The Quality of Services and Their Impact on Customer Satisfaction in the Telecom Sector with Reference to Mobile Service Providers

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Abstract

The research is based on the quality of services that are being offered by various mobile service providers and the level of satisfaction that the customers experience. The government launched the mobile phone services and opened it for the private operators 10 years back. With this move of the government, many big and small companies ventured into the business. However, as we move on today, after 10 years, only half of the companies are surviving in the industry. The rate of addition of new subscribers is equalized or balanced by the churning of the customers. According to the Telecom Regulatory Authority of India (TRAI), mobile telephony service providers have failed to meet the set customer satisfaction benchmarks. In an attempt to reduce the churn rate problem, companies constantly try to come up with new ideas and plans to retain their original customers and attract new customers. The objective of the study was to assess the quality of services provided by basic and cellular mobile service providers for assessing the customers' perceptions of the services. The aim of this research was to measure the overall satisfaction of the customers with regard to network availability, billing problems, customer care services, usage, etc.

Keywords: service, quality, customer care, telecom, mobile service providers

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dvanced mobile services combine the innovation potential of computing, data communications, and the wireless industry. Emerging mobile data services and mobile computing will enhance the existing services by blending the extraordinary innovation potentials of the wireless, computing, and digital information industries. In an increasing number of countries, including all of Western Europe, parts of Asia, and many developing countries, mobile phones are used more widely than fixed line telephone services. Network operators are currently upgrading their networks to platforms that provide higher bandwidth and will support more advanced multimedia applications.

Need for the Study

TRAI collects performance-oriented data from various service providers on a quarterly basis to monitor the growth trends in the sector and to decide upon pro-active and suo motto measures to fuel the growth of the telecom services in the country. The survey also covers an assessment of the level of satisfaction with the services received by the subscribers of these telephone service providers. The study aims to provide inputs to testify few of such

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postulates in order to provide the service providers/ producers fresh insights on consumer behavior. The aim of the study is to objectively understand the behavior of mobile phone users in Karnal and Panipat and to further capture their satisfaction levels that were influenced by various technical and non technical factors.

Consumers' Satisfaction – An Analysis

The study assesses the satisfaction level of the consumers encompassing the quality of the technical services, quality and operational aspects of gadgets, and social /psychological costs due to unsolicited promotional calls/SMSs, and so forth. The analysis in this paper throws light on the consumption behavior of mobile phone users in Karnal and Panipat and covers the aspects like usage pattern of mobile phone services, assessment of the level of satisfaction, preferences for various attributes, and functionalities of gadgets, and so forth.

Design of the Study

The government launched the mobile phone services and opened it for the private operators 10 years back. At that time, many big and small companies ventured into the business. Today, after 10 years, we find only half of them surviving in the industry. The industry has seen many ups and downs like regulatory uncertainties, policy upheavals, technology disruptions, and the many accompanying legal tussles. The industry is clearly divided between GSM and CDMA operators, with the GSM users accounting for 80% of the total subscribers. Bharti Airtel, Idea Cellular, Vodafone, Aircel, and BSNL are major players in the GSM business in India, while Reliance and Tata Teleservices remain the only two significant players in the CDMA space.

In areas like overall satisfaction, network availability, billing and customer care, mobile subscribers - irrespective of which service they use - are not ready to give even 80% marks, let alone the TRAI pass marks of 90-95% for various parameters. The analysis of this study throws light on the consumption behavior of the mobile phone users in Panipat and Karnal and covers the aspects like usage pattern of the mobile phone services, assessment of the levels of satisfaction of the users, preference for various attributes, and functionalities of the services provided.

Review of Literature

In today's competitive market, the purpose of a firm should be read as "creating loyal customers". Therefore, for attaining a sustainable competitive advantage, a firm should be able to create and retain customers. One of the necessary conditions for this is that a firm's offerings must be able to meet the customers' needs and wants. For product planning and development, a firm needs to know what customers want from a product (Rahman, 2004).

