An Empirical Model on Customers' Perception in the Selection of Indian Prepaid Mobile Services

** P. S. Rajeswari*
*** P. Ravilochanan*

Abstract

India, a leading country in the telecommunication sector, has shown remarkable growth in prepaid mobile subscriptions through rigorous rural penetration. At the same time, the rate of monthly customer attrition is very high when compared with other countries across the globe. Customer churn is very aggressive, particularly in the prepaid segment, when compared with the postpaid segment. Hence, it is decidedly imperative for the mobile operators to comprehend the exact preferences of the customers to select the mobile operators based on prepaid mobile services attributes. Thus, the purpose of the present paper was to examine the reasons for the customers to select specific service providers and to develop a business model based on the operational strategies for the prepaid mobile segment. Descriptive research method was adopted for the present study, and by using a structured questionnaire, the survey method was undertaken. A total of1102 sample respondents from 10 cities across Tamil Nadu participated in the study (using purposive sampling method). The factors related to technology based customer care services, accessibility, roaming charges, network coverage, and call charges were found to be acting as drivers for the customers to select a specific service provider. Based on this analysis, an empirical business model was designed by integrating the respective marketing elements and operational key areas to improve the business portfolio of the mobile service providers. Finally, operational strategies were recommended based on the current market scenario.

Keywords: **telecommunication, customer satisfaction, customer retention, voice and data services, affiliate marketing, social media marketing, mobile service providers**

JEL Classification : L96, L82, M31, M37

Paper Submission Date : April 23, 2014 ; Paper sent back for Revision : May 14, 2014 ; Paper Acceptance Date : June 6, 2014

Indian mobile services, one of the fastest proliferating telecommunication segments, is facing major challenges in customer retention, mainly in the prepaid segment. According to the statistical report of Telecom Regulatory Authority of India (TRAI) 2014, total prepaid subscription has been found to be 886 million, with an average monthly prepaid churn of 14% in India (TRAI, 2014). This was indicated by the increase in prepaid subscriptions with the rise in churn rate when compared to last year. To solve this issue, telecom marketers have been playing different magical games in offering attractive service packs and tariff plans in different permutations and combinations to enhance customer retention. In the real scene, customer attrition has occurred at a higher rate due to various operational reasons. By understanding the exact expectations of the customers and their perceptions of mobile services, marketers can design better operational strategies to improve customer loyalty.

Review of Literature

Velmurugan and Velmurugan (2014) examined the consumers' awareness and adoption of 3G mobile phones in India by emphasizing the vital need of any marketer to know the exact need of the customers in selecting a

**Assistant Professor,* School of Management, SRM University, Kattankulathur - 603 203, Tamil Nadu.
E-mail: psrajee_2003@yahoo.co.in
***Professor and Research Associate,* School of Management, SRM University, Kattankulathur - 603 203, Tamil Nadu.

particular mobile operator . Raheem, Nawaz, Mujeeb, and Vishnu (2014) pointed out that the perceptions of the customers need to be monitored for understanding the switching behavior of the customers from 2G to 3G services. Abadi, Kabiry, and Forghani (2013) investigated the factors influencing customers' perception to adopt Isfahanian mobile banking facility . Clancy, Berger, and Krieg (2013) pointed out that self-reporting is the best way to percolate the determinants of factors in preferring the brand choice for products and services. UKEssays.com (2013) explained the importance of studying customer perception in Malaysian Telecommunications . The study evaluated customer benefits and their needs for purchase in terms of costs of usage. It was found that there were five factors that influenced customers to select particular mobile operators, which were - Service Provider, Peer Influence, Quality of Services, Customer Services, and Promotion & Coverage of Network. Wel et al. (2013) explored the role of text messages (SMS) and multimedia messages (MMS) in 3G mobiles, especially in the perceived ease of use.

Koga, Maccari, Kniess, and Ruiz (2013) evaluated the consumers' behavior in terms of discarding and recycling of mobile phones in Brazil by means of a perception study. The survey results showed that majority of the respondents had awareness about recycling. Ranjith and Goyal (2011) explained the importance of consumer perception in mobile computing and determined the factors of consumer perception. Murray (1991) pointed out that consumer perception deals with the views, ideas, and feelings of the consumers on various services availed by them. Murray also pointed out that consumers have a higher perception of risk when purchasing services, which causes them to have distinctive information needs. Assael (1992) proposed the importance of customers' involvement in decision-making and explained the role of complex decision-making processes.

