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An Empirical study on the customer satisfaction of selected Telecom Service Providers in India

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Abstract:
Telecom services are the need of modern day society. The companies in the telecom sector are facing cut throat competition in the market. The major players are coming up with new plans and lucrative offers to satisfy the customers. In the present study customer satisfaction in telecom sector has been measured by asking the customers about satisfaction for offers and promotions, signal coverage of the operator, relationship with the service provider and the service charges. The customer satisfaction also depends upon the support and service provided by the telecom operators to its customer. The same has also been studied in this paper. The correlational and regression has been applied.

Introduction:
Customer satisfaction is one of the most important elements for the success of any organization and the telecom sector is no exception. Also customer satisfaction has been used as measure of the non-financial measure of the organization. So in the current research customer satisfaction has been taken as one of the element. The customer satisfaction depends upon the various factors such offers and promotions, signal coverage of the operator, relationship with the service provider and the service charges. The support and service provided by the telecom operators to its customer is one of the major elements to examine the customers' satisfaction.

Literature Review:
The Indian perspective was presented by Balaji (2009) stating that the financial crisis of the late 1990's adversely affected the growth rate of telecommunication industry of India. After that, companies are trying to entice the customers through various price offerings as well as quality services. They carried out the study to evaluate the perception of customers about the price tolerance, customer satisfaction and the other significant aspects like trust on service provider to stay loyal to a particular telecommunication service provider. Random sampling was employed and about 199 post-paid mobile customers were surveyed in differing cities of India. It was found

that quality of service provided play vital role in choosing the telecom service provider as well as staying loyal to the same. Moreover, customers also consider that once they are satisfied with the quality of services their tolerance towards price is enhanced, which reflects positive implications on consumer trust and loyalty for a telecommunication service provider in India.

VIJ (2012) gave his opinion about the telecommunication service providers in Himachal. The gaps in service quality were ascertained by them and their determinants were also identified. Primary data was collected through structured questionnaire. About 50 respondents using mobile cell phones were surveyed at Baddi, Distt Solan of Himachal Pradesh. Analysis of data revealed that efficient staff with competence and skills must be recruited by the telecom companies to technically handle the situations. Moreover, customers feel that service providers must respond to their queries and must also pay attention to the service quality.

Geetika et al. (2012) gave a detailed view about the perception of the Indian customers about the telecom companies. About 300 customers were surveyed in the State of Uttar Pradesh to know about the perception and attitude of the customers. It was found that mobile companies must carefully choose the marketing strategies in order to grab the market share.

Bhandari & Kaur (2013) stressed on the point that satisfaction of the customers in the telecom industry is of prime importance and that it reduces the switching behavior among them. They carried out their study in Chandigarh, Mohali and Panchkula involving 170 customers of various service providers such as Idea, BSNL, Vodafone and Airtel. It was however found that effective marketing strategies must be adopted by these companies in order to maintain the customer base and to keep a hold on the customers.

While VIJ (2012) gave an Indian perspective, Rahman (2012) also presented his views about foreign nation. He attempted to discover the factors that are considerably affecting telecom customer’s perception in Dhaka city of Bangladesh. 450 telecom customers were surveyed in Dhaka to elucidate their perception pertaining to the influential factors. This exploratory study revealed that outlook of the customers varied in terms of service quality, corporate image and their satisfaction. Service delivery was found to be of major concern among customers. Service quality included the quality of network provided by the service providers. It was recommended that due emphasis must be given to the service quality to attract the customers in Bangladesh.

Kushwah & Bhargav (2014) explicated the need to comprehend the opinion of service quality of customers and their anticipations. They carried out a study to examine the variance in service quality of Telecom sector in terms of consumers’ anticipations and opinions concerning mobile phone services. The study was carried out in New Delhi involving 500 respondents. Statistical tool of ‘Z’ test was employed to analyze the data which exhibited that there was a statistically substantial variance between customers’ anticipations and opinions of mobile phone services. Moreover, it was implicated that companies must focus on service quality in order to survive in the stiff competition.

The purchasing behavior of cellular service was highlighted by Ahmad & Ahmad (2014) in Pakistani environment. Pakistan is one of the emerging nations of the world with its cellular service industry growing at a considerable rate. Moreover, there are varieties of choice available for Pakistanis when they choose a cellular service provider. Thus, Ahmad & Ahmad (2014) directed a study involving 263 responses to ascertain the directing factors that influence the buying actions of mobile consumers in Pakistan. It was however found out that selection of cellular service provider rest on the kind of occupation of the customer. Moreover, the results also depicts that good or bad quality does not form the decision making base for the people belonging to Islamabad/Rawalpindi. Rather they lay emphasis on price, advertisings and communal aspects.