According to Sureshchandar, Rajendran, and Anantharaman (2002), the relationship between service quality and customer satisfaction has received considerable academic attention in the past few years. But the nature of the exact relationship between service quality and customer satisfaction (especially in the way the two constructs have been operationalized) is still shrouded in uncertainty. Results of a study on service loyalty by Caruana (2002) indicated that customer satisfaction does play a mediating role in the effect of service quality on service loyalty. The effects of a number of demographic indicators on service loyalty have also been reported.

Kang, Cho, and Baek (2007) investigated the effects of service quality on customer satisfaction in the education service industry, with the focus being on those customers who had decided to switch their service providers. A study on managing service quality by Robledo (2001) compared four different methods for measuring service quality within an airline setting. Six instruments were used to measure the service quality of three international airline companies. The validity and reliability of the six different models were examined, and it was is concluded that unweighted SERVPEX methods were superior to the others.

Studies on service quality and customer satisfaction by Santouridis and Trivellas (2010) revealed that customer

service, pricing structure, and billing system were the service quality dimensions that had a greater significant positive influence on customer satisfaction, which in turn, had a significant positive impact on customer loyalty. According to Evanschitzky, Sharma, and Prykop (2012), customer satisfaction is regarded as a prerequisite for establishing long-term, profitable relations between a company and a customer, and customer contact employees are key to nurturing this relationship.

Empirical findings of a study by Pollack (2008) on the nature of the service quality and satisfaction relationship revealed that satisfiers initially exhibited no relationship with satisfaction, but after the acceptable level of quality (i.e. inflection point) had been reached, it become positively related. Dissatisfiers initially followed a positive relationship path with satisfaction, but after the inflection point exhibited no relationship, or at best a significantly weakened one with satisfaction, their positive relationship turned into a negative one.

Edward and Sahadev (2011) found that the mediating role of switching costs was found to have adequate statistical support and the other direct linkages were also found to be valid. The findings suggested that service firms may benefit from pursuing a combined strategy of increasing customer satisfaction and switching costs both independently and in tandem, depending upon the product-market characteristics.

Statement of the Problem

The present paper examines service quality and its impact on customer satisfaction in the telecom sector with reference to mobile service providers. The sample unit includes all the existing and potential users of different mobile services from Panipat and Karnal. The study was restricted to 100 respondents, and convenience sampling was used for this purpose. The study was undertaken from March - August 2013.

Analysis and Results

Solution Profile of the Respondents: It can be inferred from the Table 1 that the number of respondents included 50 men and 50 women, that is, 50% of the respondents were men and the remaining 50% of the respondents were women.

S Age Profile: It can be inferred from the Table 2 that majority of the respondents were in the age group of 19-45 years.

Sindustry Profile: It can be inferred from the Table 3 that Vodafone lead the market with maximum users (22%) followed by Airtel (18%). The rest of the operators - BSNL, Spice, Reliance, and Tata Indicom were subscribed by

Table 1 . Gender Profile of the Respondents						
Gender	Percentage of Respondents					
Male	50	50				
Female	50	50				
Total	100	100				

Table 2. Age Profile of the Respondents					
Age	< 18 Years	19-45 Years	> 45 Years	Total	
Male	0	48	2	50	
Female	5	40	5	50	
Total	5	88	7	100	

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	Airtel	Vodafone	BSNL	Spice	Reliance	Tata Indicom	Total
Male	9	11	10	5	6	9	50
Female	9	11	5	10	9	6	50
Total	18	22	15	15	15	15	100

Table 3 . Categorization of the Respondents on the Basis of Brand Usage and Preference

Table 4. Details of the Number of Hours the Respondents Spent While Using their Mobile Phones

Hours	Number
<1hr	27
1-2hrs	16
2-4hrs	49
> 4hrs	8

Table 5. Details of the Ranks given by the Respondents for Various Service Attributes

	Service Importance						
Rank	Network	Tariff Plans	Easy Recharge	Additional Offers	Tunes	Coverage	Roaming Facility
Rank 1	46	35	3	2	0	10	4
Rank 2	28	23	9	4	1	32	3
Rank 3	9	22	25	14	1	22	8
Rank 4	11	6	26	12	3	16	26
Rank 5	3	11	18	31	10	12	15
Rank 6	2	2	15	28	19	4	29
Rank 7	1	1	4	9	66	4	15

CALL DROP				
Very Frequently	8			
Frequently	12			
Sometimes	68			
Never	12			

15% of the respondents (each). The analysis also shows that all the respondents used mobile phones in their daily lives.