Gourville and Soman (1998) examined the effect of paying in advance for a service on the consumers' interest in that service. They found that the longer the delay between paying for a service and using it, the more the consumers tend to treat that service as if it had been acquired for free. They also suggested the importance of investigating consumer perception in which benefits temporally precede costs. Holbrook (1994) explained the need of assessing customer value for marketing activities. The author found that the customers had different needs of and attitudes to new products. Coleman (1983) noted that members of different social classes have different consumer motivations, and that class often does not always correlate well with income.

Wilson, Zeithaml, Bitner, and Gremler (2012) described the significance of customer perception in assessing the current performance of the marketers through different levels of customer satisfaction. Webster Jr. (2000) explained the types and potential objectives of marketing campaigning. Reichheld and Sasser (1990) emphasized the importance of factors triggering customer loyalty in the mobile services industry. DeSouza (1992) portrayed that the factors influencing customer retention need to be determined by understanding the needs and desires of the customers.

Research Questions

(1) What were the key reasons for the customers selecting specific mobile service providers?

(2) How to devise operational retention strategies to enhance customer loyalty?

Problem Focus

Indian mobile services have pitched tremendous growth substantially in the past one decade, but failed to arrest the churn rate. Irrespective of huge promotional offers and add on benefits tailored by the mobile operators, customer churn could not be kept under control. It was found that the mobile operators had not succeeded in understanding the customers' value, motives, and their needs for choosing a specific mobile operator for subscription out of the extensive list of mobile operators. First and foremost, the mobile operators need to tap the exact expectations of the customers in selecting a mobile service provider, and then only it would be easier for them to develop corresponding strategies that need to be implemented for building customer loyalty and customer relationship management.

Research Objectives

(1) To determine the factors influencing customers' perception in the selection of Indian prepaid mobile services,
(2) To develop an empirical business model based on customers' perception of Indian prepaid mobile services.

Research Methodology

✍ **Justification of the Study :** Mobile operators pooled a remarkable market growth in the prepaid segment through rural penetration in India. They were incarnating several market driven strategies by rendering a variety of service plans to increase customers' lifetime with their network, but they were not able to realize return on investment as customers are tender in toggling mobile operators in a very short span of time. It is very difficult for the mobile operators to predict the exact requirements of the customers, as this segment is highly volatile due to innovations and advancement in mobile technology.

It is clear that the marketers have not gone through the mind map of the customers pertinently .They have to fundamentally strengthen their approach by thoroughly analyzing the reasons for the customers to select a specific operator and their expectations from the mobile services provided by them.

✍ **Research Design :** Descriptive research method was undertaken in this study. Primary and secondary data were gathered for conducting this study. The survey method using a structured questionnaire was used for collecting the primary data. The time period for the study is from December 2012 to August 2013.

✍ **Sampling Framework :** Tamil Nadu is the second largest state in India in prepaid mobile subscriptions among all the states in India. It contributed to 10% of the total prepaid subscriptions in India as of December 2013. Approximately 50% of the monthly average churn is represented by this state ("Mobile subscribers largest in Uttar Pradesh, Tamil Nadu," 2013). Customers from 10 major cities of Tamil Nadu - such as Chennai, Madurai, Dindigul, Coimbatore, Trichy, Salem, Erode, Vellore, Tirunelveli, and Thanjavur - based on prepaid subscription and churn rate of 2013 were asked to participate in the present study. Purposive sampling method was adopted for sampling and a total of 1102 respondents were considered for the study.

✍ **Reliability and Validity :** Inter item and split-half reliability were checked by using SPSS 20 package and Cronbach's alpha value was found to be 0.94. Content, construct, and face validity were checked and evaluated by respective experts and was supported by the literature.

✍ **Pilot Study :** A pilot study was performed in Chennai with 100 respondents to verify the effectiveness of the questionnaire. Initially, 386 questions were included in the questionnaire, and after getting feedback from the respondents, it was found that some of the questions focused too much on surfing and gaming using mobile phones. Majority of the respondents gave the feedback that these questions were not relevant to their usage patterns. Hence, those 56 questions were dropped, and 39 questions were found to have a linear relationship with other questions based on different constructs taken for the present study. This was reconfirmed by using a reliability study, whose Cronbach's alpha score was below 0.45, and at last, the said 39 questions were also removed from the questionnaire. Finally, 291 questions were included in the final questionnaire (Table 1).

