
WIRED FOR SUSTAINABILITY: CRAFTING A BUSINESS INNOVATION MODEL FOR MOBILE OPERATORS IN BANGLADESH

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Abstract

In today's globalized world, communication is a fundamental necessity for everyone. Mobile phones have evolved beyond personal devices for staying connected with family and friends; they now serve as extensions of individuality and personality (Persaud & Azhar, 2012). Consumer research plays a pivotal role in understanding consumer behavior at every stage of the transaction process: before, during, and after a purchase (Ashaduzzaman, Ahmed, & Khan, 2011). It delves into the specific decisions, thoughts, activities, and experiences that drive consumer needs and desires (Cohen, Prayag, & Moital, 2014). This study focuses on consumer behavior, which is central to satisfying consumer needs and retaining their loyalty, making it a cornerstone of business strategy. Examining the factors influencing purchasing decision-making, customer preferences, satisfaction levels, and media choices, the research seeks to uncover what characteristics guide consumers in their choices. In the context of Bangladesh, mobile operators have not only significantly contributed to the national budget, accounting for over 10% of GDP growth, but have also generated substantial employment, with 850,000 jobs created. The mobile sector has been identified as a key driver of rapid economic development, poverty alleviation, and employment by the government. Among the various mobile operators in Bangladesh, Grameen Phone stands out as the most popular telecom service, boasting approximately 75 million users.

Keywords: Mobile phones, consumer behavior, communication, Grameen Phone, Bangladesh.

1. Introduction

In the modern era of globalization, the necessity of communication is essential for everybody. The mobile phone is not only used to stay coherent with family and friends as a personal device, but also an expansion of their individuality and personality (Persaud & Azhar, 2012). Consumer research that takes place at every period of the dealings process; during the buying, before the buying, and after the buying and to study consumer behavior consumer research is the methodology used (Ashaduzzaman, Ahmed, & Khan, 2011). To gratify consumer needs and wants, consumer behavior includes particular decisions, ideas, activities or experiences (Cohen, Prayag, & Moital, 2014). To generate and keep consumers is the objective of a business as the most significant in business instruction is the consumer behavior of this study. The innovation of the business model can either create a new market or allow a company to create and exploit new opportunities in existing markets. The study is capable to cover what characteristics they look for their purchasing decision-making method which factors affect, what customers buy, satisfaction level and their media preferences. According to GDP growth, the mobile operators have contributed over 10 percent to the national budget of Bangladesh and also created 850,000 jobs. The mobile sector is one of the thrust sectors for rapid unemployment, economic development and poverty alleviation that have identified by the government. There are different kinds of mobile phone operators in Bangladesh under the name of Grameen Phone, Banglalink, Airtel, Robi,

and Teletalk, etc. In Bangladesh, the most popular telecom service is Grameen phone. Table 2 shows that the Grameen phone has about 75 million users in Bangladesh.

The location of Robi and Banglalink soon after Grameen phone and the location of another two companies (Airtel and Teletalk) are behind them. In this study, there are some problems to innovate a business model as like networking problem (in the rural area), limitations on bonus use and recharge (here is range to use the bonus), limitation of FNF system, faster internet service (always buffering) and per second pulses, etc.

By findings the customer purchasing behavior of the mobile this study can profit to the subsisting literature. In the area of communication technology, this will uncover new rooms for a future experiment. On the part of mobile phone operators, this study is titled 'consumers' attitude change in Bangladesh, where Grameen phone, Robi, Banglalink, Airtel, and Teletalk play the pioneering role of a solid understanding of consumer behavior patterns. This study has been conducted to cover the service gap to innovate a business model with sustainability. In this study, we illustrated some services that have been taken from existing literature which services are provided by five SIM companies of Bangladesh at the present. But by providing these services, the SIM companies can't success to achieve the customers' demand. In this study, to achieve the aim companies' success and to reduce unsuccessfully, we added some new value (value-added service) with the existing value to innovate a business model. By adding this new value to the existing value the companies may fulfill the customer demand and companies may expand their business in Bangladesh as well as many people in our country may get the employment opportunity as well as the economic development of our country.

The rest of the paper is structured as follows: the second section reviews the related literature; the third and fourth section mentions the objectives and research questions; the fifth section describes the research methodology; the six-section discusses the data analysis and findings and the final section elucidates the conclusion and suggestions along with the proposed model of the study.

