An Emphasize of Customer Relationship Management Analytics in Telecom Industry

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Abstract

Background/ Objective: The study aims to accentuate the need of CRM analytics in the telecom sector by scrutinizing the crucial components under the prime arch of technology, marketing strategies and end user expectation. **Method/ Analysis:** Data pertaining to seven telecom service providers were collected from a sample of 200 mobile users in Tamil Nadu, India using simple random sampling. The descriptive study was analyzed by employing multiple regression technique in order to measure the combined effects of the independent variables and Anova to discern the significance of the variables. SPSS Statistics 17.0 version is used for data analysis. **Findings:** The study found that an aggressive strategy is required to enhance trustworthiness of the telecom service providers by strongly holding the customers' priorities at heart, serving consumers with highly customized services and commendable behavior of customer service executive to make the interaction between the provider and customer an enduring experience. **Application/Improvement:** This study drifts away from the earlier studies where perception about the technology was the prime focus and complements the recent studies where mere technology is no more a competitive advantage to acquire customer satisfaction. Taking a step forward, this study also prioritizes the order of variables affecting customer satisfaction as: Marketing strategies, End – User expectation on services and Technology. Thus the research output calls for an aggressive customer analytics in Telecom Industry.

Keywords: Customer Analytics, Customer Relationship Management(CRM), Customer Satisfaction, Telecom Analytics

1. Introduction

Indian telecom service provider market is one of the highly competitive segments with 15 plus players mainly in the prepaid connection market. The recent statistics reveal that the churn rate in India has exceeded 14 % per month, which is a very high churn rate[1]. As the switching cost is low, the biggest challenge for telecom service providers is to retain the customers. CRM is gaining importance as a key strategy to retain customers, for relationships are emerging in the battlefield of intense competition. CRM finds success if it competes on relationship dimensions, rather than giving competitive products to the customer[2]. From the perspective of Lombard, CRM is viewed as business process which provides structure and a plan to develop and maintain customer relationships [3]

From the view point of marketing literature, CRM is positioned in the marketing thought framework, mainly the relationship strategies of marketing as "An ongoing process which includes leveraging and developing market intelligence for maximizing profit in relationship to the customer[4]. CRM is focused in merging the IT & strategies of relationship marketing to create long – term and profitable relationships towards the customers[5].

In order to capture customer attention, companies thrive with the knowledge of markets, product usage and segments to design the most appropriate strategies for marketing and promotion. Promotions and Advertising

plays a vital role in influencing purchase decision and as well as to build a long lasting relationship with the customers[6].Thus marketing is essential in both customer attraction and retention. Marketing has a competitive edge over technology.

Marketing is an essential component in CRM Implementation and Database analysis. To be an effective tool in CRM it should target the right customer segment with right message and timing using the appropriate medium for communication[7].So, marketing should be a seamless integration of discerning customer's behaviour, attitudes, pertinent positioning and influencing the customers. Customer data is the basis of CRM Implementation. Mere collection of Customer data by CRM Systems is not going to help in effective decision making. This is where Customer Analytics plays a key role. Deeper insights about the needs and wants of the customer can be obtained only after the data consolidation and analysis relating to marketing and sales. CRM Analytics enable the telecom providers to make strong decisions paving way to customer acquisition, customer retention and satisfaction at various levels of customer relationships[8.]

For a marketing strategy to be successful, the consumers should be the prime focus. Marketing Strategies influence and get influenced by end users cognition, behavior, environment and affect. From the view point of consumers, marketing strategy is the stimuli enforced in order to influence[9].

The 3G in Mobile Communication is still in its Infant stage as far as India is concerned. As India is thick in population, it is financially impossible to have a universal 3G coverage. With 3G in the infant stage 4G is into play which places pressure on the investors to invest huge amounts in 4G infrastructure without even making complete return on investments in 3G [10].

As the competition has become intense in mobile telecom service providers, the spectrum band is spread very thin among the players and there is no sufficient allocation. So no longer can technology be a competitive advantage or a tool to create customer satisfaction as it was assumed earlier. Despite this competition as far as the voice connectivity is concerned, the telecom service providers have given their best to provide an affordable connectivity in voice communication[11].

In mobile service provider sector the switching cost is very less and customers tend to switch to other operators in no time. The Churn Management solution of CRM

Analytics aids in identifying the customers who tend to defect from the service provider on the basis of their behavior. By the data analysis of the customers who are defected, the telecom providers can find out the reason for defection and take necessary steps in future to reduce the churn rate.

Customer loyalty is one of the prominent tools to reduce switching of customers. It is proposed that loyalty and customer satisfaction had a positive relation. To improve the customer loyalty and satisfaction the firms should focus on service quality and perceived value enhancement.

For firms competing in a highly competitive environment, the optimum strategy lies in providing high quality service and implement method that aims to contribute added value. Switching barriers should be built by telecom service providers to enhance customer loyalty and avoid customer defection.