A Nigerian viewpoint was presented by Samuel & Olatokun (2014) by scrutinizing perception of mobile telecommunication users' with respect to service providers. The study was commenced with intent to determine whether information facility and promotion and demonstration of services will considerably influence the opinion of the telecom users.MTN, GLO, AIRTEL, and ETISALAT were the service providers that were involved in the study. About 626 respondents were surveyed which revealed that users of MTN and GLO mentioned their corresponding providers undesirable with respect to providing essential information as well as the demonstration of their merchandises in protmoion.

In the same year, perception of the customers towards a public sector telecom company was clearly demarcated by (Menon, 2014). Various characteristics of customer behavior particularly gratification, reasons, motive, its influences in telecom sector with recommendations was studied and presented in the research. It was proposed that customer gratification is the ultimate aim of every company. About 125 houses of Pampadygrama-panchayath of Kottayam district were surveyed. The results of the study indicated that most of respondents are satisfied with the service provided by BSNL. They are also pleased with the call rate of BSNL in comparison with other service providers.

KwabenaAdjei & Denanyoh (2014) carried out a study to examine the elements of brand equity among mobile telecom users in BrongAhafo Region of Ghana. Mobile telecommunication providers play a significant role in reinforcement the economy and inspiring the effectiveness among a large number of mobile subscribers across the globe. The accomplishment of any corporate is influenced by the strength of their brands, which entices novel and current customers for incessant growth. Six mobile telecom providers were found to be operating in the market of Ghana namely, Vodafone, Airtel, MTN, Tigo, Glo, &Expresso. About 200 residents of Sunyani Municipality were involved in the study out of which only 194 responses were obtained. The results of the study indicated that the factors that have significant positive relationship to customer loyalty are call rate and call quality, network coverage and sales promotion. Moreover, the study also revealed that brand image and rapid customer service were perceived to have a minimal impact on customer loyalty.

In the above section, the scholar mentioned about the empirical studies undertaken by various scholar exhibiting the perception of the customers about the current service provider in telecom sector.

Sampling Plan

The sample size can be determined after studying population and percentage of accuracy required such that a sample size representing population is able to provide that desired level of accuracy. In usual cases, a population targeted is very huge and thus, exact population is not used but a group of people or associations are considered with formation of representative sample.

For the current research, the target market is NCR which has a population of 46,000,000 approximately with 99% confidence interval and 4% of Marginal errors, the sample size comes out to be 1041 (Sarma, 2012) and thus, an approximate sample size of 1000 has been determined for conducting survey on consumers in the region. However in total 1094 forms were filled from the customers. Some of the forms were not complete and some of the respondents do not return the forms. So, the total number of customers included in the study becomes 1000. The primary research involve consumers as participants of a survey where they would be asked about their perspectives on the voice and data services provided by the Indian Telecommunication companies within Delhi NCR region.

Brief Profile of the selected companies

a) BhartiAirtel

BhartiAirtel is one of the leading telecommunication company which has its network in 20 different countries around the world. In terms of the number of subscribers BhartiAirtel is the leading telecom operator in India while globally it ranked third. BhartiAirtel offers various services to its customers which includes wireless service (2G, 3G and 4G) , High speed broadband servie , Direct to Home (DTH) services and fixed line services. As per the latest annual report BhartiAirtel has more than 324 million customers all around the world. Total revenue of BhartiAirtel in 2015 has been recorded as Rs 920.4 billion and 16.1 % of the total spectrum market share(Bharti Airtel, 2015).

2) **BSNL**

Bharat Sanchar Nigam Limited (BSNL) is the government owned Telecom Company in India which was incorporated in 2000. BSNL. The main vision of BSNL is to become one of the leading telecom operator in India and also create the organization which is focused on providing quality service to its customers. Currently BSNL has the capacity of around 43.74 million of basis telephone and 72.60 million of GSM capacity. Similarly BSNL is only telecom operator which is focused on filling the digital gap between the rural and urban. However BSNL has not been able to perform well financially and it incurred loss of Rs 8234.09 crore in 2014-15(BSNL, 2015).

3) **Idea Cellular**

Idea Cellular is one of the leading telecom service provider in India which is one of the subsidiary of the Aditya Birla Group. Idea offers both the 2G and 3G services to its customers and is in the process of launching the 4G service for which it has already won the spectrum. The main mission of Idea is to delight its customer along with meeting the individual communication anytime and anywhere. As per the latest annual report Idea has around 104778 2G sites and around 21381 high speed sites. It also owns more than 82000 kilometer of fiber, which helps to provide quality voice and data services to its customers(Idea Cellular, 2015).

4) **Reliance Communication**

Reliance Communication is one of the subsidiary company under the Reliance Group which is one of the largest business houses. Reliance communication has the customer base of around 118 million. It offers both the voice and data service to its customers along with the other wireline services. The main mission of the company is to become one of the world's leading service provider in the communication sector. The total revenue of the company during 2014-15 was Rs 22098 crore with net profit of Rs 620 crore(Relaince Communication, 2015).

