Research Article

CUSTOMER RELATIONSHIP MANAGEMENT DIMENSIONS IN MOBILE TELECOMMUNICATION SECTOR

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ABSTRACT

The mobile telecommunication sector in India is witnessing significant developments in the last few years. Due to intense competition the service providers are forced to cut tariffs and shift their focus from merely providing voice call services to various data services. The market is also getting saturated with decrease in net subscriber addition resulting in considerable reduction in the profit margins of the service providers. The high cost of acquiring new customers and the challenge of retaining a loyal customer base have urged telecom operators to be more customer–centric and provide the best service quality to customers. This present study is a descriptive and exploratory research that focuses on describing the profile of mobile telecom customers and identifying the CRM dimensions in mobile telecom sector. A sample of 766 respondents of five service providers was taken from five districts of Northern and Central Kerala. This study attempts to assess the effectiveness of the mobile service providers in managing customer relationship. Four dimensions of CRM like Key customer focus, Technology, Business process and Knowledge management have identified in this study and the service quality of five major telecom service providers are also evaluated in terms of reliability, responsiveness, assurance and network quality. The study also analyses the influence of CRM practices of the service providers on customer loyalty. The research instrument was constructed using Likert scaling technique and the reliability and validity of the instrument were tested using Exploratory Factor Analysis. The study provides useful information regarding the CRM practices in telecom sector and opens up new avenues for future research.

INTRODUCTION

The Indian telecom sector has emerged as one of the leading potential markets in the global perspective with a high paced growth over the past 25 years. Two major reasons that contributed to the growth of the sector are technological innovations and regulatory changes. The liberalisation of telecom sector in 1994 and the setting up of Telecom Regulatory Authority of India or TRAI as an independent regulator for the Indian telecom sector in 1997fuelled the growth of telecom industry in India. In the first decade of the 21st century, the mobile telecom services became affordable to Indian middle class people when the government further liberalised the entry of private and foreign investors. India is currently considered the world's second-largest telecom market with third highest number of internet users in the world, (IBEF, 2017). The number of mobile subscribers has reached 1167.44 million in December 2017 from 752.19 million in December 2010 with an increase of 55.21%, (TRAI, 2017). The wire-less tele-density has reached 90.11 in December 2017 which means that the number of mobile phone connections per hundred people of India is 90.11. The number of mobile internet subscribers also increased steadily in the last few years. Even though there is a substantial increase in the number of mobile phone users, the Indian telecom sector is facing a lot of challenges. With the entry of a new service provider named Reliance Jio in September 2016 which offered free voice call services and data packages at extremely low cost, the Indian telecom sector witnessed a new era of data revolution. The competition become so severe that other service providers were also forced to reduce their tariffs on voice calls and data services leading to a sudden decline in the Average Revenue per User (ARPU) for all service providers.

With the competition becoming severe, the service providers are faced with the challenge of reducing customer churn by retaining the existing customer base in a highly competitive and volatile market. The complexity and high cost of acquiring

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new customers has prompted telecom operators to adopt strategies to retain the existing customer base. In this context, a customer–centric approach is required for better understanding of the individual customer needs and to respond quickly to customer demands and develop strategies to understand how and why a sense of loyalty develops in customers.

The objectives of the research are:

- To study the demographic profile of the mobile subscribers.
- To study the factors influencing Customer Relationship Management in telecom sector
- To analyse the influence of CRM on Customer loyalty.

LITERATURE REVIEW

Customer Relationship Management

Customer Relationship Management (CRM) is a widely implemented model in service industry and it combines business process, people and technology for measuring and valuing customer relationship. Different approaches to CRM are available in extant literature viewing CRM as a philosophy, strategy, process and technology. The philosophical approach stresses on customer centricity and understanding changing customer needs to attain long term business profitability. According to this view the firms must be able to continually deliver high customer value through a customer centric culture, (Rigby *et.al*, 2002: Wilson, Daniel & McDonald, 2002). A widely accepted and upcoming perspective is to treat CRM as a business strategy enabled by information technology by integrating organization functions in order to deliver superior value to selective profitable customers, (Parvatiyar and Sheth, 2001; Ang and Buttle 2002; Smith 2002; Payne & Frow, 2005). Another approach is to view CRM as a business process involving a set of activities undertaken by the firms for initiate, develop and maintain relationships with customers by leveraging market intelligence for the purpose of establishing long term and profitable customer relationships (Plakoyiannaki & Tzokas, 2002: Reinartz *et.al*., 2003: Zableh *et al*. 2004). Several researchers emphasized the role of technology in managing customer relationships and stated that CRM tools enable firms to harness the power of database, data-mining and interactive technologies. CRM as a technology helps firms to collect, store and analyze unlimited customer data, manage customer interactions, link front and back-office functions and build knowledge from that data and disseminate the resulting knowledge across the organization. (Bose, 2002; Crosby & Johnson, 2001; Chen & Popovich, 2003; Greenburg, 2010).