2. Literature review

The manipulating tactics and consumer behavior change is identified, searching, selecting, and consuming products and services for satisfying their needs and wants (Solomon et al., 2006). The psychology of how clients realize, imagine, reason and select about the different kinds of alternative brands, services, and products that are called consumer behavior change (Ahmed, Gull, & Rafiq, 2015). Product or service by the customer attitude is dominated by a match of the service or product user image with the self-concept of the customer (Bose & Sarker, 2012). "To convergence of the e-business, internet, and the wireless world promising industry has been created by the widespread and the emerging adoption of wireless data networks even though the mobile business is a highly new (Camponovo & Pigneur, 2004). In the communication market network externalities play a significant role where the number of its members of the usefulness of connecting a communication network is positively involved (Camponovo & Pigneur, 2004).

In the recent years of Bangladesh, mobile telecommunication became the highest prevalence in the service sector because of its' increasing network coverage (Ahmed, 2014). Now-a-days the mobile industry is highly competitive, in these circumstances; it becomes a complex problem for a customer in selecting a mobile operator who has to elect the highest adequate communication (S. Ahmed, 2014). The importance of mobile phones is not only becoming an increase in daily life, but also healthcare (Mahfuz, Abdul, Mia, & Hasan, 2014). The operators are providing attractive call rates, packages, and value-added services with their key services" (Ahmed 2012). Since 2004 in terms of connectivity and price Bangladesh's mobile department has accomplished well (Zainudeen, 2011). In the world context, mobile phone technology is not far old technology. In the area of mobile phone operator services studies

have been going forward across the world of any other aspects or in connection to customer switching behavior (Jamil, 2018)

Particularly for the mobile telecommunication service providers, price plays an important role in telecommunication bazaar (Alam, Roy, & Akther, 2016). "Low call charge, wide and strong network coverage, faster internet service, a promotional package such as a bonus or cash incentive to use and recharge are the main features that influence customers to switch other operators" (K. Hasan, 2013). Customers are always looking for facilities, but at present, there are some problems in mobile phone company like high call rate, bonus system, pulse facilities, limited FnF facilities and special offers for the customer, etc., which companies provide these types of facilities customers are very satisfied on that company (Ahsan, 2017). There are some significant variables for customers such as call rate, availability of flexi load/easy load facility, location of the service center, the effectiveness of network, friends & family number facility, network coverage and value extra military facilities that have been selected by Ahsan(Ahsan, 2017).

To alternate purchaser's attitude towards them with the help of mobile phone MMS, SMS, voice, voice call, SMS, video call, etc. institutional market, business market, consumer market even the people's republic of Bangladesh is communicating with their destination audience (Majedul Huq, 2015). The emergence of smart phones and mobile internet as a result of internet services, personal computing and the convergence of mobile telephony (Kenney & Pon, 2011). It hinders them to get amusement from the single operator by increasing the customers' prospects as customer satisfaction is the comparison of perceived performance with the prospect (Latif & Mamun, 2015). Fastest internet package with the lowest call rate and network coverage are the principal attraction of subscribers and because of the fascinating packages offered and communicated by the operators, the financial aspect is getting over priority in customers' choice (Latif & Mamun, 2015).

This study reported that corporate image, price and service quality are determined based on the loyalty through customer satisfaction. To understanding customer attitude at the bottom of the pyramid, another study was on mobilized approach (Ashaduzzaman et al., 2011). With the seven key components of services, mobile phone operators are giving services such as price, promotion, physical evidence, product, place, and people (Latif & Mamun, 2015). In this research, the business innovation model is built based on the existing literature as well as data and information is gathered from the interviews of Bangladeshi mobile SIM operators to identify the pros and cons of mobile SIM company. Therefore, it is a unique and original innovation comparing to others.

2. 1 Conceptual framework

We have made the following conceptual framework based on the existing literature to explore the present services of mobile companies.