5) **Tata communication**

Tata communication is a global telecom operator operating in more than 30 countries around the world. As per the latest report the total value is around $ 3.2 billion and it is one of the subsidiaries of the Tata Group. The total assets of the Tata communication was Rs 180534 million in 2015 and the EBITDA for the same period was Rs 18080 million. More than 70 % of the revenue for Tata communication is generated outside India and more than 1600 telcos use the network of Tata communication to provide the their services(Tata Communication, 2015).

6) Vodafone Cellular

Vodafone Cellular with its 194 million customers in India is one of the leading telecom operators. The main vision of the Vodafone is to become the communication leader and help in the connecting the world. In India Vodafone have more than 130000 sites out of which 35000 are the high speed 3G sites. The total revenue of Vodafone was Rs 42352 core with growth rate of around 12.6 % as compared to the previous year. Total profit of Vodafone during 2014-15 was Rs 12605 which was 29.6 % higher than the previous year(Vodafone Cellular, 2015).

Descriptive Analysis

Descriptive analysis provides the overview of the collected data. In the descriptive analysis the demographic profile of the respondents has been included such as age, gender, educational qualification and their current occupation. Analysis of the demographic profile helps in determining whether the respondents included in the study are relevant to the current study or not. Results of the demographic profile have been presented below:

Age of the respondents

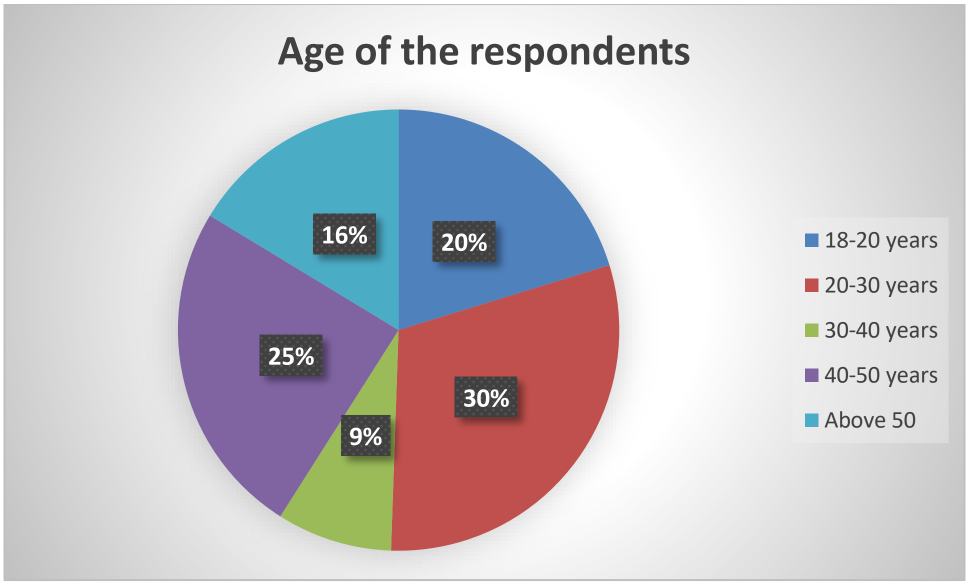

Figure 1 Age of the respondents

Age of the Respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
18-20 years	201	20.1	20.1	20.1
20-30 years	308	30.8	30.8	50.9
30-40 years	84	8.4	8.4	59.3
40-50 years	245	24.5	24.5	83.8
50-above	162	16.2	16.2	100.0
Total	1000	100.0	100.0	

Table 1 Age of the respondents

As shown in the above figure most of the respondents were in the age group of 20-30 years (30 %) which was followed by the respondents in the age group 40-50 years. Results also show that only the proportion of respondents in the age group of 18-20 and above 50 was 20 % and 16 % respectively. This shows that most of the telecom customers in the Delhi NCR region are mostly in the middle age population. However the results for the demographic profile are largely dependent on the sample selection. In this case since the random sampling technique was used to collect the data and the sample is also quite large the sample is expected to represent the true population. According to the 2011 census out of the total population of more than 16 million 66.6

% of the population were in the age group of 15 – 59 whereas only 6.1 % of the total population were above 60 years of age.