Soliman (2011) researched on Customer Relationship Management and its relationship to marketing performance among managers of financial institutions in Egypt and identified three dimensions of CRM like focus on main customers, the organization's efficiency and the customer knowledge management and stated focus on main customers was found to have a direct, strong, positive and statistically significant correlation with the marketing performance and hence financial institutions must exert more efforts to discover the needs of the main customers and deal them with great care to gain their loyalty.

Rababah *et al*. (2011) explained four major perspectives of CRM process which are customer facing level process, customer-oriented process, cross-functional CRM process and CRM macro-level process and found that for ensuring the successful adoption and implementation of any CRM initiative, organization should understand the different levels of CRM process and the integrated activities among the CRM processes at each stage.

Mohammed, Rashid & Tahir (2014) has analyzed the relationship between CRM technology and organizational performance in hotel industry by examining the mediating role of marketing capabilities and examined a positive and significant relationship between CRM technology and marketing capabilities of the hotels. The implication of the study is that hotel managers should adopt new information technology to assist hotel employees enhance their capacity to offer superior service to customers.

Elkordy (2014) viewed CRM as a distinct capability that can lead to superior business performance using a Resource based view (RBV) of the firm. The study revealed that all CRM dimensions like CRM technology, CRM processes, customer orientation and CRM organization showed a positive link to performance and compared to the other variables, CRM organization proved to be a strong determinant on performance.

Azzam (2016) has investigated the relationship between CRM dimensions and hotel performance in Jordanusing the balance scorecard (BSC) approach to measure hotel performance. The findings of the study demonstrated a significant relationship between CRM dimensions like customer orientation, CRM organization, knowledge management, and technology based CRM and hotel performance with CRM technology showing the most significant and positive relationship.

From the above literature review four dimensions of CRM are identified such as key customer focus, technology, and business process and knowledge management.
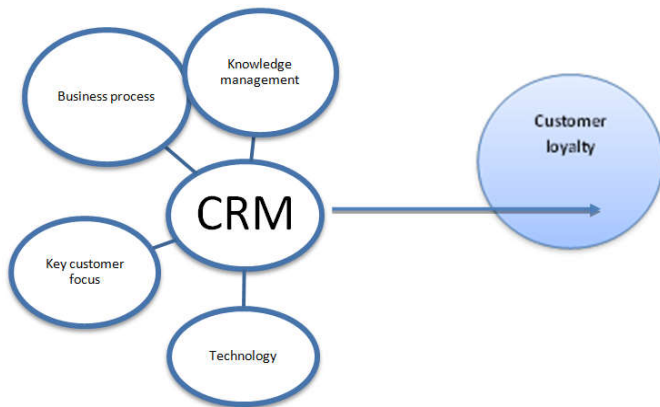
Customer Loyalty

The concept of customer loyalty has been widely researched in marketing literature. One of the widely accepted definitions of customer loyalty is in terms of repeated purchase behaviour due to a positive disposition toward the service providerand interpreting patterns of repeat purchasing as a manifestation of loyalty (Gremler and Brown 1993; Oliver 1997; Anderson and Jacobsen; 2000; Curtis, 2009). Another view focused on attitudinal loyalty which measures the level of consumer's psychological attachments and the extent to which customer acts as an advocate for the company's products and recommends the products to others, (Lovelock 1996; Chowdhuri & Holbrook 2001). Many studies focuses on composite loyalty which is the combination of behavioral and attitudinal dimensions of loyalty and concludes that loyalty is measured in terms of both repeated purchase behavior and favorable attitudes and intentions towards the company and its products, (Uncles, Dowling & Hammond 2003; Thiele 2005; Kaur and Soch 2012).

