

Stochastic Modeling & Applications

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Visva-Bharati University, Santiniketan, India

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A STUDY OF SUBSCRIBER SATISFACTION TOWARDS THE SERVICES OF TELECOM COMPANIES**VARSHA TANDEL AND DR. GAJANAN WADER****ABSTRACT**

The satisfaction of subscribers is the most significant component for telecom companies to gain a competitive advantage from the market. The present study is undertaken to identify the level of satisfaction of subscribers with the services provided by their telecom service provider. This study also describes the overall satisfaction of subscribers towards their service provider. The result showed that selected factors greatly influence the level of satisfaction of subscribers with the services provided by telecom service providers.

Keywords – Subscriber's satisfaction, telecom companies, service provider.

1. INTRODUCTION

The telecom industry is one of the booming industries and it gives a higher contribution to the GDP of an Indian economy. With the need and requirement of information in day-to-day activities, the telecom industry is also flourishing. To retain the existing subscribers and to attract new customers, the telecom service provider is also taking efforts by offering the latest technology and advanced features at affordable prices to their customers. Therefore, customer satisfaction is the crucial key for the companies to maintain balance in the industry in respect of the market share. Satisfied customers will help the companies to increase their revenue and business. On the other hand, dissatisfied customer will search for the alternatives and will move to another service provider.

2. OBJECTIVE OF THE STUDY

1. To study the satisfaction level of subscribers towards the services provided by telecom service providers.
2. To study the overall satisfaction level of subscribers towards their service provider.

3. REVIEW OF THE LITERATURE

3.1 Shebin Mohammed Ali (2006), in his study titled "To study the Impact of Customer Satisfaction on Customer Loyalty in mobile telecom at Ernakulam District" analysed that customer loyalty plays an important role to retain the existing customer as well as to enhance their business. It leads to repurchases of goods and services. The Customer loyalty is dependent upon the satisfaction of customers. The companies should concentrate on the changing needs and habits of their customer. They should not only come up with advanced features and updated technology but also should provide their services at reasonable prices to satisfy their customers.

3.2 **Arpan Kumar Kar (2019)**, in his paper, determined that the revenue of the business organization is highly depend upon the satisfaction of their customer. A good quality of services by services not only create a favourable impact on the customer but also enhance their satisfaction level. Therefore, the telecom service provider should undertake research activities to fulfil the changing demands of their customers.

3.3 **Joseph Kofi Nkuah (2015)**, in his study titled "An Evaluation of Customer Satisfaction Levels among the Various Mobile Telecommunication Networks in the Wa Municipality" explained that the staff of organisation should be properly trained to handle the complaints. They should have adequate skills to solve the queries of customers. Services should be provided at reasonable and affordable prices as compared to other service provider, so that customer will not shift to another service provider. Management should plan for marketing strategies to satisfy their customer as per their changing requirements.

3.4 **Marna Sarmiento Baptista, Cristina Galamba Marreiros, and Maria Raquel Lucas (2019)**, in their study titled "The Quality of Customer Service and the Level of Consumer Satisfaction in Timor Leste Telecommunications", concluded that the satisfaction level of customers is more important than any material things like office hours of an employee, promotional materials, etc. and customers are greatly satisfied with the kind and helpful nature of employees of an organization.

4. NEED OF THE STUDY

Nowadays, companies are facing tough competition from each other in the telecom sector. With changing time, customers' requirements also changed. Therefore, the companies need to find out the satisfaction level of the

customers in respect of their services on a time-to-time basis and accordingly try to improve the quality of their services.

5. SCOPE OF THE STUDY

Telecom companies can use the collected information as feedback. The service provider can use this data to improve the quality of their services and the present study can be extended to different cities or states.

6. LIMITATION OF THE STUDY

The area for this research study was restricted to the subscribers of the Mumbai city. The present study concentrates on the selected factors in the recent time, in the future opinion of customers may change due to the advanced and latest features of services and collected data may be biased due to the behaviour of human being.