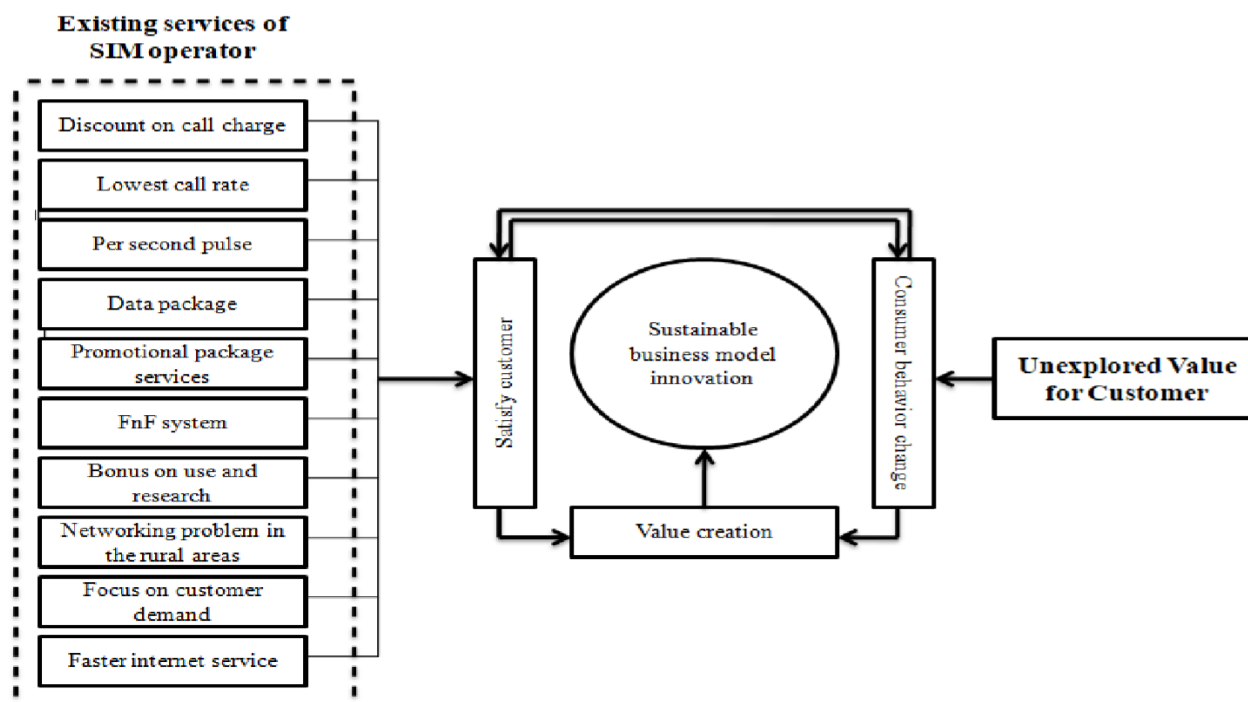


Figure 1: Conceptual framework based on the existing literature

Figure 1 shows that there are some existing services of SIM operator including a discount on call charge, lowest rate, per the second pulse, data package service and promotional package service, FnF system, bonus to use and recharge, networking, service in the rural areas, focus on customer demand and faster internet services, etc. Customers can't receive all of these services together from the SIM operators. Customers are using more than one SIM to get the service they want. Here customers are more concern about the networking service in a rural area. On the other hand, existing customers are switching from one operator to another for getting a discount on call charge, lowest call rate, per second pulse system, more time on data package and promotional package. Customers are switching to other operators when existing operators are failing to fulfill the customer's actual demand. In this research, some unexplored services have been included with the existing services to innovate a business model. By adding these unexplored services with existing services, here customers will be happy and consumer behavior will be changed as well as it will be new value creation and business model will be innovative with sustainability.

3. Objectives

The main aim of the study is to build a sustainable business innovation model for the mobile SIM company of Bangladesh by changing consumer behavior: The more specific objectives are: a) To explore the customer's expectation and perception.

- b) To assess the management of customer satisfaction levels.
- c) To analyze the factors that affect users for switching to another cell phone operator.
- d) To find out the ways of sustainability of existing phone operators.

4. Research Questions

To attain the above aims and objectives, one major research question (MRQ) and three subsidiary research questions (SRQs) have been formulated that will guide the study as well.

MRQ: How a new business model can be innovated by manipulating tactics and consumer behavior changes of SIM operators in Bangladesh?

SRQ1: How can they manage their customer satisfaction levels?

SRQ2: How can customers' expectations and perceptions be explored?

SRQ3: Which factors are affecting for switching other cell phone operators?

5. The methodology of the study

For getting the best results, we have chosen the appropriate methodology which is very important to conduct successful research. Hence, a qualitative method was employed to conduct the research. Case study, direct observation, and interview method were also used in the study. The primary data were collected from five Bangladeshi mobile phone companies' customers and employees. A total of 40 customers and administrators have been interviewed by the interview technique using a questionnaire from March to July 2019. The questionnaires consisted of seven qualitative questions and it was used to check the pertinent issues as well as to know the pros and cons of five mobile phone companies in Bangladesh.

5.1 Methods of gathering data:

Secondary data have been used for the relevant research reports, publications, newspapers, books; websites, etc. A semi-structured questionnaire was prepared with an open-ended questionnaire for gathering primary data. Case study and direct observation methods were also used for the collection of necessary data.

5.2 Interview procedure:

The study has selected Grameen Phone, Banglalink, Airtel, Robi and Teletalk from Bangladesh as the sample for the case study using a purposive sampling technique. The interview was taken with ten (10) phone company authorities and thirty (30) customers.