✍ **Results of the Pilot Study**

(1) Majority of the respondents (76%) mentioned that they selected a mobile service provider on the basis of the provider's performance in network connectivity and call drop, network coverage, and value added services.

(2) They also emphasized that the service provider's performance with regards to customer service,

Table 1. Factors Considered for the Study

S.No	Factors	No of Variables
1	Mobile Phone usage (MP)	12
2	Handset Details (HD)	11
3	Phone Details (PD)	33
4	Internet Usage (IU)	8
5	Data Card (DC)	10
6	Satisfactory Level on Corporate Image (SLCI)	17
7	Performance (P)	16
8	Customer Relationship Management (CRM)	12
9	Service Quality (SQ)	47
10	Price	9
11	Switch	7
12	Churn (CH)	30
13	Internet Usage (INT)	14
14	Surfing (SUF)	32
15	Personality Profile (PP)	9
16	Attitude (A)	7
17	Socio - Demographic factors	17
Total	**291**	

advertisements about corporate image, tariff plan, and corporate social responsibility were the major factors that influenced them to choose a service provider.

✍ **Details of Data Collection :** In total, ten major cities of Tamil Nadu were selected for primary data collection based on their prepaid subscription and churn rate of 2012-2013 . The cities chosen for the study were Chennai, Madurai, Dindigul, Coimbatore, Trichy, Salem, Erode, Vellore, Tirunelveli, and Thanjavur ; 100 respondents were considered from each city except Chennai ; 202 respondents participated in the study from Chennai based on the prepaid subscription model. The study was mainly on prepaid mobile services; henceforth, a total of 1102 prepaid subscribers were identified after enquiring about the types of services availed by them with respect to prepaid mobile operators. Other than this condition, there was no specific criteria for data collection. Therefore, respondents from all age groups, income groups, occupational, and educational profiles participated in the present study.

Analysis and Results

From the total of 1102 respondents, 835 of them were males and remaining 267 were females. The breakup of the sample respondents based on age group is as follows : 34 respondents belonged to the age group of 12-18 years, 969 respondents were in the age group of 19-30 years, 57 respondents fell in the age group of 31-40 years, 12 respondents fell in the age group of 40-49 years, 10 respondents were in the age group of 50-59 years, and the remaining 20 respondents were above 60 years of age. Based on income group classification, 874 respondents earned a monthly income below INR 15000, 110 respondents were earning between INR 15001-30000 per month, 45 respondents each belonged to both categories of income groups, that is, earning INR 30001 to 50000, and INR 50001 to 75000 per month. The remaining 28 respondents were earning a monthly income above INR 75000.

Regarding the profile of the sample respondents based on their frequency of travel, 196 respondents mentioned that they traveled on a weekly basis, 418 respondents revealed that they traveled on a monthly basis, 232 respondents were required to travel once in every 3 months, 100 respondents traveled once in every 6 months, 77 respondents traveled once in a year, and the remaining 79 respondents traveled rarely.

With respect to the educational profile of the respondents,76% of the respondents were post graduates ; 12% of the respondents were under graduates, and the remaining 12% were class 12 pass outs. With regards to employment status, 312 respondents were professionals, 236 respondents were employed in private companies, 382 respondents were self-employed, and the remaining 172 respondents were employed in public companies. Majority of the sample respondents (708) were churners, that is, they switched their mobile service provider once in every 6 months, and the remaining 394 respondents were non - churners.

✍ **Data Processing :** Data were subjected to processing of data cleaning by checking the missing values and measures of dispersion using descriptive statistics.

Variables Overview

(1) List of Predictors

✍ **Construct :** Consumer buying factors.

✍ **Items :** Coverage, roaming facility, call charges ,GPRS, MMS, offers, accessibility , customer care, technology, e -recharge vouchers, Internet facility, convenience in subscription, ringtones.

(2) List of Criterions

✍ **Construct :** Service providers.

✍ **Items :** Airtel, Aircel, BSNL, Vodafone, Reliance, Idea Cellular, Tata Docomo, Virgin, MTS, Videocon, Loop, Uninor.

?

Data Analysis

✍ **Research Objective 1 :** To determine the factors influencing the customers' perception in the selection of the Indian prepaid mobile services.

✍ **Statistical Tools:** Correspondence analysis, log linear logit analysis.