7. RESEARCH METHODOLOGY

Descriptive and analytical method of research is used for the study. Population consists of subscribers of the telecom companies in the Mumbai city. Sample includes 100 respondents from the city of Mumbai. The data was collected from the subscribers of Tata Teleservices (MAH) Ltd., Bharti Airtel Ltd., Reliance communication Ltd., Vodafone Idea Ltd and other service provider. Primary data collected for this study by the way of Survey method. Structured questionnaire method was used for the collection of data from the subscribers.

8. FINDINGS

Table 1 shows out of the total respondents, 46% were male and, 54% were female. Table 2 indicates that, out of 100 respondents, the majority of the respondents were from the age group of up to 20 years. Table 3 represents that, 90% of respondents were students. Table 4 shows, the services of Tata Teleservices (MAH) Ltd., Bharati Airtel Ltd., Reliance Communication Ltd., Vodafone Idea Ltd., and others were used by 1%, 20%, 41%, 19%, and 19% of respondents respectively. Table 5 indicates that 80% of respondents preferred pre-paid services and 20% of respondents preferred post-paid services. Table 7, 8, 9, and 10 shows that, majority of respondents were satisfied with the services of availability of network in their area, recharge plans, customer care services, and availability of network while traveling. Tables 11, 12, and 13 show that majority of respondents were highly satisfied with the services of online recharge, 2G, 3G, and 4G internet facility, and full talk time. Tables 6, 14, and 15 indicate that majority of respondents were neutral in respect of services such as connection charges, validity, and availability of recharge coupons by retailers. Table 16-20 represents the overall satisfaction of subscribers towards their service provider. Table 16, 17 & 18 shows that majority of the respondents were satisfied with their service provider. Table 19 indicates that the majority of respondents were neutral and table 20 shows that, majority of respondents were highly satisfied with their service provider.

9. RECOMMENDATION

The survey shows that companies should reduce the connection charges to attract the maximum number of customers. They should undertake research activities in respect of technology and spread their network over the globe to solve the problem of availability of network in local residence area and during traveling. They should provide proper training to their customer support team to handle customer queries effectively and efficiently. The service provider should come up with affordable recharge plans. They should undertake efforts to enhance the services of online recharge. They should adopt the modern and latest technology to improve the quality of internet services. The service provider should also look in the area of talk time, validity, and availability of recharge coupons by the retailer for the benefit of subscribers.

10. CONCLUSION

The study describes that, the level of satisfaction of subscriber is greatly influenced by the various services offered by the service provider. The main objective of the study is to identify the satisfaction level of subscribers towards services provided by telecom companies. In case of services such as recharge plans, customer care services, online recharge services, availability of network while traveling, internet facility, validity and talk time by service provider have a positive and strong impact on the subscribers. Therefore, as per the changing environment, the telecom service provider needs to identify the increasing demands of their subscribers, and accordingly, they should plan and frame innovative strategies so that they can meet the demands of their subscribers in order to satisfy them.

11. REFERENCES

- 1) Shebin Mohammed Ali (2020), "To study the Impact of Customer Satisfaction on Customer Loyalty in mobile telecom at Ernakulam District", Alochana Chakra Journal, Volume IX, Issue V, Pg – 7887-7904.

- 2) Joseph Kofi Nkuah, Abigail Essel and Lydia Faith Nsubuga (2015), “An Evaluation of Customer Satisfaction Levels among the Various Mobile Telecommunication Networks in the Wa Municipality”, International Journal of Research in Business Studies and Management, Volume 2, Issue 4, Pg – 1-15.
- 3) Marna Sarmiento Baptista, Cristina Galamba Marreiros and Maria Raquel Lucas (2019), “The Quality of Customer Service and the Level of Consumer Satisfaction in Timor Leste Telecommunications”, Asian Business Review, Volume 9, Number 3, Pg – 91-100.
- 4) https://www.researchgate.net/publication/335996970_Determinants_of_Customer_Satisfaction_in_Telecommunication

APPENDIX -

(HS–Highly Satisfied, S–Satisfied, N-Neutral, D–Dissatisfied, HD-Highly Dissatisfied)