6. Data Analysis and Findings

The results from the interviewees are similar to each other. It seems that all people use a mobile phone because of their daily needs in this modern era. In recent years mobile telecommunication services are becoming the most dominant service sector in Bangladesh. They have witnessed phenomenal change over the last few years and also brought tremendous change for their day to day's activities to the common people in Bangladesh. Now-a-days, mobile phones are used by almost all age group's males and females. Mobile companies are always trying to keep their market share and even surviving in the highly competitive market by changing consumer behavior. Therefore, it is very important to learn about customer's expectations, perceptions, and satisfaction level and stable in existing phone operators.

Table 1: Profile of the Interviewees (n=40)

Where	Descriptions	Number	How long	When	Descriptions	Number
Five SIM company employees of Bangladesh (GP, BL, Robi, Airtel and Teletalk) through face to face interview	Interviewees		10 minutes per person (Averagely)	From March to July 2019	Interviewees Occupation	
	Male	30			Employees of SIM company	10
	Female	10			Student	19
	Total	40			Business Man	5
					Service Holder	6
&	Interviewees		Insights and views of the customers & employees		Total	40
	20-35	32			Name of the SIM	Number of users
	35-50	8	Customer perspective	Employees perspective	Grameen phone	18
Customers of SIM user in Bangladesh through face to face interview	Total	40	1. International Roaming Facilities for Customers 2. International Messaging and Incoming Call Charge 3. Networking and Internet Facilities for both Rural and Urban Areas 4. Money Paid Service for Job Application 5. Natural Disaster Alert Signal	1. Set Business Strategies 2. Suitable and Lucrative Package for Customers 3. Cyber Security Awareness	Banglalink	11
					Robi	5
	Interviewees Education				Airtel	3
	Below Graduation	14			Teletalk	3
	Above Graduation	26			Total	40
	Total	40				

Table 1 shows that most of the interviewees mentioned that they use Grameen phone and then Robi and Banglalink and other operators are used by very few interviewees. For this research, the primary data have been collected from five mobile phone companies' operators and employees in Bangladesh. The participants were employees of SIM company, students, businessmen and service holders, etc. The questionnaires consisted of seven questions. It aimed to check the pertinent issues and the questionnaires were understandable, clear and comprehensible. According to the customer's view, it was found that Grameen phone is the leading service company that has a 46% market share. Through the customers view it has been found that according to customers and employees perspective there some service gap to innovate a business model with sustainability such as international roaming facilities for customers, international messaging and incoming call charge, networking and internet facilities both rural and urban areas, money paid service for job application and natural disaster alert signal (Customer perspective) and set business strategies, suitable and lucrative packages for customers as well as cyber security awareness (employees' perspective). The interviews have been taken on an average of 10 minutes per person. Total data were collected from 40 interviewees. The interviews have been taken both male and female and thirty-two interviewees were in the age group of 20-35 and eight interviewees age were 35-50. Interviewee's educational qualification was above graduation twenty six-person and below graduation, fourteen people and all interviews were conducted from March to July 2019. As there are some service gaps of SIM Company, therefore every marketer of this service needs to bring a change to increase the new customers and retain old customers as well as to innovate a new business.

6.1 Consumer behavior change of mobile company

We explored how consumer behavior changes of the mobile company. Findings have been illustrated in Figure 2.

