

AN EMPIRICAL STUDY OF DETERMINANTS TOWARDS CUSTOMER SATISFACTION IN MAJOR INDIAN TELECOM COMPANIES

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ABSTRACT

This study aims to measure the impact of variables, namely; Network coverage, Signal strength, Price fairness, Service quality and Sales promotion on customer satisfaction using telecom services of three major service providers i.e. Bharti Airtel Ltd., Vodafone Idea Ltd., and Reliance Jio Infocom Ltd. As a matter of fact customer satisfaction is directly proportional to customer loyalty followed by word of mouth, long term association and willingness to pay more for that particular brand, therefore this study will offer requisite feedback to telecom operators towards improving their services, product offerings and corporate strategies. Primary data was collected from 350 respondents through a standardized questionnaire and data was analyzed using ANOVA and Multiple Regression.

The results indicated significant positive association between Customer satisfaction and all independent variables (i.e. Network coverage, Signal strength, Price fairness, Service quality and Sales promotion) where Price fairness proved to be the major influencer with $\beta = .247$ towards a particular service provider followed by Network Coverage ($\beta=0.223$), Service quality ($\beta = .218$), Signal Strength ($\beta = .209$) and sales promotion ($\beta = .096$). Thus, telecom operators should focus on providing services at affordable prices so as to increase customer satisfaction and create repurchase intentions.

Key Words: Network coverage, Signal strength, Price fairness, Service quality, Sales promotion, Customer Satisfaction, Telecom operators, India.

Introduction

Telecommunications refers to array of network devices, technology, equipment and software applications supporting communication through a distance. Telecommunication has brought the world on a common platform by enabling the participation and development of the people in nations' build-up as a global society. Indian telecom sector has been subjected to high pace of market liberalisation and growth since long and now has become the world's most

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competitive and one of the fastest growing telecom markets. The sector has also contributed towards socio-economic development of the country by narrowing down the rural-urban digital divide to an extent and future also seems to be promising in terms of consumer demand, being country heading towards digitalization where telecommunications will play a vital role. Indian telecom sector in current times is subjected to unique pricing, desperate customer choices and fragmented competition with availability of limited number of telecom operators, thus in order to increase the customer base and to retain the existing one it is must for every service provider company to meet the customer expectations well in time.

The underlying research intends to examine the key variables affecting consumer satisfaction in Indian telecom segment, so that concerned service provider organizations can channelize the same for long haul productive relationship with the clients. As indicated by Deng et al., (2009) Customer satisfaction is extremely notable in business as it governs service provider capability towards product differentiation and relationship build-up with its clients. Customers are becoming more cultured, segmented, demanding and anticipate more in terms of customization, newness, quality and price, thus corporates needs to give due diligence towards customer satisfaction (Stark, 2011). Anderson, Fornell, and Mazvancheryl, 2004 further proclaimed that business is subjected to lose customers, investors and market share in case it fails to gratify its customers proficiently and effectively as its rival does. For this reason it is important to have clear understanding regarding what consumer needs and what will give them greatest satisfaction (Maiyaki et al., 2011).

Literature Review

Network Coverage

Kim et al. (2004) specified that consumer loyalty in telecom industry is dictated by factors like call quality, network coverage and the complaint redressal mechanism. The high-end network quality alongside service pricing assumes higher significance in selection of telecom operator as featured by Rahman et al. (2011) who coordinated an investigation of 400 Malaysian telecom subscribers. Practices of network optimization in the sector focus on retaining high-end service quality.

Signal Strength

J.D. Power and Associates (2003) in their study titled 'Wireless network quality assessment' presumed "Operators that offer superior network quality will increase their probability of attracting new customers and retain greater amount of existing ones". Consumer loyalty in telecom sector is majorly dependent on signal quality as no calls or net utilization is feasible

without adequate signal from a specific network. Kim et al. 2004 stated that bad signal quality can prompt call drops, voice bends and dubious call connectivity.

Price Fairness

Xia et al., 2004 determined price fairness as “consumers’ assessments of seller’s price as sensible, satisfactory or legitimate”. Price fairness plays significant role towards attaining customer satisfaction as few studies (Wong, 2009; Kim, Park, & Jeong, 2004; Keaveney, 1995) in the sector found major churn of customers due to dissatisfaction among customers towards product pricing. Wong (2010) further conducted a study with a sample size of 1,403 Canadian post-paid mobile customers over a period of 3.7-years where he reported that greater customer loyalty was observed in consumers with optimum rate plans than those with non-optimal ones.