Table 1

Gender		
Male	Female	Total
46	54	100

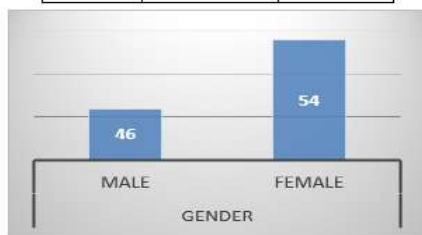


Table 2

Age				
Up to 20 Years	21-40 Years	41-60 Years	61 Years & Above	Total
83	15	1	1	100

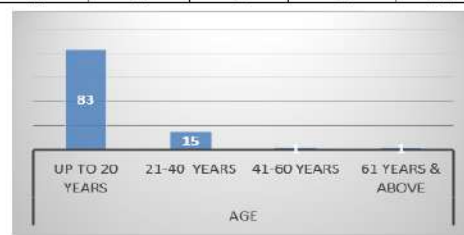


Table 3

Occupation					
Student	Business	Profession	Service	Other	Total
90	1	2	5	2	100



Table 4

Your Telecom Service Provider					
Tata Teleservices (MAH) Ltd.	Bharti Airtel Ltd.	Reliance Communication Ltd.	Vodafone Idea Ltd.	Other	Total
1	20	41	19	19	100

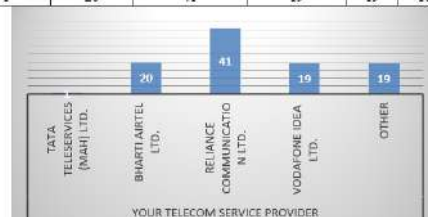


Table 5

Type of Connection		
Pre-Paid	Post-Paid	Total
80	20	100

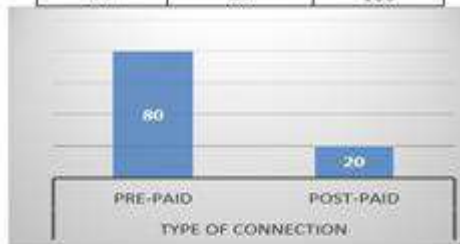


Table 6

Connection Charges					
HS	S	N	D	HD	Total
18	28	31	11	12	100

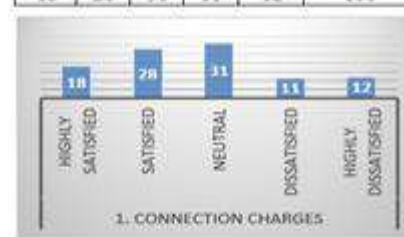


Table 7

Availability of Network in your area					
HS	S	N	D	HD	Total
15	31	16	17	21	100



Table 8

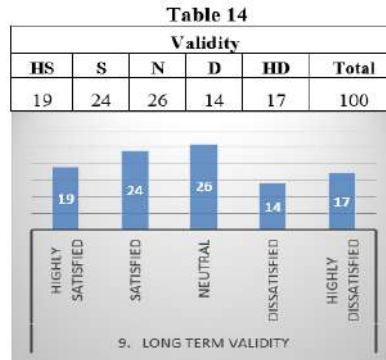
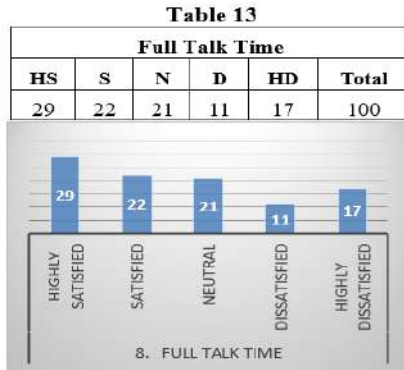
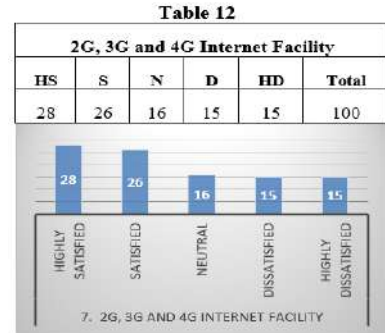
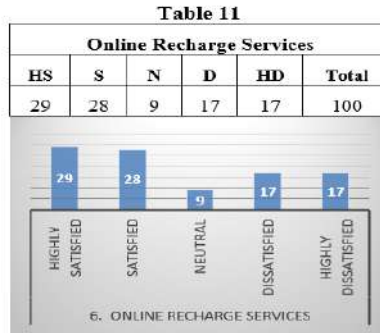
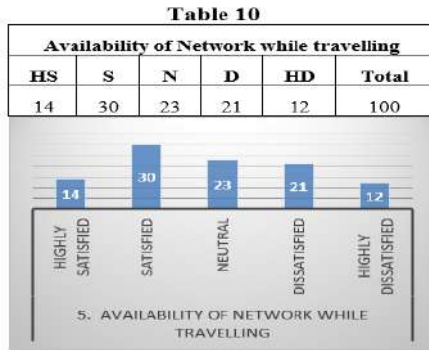
Recharge Plans					
HS	S	N	D	HD	Total
16	32	25	15	12	100



