthly on an average for 12 GB as prepaid user.

Table 1: Demographic Data of Respondents (N=324)

Demographic Variables	Categories	Frequency	Percentage
Gender	Male	229	70.7
	Female	95	39.3
	Total	324	100.0
Age	18-21 years	321	99.1
	22-25 years	2	0.6
	More than 25 years	1	0.3
	Total	324	100.0
Income	21,000-25,000 TK	15	4.6
	25,001-30,000 TK	37	11.4
	30,001-35,000TK	57	17.6
	35,001-40,000 TK	50	15.4
	40,001-45,000 TK	43	13.3
	45,001-50,000 TK	37	11.4
	More than 50,000 TK	85	26.2
	Total	324	100.0
Marital Status	Married	15	4.6
	Single	309	95.4
	Total	324	100.0
Religion	Muslim	304	93.8
	Hindu	20	6.2
	Total	324	100.0
Department at University	Business Administration	75	23.15
	Computer science	45	13.89
	Civil	35	10.80
	Electrical engineering	30	9.26
	Architecture	24	7.40
	Pharmacy	30	9.26
	Microbiology	25	7.72
	English	35	10.80
	Economics	25	7.72
	Total	324	100.0
Grade at university	Bachelor	194	59.87
	Masters	130	40.13
	Total	324	100.0
Duration of using internet service	less than 6 months	4	1.2
	6 months-1 year	9	2.8
	1 year-2 years	23	7.1
	2 years-3 years	51	15.7
	3 yeras-4 years	55	17.0
	4 yeras-5 years	46	14.2
	more than 5 years	136	42.0
	Total	324	100.0
Average time of using mobile internet service per day	less than 30 minutes	17	5.2
	30 minutes-1 hour	26	8.0
	1-2 hours	30	9.3
	2-3 hours	61	18.8
	3-4 hours	49	15.1
	4-5 hours	42	13.0
	5-6 hours	26	8.0
	More than 6 hours	73	22.5
	Total	324	100.0
MNOs' distribution	Grameen phone	145	44.75
	Bangla Link	125	38.58
	Robi	64	19.75
	Airtel	59	18.20
	Teletalk	40	12.34

Usage status per month	Number	Average expense	Data used
Pre-paid user	284	650	12 GB
Post-paid user	8	580	10 GB
Using both pre-paid and post-paid	32	489	14.8 GB

4.2 Factor Analysis

For the scale development for mobile internet service quality, a pool of items has been generated from the literature. In order to explore the construct dimensions, Exploratory Factor Analysis (EFA) was first conducted to check if the proposed factor structures are indeed consistent with the actual data. EFA was run using the Principal Components extraction method with Varimax rotation. As the Kaiser-Meyer-Olkin (KMO) for this data set is found large as .871 so the KMO supports factor analysis. This tests the null hypothesis that the correlation matrix is an identity matrix. In the study, the Bartlett's test of sphericity is found significant that is, its associated probability is less than 0.05 and in fact, it is actually 0.000. This means that correlation matrix is not an identity matrix. Thus, from the perspective of Bartlett's test, factor analysis is feasible (Table 2).

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.871
Bartlett's Test of Sphericity	Approx. Chi-Square	2237.687
	df	190
	Sig.	.000

For this study, there were five factors having Eigen values exceeding 1. The Eigen values for factors after rotation are 6.489, 1.771, 1.192, 1.168 and 1.020. The percentage of the total variance which is used as an index to determine how well the factor solution accounts for what the variables together represent is 58.204%. As a result of the factor analysis five dimensions 19 items have been found (Table 3). All the factor loadings were above the recommended cut off point of 0.40 (Nunnally & Burnstein 1994). Internal reliability of the factors was also higher than the recommended level of 0.70 (Bagozzi & Yi 1988).