Factors' contributing to customer satisfaction in telecom industry is in a transition stage from the earlier school of thoughts to modern school of thoughts. The factors have slowly started to drift away from the earlier studies and researches have been carried out to justify the change in factors[12].

This study aims at finding the exact level of transition by prioritizing the various factors contributing to customer delightment by doing an in-depth analysis of various components in the areas of technology, marketing and end user[13].

2. Materials and Methods

A Descriptive type as each and every item is clearly described. Questionnaire is the research tool employed in this study. The instrument encompassed 39 items (Technology dimensions:13 items, Marketing strategies:9 items, Customer satisfaction:11 items, End user expectation :6 items) adopting five-point Likert scale with intensities ranging through.

i. Strongly disagree, disagree, partially agree, agree, strongly agree.
ii. Not sure, poor, fair, good and Excellent.
iii. Never, rarely, sometimes, often and always.
iv. Highly dissatisfied, dis satisfied, partially satisfied, satisfied and highly satisfied

Simple random sample is considered a simple case in which each of the population elements has a known and

equal probability of selection. As this is an empirical study with infinite population some randomization was made in the timings of data collection at the major recharging points and bill collection centers.

A pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample.

- Whether the respondents understand all the questions?
- Whether certain words in the questions need explanation?
- Are there unnecessary questions?

The deficiencies on the questionnaire are corrected.

SPSS Statistics 17.0 version is used for data analysis. Multiple Regression analysis was applied which uses simple and multiple predictions to predict Y from X values[14].

3. Results and Discussions

Cronbach's alpha value of all the 39 items are, $\alpha = 0.854$. This value is good in a marketing research. The questionnaire is reliable and the items are internally consistent. The result is expressed in Table 1.

3.1 Multiple Regression

H_0:Customer satisfaction on services provider does not depend on the MOBILE TECHNOLOGY, MARKETING STRATEGIES and ENDUSER EXPECTATION.

The multiple regression model was employed to measure combined effects of the independent variables (MOBILE TECHNOLOGY X_1; MARKETING STRATEGY X_2; and ENDUSER EXPECTATION X_3 ;) against the dependent variable (Customer satisfaction Y). The theoretical equation for multiple regression is given as

$$Y = a_0 + a_1X_1 + a_2X_2 + a_3X_3$$

a_0 - regression constant

Table 1. Reliability statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.848	.854	39

a_1, a_2 and a_3 are the regression coefficients of the three independent variables.

The 't' test was applied here to work out and test the statistical significance of the regression co efficient. R^2 - coefficient of determination, was compared in order to determine percentage variation among the dependent variables. F-value was to compute the significance of R^2 with F-distribution at 5% level of significance. The model summary is exhibited in Table 2.

3.2 Anova

The Anova model was employed to discern the significant variation among the three independent variables (Mobile Technology, end user expectation and marketing strategies). The results are exhibited in Table 3.

The model's prediction ability is expressed as R^2 in Table 2 with a value of 0.432 in which 43% of variance in the dependent variable belongs to the independent variables with F-value 49.514 in Table 3.

The beta weight of 0.269 for variable 1 (MOBILE TECHNOLOGY) in Table 4 denote that when all the other variables are held constant. Customer satisfaction (the dependent variable) would increase by quarter the SD (0.269). The order of importance /predictive importance for the independent variables 2, 1 and 3 was 0.371, 0.269 and 0.169 respectively exhibited in Table 4. The t-test confirmed that the results obtained were generalized to the total population by values 4.101, 5.622and 2.789 in Table 4. From the Anova Table 3,it was discerned that

Table 2. Model summary

Model	R	R^2	Adjusted R^2	Standard Error of Estimate
1	.658a	.432	.424	4.29994

a. Predictors: (Constant), END USER EXPECTATION, MOBILE TECHNOLOGY, MARKETING STRATEGIES
b. Dependent Variable: CUSTOMER SATISFACTION

Table 3. Anova table

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2746.482	3	915.494	49.514	.000a
	Residual	3605.448	195	18.489		
	Total	6351.930	198			

a. Predictors: (Constant), END USER EXPECTATION, MOBILE TECHNOLOGY, MARKETING STRATEGIES
b. Dependent Variable: CUSTOMER SATISFACTION

significance value was 0.00, which is a lesser value than 0.05. So the regression employed here was concluded as a good model and all the variables were also significant as per the coefficients table. The normal probability plot (Expected Cumulative Probability Vs Observed Cumulative Probability) is exhibited in Figure 1.

