CONSUMER PREFERENCES ON MOBILE SIM CARDS: A STUDY CONDUCTED IN URBAN WEST BENGAL

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ABSTRACT

There is a huge upsurge in the current telecommunication market in India due to several reasons. Urban market is almost penetrated by all the national & international players but still the rural market is not yet pierced as compare to urban market. The 70% of population in India are staying in rural India only. So, naturally all the marketers will try to enter the market & want to grasp it as soon as possible. It is an accepted fact that India has tremendous potential for development of mobile services & related products. The study aims to determine the consumer preferences at the time of buying a SIM Card of a particular mobile service provider and identifying the most important attributes & sub-attributes at the time of buying a SIM Card on urban West Bengal. The area chosen for the study is West Bengal, which comprises most prominent urban areas namely Asansol, Malda, Siliguri, Kolkata and Kharagpur. It also gives the ideas to deliver a desired combination of various features with adoption of new technologies. Conjoint analysis has been used for this purpose with SPSS 21 with 200 sample size in various urban areas of West Bengal, which estimates the consumers' preferences with the help of different pre-specified factors to find out which is the most preferred attribute by the consumers.

Keywords: Customer preferences, Conjoint Analysis, Smartphone, 4G, SIM Card

Introduction

Worldwide growth in economies & population explosion gave an opportunity to the marketers to market their products or services. Due to technological advancement, globalization and with many other factors, over the years, world telecommunication industry is improving like anything. Rise in economy & ever increasing population in worldwide is providing rapid growth in the telecom sector. According to the world telecom market the various continents figure in billions are given below.

Global Telecom Market (Figures in Billions)

2011 ▨   2014 ▨   2017 ▨
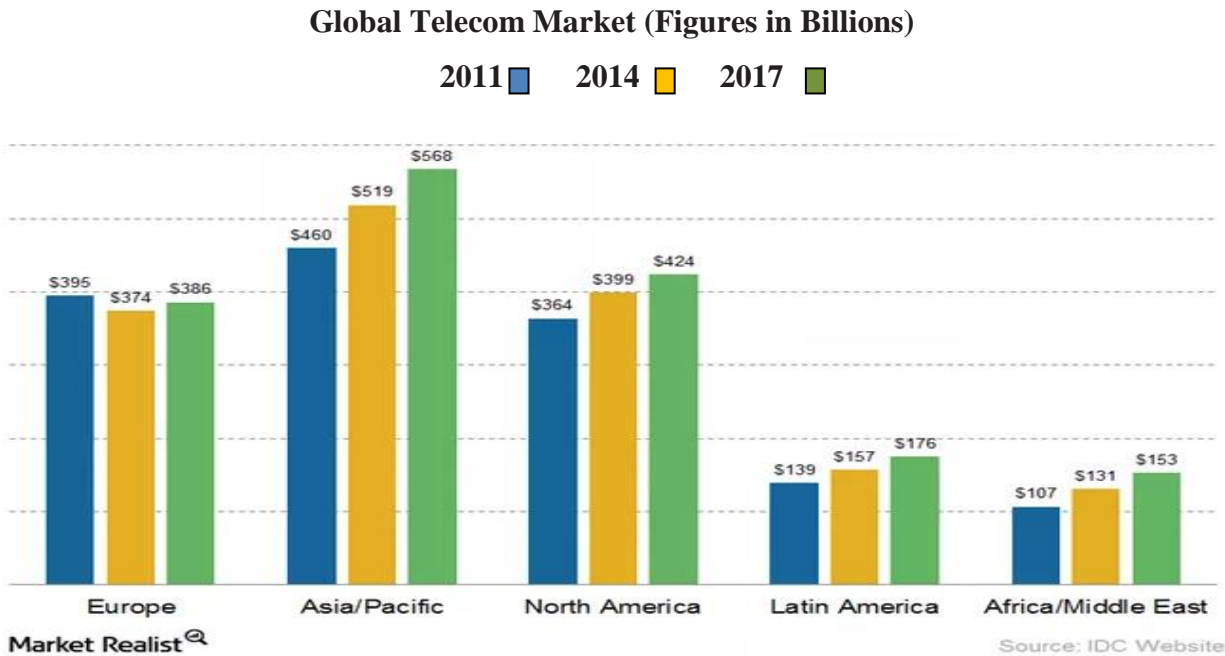
In 2014, only in Europe 80% of population were unique mobile subscribers where as 39% of population of sub-saharan region of Africa were unique mobile subscribers. The analysts expressing that mobile market will grow like anything in the developing nations especially from 2015-2020. If we look at the figure it is showing that Asia/Pacific area is improving like anything in all the years since 2011 and it is yet to improve a lot. It is now a true fact that in world economy the global telecom market has took a major role. Telecom companies like Vodafone, SBC Communications, Bell South, AT&T, Verizon, Quest Communication etc is trying to take the advantage of huge growth in world telecom market.