CRM and Customer Loyalty

Several studies provided evidence for the influence on CRM practices on customer loyalty in telecom sector. Kaur (2011)

has studied the effect of Customer Relationship Management (CRM) on Customer loyalty in telecom industry and identified the mediating role of commitment, corporate image and switching cost in the relationship between customer satisfaction trust and customer loyalty. Vani Haridasan (2012) researched on CRM in mobile telecom services and established that there is a strong linkage between service quality and service loyalty, service quality and loyalty indices and service loyalty and loyalty indices. Khaligh *et al.* (2012) has investigated the impact of eCRM on customer loyalty and retention in the telecom industry in Iran. The variables of Customer Retention were grouped into 7 constructs such as Customer Satisfaction, Customer Involvement, Trust, and Attraction of alternatives, Service Quality, Price, and Switching.Findings showed that for the successful implementation of eCRM, vision and commitment from the management are needed. Koi Akrofi *et al.* (2013) assessed the impact of relationship marketing tactics on customer loyalty in mobile telecommunication sector in Ghana. The study used four tactics typical of service industry like service quality, price perception, brand image and value offered and examined that a positive significant relationship between each of these marketing tactics and customer loyalty. Abdullah *et al.* (2014) studied the impact of Relationship Marketing Tactics (RMT's) & Relationship Quality on Customer Loyalty in Malaysian mobile telecom industry by studying three variables related to RMT namely brand reputation, alternative attractiveness and emotions and its impact on customer loyalty.The study provided a better understanding on the effectiveness of RMT's and identified the mediating role of relationship quality (Trust) in the relationship between RMT and customer loyalty.

Based on the literature review the below proposed research model is derived:

RESEARCH METHODOLOGY

The research design used in this study is descriptive as this research aims to describe the demographic profile of the respondents and to study the factors influencing CRM and their relationship with customer loyalty. The area of the study chosen was five districts of North and Central Kerala, namely, Ernakulum, Thrissur, Malappuram, Kozhikode and Palakkaddue to their high tele-density and being the industrial and cultural hubs of Kerala. The researcher used Stratified random sampling method to collect data from the customers of five major service providers like Airtel, Idea, Vodafone, BSNL and Reliance JIO. A self- administered questionnaire was distributed to 1000 respondents and with around 77% response rate, 766 responses were found to be completely filled. The responses were taken through direct interaction with the customers at customer service centres, retail stores of service providers, colleges and shopping malls. The researcher has ensured to cover respondents of all age groups and proper guidelines in vernacular language were given to increase the accuracy of responses collected.

The demographic characteristics of the customers are summarized in Table given below:

Table 1 Demographic Characteristics of Respondents

Gender

	Frequency	Percent	Mean	Standard Deviation
Male	373	48.7		
Female	392	51.2	1.5157	.50786
Total	766	100.0		

Age

	Frequency	Percent	Mean	Standard Deviation
below 30	288	37.6		
31-40	385	50.3		
41-50	83	10.8	1.7624	.70734
50-60	7	.9		
above 60	3	.4		
Total	766	100.0		

Education

	Frequency	Percent	Mean	Standard Deviation
higher secondary	105	13.7		
under graduate	380	49.6		
post graduate	188	24.5	2.3525	.86684
professional	92	12.0		
Total	766	100.0		

Employment

	Frequency	Percent	Mean	Standard Deviation
private	165	21.5		
Government	62	8.1		
self-employed	129	16.8	3.0405	1.23762
un-employed	398	52.0		
Total	766	100.0		

Income of the respondent				
	Frequency	Percent	Mean	Std. Deviation
below 10000	127	16.6		
10001-30000	135	17.6		
30001-50000	44	5.7	3.6514	1.64175
above 50000	32	4.2		
dependent	428	55.9		
Total	766	100.0		

ANALYSIS AND RESULTS

Data collected was analysed through a series of validated tools and procedures. The reliability of items was assessed by computing the coefficient alpha that measures the internal consistency of the items for all dimensions of CRM. Due to the multidimensionality of CRM constructs, coefficient alpha was computed separately for all the dimensions identified.