Table 3: Results of Factor Analysis

Construct and indicators	Factor Loading
Convenience (Cronbach's Alpha= .678)	
1 easy activation process	.513
2 easy recharging options	.629
3 availability of recharging point	.582
Customer satisfaction (Cronbach alpha= .754)	
1 Overall satisfied with the service	.556
2 Intend to say positive things about the operator to other people	.644
3 Will encourage friends and relatives to service from them	.777
4 Expect to have from them in future	.718
Responsiveness (Cronbach alpha= .790)	
1 helpful customer care service	.572
2 less time taken to reach customer care manager	.772
3 having service from the operator increase social status	.552
Availability (Cronbach's Alpha = .668)	
1 Wide network coverage	.619
2 Faster network	.767
3 Uninterrupted network	.886
4 Sufficient limit of the package	.548
5 Message about data usage	.540
6 Instant message about data usage crossing the limit	.515
Perceived Value (Cronbach's Alpha= .668)	
1 reasonable price of the package	.781
2 operator is reliable	.629
3 intend to recommend this operator to others	.556

4.3 Descriptive Analysis

In descriptive statistics, the data was explored to understand the nature and characteristics of the data. Table 4 shows the descriptive statistic of the study variables analyzed in this study. The descriptive statistic shows that of the two factors like Convenience and availability receive the highest score with the mean of 3.91 and 3.68. The mean score of factors of Customer Satisfaction is perceived higher with a mean score of 3.69 indicating that students are satisfied towards mobile internet use in Bangladesh.

Table 4: Descriptive Statistics of Variables

Component	Items	N	Min	Max	Mean	Std. Dev	Skew ness	Kurtosis
Convenience	S5= easy activation process	324	2	5	3.91	.628	-.198	.220
	S6= easy recharging options	324	2	5		.709	-.137	-.267
	S7= availability of recharging point	324	2	5		.709	.261	-.104
Customer satisfaction	Os1= Overall satisfied with the service	324	2	5	3.69	.683	-.284	-.351
	Os2=Intend to say positive things about the operator to other people	324	2	5		.749	-.132	-.344
	Os4= Will encourage friends and relatives to service from them	324	2	5		.843	-.086	-.657
	Os5= Expect to have from them in future	324	2	5		.766	-.329	-.127
Responsive ness	S8= helpful customer care service	324	2	5	3.64	.786	-.096	-.612
	S9= less time taken to reach customer care manager	324	2	5		.952	.110	-.923
	S16= having service from the operator increase social status	324	2	5		.802	-.166	-.448
Availability	S1= Wide network coverage	324	2	5	3.68	.750	-.320	-.126
	S2= Faster network	324	2	5		.842	-.440	-.287
	S3= Uninterrupted network	324	2	5		.694	.081	-.392
	S11= sufficient limit of the package	324	2	5		.728	-.066	-.259
	S12= message about data usage	324	2	5		.709	-.113	-.273
	S13= instant message about data usage crossing the limit	324	2	5		.730	-.105	-.242
Perceived value	S4= reasonable price of the package	324	2	5	3.66	.712	-.404	.051
	S14= operator is reliable	324	2	5		.637	-.154	-.037
	Os3= intend to recommend this operator to others who seek advice	324	2	5		.718	-.066	-.239

4.4 Data Analysis Structural Equation Modeling (SEM)

4.4.1 Assessment of Measurement Models

Several steps were used in the assessment of the measurement model. First, an initial principal component (exploratory factor analysis) analysis is performed. Subsequently, followed by assessment of convergent and discriminant validity, and evaluation of the measure's reliability.

Convergent Validity

Within this study, the factor loadings revealed support for convergent validity for the six constructs. All factor loadings were higher than the recommended level of 0.70 except two items of Availability dimension as S11 (.613) and S12 (.639). The factor loadings ranged from 0.613 to .850. The high factor loadings give reason to conclude that the measures have convergent validity. The composite reliability and Chronbach's alpha values for the studied constructs were ranged from 0.797 to 0.852 and 0.626 to 0.791, respectively (Refer to Table 5). All AVEs were higher than 0.50, providing sufficient evidence for convergent validity, except for Availability dimension (0.491) that AVE is slightly lower than recommended level of 0.50. So, the service quality dimensions were found to have adequate convergent validity.