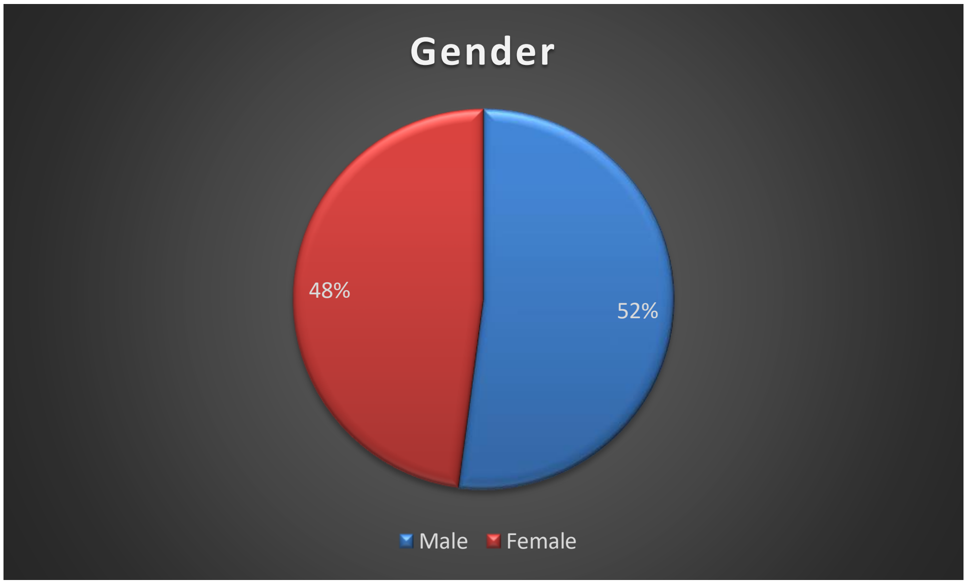

Figure 2: Gender of the respondents

The gender wise distribution of the total respondents shows that 52 % of the respondents were males and rest of them were females. This shows that the ratio of male and female customers in the telecom sector is not very large.

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	521	52.1	52.1	52.1
Female	479	47.9	47.9	100.0
Total	1000	100.0	100.0	

Table 2 Gender of the respondents

According to the latest census (2011) the proportion of female in the total population is around 47 % and the percentage of the female workforce (age between 15- 59) is only around 15 % which shows that despite having almost half of the total population the participation in the workforce is quite less. One of the reasons for the low participation rate of female in the workforce is may be because most of the data may have been collected from the students or the housewives in the Delhi NCR region.

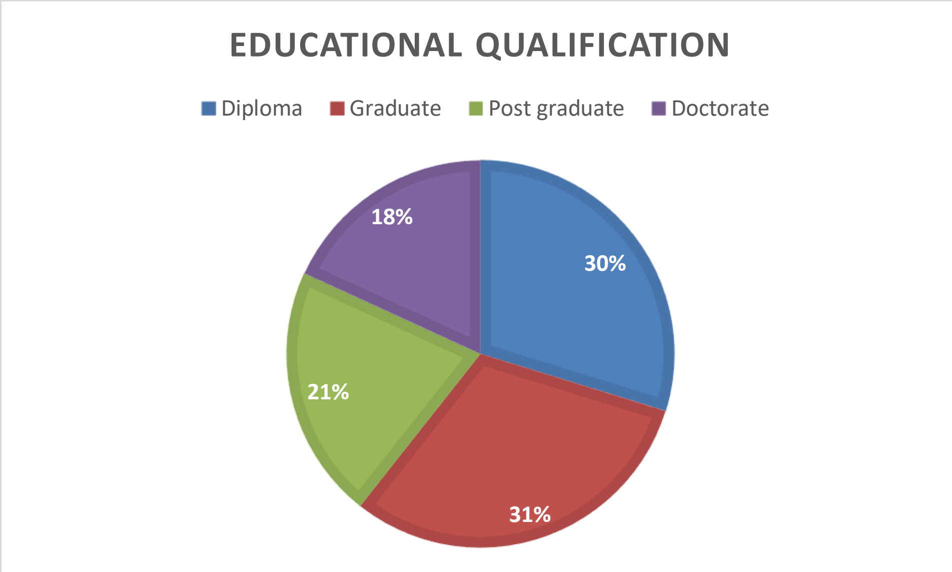

Figure Error! No text of specified style in document.**3: Educational qualification of the respondents**

Another component included in the demographic profile of the respondents is the educational qualification. As shown in the figure above 31 % of the respondents included in the sample have bachelor degree whereas 29 % of them have completed their diploma.

Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	295	29.5	29.5	29.5
	Graduate	306	30.6	30.6	60.1
	Post graduate	210	21.0	21.0	81.1
	Doctorate	189	18.9	18.9	100.0
	Total	1000	100.0	100.0	

Table3: Education qualification

The proportion of respondents who hold the post graduation degree is 21 % whereas 21 % of the respondents have completed their doctorate. The results show that most of respondents in the sample are highly educated and the main reason behind such results is the selection of the location for the data collection. The data was collected in capital city where the educated people from all over India are expected to come in search for job or quality education.