Correspondence Analysis

✍ **Principle :** Correspondence analysis (CA) is also called perceptual mapping and social space analysis. This technique aims at explaining the inertia (variance) in a cross tabulation with a number of rows and columns. CA provides output as inertia of each attribute and object. In this analysis, as per the research objective, the factors influencing customers to select the prepaid service providers had to be analyzed. Since these two variables were nominal, they were taken for analysis . Hence, the list of service providers had been taken as objects in the rows and the consumer buying factors were taken as attributes in columns.

As can be inferred from the Table 2, the correspondence analysis (CA) exhibited a total number of 6 dimensions accounting for 100 % of the variance explained. However, the objective of CA was to reduce the set of data into a two dimensional map, and therefore, it was proposed to find out the amount of variance explained by these two dimensions. As shown in the Table 2, the cumulative percentage of variance explained amounts to 73.4% for the first two dimensions, leaving only 26.6% for the remaining dimensions (dimensions 3-6). Therefore, the other dimensions (dimensions 3-6) were dropped from analysis. Moreover, the inertia for these dimensions was also found to be not significant.

Table 2. Summary of Dimensions

Dimension	Singular Value	Inertia	Chi Square	Sig.	Proportion of Inertia	
					Accounted for	Cumulative
1	.304	.093			.507	.507
2	.204	.042			.227	.734
3	.154	.024			.130	.864
4	.136	.018			.101	.964
5	.066	.004			.024	.989
6	.046	.002			.011	1.000
Total		.183	201.022	.001**	1.000	1.000

***p* <.01

Table 3. Contribution of Each Attribute to the Inertia of Dimensions

Attributes	Dimension 1	Dimension 2
Coverage	**.781**	.022
Call Charges	**.756**	.000
Roaming charges	**.852**	.020
GPRS	.207	**.246**
MMS	.082	**.699**
Offers	.016	**.424**
Accessibility	.150	**.825**
Customer care	.003	**.892**
Technology	.077	**.165**
E recharge vouchers	**.279**	.019
Internet facility	**.247**	.244
Convenience in subscription	**.031**	.001
Ringtones	**.357**	.133

It can be inferred from the Table 3 that the values of contribution made by the attributes to each of the dimensions indicate that attributes such as roaming charges, network coverage, call charges, e- recharge vouchers, Internet facilities, convenience in subscription, and ringtones are heavily loaded on dimension 1. These values are given in bold in the Table 3. Similarly, attributes such as GPRS, MMS, offers, accessibility, customer care, and technology are loaded on dimension 2.

It can be inferred from the Table 4 that the contributions made by different columns for the variable service provider indicate that Reliance Infocom was heavily attached to dimension 1 with a loading of 0.811, and Bharti Airtel was also heavily loaded on dimension 1, with a loading of 0.679, followed by Tata Docomo, with a loading of 0.492, and Idea Cellular was closely loaded, with a loading value of 0.450. Aircel had a meager loading (0.133) in dimension 2 as compared to the other service providers. It is quite surprising to note that there was no place for Vodofone and other operators in any of the dimensions because of poor loading.

A comparison of contribution to dimensions by various points in Tables 2 and 3 depicts that much of the service attributes identified under dimension 1 were related to Reliance Info, Bharti Airtel, and BSNL ; while most of the attributes identified in dimension 2 were related to Tata Docomo, Idea, and Aircel. Hence, the association of the attributes selected in dimensions 1 and 2 correspond to the respective service providers as mentioned above. Therefore, to bring down the churn rate of the customers, the service providers - Reliance, Bharti Airtel, and BSNL need to concentrate on network coverage, call charges inclusive of roaming, schemes on recharges vouchers, and

Table 4. Contribution of Each Service Provider to the Inertia of Dimensions

Service Providers	Dimension 1	Dimension 2
Airtel	**.679**	.113
Aircel	.023	**.133**
BSNL	**.421**	.217
Vodafone	.024	.024
Reliance	**.811**	.182
Idea Cellular	.157	**.450**
Tata Docomo	.471	**.492**

attributes associated with Internet facilities. Since the major portion of this market has been tapped by the youth segment, it is essential for these service players to bring novelty in ringtones and services related to online subscriptions as well as also offer increased add-on facilities.

The service providers - Tata Docomo, Idea, and Aircel have to fine-tune their strategies on multimedia services by offering services like point of parity purchase, menu driven services, and offers on various add-on packages. They could devise a robust networking pattern for enhancing CRM to build loyalty through effective customer care.

Log Linear Logit Analysis

Principle

(1) Log linear analysis was applied for performing the confirmatory test, it was enabled to test dependencies, inclusion of variables (or their interactions) into the model, and to test the fit of the model.