Table 5: Summary of PLS Quality (AVE, R Square, Composite Reliability and Cronbach's Alpha)

Variables	Number of Items	Average Variance Extracted (AVE)	R Square	Composite Reliability	Cronbach's Alpha
Availability	6	0.491		0.852	0.791
Convenience	3	0.609		0.824	0.68
Customer satisfaction	4	0.559	.433	0.835	0.74
Perceived value	3	0.605	.31	0.82	0.672
Responsiveness	3	0.569		0.797	0.626

From the table presented above, it is clearly stated that all the variables used in this research were reliable since it obtained the Composite Reliability and Cronbach's Alpha values more than 0.7. All values fall within the acceptable range to conclude good reliability.

Discriminative Validity

It is recommended that constructs that do not have high correlations provide discriminant validity. Table 6 shows the correlations between factors. As correlations between factors were not higher than 0.70, we can consider this is as a support for discriminant validity. AVE was also used to demonstrate discriminant validity. AVE and cross factor loading extracted for all latent variables. All the items are having higher loading on their corresponding construct than the cross loadings on the other constructs in the model. The AVE for each latent factor exceeded the respective squared correlation between factors, thus providing evidence of discriminant validity (Fornell & Larcker 1981).

**Table 6: Correlations and Measures of Validity among Variables**

	Availability	Convenience	Customer satisfaction	Perceived value	Responsiveness
Availability	0.701				
Convenience	0.525	0.78			
Customer satisfaction	0.436	0.548	0.748		
Perceived value	0.454	0.445	0.546	0.778	
Responsiveness	0.476	0.49	0.464	0.461	0.754

4.4.2 Assessment of the Structural Model

In order to test the hypothesized relationships between variables, structural equation modelling was employed. The Figure 2 summarizes the results of the PLS analysis including path coefficients (β), path significant (p-value), and variance explain (R^2

values) of the structural model. All statistical tests were assessed at 5 percent level of significance using two-tailed t-tests.

Figure 2: Results of Structural Model
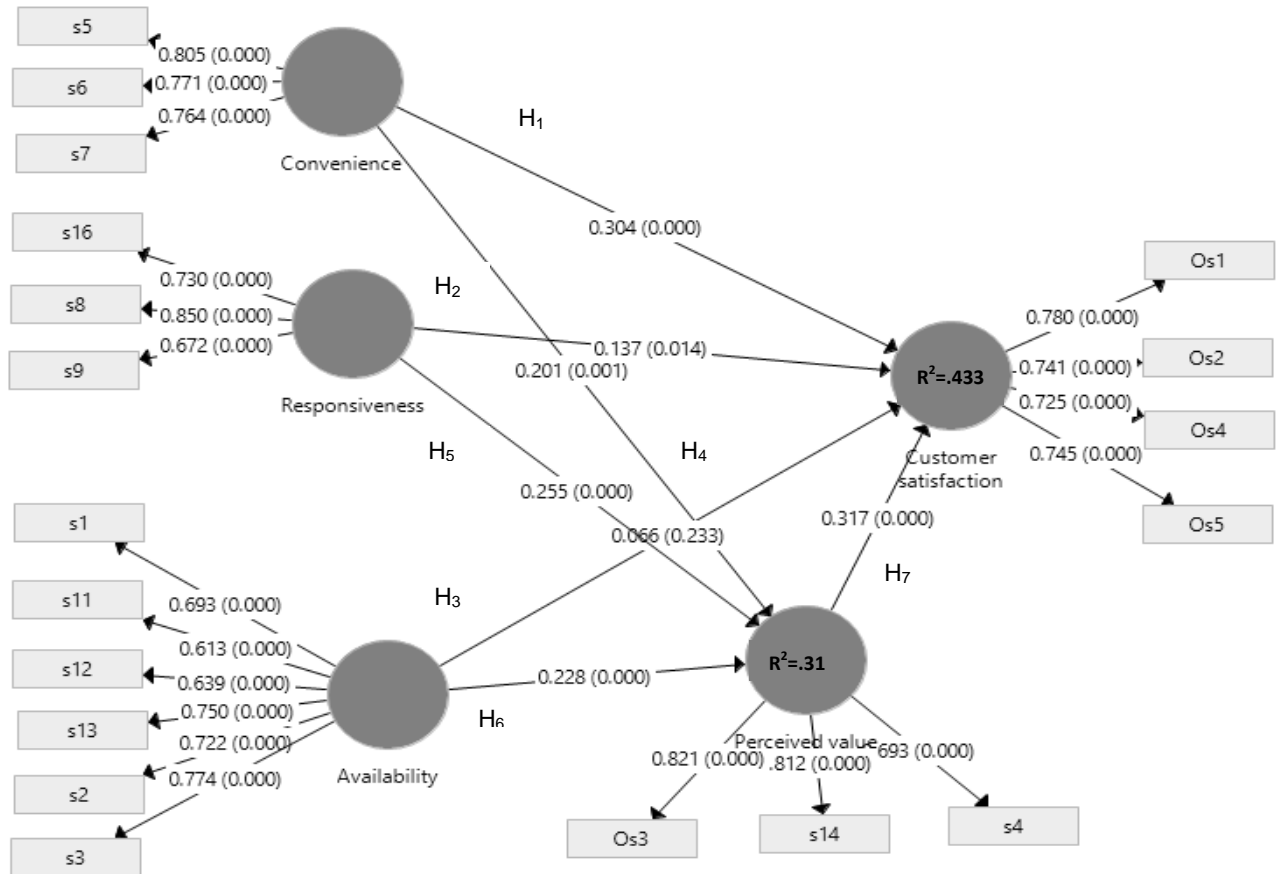
4.4.3 Hypotheses Testing