The Table 4 shows the details of the number of hours the respondents spent while using their cell phones. Forty nine percent (49%) of the respondents used their phones for 2-4 hours everyday. This is followed by the low usage category of respondents, who used their phones for less than 1 hour (27% of the total respondents); 16% of the respondents fall in the category of users who used their phones for 1-2 hours ; and the remaining 8% of the respondents were heavy users, who used their phones for more than 4 hours each day.

The Table 5 shows the importance of the seven attributes : network, tariff plans, easy recharge, additional offers, caller tunes, coverage, and roaming facility as ranked in order of importance by the respondents. From the Table 5, it can be inferred that network, tariff plans, roaming, and additional offers were the important attributes, while tunes was the last attribute which was relevant for the users

It can be inferred from the Table 6 that 68% of the respondents faced the problem of call drop occasionally,

Wrong Number					
Very Frequently	3				
Frequently	10				
Sometimes	65				
Never	22				

 Table 7. Satisfaction Levels of the Respondents w.r.t the Wrong Number Issue

Table 8. Satisfaction Levels of the Respondents w.r.t Connectivity

Connectivity/Network Problems				
Very Frequently	9			
Frequently	25			
Sometimes	46			
Never	20			

Table 9. Respondents' Opinion about the Customer Care Services Offered by the Operators

Customer Care Services					
Able to resolve complaints	48				
Listen, but do not follow	31				
Give Feedback	15				
No Response	6				

Table 10. Satisfaction Levels of the Respondents with Various Attributes Measured on a Likert Scale

	Highly Satisfi	ed Somewhat	Neither satisfied nor dissatisfied	Somewhat Dissatisfied	Highly Dissatisfied
		Satisfied			
VAS	12	51	32	4	1
Bill Payment Time Allotted	8	19	2	3	1
Roaming Facility	33	27	25	12	3
Customer Care Services	19	42	20	15	4

Table 11. Average of Ranks Given to Various Attributes						
VAS	Time for bill payment	Customer Care Services				
2.73	3.03030303	2.87	2.73			

followed by 12% of the respondents, who reported that they faced this problem frequently; 12% of the respondents never faced this problem; while for 8% of the respondents, the issue of call drop was a nuisance as they faced this issue 'very frequently'.

From the Table 7, it can be inferred that 65% of the respondents revealed that they sometimes received wrong number calls on their phones followed by 22% of the respondents, who never faced this problem.

It can be inferred from the Table 8 that 46% of the respondents reported that they faced network/connectivity problems followed by 25% of the respondents, who faced this issue frequently, and 20% of the respondents revealed that they never faced network problems/connectivity issues.

As revealed in the Table 9, the majority of the respondents (48%) said that in case of queries/complaints, when

	Operator switching
No	56
Once	38
Twice	3
>2	3

Table 12. Frequency with which the Respondents Switched their MSP

	Connectivity	Bill issue	No package	Not satisfied with customer care services	No Attractive tariff plans/combo plans
Ι	30	4	18	5	22
Ш	17	16	16	12	18
Ш	15	18	22	9	15
IV	5	21	18	24	11
V	12	20	5	29	13

Table 14. Correlation Between Time Spent on the Phone and Age Group of the Respondents

	Usage	Age
Usage	1	
Age	0.130435	1

	Usage	Gender	
Jsage	1		
Gender	-0.01157	1	

they contacted the customer care department of their respective service providers, their complaints/issues were resolved. According to the Table 10, most of the respondents were greatly satisfied with their mobile service providers with respect to the roaming facilities offered to them.