(2) From the above analysis, the important attributes with respect to each service provider and their business strengths were inferred, but this pattern could be statistically tested only through parametric test involving nominal variables as predictors. Hence, the hypothesis of the above mentioned relationship was tested by using log linear logit analysis.

✍ **Criterions:** Service providers.
✍ **Predictors**: Consumer buying factors.

✍ **Null Hypothesis (H01) :** There is no significant relationship between service providers and consumer buying factors.

✍ **Alternate Hypothesis (H1) :** There is a significant relationship between service providers and consumer buying factors.

From the Table 5, it can be inferred that the overall goodness of fit of the model was assessed by comparing the expected frequencies to the observed cell frequencies for each model. The statistic normally used to tell how well the model of expected frequencies fitted with the observed frequencies was the likelihood ratio chi-square statistic ($G2$). The non-significant $G2$ value explained that the model provided a good fit between the expected and the observed frequencies (i.e., it was not significantly different from this data). It was often found that more than one model provides an adequate fit to the data as indicated by a non-significant $G2$. Hence, the null hypothesis (H01) was rejected. From the Table 6, it can be observed that the entropy was the measure on the space of probability distribution of observed and expected frequencies. The highest value of entropy favored the result. Hence, the assigned model was fitted with the data.

Table 5. Goodness-of-Fit Tests

Goodness of fit statistics	Value	*df*	Sig.
Likelihood Ratio	47.198	15459	1.000
Pearson Chi-Square	48.607	15459	1.000

Table 6. Analysis of Dispersion

	Entropy	Concentration	*df*
Model	672.506	239.374	282
Residual	753.379	419.950	9627
Total	1425.885	659.324	9909

Empirical Prepaid Business Model

✍ **Research Objective 2 :** To develop an empirical business model based on the customers' perception of Indian prepaid mobile services.

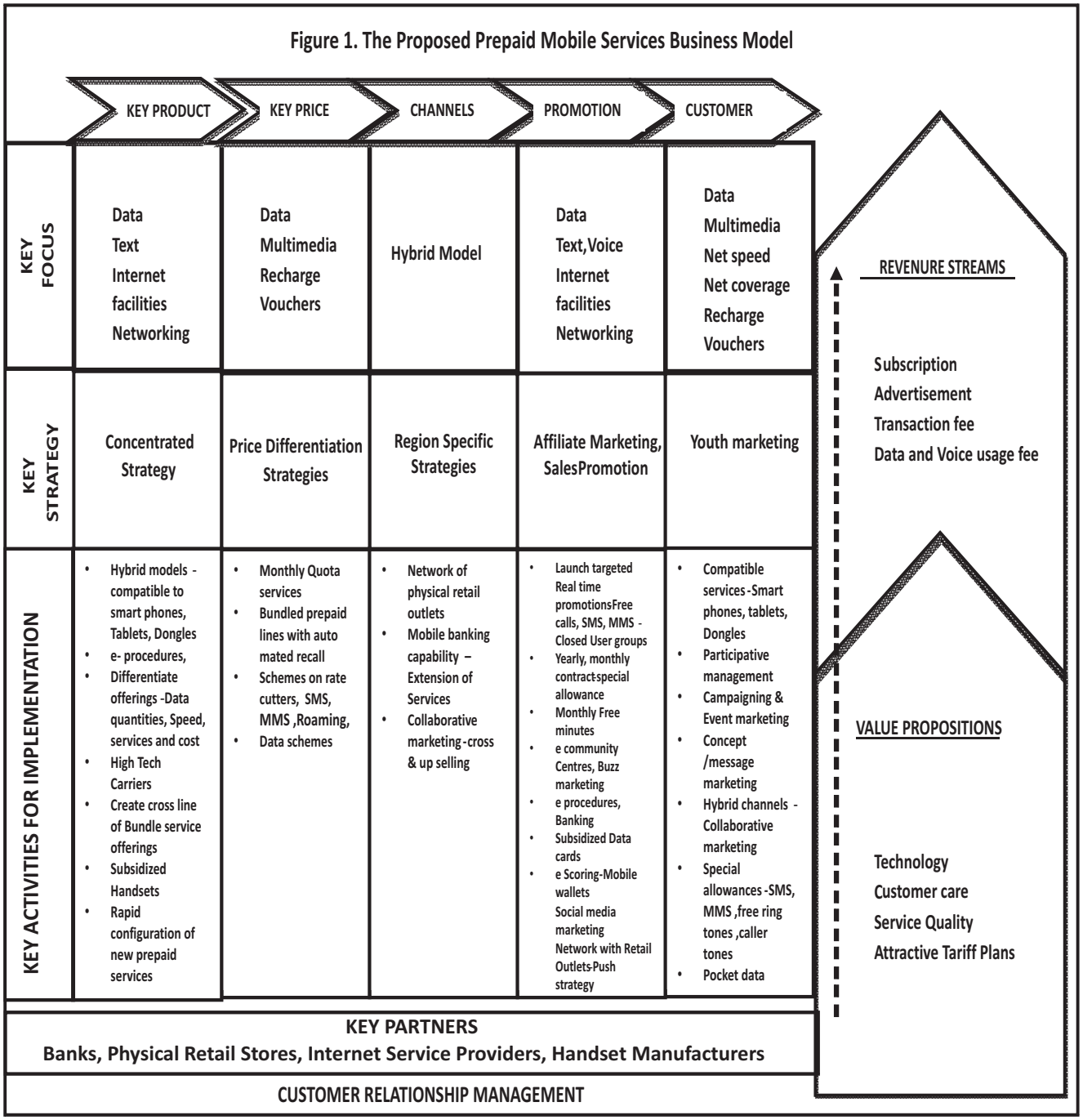
✍ **Principle :** The empirical prepaid business model was designed based on the results of consumer perception analytics performed by the correspondence analysis. The proposed empirical model was generated based on the fundamental key elements of services marketing, especially for prepaid mobile segments . The actionable key elements, focus areas, key strategies with their corresponding tools for implementation were integrated respectively.