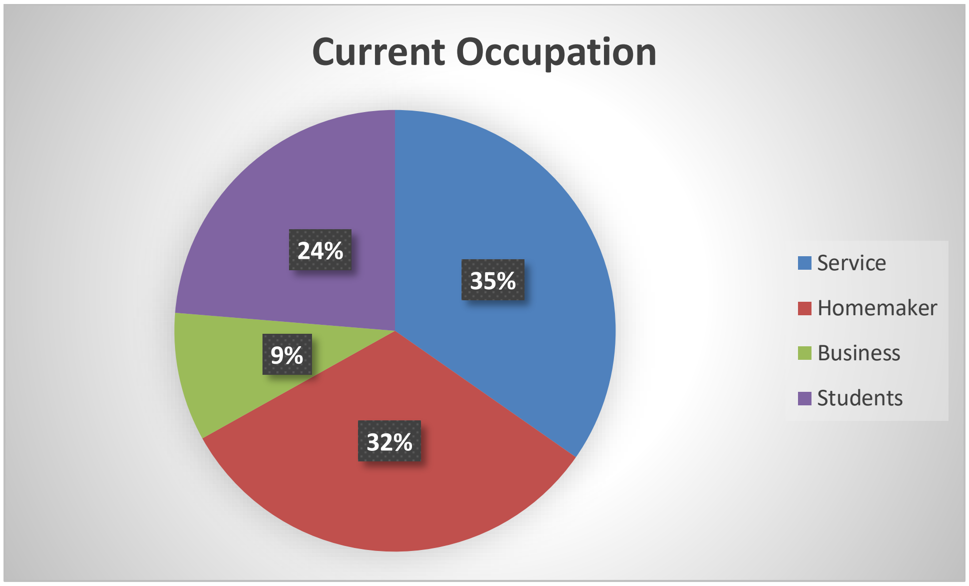

Figure 4: Current occupation of the respondents

In terms of the current occupation of the respondents the results (as shown in the above figure) shows that most of them are the employees (35 %) whereas 32 % of the respondents were homemaker.

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Service	347	34.7	34.7	34.7
	Homemaker	322	32.2	32.2	66.9
	Business	94	9.4	9.4	76.3
	Student	237	23.7	23.7	100.0
	Total	1000	100.0	100.0	

Table 4 occupation of the respondents

The proportion of the respondents who were studying is 24 % and rest of the 9 % has their own business. Since the Delhi NCR region which includes major hub for both the national and the multinational companies (especially Gurgaon in Haryana and Noida in Uttar Pradesh) there is higher number of the employed people in the sample.

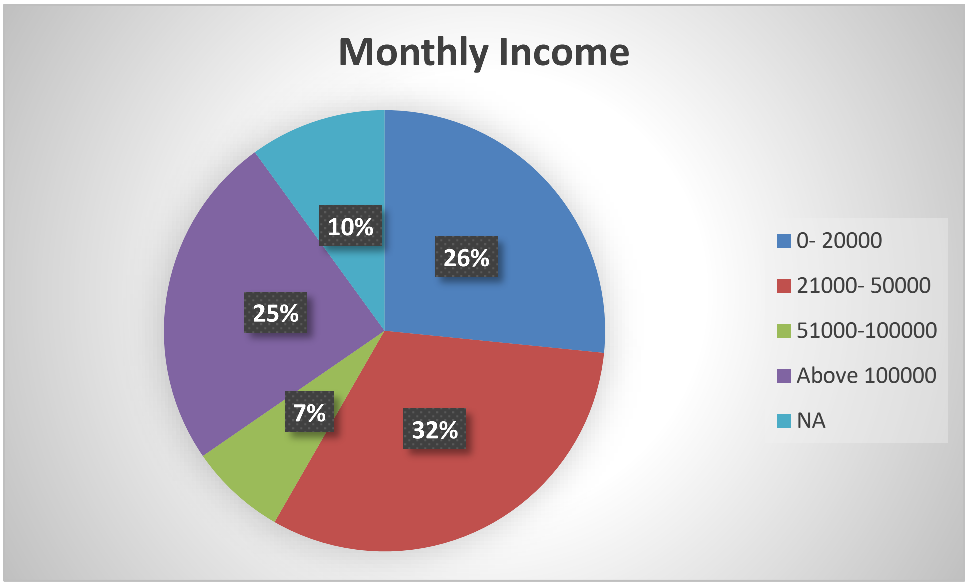

Figure 5: Monthly income of the respondents

Monthly Income

	Frequency	Percent	Valid Percent	Cumulative Percent
0- 20000	266	26.6	26.6	26.6
21000- 50000	317	31.7	31.7	58.3
51000-100000	71	7.1	7.1	65.4
Above 100000	246	24.6	24.6	90.0
NA	100	10.0	10.0	100.0
Total	1000	100.0	100.0	

Table 5: Monthly income

In terms of the monthly income of the respondents most of the respondent's income was between Rs 21000 – 50000 whereas 26 % of them have monthly income up to Rs 20000. The distribution of the monthly income of the respondents is shown in the above figure. According to the latest statistics of Delhi the per capita income is Rs 219979 per annum.