The importance of price fairness, service quality in determining customer satisfaction was also testified by Hafeez and Hasnu (2010) who investigated customer satisfaction in Pakistan. Studies have revealed that customer’s preference to accept a particular price has direct bearing on their contentment level and loyalty (Martin-Consuegra, Molina and Esteban, 2007).

Service Quality

As indicated by Parasuraman et al. (1985), "Service quality, is something as professed by customers, can be characterized as the degree of divergence between customer's wants and their perceptions". Zeithaml et al. (2003) developed a conceptual model of service quality which stated that service quality impacts particular customer behaviours determining whether consumers will remain loyal or leave an organization. Balaji (2009) studied the antecedents and consequences of customer satisfaction with Indian mobile services, by surveying 199 post-paid mobile subscribers in major Indian cities and testified that perceived service quality is the main predictor of customer satisfaction, which results into trust, price bearance and customer loyalty. Omotayo and Abiodun (2011) also found that service quality has a positive impact on satisfaction and loyalty under their study of 148 Nigerian major telecom companies’ subscribers.

Gupta and Sharma (2009) directed a study on Indian telecom consumers where they mentioned that to retain existing customers and draw the new ones, service operators must offer adequate service quality at no concealed cost. Moreover, the positive association between service quality and consumer satisfaction was bolstered by numerous other studies i.e. (Sureshchandar et al., 2003; Cronin, Brady, and Hult, 2000; Caruana, Money, and Berthon, 2000; Negi, 2009; Agyapong, 2011).

Sales Promotion

Gilbert and Jackaria (2002) stated that sales promotion consists of a wide variety of short-term tactical promotional tools aimed at generating a desired response from customers. There is intense competition between Indian telecom service provider companies thus sales promotion plays a significant role in retaining a market share among companies. Sales promotion is defined as some kind of offers that has the capability of increasing consumer demand or improves product quality. It has significant impact on consumer's brand choice, purchase time, and purchase quantity decision (Khan, 2012). Oyeniyi (2011) mentioned that to retain consumers in the face of keen competition, service providers must develop marketing strategies that will not only win customer but help to retain them over longer period of time.

Customer satisfaction

Oliver (1997) defined "customer satisfaction as customer response to the state of fulfilment, and customer judgment of the fulfilled state". Zeithamal & Bitner (1996) stated customers' own perceptions of service quality as the main factor contributing to customer satisfaction as it enhances customer loyalty, averts customer fallout, drops consumers' price sensitivity, lessens the cost of botched marketing and fresh customer acquisition, moderates operating costs due to increase in customer base, improves the efficacy of advertising and enhances business standing (Fornell, 1992). Organizations must identify the determinants of customer satisfaction and dissatisfaction, in order to ensure customer satisfaction (Motley, 2003). Satisfaction of customers with company's products and services is considered as utmost important factor toward its competitiveness and accomplishment (Hennig-Thurau and Klee, 1997).

In telecom sector (Wong, 2010; Mittal and Kamakura, 2001; Leelakulthanet and Hongcharu, 2011) client retention governs the success and endurance of telecom operators which might be because of harsh competition, significant cost of enticing new customers and the similarity of service offerings by telecom service providers. Hanif et al. (2010) customer satisfaction is how customer in telecommunication industries with higher satisfaction tends to use those services continuously and having a positive impact on the customer retention (Kim et al., 2004) and also most likely to recommend the service provider to others, improving bottom line for the company (Eshghi et al., 2008).