The equation includes all the three variables

Customer Satisfaction= 7.565+ 0.436 (MARKETING STRATEGIES) + 0.215 (MOBILE TECHNOLOGY)+ 0.252 (END USER EXPECTATION)

Table 4.   Co-efficeient – t-test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.565	2.336		3.239	.001
	TECHNOLOGY	.215	.052	.269	4.101	.000
	MARKETING	.436	.078	.371	5.622	.000
	ENDUSER	.252	.090	.169	2.789	.006

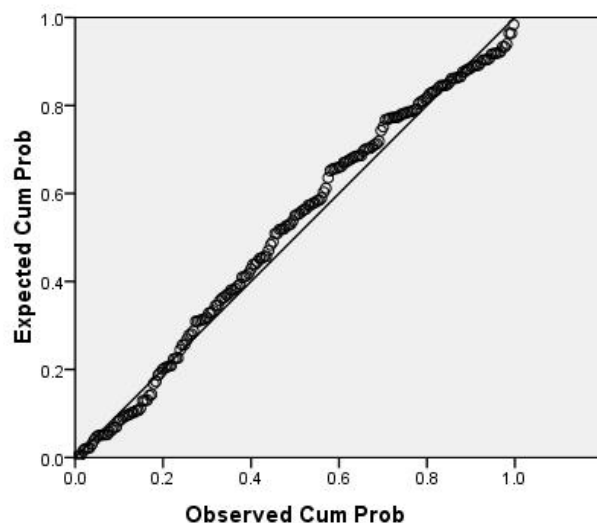a. Dependent Variable: CUSTOMER SATISFACTION

Figure 1.   Normal probability plot.

4. Conclusion

This study has complemented Greenberg, 2002 who proposed that CRM is not a mere technology, but more of hospitality, it is about hurling a welcome mat on your front porch. Telecom Customers started demanding for more VAS (value added services) and higher levels of connectivity at lower prices. The flexibility in Government regulations had introduced increased levels of competitions, that has led to more substitutes and reduced price rates, rapid technology advancement is pushing companies to absorb advanced and innovative technology tools i.e. CRM analytics in order to meet market demand. Combining data management and analytics of network, market, customer along with other various critical areas of business results in effective understanding of issues related to operation, forecasting and on time decisions.

The marketing component such as retail outlets, offers, discounts, Schemes, payment norms, advertising campaign was the variable contributing more on customer satisfaction.

The end user component included the priority given to customer loyalty, alerts on new schemes, loan for recharge and specific offers for individuals was second in the order of importance to customer satisfaction.

Under the technology component, network coverage, mobile internet settings, 3G /4G network, internet packs, automatic updating of SIM card validity, Increase integration of web sales and customer care,e-recharge and net-banking were considered as last variable i.e., basic requirement and not as components delighting the customers.

5. References

1. Rajeswari PS, Ravilochanan P. Churn analytics on Indian prepaid mobile services. Canadian Center of Science and Education. 2014; 10(13):169–83.
2. Meera A. Role of service quality in customer relationship management: an empirical study of Indian telecom industry. 2013; 3(2):87–94.
3. Lambert DM. Customer relationship management as a business process USA. Journal of Business and Industrial Marketing. 2010; 25(1):4–17.
4. Zablah AR, Bellenger DN, Johnston WJ. Customer relationship management implementation gaps. Journal of Personal Selling and Sales Management. 2004, 24(4):279–95.

5. Amine NT, Mazen HS, Saeed A. The perception of customer relationship management adoption case of mobile companies in Saudi Arabia. Journal of Mobile Technologies, Knowledge and Society. 2011:1–13

6. Vani H, Shanthi P. CRM implementation in Indian telecom industry – evaluating the effectiveness of mobile telecom service providers using data envelopment analysis. International Journal of Business Research and Management. 2011 Oct; 2(3):110–27.

7. Maher FM. Customer relationship management (telecommunication industry) comparison between (Airtel) and (Zain). International Journal of Business and Management Invention. 2013Nov; 2(11):52–8.

8. How US telecoms can more effectively convert data to foresight [Internet]. [Cited 2011 Jan 09]. Available from: http://www.cognizant.com/InsightWhitepapers.

9. Deepak S, Anil A. Customer relationship management in banks, Abhinav. Journal of Research in Commerce and Management. 2011:8–13.

10. Kapil Y, Shashank T, Rajiv D. Impact of technological changes in telecom sector in India. Indian Journal of Science and Technology. 2015 Feb; 8(4):194–9.DOI: 10.17485/ijst/2015/v8iS4/62217.

11. Samarajiva R. Leveraging the budget telecom network business model to bring broadband to the people. Information Technologies and International Development Journal.2010; 6(4):93–7.

12. Castaneda JA. Relationship between customer loyalty and satisfaction on the internet. Journal of Business and Psychology. 2011Oct; 26(3):371–83.

13. Liu L, Tzer C, Maggie Y, Lee CH. The effects of relationship quality and switching barriers on customer loyalty. International Journal of Information Management. 2011; 31(1):71–9

14. Rajini G.Vital strategies discriminating global and local organizations in India. GlobalBusiness Review. 2013; 14(2):225–41.