General Background

After analyzing the demographic profile of the respondents to know the customers general background of the respondents in term of their current operators few questions were included in the questionnaire and the results of the collected data is shown in this section.

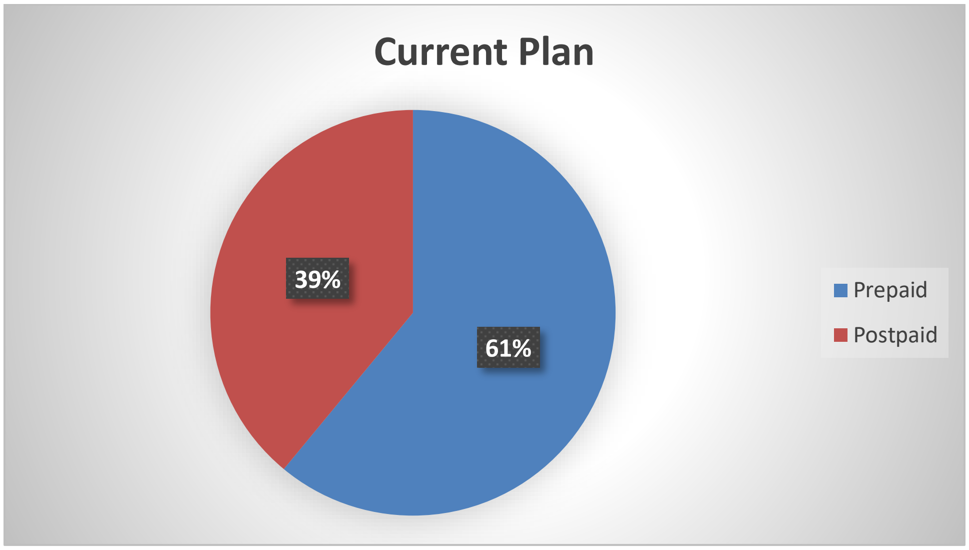

Figure 6: Current plan of respondents

When asked about their current plan of their network 61 % of the respondents said that they have prepaid plan and the rest of them have postpaid plan. The analysis also shows that the people who have postpaid plan are mostly either employed or have their own business. In other words respondents who have fixed income source prefer postpaid plan and the other respondents such as students or the homemakers who do not have fixed income source prefer the pre-paid plan. According to the Telecom Regulatory Authority of India (TRAI) the total number of wireless subscribers in Delhi is 47. 7 million which is highest among the four metros in India. The number of wireless subscribers in Mumbai, Kolkata and Chennai are 31.9 million, 25 million and 11.4 million respectively.

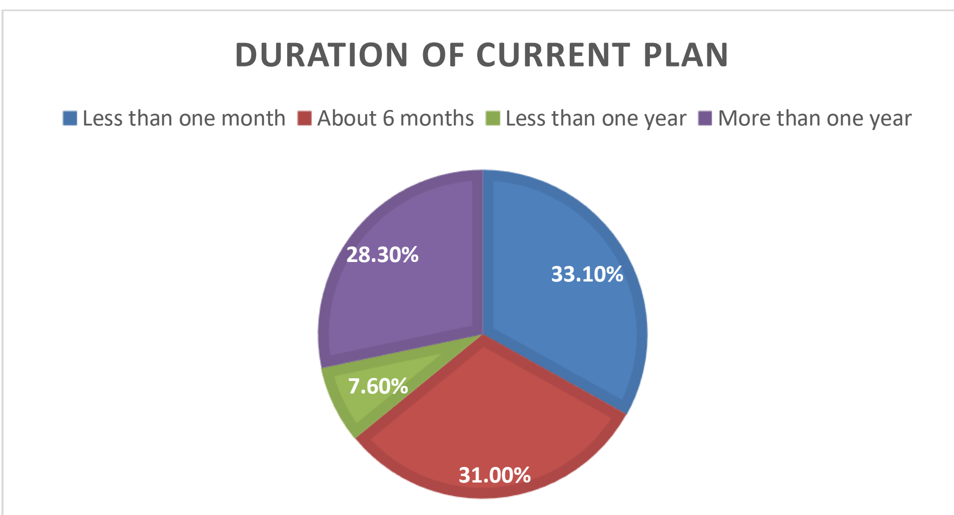

Figure 7: Total time for the current plan

The respondents were asked since when they are using the current operator and the main motive behind collecting the data was to know about the average time the customer used particular operator. As shown in the figure above 33 % of the respondents said that they were using the current operator for less than a month whereas 31 % of them said since 6 months they are using their current operator. The proportion of respondents continuing with their current operator for more than a year is around 28 % whereas rest of the respondents do not continue for more than a year. The highly switching of customer from one operator to another is mainly due to high level of competition and the incentives provided by them. There are more than 10 mobile operators in the Delhi and more six different landline operators which shows that the customers have plenty of option which led to frequent switching from one operator to another based on their preferences.