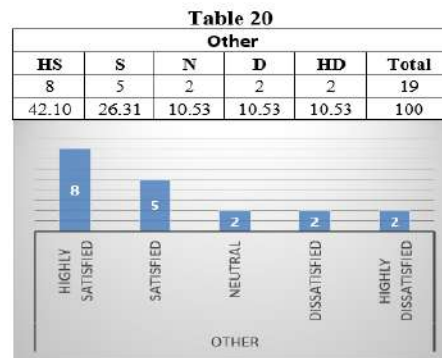
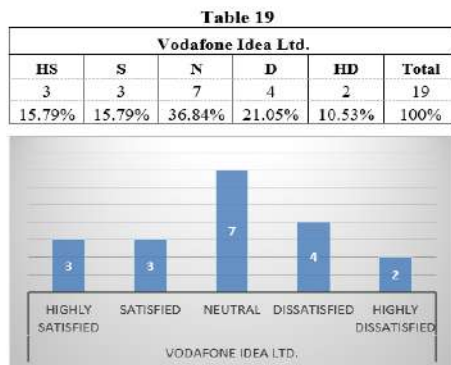
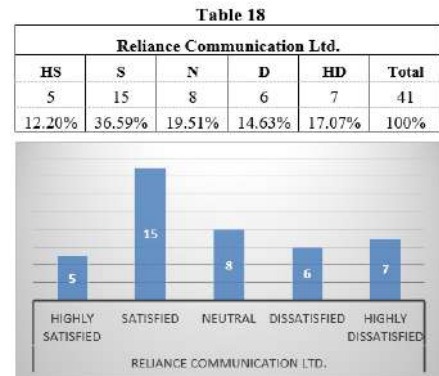
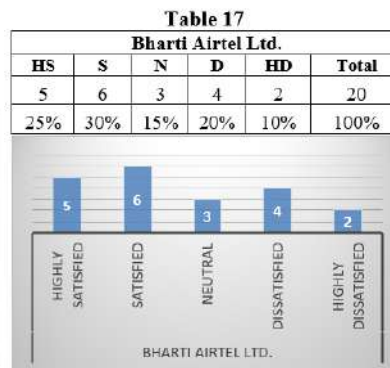
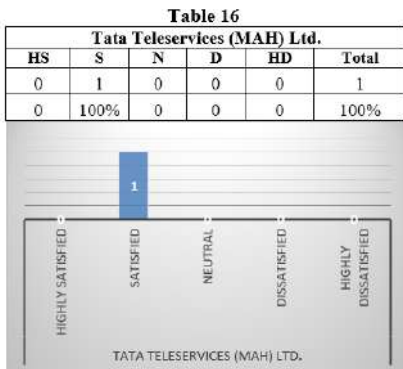
Table 9

Customer Care Services					
HS	S	N	D	HD	Total
13	33	23	18	13	100





Overall Satisfaction of Subscribers towards Service Provider



AUTHOR DETAILS:

¹VARSHA TANDEL AND ²DR. GAJANAN WADER

¹Ph.D. Research Scholar and ²Research Guide, Research Department of Accountancy, Pillai College of Arts, Commerce and Science (Autonomous), New Panvel – 410 206

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