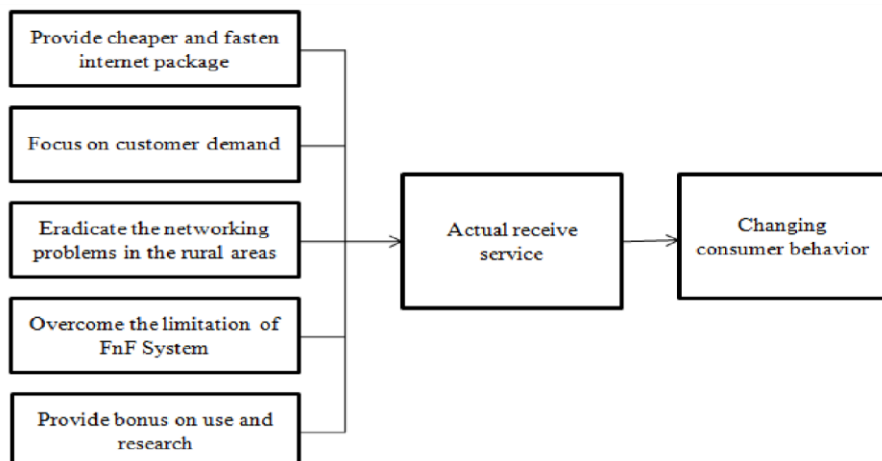


Figure 2. Consumer behavior change of mobile company

Figure 2 reveals that some important attributes to innovate a business by changing consumer behavior for choosing cell phone operators. All customers demanded that they need a good network, good internet facilities, FnF facilities, good customer service, carefully on the customer, etc. But according to the customer perspective, Figure 2 indicates that there are some of the problems to fulfill customer demand. According to the interviewee's perspective, the advantages that the companies are providing are not sufficient for customers to fulfill their demand. To have better facilities, customers always switch to other operators. To change consumer behavior company need to provide cheaper and faster internet package, need to focus on customers demand what they want, eradicate the networking problems in rural and urban areas, overcome the limitation of the FnF system and provide a bonus on use and research. When all of these facilities will provide to the customers, customers will receive the actual service and then the business model will be innovated by changing consumer behavior. Surprisingly, most of the mobile companies are failing to trace customer's expectations and also are unable to fulfill their desired expectations. If the companies can fulfill the above facilities as well as the customer's demand, they could make a business innovation.

6.2 Customer's expectation, perception and satisfaction level

We analyzed customer's expectations, perception and satisfaction levels. However, findings have been explained in Figure 3.

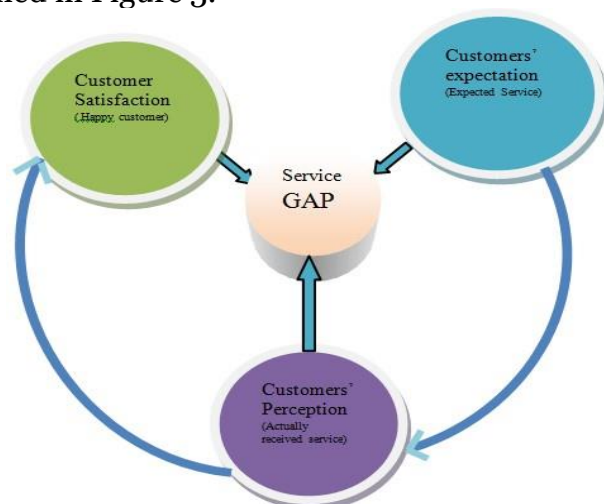


Figure 3: Customer's expectation, perception and satisfaction level

Figure 3 reveals that to fulfill customer satisfaction there are some service gaps between the customer's expectations, perceptions, and satisfaction. Customer expectation represents the expected service and customer perception reveals the received service and when these two demands are fulfilled, Customer satisfaction is fulfilled. In previous literature, the researcher showed some points (e.g. Discount on-call charge, Lowest price, time increase on data package, promotional package, limitation of the FNF system, bonus to use and recharge, networking problem in the rural area, per second pulse and faster internet service, etc.) to fulfill the customer satisfaction but that is not enough according to customer demand as there have many restrictions to use this service. Over the time by different interviewee's perspective, it has been illustrated that there are some gaps to fulfill the customer's satisfaction level that are "international roaming facilities for customers, international messaging and incoming call charge, networking and internet facilities, both rural and urban areas, money paid service for job application, natural disaster alert signal, set business strategies, suitable and lucrative packages for customers and cyber security awareness". Customer satisfaction is the customer fulfillment response that comes from the customer's personal feeling of either pleasure resulting from the evaluation-based response to service. This evaluation comes from customer expected services with the received service by the customer.

6.3 Present Scenario of existing phone operators in Bangladesh

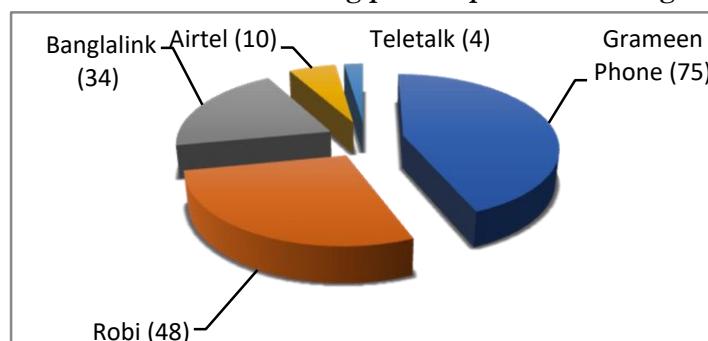


Figure 4: The numbers of subscribers listed on July 2019, Bangladesh Telecommunication Regulatory Commission (BTRC)

Figure 4 shows that the highest number of people (75 Million) in Bangladesh use Grameen phone followed by Robi (48 Million), Banglalink (34 Million), Airtel (10 Million) and the lowest number of people i.e. only 4 million uses Teletalk

6.4 The ways of sustainability for business innovation of the mobile operators

Findings have been pictured in figure 4. We have shown the ways of sustainability for business innovation by adding new services with existing services.