The ever growing population in world & advancement of technologies is always providing the opportunities to telecom companies to sell their services in remotest areas of world. Nowadays it has become a challenge to the telecom companies to retain the customers & improving the telecom infrastructure.

The stupendous growth in Indian telecom industries in last 15 years made a history. In early 1990's the economic condition of India was in restructuring phase & some policies implemented by the Indian Government at that time has suddenly changed the economic condition in India. In 1991, after implementing the policies in the LPG era which also called as Liberalization, Privatization & Globalization era, the private companies has invested more & more money in India. With other sectors the telecom companies has also came into the market with various mobile phones & day by day the popularity of mobile phones & allied services has been increased. Today India is having second largest customer base after China & it is competing with everyone in the world.

Review of Existing Literature

Bloemer et al. (1998) identified that the switching cost as a crucial factor for customer loyalty in the market. Differentiation of the service will increase perceived switching cost. The change shifts competition in GSM sector from price and core services to value added service is used as a weapon to generate the customer loyalty.

Woo et al. (1999) explained that customer satisfaction and perceived value were found to be important background of customer loyalty. From the studies it has been revealed that the customer satisfaction is affected by customer loyalty not the service quality, where customer satisfaction played a significant role in the mediating relationship between the others and customer loyalty and it is directly enhancing the customer loyalty also. Prior research has demonstrated that the customer satisfaction is the most important factor and the impact of customer satisfaction on customer retention. The whole effect of perceived value on customer loyalty was smaller than the previously mentioned factors. Based on the results the researchers have studied an exploratory factor analysis of 20 attributes, four determinants in order of importance were envisaged. They are transmission quality and coverage of the service providers' network, different policies on pricing, staff are competent enough or not, customer service etc. The result suggested that network providers should focus more on the basic features like transmission quality and network coverage as the main attributes of their service offering and formulate appropriate pricing policy, rather than competing or, customer service and other supplementary services.

Bhatnagar (2000) in his paper presented at India Telecom Conference elaborates about present & future prospect in future in rural India in the context of information & communication related technologies. It is also been described in the context of access of telephone, Internet and other electronic media in the rural areas of India. The access in context of information & communication technology is not up to the mark and it require huge investments from the Government or from the private sectors to cover large parts of rural India which is having very small or no access to the recent communications facilities. The paper proposes a framework which requires a micro level analysis to find out the solution of the particular problem in rural areas. The paper also argues that a uniform approach like how to improve a universal service obligation is needed to find out as a part of granting the licenses on regional basis may not be feasible for a country like India which is very big in size with variety of culture. Rural areas with noteworthy activity related to economic growth have to treat differently from remote places and economically backward regions in different parts of the country. A positive policy is needed to complete this framework properly which encourages huge investments in infrastructure, which is much needed in rural areas. The nature of support for different rural regions in the country will be based on the cost required to providing the access; the probability for earning revenue and the institutions/organizations which can deliver a valuable service in rural areas.

Bhatty et al. (2001) illustrated on their article that customer satisfaction is having a positive significant association with customer retention. If the customers are satisfied with the services provided by service providers then they will retain themselves in the same brand as well as they will motivate others to use the services. There are various factors like original information about products, delivery promises, consistency, able to handle any problem etc are directly affecting the customer retention. Price, call quality & customer support are the main key factors whose workability depends on customer satisfaction. If these factors work properly in an organization then customers will be satisfied for sure.