It can be inferred from the Table 11 that most of the post-paid respondents were satisfied with the time given to them to pay their bills followed by roaming, VAS, and other customer care services offered by the operators. According to the Table 12, 56% of the respondents had not switched their service provider in the last 1 year, 38% of the respondents had switched their service provider once, and 3% of the respondents had switched their service providers twice or more than two times in the last 1 year.

It can be inferred from the Table 13 that according to most of the respondents, the connectivity/network problem (2.89) was the major reason for switching to another service provider.

Correlation Analysis

From the Table 14, it can be inferred that there is a strong correlation between time spent on the phone and the respondents' age group. The analysis shows that the maximum value for correlation is for the age group of 19-45 years, which shows that the respondents in this age group spent the maximum time on their phones. It can be inferred from the Table 15 there is a weak correlation between the time spent on the phone and gender of the respondents.

From the Table 16, it can be inferred that the maximum positive value of correlation is between operator

	Operator Switching	Connectivity Problem	Bill Issues	No Package Plans	Not satisfied with customer care services	Non availability of Attractive tariff plans/combo plans
Operator Switching	1					
Connectivity Problem	-0.083581666	1				
Bill Issues	-0.104945004	0.3312	1			
No Package Plans	-0.050718563	0.0517	0.2984	1		
Not satisfied with customer care services	-0.09952018	0.1453	0.25175	0.4003	1	
Non availability of Attra tariff/combo plans	ctive 0.028317488	0.1753	0.2423	0.1203	0.3274	1

Table 16. Correlation Between Operator Switching and Other Reasons

Table 17. Correlation between the Operator's Selection and the Qualityof Services Provided by the Customer Care Executives

	Operator	Customer Care Executives
Operator	1	
Customer Care Executives	0.036722815	1

Source of Variation	SS	df	MS	F	P-value	F crit
Rows	747.4444	2	373.7222	72.96095	1.09E-06	4.102821
Columns	13.77778	5	2.755556	0.537961	0.743951	3.325835
Error	51.22222	10	5.122222			
Total	812.4444	17				

Table 18. ANOVA Test for Age Group and the Mobile Service Provider

 $F(72.9) > F \operatorname{crit}(4.1)$

switching and attractive plans being offered by other operators, which was the most important reason for the respondents to switch their mobile service provider. Other attributes follow in order as follows: No package plans available with the existing provider, connectivity problems, no proper customer care services, billing issues.

From the Table 17, it can be inferred that there is a strong correlation between operator selection and the quality of services provided by the customer care executives. This implies that the quality of services provided by the customer care executives of a service provider play a key role in influencing the patrons' satisfaction levels with a particular service provider.

ANOVA

 \rightarrow H01: There is no significant difference between the age group of the respondents and the mobile service providers selected by them.

→ Ha1: There is a significant difference between the age group of the respondents and the mobile service providers selected by them.

As depicted in the Table 18, the *F* value is greater than the critical value. So, we accept Ha1 and we can say that there was a significant difference among the age groups while selecting their mobile service providers.

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	167.445	1	167.445	90.89544	5.7E-18	3.888853
Within Groups	364.75	198	1.842172			
Total	532.195	199				

Table 19. ANOVA Test for Occupation of the Respondents and the Mobile Service Provider

F (90.9)> F crit (3.9)

Table 20. ANOVA Test for the Selection of the Service Provider and the Satisfaction Provided by theValue Added Services

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	17.405	1	17.405	9.91795	0.00189	3.888853
Within Groups	347.47	198	1.754899			
Total	364.875	199				

F (9.91)> F crit (3.88)

Table 21. ANOVA Test for the Selection of the Service Provider and the Satisfaction Provided by theRoaming Facility

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Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	10.125	1	10.125	4.998504	0.026486	3.888853
Within Groups	401.07	198	2.025606			
Total	411.195	199				

F (4.99)> F crit (3.88)

 \rightarrow H02: There is no significant difference between the occupations of the respondents and the mobile service providers selected by them.