Research Objectives

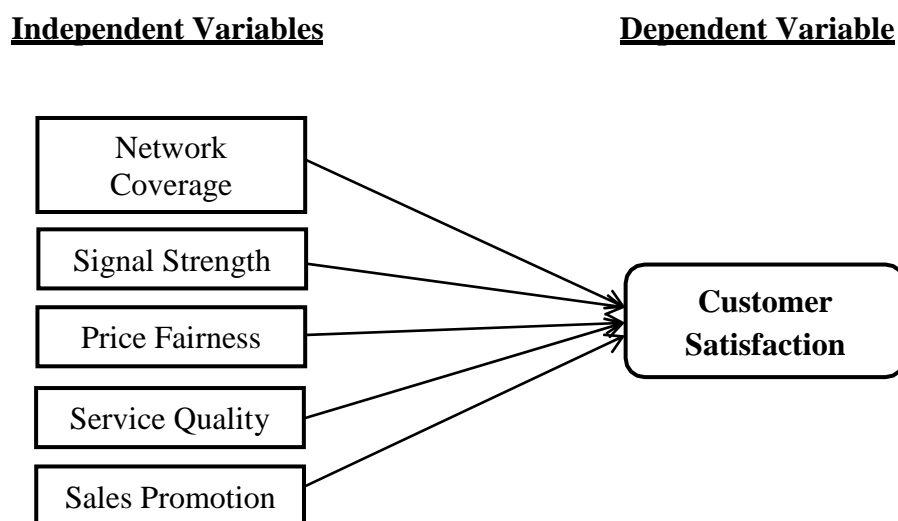
- 1) To examine the relationship between variables like network coverage, signal strength, price fairness, service quality and sales promotion with customer satisfaction in Indian Telecom sector.
- 2) To assist telecom companies in identifying the major determinants of customer satisfaction.
- 3) To probe vistas for further research.

Methodology

The study was causal in nature with survey being the mode of data collection. Convenience (Non-probability) sampling technique was used to collect data from 350 respondents in the age group of 18 years and above, using network services of three major Indian telecom companies i.e. Bharti Airtel Ltd., Vodafone Idea Ltd. and Reliance Jio Infocom Ltd.

Closed ended self-administered survey questionnaire was used for data collection which was divided into two parts, wherein first part comprised of Demographical profile and second part seeks to gather information based on dependent Variable (customer satisfaction) and Independent Variables (price fairness, service quality, network coverage, signal strength and sales promotion). Responses were obtained on 5 point Likert scale ranging from 1 as Strongly Disagree to 5 as Strongly Agree. Reliability of the questionnaire was checked through Croanbach's alpha and to test the model significance and hypothesis ANOVA and Multiple Regression analysis was used.

Figure 1: Conceptual Model of the study



Hypothesis of the study

H₁ – There is significant relationship between Network Coverage and Customer Satisfaction.

H₂ – There is significant relationship between Signal Strength and Customer Satisfaction.

H₃ – There is significant relationship between Price Fairness and Customer Satisfaction.

H₄ – There is significant relationship between Service Quality and Customer Satisfaction.

H₅ – There is significant relationship between Sales Promotion and Customer Satisfaction.

Analysis and Results

This section presents the demographic profile of respondents as shown in Table 1 where out of the total sample size of 350 respondents 62.28% were male and 37.72% were female. The majority of respondents were between the age group of 18 to 30 years i.e. 29.71% and the least were in 51 years i.e. 18.86%. Most of the respondents i.e. 66.58% had prepaid connections in comparison to 33.42% with postpaid connections. Amongst the telecom companies taken for the study Reliance Jio had highest number of subscribers being 36.57% followed by Airtel 32.57% and Vodafone Idea with 30.85%. Demographic analysis further indicated that 31.42% of respondents were using their connections since less than one year, 38.58% are having network experience of 1 to 5 years where as 30% are connected with their network for more than five years.

Table 1: Respondents Demographic profile

Measures	Items	Frequency	Percentage
Gender	Male	218	62.28%
	Female	132	37.72%
Age	18-30 yrs	104	29.71%
	31-40 yrs	93	26.58%
	41-50 yrs	87	24.85%
	51yrs & above	66	18.86%
Connection Type	Prepaid	233	66.58%
	Postpaid	117	33.42%
Network Subscribed	Airtel	114	32.57%
	Vodafone Idea	108	30.85%
	Reliance Jio	128	36.57%
Duration of Network Experience	≤ 1 year	110	31.42%
	1-5 years	135	38.58%
	≥5 years	105	30%

Descriptive Statistics

In order to determine the main feature of collected data descriptive statistics was used. It offers summary statistics in terms of mean, standard deviation and the number of respondents (N) which is 350 in current study as measures of central tendency. As shown in Table 2 the

mean values of all the six variables are greater than 3 which shows significant positive trend whereas standard deviation which determine the spread of distribution fall between 0.62 to 0.89.