The evaluation criteria for confirming each hypothesis was the use of t-values for each of the path loading. Significant t-values for path loadings signify support for the proposed Path Mean Std Deviation T-Statistic hypothesis. The cut-off criteria used was a t-value greater or equal to 1.645 for an alpha level of 0.05 (Hair et al. 2006). Refer to Table 7 on the summary of the structural model.

Table 7: Results of the PLS Analysis: Path Coefficients

Standardized regression weight	Standardized solution	t-Values	P Values	Hypothesis supported or not
H_1 Convenience -> Customer satisfaction	0.304	5.586	***	supported
H_2 Responsiveness -> Customer satisfaction	0.137	2.455	0.014	Not supported
H_3 Availability -> Customer satisfaction	0.066	1.127	0.26	Not supported
H_4 Convenience -> Perceived value	0.201	3.641	***	supported
H_5 Responsiveness -> Perceived value	0.255	5.183	***	supported
H_6 Availability -> Perceived value	0.228	4.196	***	supported
H_7 Perceived value -> Customer satisfaction	0.317	6.352	***	supported

Hypothesis H_1 states that there is a positive relationship between Convenience and Customer Satisfaction. Figure 2 shows that the hypothesized path for H_1 was positive and significant ($\beta = 0.304$, $p < 0.000$). Thus, hypothesis H_1 was supported. Hypothesis H_2 explores Responsiveness's relationship to Customer Satisfaction. The hypothesized path for H_2 was also found positive and significant ($\beta = 0.137$, $p < 0.01$). Thus, hypothesis H_2 was supported. Hypothesis H_3 suggests that Availability has a positive relationship on Customer satisfaction. The hypothesized path for H_3 was not found significant ($\beta = 0.0666$, $p > 0.10$). Thus, hypothesis H_3 is not supported. Hypothesis H_4 suggests that there is a positive relationship between Convenience and Perceived value. The hypothesized path for H_4 was positive and significant ($\beta = 0.201$, $p < 0.000$). Thus, hypothesis H_4 is supported. Hypothesis H_5 explores the relationship between Responsiveness and Perceived value. The hypothesized path for H_5 was significant ($\beta = 0.225$, $p > 0.000$). Thus, hypothesis H_5 is supported. Hypothesis H_6 investigates the relationship between Availability and Perceived value. The hypothesized path for H_6 was positive and significant ($\beta = 0.228$, $p < 0.000$). Thus, hypothesis H_6 was supported. The final Hypothesis H_7 explores the mediating relationship between Perceived value and Customer satisfaction. The hypothesized path for H_7 was positive and significant ($\beta = 0.317$, $p < 0.000$). Perceived value has stronger effect on Customer satisfaction (.317) as compared to direct effect of Convenience to Customer satisfaction (.304), Responsiveness to Customer satisfaction (.137) and Availability to Customer satisfaction (.066). It can be concluded that Perceived value partially mediates the relationship between service quality and satisfaction. This means that hypothesis H_7 was also supported. In terms of R^2, the proposed model shows that 43.3% of the variance in Customer satisfaction was explained by service quality and Perceived value whereas, 31% of the variance of Customer satisfaction was explained by Perceived value. This means that service quality and perceived value have medium predictive power to customer satisfaction (> 30%). Overall, it can be said that simultaneously, the direct and indirect links between service quality, perceived value and customer satisfaction are all significant, in support of H_1 to H_7 except H_3.