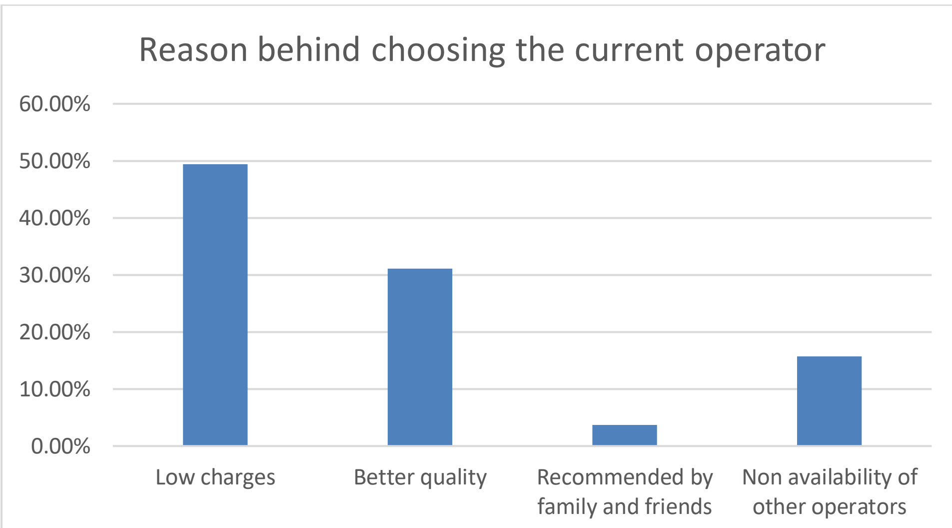

Figure 8: Main reason for choosing the current operator

As the results shows that proportion of the customers continuing with the same operator for more than one year is comparatively low, respondents were asked about the main reason behind choosing their current operator. Results show that around 50 % of the respondents said that the low charges charged by their operator is the main reason for choosing the operator whereas for 31 % the respondents the quality of the service was main reason. Similarly around 13 % do not have any other option to choose and res of them used particular operator on the basis of the recommendation from their family and friends. One of the reason behind the frequent change in the operators is the availability of the Mobile Number Portability service under which the customers can switch from one operator to another without changing their mobile number.

Inferential Analysis

For the the inferential analysis both the regression analysis and the correlation analysis has been be conducted to examine the various aspects of customers in the telecom sector. The inferential analysis is based on the primary data collected from the 1000 customers in the Delhi NCR region. The Pearson Correlation coefficient has been used to examine the correlation among the variables whereas thelinear regression analysis has been performed to find the impact of the independent variable on the dependent variable.

To examine the impact of various factors on the customer satisfaction multiple regression has been performed by taking customer satisfaction as the dependent variable and the various factors such as various offers and promotions, signal coverage of the operator, relationship with the service provider and the service charges.

Prior to running the regression analysis it is important to examine whether the correlation of the factorsincluded in the model are related to each other or not. To examine the correlation the Pearson correlation was tested and the results show that most of the variables are significantly and positively correlated with each other. Since the variables are correlated the regression has been performed and the results are shown in the table below.

Following table present the regression results. The R^2 (adjusted) is 0.91 which indicates that the explanatory variables included in the model are able to explain 91 % of the variation in the dependent variation and the rest of the variation is explained by other factors. Similarly the result for the F statistic is significant at 1% which indicates that the cumulative impact of the explanatory variable on the explained variable is significant.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.024	.033		-.744	.457
	I am happy offers/promotion provided.	.395	.022	.401	17.988	.000
	I am happy signal coverage provided.	.472	.022	.477	21.125	.000
	I feel happy while dealing with my service provider.	.056	.019	.056	2.918	.004
	I am satisfied with the charges charged by my service provider. h	.063	.019	.063	3.284	.001

a. Dependent Variable: Customer satisfaction

Adjusted R^2: 0.91

F test : 0.000

D-W : 1.5

Table 6: Regression results for factors affecting customer satisfaction in the telecom sector

The individual impact of each factor on the customer satisfaction has been shown by the regression coefficient in the above table. As per the results all the factors included in the model have positive and significant impact on the customer satisfaction. All the coefficient are significant at 5 % significant level. The coefficient of the offers/ promotion (0.395) can be interpreted as, with one unit increase in the offers and the promotion by the providers the customer satisfaction increases by 0.395 units holding all other things constant. Regression coefficient of other variables can also be interpreted in similar way.

Support and service by telecomm service providers

The support and service provided by the telecom operators to its customer is one of the major element to examine the customers' perspective in this sector. So to examine the support and service of the major telecom operators included in the current research the regression analysis has been performed. The dependent variable for the regression has been used is the support and service and the various aspects of the support and service in the telecom sector as the independent variable.