Table 2: Descriptive Statistics of main Variables

Variables	Mean	Standard Deviation	Number of respondents
Network Coverage (NC)	3.38	0.62	350
Signal Strength (SS)	3.12	0.79	
Price Fairness (PF)	4.24	0.72	
Service Quality (SQ)	3.76	0.89	
Sales Promotion (SP)	3.47	0.65	
Customer Satisfaction (CS)	3.58	0.83	

Reliability

The reliability of 25 items in the questionnaire was examined using Cronbach's Alpha (CAs) as depicted in Table 3. CAs verify reliability by testing the degree to which scaled items represent the phenomenon they are intended to measure (Cronbach, 1951). The questionnaire proved to be reliable as all the alpha values were higher than 0.60 (Das, 2012).

Table. 3: Reliability Coefficients

Variables	Number of Items	Cronbach's Alpha
Network Coverage (NC)	3	.829
Signal Strength (SS)	3	.797
Price Fairness (PF)	5	.726
Service Quality (SQ)	5	.854
Sales Promotion (SP)	4	.672
Customer Satisfaction (CS)	5	.868

Regression Analysis

Multiple Regression analysis was conducted to test the hypothesis and draw the results there under. As reflected from Table. 4, R-square is displaying that the dependent variable (Customer satisfaction) is influenced 78.1% by independent variables (Network Coverage, Signal strength, Price fairness, Service quality & sales promotion). Since R Square is near to one it demonstrates overall consistency of findings with the model and consumer satisfaction in telecom industry can be affected by these factors.

Table. 4: Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.884 ^a	0.781	0.747	.56518
a. Predictors: (Constant), Network Coverage, Signal Strength, Price Fairness, Service Quality and Sales Promotion				

Model seems to be statistically substantial as the significant value reflected in Table 5 of ANOVA is less than 0.05. This further clear that all the independent variables, that is, network coverage, signal strength, price fairness, service quality and sales promotion are associated with customer satisfaction being dependent variable.

Table. 5: ANOVA^a Analysis

	Model	Sum of squares	Df	Mean Square	F	Sig.
1	Regression	9.735	5	1.947	4.847	.000 ^b
	Residual	47.572	144	.330		
	Total	57.307	149			
a. Dependent Variable: Customer Satisfaction						
b. Predictors: (Constant), Network Coverage, Signal Strength, Price Fairness, Service Quality and Sales Promotion						

Table.6: Regression Coefficients^a

	Model	Unstandardized coefficient		Standardize d coefficient	T	Sig.
1		B	Std. Error	Beta		
	(Constant)	2.436	.417		5.243	.000
	Network Coverage (NC)	.078	.040	.223	2.434	.000
	Signal Strength (SS)	.155	.074	.209	2.010	.000
	Price Fairness (PF)	.115	.036	.247	3.101	.000
	Service Quality (SQ)	.157	.007	.218	2.376	.000
	Sales Promotion (SP)	.035	.083	.096	1.235	.000
a. Dependent Variable: Customer Satisfaction						

The above Table 6 reflect that as significance value is $0.000 < 0.05$, so our hypothesis is accepted which proves there is a significant relationship between dependent variables and independent. Amid all variables, Price fairness is the main factor effecting customer satisfaction towards particular service provider with standardized coefficient $\beta = .247$. While Network Coverage is the second significant variable with coefficient of $\beta = 0.223$, followed by

Service quality ($\beta = .218$), Signal Strength ($\beta = .209$) and sales promotion ($\beta = .096$) which are comparatively less effected by Customer Satisfaction.

Conclusion

Customers in India are found to be price sensitive and ready to switch to other service providers in case they don't find value for their money. As India has one of the lowest tariff rates in the world along with availability of cheaper handsets the subscribers comprises of all sections of the society, making India one of the largest and fastest growing telecom market. The sector is left with limited number of service providers due to the fierce competition in the market thus in order to ensure their survival, companies need to keep their customers satisfied as it will help company for their long term association with them, keep up word of mouth and improve the brand image.

The study found out that Indian telecom user look most for pricing of the services (i.e. Price fairness) followed by network coverage, service quality, signal strength and sales promotion. Telecom players should therefore design their tariff plans in a way which are far affordable and beneficial for the customers of all walks and equally value each variable influencing customer satisfaction so as to gain market share in sector. The empirical evidence extended by this study towards customer satisfaction in sustainable services like telecom will be beneficial for further research in other developing countries also.

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