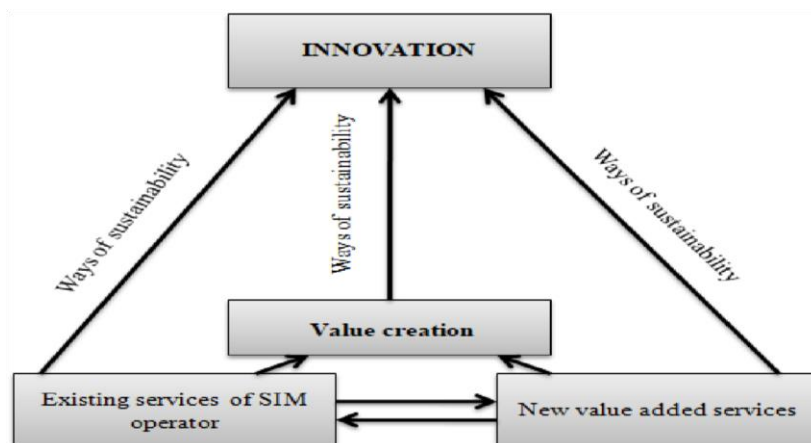


Figure 5: The ways of sustainability for business innovation of the mobile operators

Figure 5 indicates that the ways of sustainability for the business innovation of mobile companies in Bangladesh. The interviewees, both the customers and the employees reported the reason for switching the customers from one company to another company, what are their demands and what kind of benefit they are getting from that company and also noted some solution to find out the business policy for establishing the company.

Also, the emerging companies should follow the Grameen phone and Robi to set their business strategy as Grameen phone and Robi have a strong network facility not only the residential areas but also the rural areas of our country. They have a good business policy for various customers, For instance, different kinds of packages are offered such as international roaming facilities and contributions to sports and society, etc. All of these facilities need to be followed by emerging companies. The new and emerging companies have some limitations such as problems of the FnF system, bonus to use and recharge, networking problem in the rural area, per the second pulse, faster internet facility, etc. They have to develop their necessary services by focusing on the customer's expectation, perception, demand and why people are switching toward other operators. Particularly, the interviewees of this study suggested that the mobile operators should set business strategies, establish strong network facilities, both in rural and urban areas, offer suitable and lucrative packages for customers, provide international roaming facilities, reduce international messaging and incoming call charge, cyber security awareness, natural disaster alert signal and money paid service for job application for the customers to innovate a business model with sustainability.

6.5 Comparison of the mobile operators in Bangladesh

The data gathered from the secondary sources have been noted below in Table 2 to show the comparison among five mobile operators in Bangladesh in terms of the number of users, network, internet, FnF, and SMS.

Table 2: Comparison of the five (5) SIM Companies in Bangladesh

Name of the service	Name of the SIM company in Bangladesh				
	Grameen phone	Robi	Banglalink	Airtel	Teletalk
Number of Users	74.781 million users	47.690 million users	34.539 million users	10.510 million users	3.818 million users
Network	Network qualities are 900 MHz, 1800 MHz and 2100MHz	Network qualities are 2100 MHz and 1.8MHz	Network qualities are 900MHz and 1.8MHz	Network qualities are 2100 MHz and 1.8MHz	Network qualities are 900 MHz and 1800 MHz
Internet	2G, 3G and 4G services with license and also think 5G	2G,3G and 4G service	2G, 3G,4G services	2G,3G and 4G service	2G,3G and 4G service
FnF	1 super FnF (7.5 poisha/ 10 second), 17 FnF (12 poisha/second)	13 super FnF (4.17Paisha/10sec to 2 robu & 10p/10sec to 11 other super fnf)	9 FnF(11 paisha/10 second) and one special 6 paisha/10 second	1 super fnf 0.25 paisha/min) other operators 0.60paisha/min	FnF number (2 teletalk to teletalk 0.25tk/min and 2 other operators 0.90tk/min
SMS	50 poisha / SMS	50 poisha/ SMS	50 poisha/SMS	35p/SMS	30 poisha/SMS

Sources: According to the (BTRC)