In this way, the study has observed that service quality factors like convenience and responsiveness of mobile internet service in Bangladesh positively affect perceived value. In addition, the study also found the perceived value as a mediating factor

between service quality and customer satisfaction of the service. As was initially proposed, customer satisfaction is positively influenced by service quality factors and perceived value, thus showing that improving the service quality and perceived value of the mobile network services will lead to customer satisfaction. These results confirm the findings of other research studies (Kuo et al. 2009; Lai et al. 2008; Turel & Serenko 2006). Among these results, the service quality showed to have a stronger direct effect on customer satisfaction than perceived value. The confirmation of these relationships is an indication that, customers of mobile internet services that perceive greater service quality are more satisfied customers; and MNOs that have more satisfied customers have more loyal customer as well. But the study differs in the respect of analyzing the effects of service quality on perceived value of mobile internet service as well as effects of perceived value on customer satisfaction of the service in Bangladesh.

5. Conclusions and Implications

This study has investigated the service quality dimensions and the impact of that on customer satisfaction towards mobile internet service in Bangladesh which are very significant to provide useful policy insights to the mobile internet service providers as well as researchers for improving customer satisfaction of mobile internet service in Bangladesh. The study has observed that mobile internet service quality depends on four distinct quality factors like convenience, responsiveness, availability and perceived value. This study also empirically identified the important role of both service quality and perceived value in contributing positive effect on customer satisfaction. Even though service quality has stronger effect on customer satisfaction than perceived value, it should be noted that service quality has strong effect on perceived value. This means that without service quality, it will be impossible to build customer's satisfaction. In the integrative model, it can be seen simultaneously the contributions of service quality and perceived value to customer satisfaction. The indirect effect should be taken into account, where there is an indirect process from service quality to perceived value and then to customer satisfaction. Consistent with other research (Van et al. 2001; Deng et al. 2010; Gao, Waechter, & Bai 2015) this study shows that service quality has a strong positive significant effect on customer satisfaction, implying that customers form a high degree of satisfaction with the service as long as they perceive excellent service quality. In the context of mobile internet services, only few researchers have systematically examined the dimensions of service quality (Vlachos & Vrechopoulos 2008; Chae et al. 2002; Kim & Steinfield 2004; Muñoz et al. 2013; Tarannum & Rasu 2015; Ofori et al. 2016; Islam et al. 2015) but effects of service quality on customer satisfaction towards mobile internet service is hardly found in the literature. The results also support studies in the literature that establish the positive and significant relationship between service quality and perceived value (Cronin et al. 2000; Petrick 2002, 2004; Turel & Serenko 2006; Hutchinson et al. 2009; Lai et al. 2009; Wu & Liang 2009; Eggert & Ulaga 2002; Raza et al. 2012). The results of the study also show perceived value's positive and significant effect on customer satisfaction which corroborates the works of Anderson & Mittal (2000); Walter et al. (2002); Takala et al. (2006); Choi et al. (2018); Petric (2004); Frank & Enkawa (2007); Raza et al. (2012) and Chen & Chen (2010). But a very few authors explained the influences of perceived value on customer satisfaction in mobile internet service like Turel & Serenko (2006) and Islam et al. (2015) who found significant relationship between