Khatibi et al. (2002) in their research study illuminated that what the factors are mainly driving a customer to be loyal with the company. The study has been conducted in Malaysia with the statistical tool like ANOVA, t-test & correlation analysis to find out the result. The study reveals that restoration time, response time etc is having a strong association with the customer satisfaction & it is also true that the high impact customer satisfaction always does not mean the customer loyalty.

Aoki et al. (2003) described that students use mobile phone for various purposes. Both qualitative & quantitative techniques has been used & it has been identified that the college students uses the cell phones for various purposes like to keep in touch with friends & family members, for financial benefits, safety, information access etc. The focus group interview has been taken with 32 college students & based on the interviews with the help of attitudinal & motivational statements a well structured questionnaire has been designed. 137 students have given the responses to the questionnaire. The study reveals that length of ownership of a cellular phone is significantly associated with the necessity of keeping a mobile phone.

Aydin et al. (2003) elucidated that customer loyalty is dependent on following factors like trust, corporate image, service quality, switching cost etc. Loyal customers are those who will buy more, do the repeat purchase, even by the services in higher price, will say positive words about the survey etc. The study has been conducted in Turkey with 1622 samples & structural equation modeling has been used to find out the result. The result reveals that perceived service quality has a correlation with customer loyalty but not in sufficient condition.

Caruana (2004) mentioned in the research article that switching costs are always having an influence on customer loyalty. The data are mainly collected from the corporate clients to conduct the survey & canonical correlation analysis has been used to find out the result. The result reveals that few dimensions of switching cost is always have an effect on few dimensions of customer loyalty.

Karine et al. (2004) explained in their research article that the pricing effect on different subscribers base diffusion. The study conducted in Finland & a logistic model has been implemented to complete the survey. The findings reveal that mobile prices & their call rates do not have a significant impact on diffusion of mobile subscription.

Blery et al. (2006) illuminated that what the factors are mainly influencing a customer when they are going for repeat purchase. The study has been done in the context of Greek telephony market. Quality of services, service value & customer's satisfaction level are the major factors which influencing customers' repeat purchase. 4 four group interview has been conducted & a well structured questionnaire has been provided to 400 customers. The study reveals that if the customer is ready to go for repeat purchase then that means the customer has became loyal to that particular brand.

Objective of the study

- To identify the most important attributes & sub-attributes at the time of buying a SIM Card.

Research Methodology

The major parts of the Research Methodology are:

1. **Research design**

A research design provides the framework to be used as a guide in collecting and analyzing data. For this study the researchers have used **Descriptive Research** and the type of research design is **Cross-sectional**. Cross-Sectional design is a one-shot research study at a given point of time, and consists of a sample (cross-section) of the population of interest.

2. **Sources of data**
   a. **Primary data:** The primary data has been collected for the study through a pre-tested questionnaire. The sampling method the researchers have used is two stage cluster sampling and the respondents will be extracted from the five divisions of West Bengal.
   b. **Secondary data:** Secondary data are those which will be collected from doctoral theses, magazines, research articles, credible sources etc. Researchers have collected information from different sources to conduct the study effectively.

3. **Sampling plan**

Samples are always subsets or small part of total number that can be studied. It is a portion selected from population/universe which should have same features as that of population. In this study researchers have collected the samples from the urban consumers of West Bengal.

- **Sampling size & design:** The study area have comprised of five divisions of urban West Bengal. Two stage cluster sampling method has been used to collect various perceptions of subscribers of different mobile service providers in West Bengal. The researcher have distributed 250 questionnaires among various respondents and 200 properly filled up questionnaire has returned back to the researcher.

The study area have comprised of five subdivisions of urban West Bengal which represents all the five divisions, which means the whole West Bengal. Two stage cluster sampling method has been used to collect various perceptions of subscribers of different mobile service providers in West Bengal. From the five divisions of West Bengal, researchers have collected the responses from 125 respondents, out of which 25 respondents from each division has been chosen randomly & it has been selected with the help of random number table. The sample size along the various divisions has been shown in the table below:

West Bengal (200 respondents)				
Burdwan Division (40 respondents)	Malda Division (40 respondents)	Jalpaiguri Division (40 respondents)	Presidency Division (40 respondents)	Medinipur Division (40 respondents)
-Asansol -Durgapur -Burdwan -Dankuni	- Malda - Baharampur - Murshidabad - Dhulian - Raiganj - Balurghat -Jangipur	- Cooch Behar - Siliguri - Darjeeling - Alipurduar - Jalpaiguri	- Kolkata - Habra - Shantipur - Ranaghat -Krishnanagar -Nabadwip -Chakdaha -Basirhat -Bangaon	-Kharagpur - Haldia - Medinipur -Purulia -Bankura
Asansol	Malda	Siliguri	Kolkata	Kharagpur

4. **Questionnaire design:**

A simple, easy to understand questionnaire consisting of **close ended** questions has been used for data collection from rural subscribers.

Data Analysis & Interpretation

Demographic Profile of Consumers

Demographic Profile		Frequency	Percentage
Age	Below 25	24	12
	25-35	57	28.5
	36-45	83	41.5
	Above 45	36	18
Income	Below Rs 20000 pm	22	11
	Rs 20000-25000 pm	80	40
	Rs 25000-30000 pm	78	39
	Above Rs 30000 pm	20	10
Profession	Student	33	16.5
	Service	97	48.5
	Business	21	10.5
	Professionals	49	24.5
Gender	Male	122	61
	Female	78	39
Education	Below UG	06	3
	UG	115	57.5
	PG	79	39.5

Researchers have collected the data from 200 respondents of different backgrounds from the society. Age wise most of the data collected from the 25-45 yrs category & it explains 70%. In the income group most of the respondents are from Rs 25000-30000 category with 39% of data & the category from Rs 20000-30000 pm explains 40% of total respondents. Profession wise service class people have explained 48.5% alone whereas in Gender class Male dominates the response with 61%. In the last category named education explains the UG category with 57.5% & PG category with 39.5%.

There are various attributes which affect the decision making at the time of purchasing a SIM card but the researcher have chosen six main attributes. These are:

1. Network Connectivity

2. Tariff Plans

3. Customer Services

4. Value Added Services

5. Variety of Plans

6. Brand Name

From these main attributes the researchers have made 22 different profiles combining various sub attributes. Now the consumers have given different responses in different profiles and ranked them accordingly. The six attributes have different sub-attributes which has been mentioned in the below mentioned table.

Attributes	Sub-attributes
Network Connectivity	- Low call drop - Wide area of coverage - Low congestion
Tariff Plans	- Call rates - Internet charges - Variety of tariff plans
Customer Services	- Resolution of queries - Customized information - Complaint handling
Value Added Services	- Ringtones / Caller-tunes - Services like jokes, astrology and so on - Daily updates about news, sports and so on
Variety of Plans	- Postpaid - Lifetime - Prepaid
Brand Name	- Airtel - Vodafone - Jio

Now the researchers have done the Reliability & Validity test for further steps to conduct the research further.

Reliability & Validity

<p align="center">Correlations^a</p>

	Value	Sig.
Pearson's R	.918	.000
Kendall's tau	.892	.003
Kendall's tau for Holdouts	.709	.007

a. Correlations between observed and estimated preferences

The researcher considered the correlations where Pearson's R (.918), Kendall's Tau (.892) & Kendall's Tau for Holdouts (.709) all are providing quite significant values. Both these values are reasonably high and these results are significant at 5 percent level of significance.

The researcher has used four stimuli as validation or holdout stimuli to determine internal validity. Parameters from the estimated conjoint model (using 18 stimuli) were used to predict preferences for the holdout set of stimuli and then they were compared with actual responses by calculating correlation. Considering the Correlations table, the researcher has found out that value of Kendall's tau is 0.709 for the four holdout cases. This value is significantly high (asymptotic significance = 0.007). So, from the table the researcher is claiming that the conjoint model has high predictive accuracy and internal validity.