Reliability Coefficients for the constructs of CRM (aValue)

Table 2 Reliability Coefficients for the constructs of CRM

S No.	Dimensions	Alpha Value
1	Key Customer Focus	.814
2	Technology	.752
3	Business process	.753
4	Knowledge Management	.760
	αValue for CRM	.843

The reliability coefficients for the variables chosen for the study should have to be more than 0.70, to consider it as an acceptable value (Nunally 1978). In this study the Reliability analysis shows that all the factors have shown alpha value greater than 0.7 and the alpha value for CRM is .843 indicating the evidence of reliability. So the items constituting each variable under study have reasonable internal consistency and shows that all the dimensions of factors influencing Customer Relationship Management have a positive reliability.

Kaiser-Meyer-Olkin Measure of Sampling

Kaiser Meyer Olkin and Bartlett`s Test for factors influencing Customer Relationship Management (CRM)

Before proceeding for the factor analysis, appropriateness of factor analysis needs to be assessed. This can be done by examining sampling adequacy through Kaiser- Meyer-Olkin (KMO) statistic. Table 3 provides the SPSS output of data for Kaiser-Meyer-Olkin Measure of Sampling. KMO value greater than 0.6 can be considered as adequate

Table 3 KMO and Bartlett's Test of CRM

Kasier-Meyer-Olkin Measure of Sampling Adequacy	.865
Bartlett's Test of Approximate Chi-Square	3917.462
Sphericity (Df)	136
Sig.	.00

From the Table 3, it can be seen that KMO value for CRM Dimensionsis acceptable; Bartlett's test results also show that the values are significant and thus acceptable. For CRM dimensions four factors comprising seventeen items, all having Eigen values of unity and above were extracted and the results are shown in Table 4. Further, in order to assess the appropriateness of the data for factor analysis, the communalities derived from the factor analysis were reviewed. The extraction of all the 17 variables are >.6. It clearly shows that each variable contributes 60% of the variance. The cumulative variance is 63.986 %, which means 64% of the measured variables are contributing positively towards the study.

Exploratory Factor Analysis for factors influencing Customer Relationship Management Exploratory factor analysis (EFA) is a special form of factor analysis. It is used to assess the number of factors and the loadings of variables.

Table 4 Exploratory Factor Analysis for factors influencing Customer Relationship Management (CRM)

	Factor loadings	Percent Variance Explained
Factor1: Key Customer Focus		18.530
KCF 1	.859	
KCF 2	.655	
KCF 3	.841	
KCF 4	.863	
Factor 2: Technology		16.142
TEC 1	.674	
TEC 2	.703	
TEC 3	.627	
TEC 4	.667	
Factor 3: Business Process		15.117
PRO 1	.668	
PRO 2	.722	
PRO 3	.749	
PRO 4	.620	
PRO 5	.610	
Factor4: Knowledge management		14.197
KM 1	.667	
KM 2	.729	
KM 3	.672	
KM 4	.737	

Factor analysis of the 17 items revealed a 4-factor structure that explained 63.986 % of total variance. The criteria for retaining the 4 factors were eigen values greater than one and the ability to describe and label each factor. No items were dropped from the attributes of factors influencing Customer Relationship Management because all the items were loaded onto an easy to identify factor.

Factor 1 was labelled *Key Customer focus* described the extent of superior and added value offered to key customers by the service providers and it explained 18.530% of the variance in customer's responses to the CRM dimensions in telecom sector. *Factor 2* labelled as *Technology* explained 16.142% of the variance in customer's responses. These items covered the use of technologies by the service providers in serving customers and building relationships. *Factor 3* was labelled *Business Process* and explained 15.117% of the variance in customer's responses and it covered all activities initiated by the service providers in serving customers and building relationship across all customer contact points. *Factor 4* labelled as *Knowledge Management* explained the extent to which the service providers used customer knowledge to discover their needs, provide quick interactions and serving them better and it explained 14.197% of the variance in customer's responses to the CRM dimensions in telecom sector.

FINDINGS AND CONCLUSION

The factors and dimensions included for analysis carry a good degree of reliability to support the objectives formulated. All dimensions of CRM have got significant relationship to make the real representation of the study. Hence it is concluded that the data collected in this study is highly reliable.

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