Table 2 reveals that the highest facilities providing mobile phone operators are Grameen Phone followed by Robi, Banglalink, Airtel, and Teletalk in terms of the number of users, network, Internet, FnF and SMS systems, etc. For example, Table 2 shows that the highest number of users of Grameen phone is 74.781 million users followed by Robi (47.690 million), Banglalink (34.539 million), Airtel (10.510 million) and Teletalk (3.818 million). Networking facility of Grameen phone is better than others operator that are 900 MHz, 1800 MHz and 2100 MHz followed by Robi (2100 MHz and 1.8 MHz), Banglalink (900 MHz, 1.8 MHz), Airtel (2100 MHz, 1.8 MHz) and Teletalk (900 MHz, 1800 MHz). Internet facility on Grameen phone is also good where Grameen phone users can use the internet facility accordingly 2G, 3G and 4G with license and also they are thinking about 5 G. On the other hand, Robi, Banglalink, Airtel and Teletalk user can use the internet 2G, 3G, and 4G service respectively. About the FnF system, Robi service is better than the other operators that are 13 super FnF (4.17Paisha/10sec to 2 Robi & 10p/10sec to 11 other super fnf). In the case of SMS, the Teletalk operator is better than the other operators that are 30 poisha/SMS. After all, table 2 illustrates that Grameen phone operator is providing better service within all of the operators.

7. Managerial implications of the study-based results

The data received by the customers and company employees 'perspective which have been illustrated in Fig.6. Customers and employees noted that some services are not providing the companies. They are also facing the problems of networking and internet facilities for both rural and urban areas. They expressed their satisfaction that per second pulse system and the faster internet in the urban areas are a little bit well.

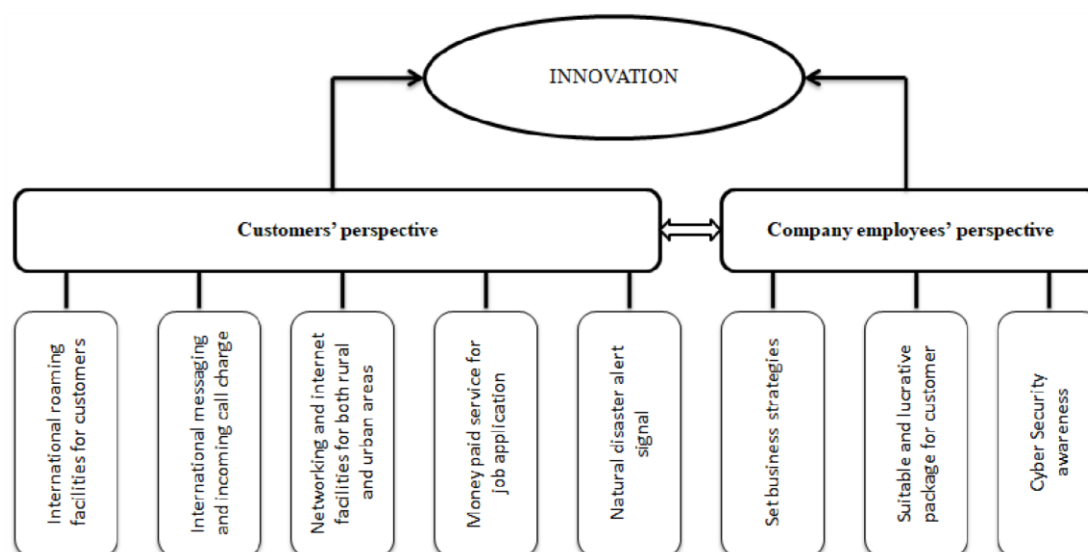


Figure 6: Business innovation perspective by customers and companies employees

Fig. 6 shows that there are five points which dominate customers' perspectives such as international roaming facilities for customers, international messaging and incoming call charge, networking and internet facilities for both rural and urban areas, money paid service for job application and natural disaster alert signal, etc. and employee's focusing points are set business strategies, suitable and lucrative package for customers and cyber security awareness etc. According to interviewees, it was found that most of the customers were focusing on a wide and strong network in rural areas. Through the interviewees, it was also found that there were the network and internet facility in the capital city but when they go to rural area, they don't get the network and internet facility properly, don't have natural disaster alert system, bonus facilities have time limit, for this reason, people can't use the bonus comfortably. By finding the problems and to overcome the present situation proposed businesses innovate model have been created. Furthermore, it is essential to focus and solve the present demand of customers which we mentioned in this study. Therefore, we can hope that by using this proposed model the customer will be happy, switching tendency will be reduced, consumer behavior will be changed and the new value will be created. By new value creation, the customer will be increased, a new business will expand and new employees' opportunities will be created as well as social and economic development will happen. Finally, we can say that this proposed business model will play a vital role to remove the present situation of mobile SIM companies and will bring economic development to society.