Overall Statistics & Findings

Utilities

Attributes	Sub-attributes	Utility Estimate
Network Connectivity	• Low call drop	0.332
	• Wide area of coverage	-0.757
	• Low congestion	0.425
Tariff Plans	• Call rates	0.356
	• Internet charges	0.351
	• Variety of tariff plans	-0.707
Customer Services	• Resolution of queries	0.234
	• Customized information	-0.885
	• Complaint handling	0.651
Value Added Services	• Ringtones / Caller-tunes	0.889
	• Services like jokes, astrology and so on	-0.456
	• Daily updates about news, sports and so on	-0.433
Variety of Plans	• Postpaid	0.021
	• Lifetime	-0.879
	• Prepaid	0.858
Brand Name	• Airtel	0.441
	• Vodafone	-0.953
	• Jio	0.512

In the Utilities table the researcher has found that Jio is the most preferred brand by the consumer in the Brand Name category followed by Airtel & Vodafone. In the Variety of Plans category the most preferred sub-attribute is Prepaid followed by Postpaid & Lifetime. In the next category named Value Added Services the most preferred sub-attribute is Ringtone or caller-tunes. The next most preferred sub-attributes in this category are Daily updates about news, sports and so on & Services like jokes, astrology and so on respectively.

In the Customer Services category most of the consumers are rated in Complaint handling category. In this category the next most preferred option consumers have revealed are Resolution of queries & Customized information.

In the Tariff Plans category most of the people has voted for both Call rates & Internet charges because the utility estimates are very near to each other. But according to the result the call charges sub-attribute is slightly preferred compared to internet charges. Variety of tariff plans came up as a last choice in this particular category.

The last category named Network Connectivity, everyone want Low congestion in the network so they can speak properly to others without any interruption. Low call drop & Wide area of coverage is the next two sub-attributes in this particular category.

The next table termed as Importance values table will describe that which attribute is the most influential.

Importance Values

Network Connectivity	26.98
Tariff Plans	21.24
Customer Services	17.59
Value Added Services	8.57
Variety of Plans	6.39
Brand Name	19.23

 Averaged Importance Score

Now, the important part of research where it explains the most preferred attributes of mobile SIM cards in urban West Bengal. According to the relative importance table the most preferred attribute by the consumer is Network Connectivity Then the next most preferred attribute is Tariff Plans and the third most important attribute is Brand Name. Customer services have become fourth in ranking and fifth & sixth are Value Added Services & Variety of Plans consecutively. The least preferred attribute is Variety of Plans.

According to the study the researcher has found that Network Connectivity is the most important attribute because the consumers of various mobile SIM cards are not so much price sensitive rather they are quality conscious. That is why Tariff Plans has come in the second position after

Network Connectivity. Brand Name is the next important category but it comes after network connectivity & tariff plans. Customer services are not so much important & that is why most of the consumers have rated as a fourth important attribute. Value Added Services has also get less preference because due to the emergence of internet people are mainly using various browsers or mobile applications to know the news or cricket match scores. Variety of Plans has become the least preferred option because most of the customers are happy with both prepaid & postpaid options.

Limitations

- Researchers claiming that limited time period and budget are definitely the limitation of the research.
- However the study was restricted to few cities of West Bengal, only selected region of these cities was considered for the research, thus neglecting the views of other respondents in other parts of West Bengal.
- A limited sample size of 200 was considered by the researchers for this study.

Scope for Further Research

- The future studies can be done increasing the sample size.
- This study is explaining that what the consumer preferences are at the time of buying various SIM cards in five cities of West Bengal only. There always been a chance of different perceptions about mobile services on different regions of India where living pattern, income level, social life etc will be different. So further researches on this issue should be done.
- The current research is based on only six attributes but still some other attributes might be there which can affect the consumer buying behavior directly/indirectly.

Conclusion & Suggestions

This paper attempts to provide the consumer preferences, with information about specific attributes to be incorporated by the mobile service providers to sustain in the market. The study focuses on the relative importance by the six salient attributes of mobile services. The Conjoint Analysis results reveal that the companies need to focus on creating the Network Connectivity

among the consumers. They also need to focus on various technical specifications to increase the coverage area and reduce the call drop. Tariff plan is the second important parameter in this study. If, the companies are providing good services then the consumers are ready to pay. But it is also visible from the study that VAS & variety of plans are also not going to help the companies. Companies need to concentrate mainly on basic features to sustain in the market for long run. It is also proved that Brand Name does not have that much of affect on consumer choice. Even consumers are OK with customer services. So, if the companies will concentrate on core features rather than add on features then they will be quite beneficial in near future.

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