 \rightarrow Ha2: There is a significant difference between the occupations of the respondents and the mobile service providers selected by them.

As depicted in the Table 19, the *F* value is greater than the critical value. So, we accept Ha2 and we can say that there was a significant difference in the occupations of the respondents and the mobile service providers selected by them.

 \rightarrow H03: There is no significant difference between the selection of the service providers and the satisfaction provided by the value-added services offered by them.

 \rightarrow Ha3: There is a significant difference between the selection of the service providers and the satisfaction provided by the value added services offered by them.

As depicted in the Table 20, the *F* value is greater than the critical value. So, we accept Ha3 and we can say that there was a significant difference between the selection of the service providers and the satisfaction provided by the value added services offered by them.

 \rightarrow H04: There is no significant difference between the selection of the service providers and the satisfaction provided by the roaming facility offered by them.

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	17.405	1	17.405	8.848409	0.003298	3.888853
Within Groups	389.47	198	1.96702			
Total	406.875	199				

Table 22. ANOVA Test for the Selection of the Service Provider and the Satisfaction Provided by theCustomer Care Services

F (8.84)> F crit (3.88)

 \rightarrow Ha4: There is a significant difference between the selection of the service providers and the satisfaction provided by the roaming facility offered by them.

As depicted in the Table 21, the *F* value is greater than the critical value. So, we accept Ha4 and we can say that there was a significant difference between the selection of the service providers and the satisfaction provided by the roaming facility offered by them.

 \rightarrow H05: There is no significant difference between the selection of the service providers and the satisfaction provided by the customer care services offered by them.

 \rightarrow Ha5: There is a significant difference between the selection of the service providers and the satisfaction provided by the customer care services offered by them.

As depicted in the Table 22, the *F* value is greater than the critical value. So, we accept Ha5 and we can say that there was a significant difference between the selection of the service providers and the satisfaction provided by the customer care services offered by them.

With reference to finding the relation between the age group of the respondents and the mobile service providers selected by them, it is inferred there was a significant difference among the age groups while selecting their mobile service providers. When judged on the parameters of ANOVA, with reference to the occupations of the respondents and the mobile service providers, there was a significant difference in the occupations of the respondents and the mobile service providers selected by them. On the question of the relation between selection of the service providers and the satisfaction provided by the value-added services offered by them, there was a significant difference between the selection of the service providers and the satisfaction provided by the value-added service providers and roaming facilities being offered by them, the ANOVA analysis rejected the null hypothesis. With reference to the selection of the service providers and the satisfaction provided by the customer care services, it is inferred that there was a significant difference between the selection of the service providers and the satisfaction provided by the customer care services, it is inferred that there was a significant difference between the selection of the service providers and the satisfaction provided by the customer care services offered by them.

Conclusion and Suggestions

Individuals, irrespective of their age, income, occupation, and gender tend to greatly rely on the services provided by the mobile service providers, which forms a lasting image in their minds, and this image then influences their preferences. Hence, the prime focus of the mobile service providers must be on improving the quality of services provided by them to make them more effective. Network connectivity, additional offers, and tariff plans are the main features that influence a customer's decision of choosing a service provider. Hence, the mobile operators should maintain the quality of these services and must highlight the new features/additional benefits provided by them. By providing new and attractive offers, the MSPs can attract customers, and their focus must be on tapping the potential customers and satisfying the existing ones.

As revealed in this study, the respondents faced problems related to network/connectivity, call drop, and received pesky/promotional calls on their numbers. Thus, the MSPs need to implement some serious steps to overcome these problems. A main reason for switching an operator was found to be the availability of attractive tariff plans/combo plans with the competitive operators. Thus, an attempt should be made by the operators to provide a range of attractive offers to retain their existing customers. With growing technology, the service providers must also cater to the needs of the customers by adopting new technologies to better serve the customers. Hence, from this research, we can conclude that the satisfaction level of the users was dependent on the quality of services provided by their mobile service providers.

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