8. Conclusions and Suggestions

The study aimed at carrying out business innovation by manipulating tactics and changing consumer behavior on mobile phone operators in Bangladesh. The study found that telecommunication has brought a tremendous change in the day to day activities of common people in Bangladesh and mobile phone has become a part of the country's culture from upper class to lower class people in Bangladesh. It is also observed that people of all walks are using the mobile phone for communicating with the nearest one and their occupational purposes. The study found the customers and employees gave more importance on set business strategies, establish strong network facilities, both in rural and urban areas, offer suitable and lucrative packages for customers, provide international roaming facilities, reduce international messaging and incoming call charge, cyber security awareness, natural disaster alert signal and money paid service for job application. It has also found that similar causes of switching

tendency as before. Therefore, every promoter of this service needs to bring a change to increase the new customer and retain the old customer as well as to improve their business. The insights and views from the mobile SIM Company's employees and customers of Bangladesh are the original ones. The proposed business innovation has been shown below in Fig.

7.

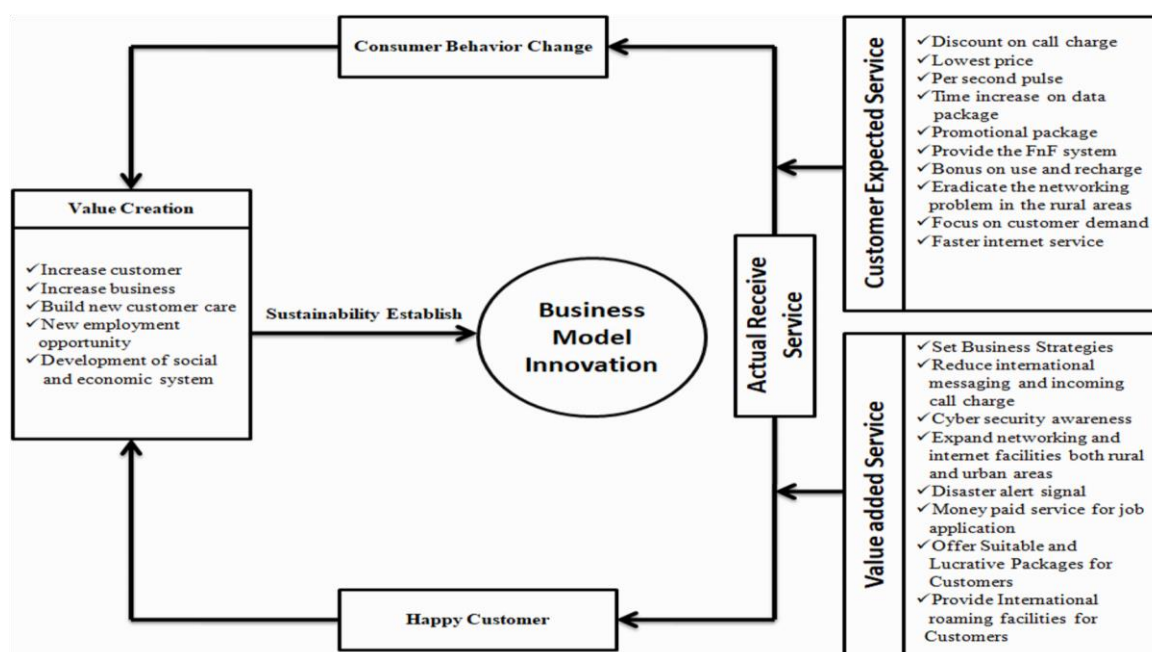


Figure 7: Proposed Business Innovation Model

Fig. 7 indicates that the top of the right side (customer expected services) indicators of the proposed model present the existing facilities of mobile company operators. For instance, they are offering discount on-call rate, lowest price, per second pulse, time increase on data package, faster internet service, bonus on use and research, strong networking facilities, FnF system, bonus on use and research and promotional package which is reveal the actual services that the clients are receiving at this moments. The bottom of the right side indicators of the model shows the innovative business activities of those mobile phone companies that are revealed as a value-added service. After receiving these two services (customer expected service and value-added service), customer will receive the actual service and also expect the following services: customer behavior will be change and the rate of customer will be satisfied and then new value creation will be created as well as the number of customers will be increased; the business activities will be enhanced; customer care with new concentration will be introduced; new employment opportunities will be created; as a result, the overall development of social and economic system will have happened and sustainability will be established. Furthermore, these innovative activities will be regarded as the recommendations or suggestions which will be applied for the solutions to the existing problems of mobile SIM companies in Bangladesh. Besides, the present research will bring a variety of communication channels for promoting mobile SIM companies, overcoming the barriers where it is needed. We think that the company should solve these entire problems to fulfill the customer demand, which will be more helpful for not only the customer but also for the mobile companies.

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