Initially the correlation analysis was conducted to test the relationship among the variables. Results from the Pearson correlation test show that most of the variables included in the model are positively and significantly related to each other. Since the variable show significant correlation d the regression analysis has been conducted to see the impact of the independent variable on the explained variable.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.171	.057		3.014	.003
	My phone service provider has latest technology.	.079	.044	.079	1.788	.074
	I have full trust on my phone service provider	.081	.042	.081	1.914	.056
	My phone service provider are always willing to help customers	.098	.043	.099	2.258	.024
	My phone service provider have good knowledge of customer demands.	.411	.057	.415	7.203	.000
	My phone service provider have operating hours convenient to all its customers	.198	.038	.199	5.171	.000

a. Dependent Variable: Support and service by telecomm service providers
Adjusted R^2 :0.69
F statistic : 0.000
D-W: 1.38

Table 7: Regression results for support and service by the telecom operators

The value of adjusted R square is shown in the above tables as 0.69 which suggests that the around 69 % of the variation in the explained variable is because of the change in the explanatory variables in the model whereas the 40 % variation is due to other factors. Generally the R^2 (adjusted) of more than 0.6 is considered to be indicator of a good regression model; however the lower value of adjusted R square does not necessarily imply that the model is not good. Similarly result for the F statistic shows that the F value is significant at 1 % which shows that the cumulative impact of the dependent variable on the independent variable is significant.

The effect of each explanatory variable on the dependent variable is represented by the coefficients in the above table. Results show that the three variables namely the willingness to serve the customer, knowing the demand of the customer and the convenient working works shows significant and positive impact on the dependent variable. In other words customers' perspective about the support and service provided by the telecom operators are majorly based on these three factors. The regression coefficient of the having convenient working hours (0.198) can be interpreted as, with one unit increase in the convenient working hours of the telecom operator, the customers perspective about the support and service increase by 0.198 units holding all other things constant. The coefficient of other factors have also similar interpretation.. However the coefficient for the remaining two variables does not show statistically significant results.

Conclusion:

The customer is asked about the satisfaction for offers and promotions, signal coverage, service provider's dealings and charges. As per the results all the factors included in the model have positive and significant impact on the customer satisfaction.All the coefficient are significant at 5 % significant level. The most important factor is signal coverage.The three variables namely the willingness to serve the customer, knowing the demand of the customer and the convenient working works shows significant and positive impact on the support and service provided by the provider. The most important factor is the convenient working hours of the telecom operator.

References:

1. Balaji, M. S. (2009). Customer Satisfaction with Indian Mobile Services. *IUP Journal of Management Research, 8(10)*, 52–62.
2. VIJ, R. (2012). Study Of Customer Perception Of Telecommunication Service Providers In Himachal Distt Solan. *Asian Journal of Multidimensional Research, 1(1)*, 62–83.
3. Geetika, Tiwari, D., & Gupta, P. (2012). A Study of Indian Consumers' Perception on Telemarketing. *International Journal of E-Education, E-Business, E-Management and E-Learning, 2(2)*, 97–102.
4. Bhandari, A., & Kaur, P. (2013). The Impact of Telecom Marketing Strategies on Customer Satisfaction. *International Journal of Multidisciplinary Research In Social & Management Sciences, 1(3)*, 78–82.
5. Rahman, D. M. S. (2012). Service Quality, Corporate Image And Customer's Satisfaction Towards Customers Perception: An Exploratory Study On Telecom Customers In Bangladesh. *Business Intelligence Journal, 5(1)*, 56–63.
6. Kushwah, S. V., &Bhargav, A. (2014). Service Quality Expectations And Perceptions Of Telecom Sector In India. *International Journal of Advancements in Technology, 5(1)*, 1–10.

7. Ahmad, Z., & Ahmad, J. (2014). Consumer Purchase Behavior in Cellular Service Sector of Pakistan. *Journal of Business and Management, 16(5),* 62–75.Available on http://iosrjournals.org/iosr-jbm/papers/Vol16-issue5/Version-4/I016546275.pdf

8. Samuel, N. O., &Olatokun, W. (2014). Telecommunication Services Provision in Nigeria-Consumers' Perspectives on Information Provision, Advertising and Representation of Services. *African Journal of Computing & ICT, 7(5),* 63–72.

9. Menon, D. S. D. (2014). Customer Perception towards A Public Sector Telecom Company (BSNL) in Mobile Services. *International Journal of Management and Social Sciences Research, 3(3),* 29–34.

10. KwabenaAdjei, &Denanyoh, R. (2014). Determinants of Customer Loyalty among Mobile Telecom Subscribers in the BrongAhafo Regions of Ghana. International *Journal of Business and Social Research (IJBSR), 4(1),* 82–95.