perceived value and satisfaction in mobile internet service. From the study perceived value is found as a mediating variable between service quality and satisfaction that is supported by the other authors in other industries (Caruana et al. 2000; Cronin et al. 2000; Chen & Tsai 2008; Varki & Colgate 2001; Sureshchandar at al. 2002; Yunus et al. 2009; Ismail et al. 2009 and Jhandir 2012). But the study is different from others in the mobile internet services context where it has been showed that service quality positively affects perceived value and both service quality and perceived value affect customer satisfaction. A very few authors like Joudeh & Dandis (2018) showed service quality, value and satisfaction have a simultaneous direct effect on behavioral intentions; Uddin & Akhter (2012) found the indirect influence of service quality and fair price on customer satisfaction of mobile phone operators through perceive value and Pijuan (2013) found the positive influence of service quality and perceived value on customer satisfaction that has a positive influence on customer loyalty on the context of mobile data services. In this way, the study is different from other studies and the results of the study indicated that a good and well-built service quality and perceived value may lead to customer satisfaction towards the mobile Internet services in Bangladesh. This study also makes a contribution to the existing literature on service quality, perceived value and customer satisfaction because these three concepts are specifically studied in the context of mobile data services. Even though, a number of research studies on customer satisfaction and customer loyalty with mobile services have been conducted, this study is one of the first attempts to study the effects of service quality and perceived value on customer satisfaction on the context of mobile internet services. In this way, this thesis provides insights on the factors that lead to customer satisfaction with mobile internet services. Contrary to the findings of a number of research studies on customer satisfaction and customer loyalty with mobile voice services (Kuo et al. 2009; Lai et al. 2008). This study offers managerial implications, where service providers should be able to see that service quality should be directed to build customer's perceived value in order to later developing customer satisfaction. The understanding of these service qualities of mobile internet service in Bangladesh can suggest guidelines for making the customers satisfied and retaining in future. This informs that in the Bangladeshi mobile internet market, where there were five players, and the market is reaching maturity, basic competitive strategy such as price competition or tangible product performance are no longer enough. Thus, mobile internet providers should shift the paradigm to providing service quality attributes and try to adopt with their current practice of service. Therefore, it is possible to give some practical advice to MNOs. Firstly, MNOs should focus their strategies on improving the service quality as it is shown by this study; service quality not only has an effect on customer satisfaction through perceived value, but also has a strong direct effect on customer satisfaction. Secondly, according to the results of this study, the most important dimension of the service quality is convenience, responsiveness and perceived value of the service. Therefore, MNOs should focus on providing convenient service by providing easy activation process, easy recharging options and availability of recharging point that helps to improve the performance of the mobile internet service. Next, MNOs should focus on improving the responsiveness toward their customers through helpful customer care, less time taken to reach customer care etc. Thirdly, MNOs should take care of the value their customers perceive on the mobile internet service. They should offer the package of mobile data at reasonable price and also provide value-added services for their customers that may lead to more satisfied customers than only providing lower mobile prices. In this way the

study will also help the government to realize the importance and develop ways of solving mobile internet service problems of users in Bangladesh.

Like other studies this study has some limitations also. Due to time and financial constraints, the sample size is somewhat limited, which may affect the validity of findings to some extent. Only private university students were selected purposively. In the study perception of mobile internet users were considered rather than the providers. This might not explore the total picture of the service in the industry.

5.1 Future Research Implication

Due to the novelty of the mobile Internet area, there is little research related to consumer satisfaction and service quality. This study has tried to identify the factors that influence consumers' satisfaction towards mobile internet service in Bangladesh. Despite this study has strengths, the research has only observed some factors that affect consumers' satisfaction towards mobile internet service. Future researches are suggested to determine other factors such as socio-demographic, usage pattern of mobile internet that influence customer satisfaction towards mobile internet service. In addition, future research can use different methodologies like longitudinal studies, focus groups and interviews to examine the relationship between service quality and customer purchase behavior in mobile internet service in Bangladesh. Moreover, future research should also assess the perceptions of students in other educational institutions especially in public universities which could provide a wider representation of the prevailing mobile internet service in Bangladesh. Finally, the study can be replicated in different cultures to assess whether the relationship between service quality dimensions, perceived value and satisfaction operates across diverse national markets as well.

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