From the Figure 1, it can be ascertained that the empirical model was fundamentally designed based on the key focus of marketing elements such as product, price, place, promotion, people, processes, and they were arranged respectively. Each of these marketing elements have distinctive key focus areas, strategy or strategies, and key activities to concentrate upon. Customer relationship marketing is the common platform to integrate all key activities . The entire model is allied with the core functions of marketing, value propositions, and revenue streams, and they are represented in the upward flow. The right strategic mix of value proposition would result in proliferating the revenue streams. In this study, as per the need of the prepaid segment, mobile operators have to concentrate on technology, customer care, service quality, and attractive tariff packages as their value proposition mix to tap the revenue streams such as subscriptions, transaction fees like services charges while making a recharge, other transaction charges with key partners, data and voice usage charges, and so forth.

✍ **Key Products :** Mobile operators, as per the current scenario, have to focus on key areas - data, messaging, Internet facilities, and network coverage as their product elements by applying a concentrated strategy. The respective key activities will be designing hybrid models compatible with smart phones, tablets, dongles ; providing rapid configuration of new prepaid services and incorporating e - procedures for customers ; differentiating data packs by speed, services, and cost ; upgrading technology using high tech carriers ; providing cross lines of bundle service offerings ; and providing subsidized handsets.

✍ **Key Price :** Price differentiation strategies need to be adopted in designing different tariff plans for data, multimedia, and recharge vouchers. Key activities for implementing strategies are monthly quota services, bundled prepaid lines with automated recall, schemes on rate cutters, SMS, MMS, roaming, and data schemes.

✍ **Channels :** A hybrid model is recommended that integrates physical retail outlets and incorporates collaborative marketing in all possible channels by concentrating on cross and up selling based on each region.



✍ **Promotions :** Affiliate marketing and sales promotions were suggested for promoting data, text, voice, and Internet services by means of key activities like promotional free calls, SMS, MMS, closed user groups, yearly or monthly contracts, special allowances, monthly free minutes, e -community centers, scoring wallets, social media marketing, and so forth.

✍ **Customer Segments :** Mobile operators are recommended to focus on youth marketing in the key areas of data, multimedia, net speed, net coverage, and recharge vouchers. The key proposed activities are participative management, event marketing , concept /message marketing, and providing special allowances in SMS, MMS, free ring tones ,caller tones, and so forth.

Recommendations

Mobile operators can revamp their operational strategies in the following areas:

(1) Hybrid Channelization of Customer Care Services : Robust networking of customer care services can be considered to be highly vital to troubleshoot complaints and to manage time taken for complaint resolution.

(2) Event Management : Marketing campaigns, inviting and focusing, on the targeted customer base can be pivotal for establishing brand value in the minds of the customers.

(3) Market Basket Analytics: Needs, wants, and motives of the customers can be analyzed in all parameters to design marketing plans.

(4) E- Mobile Systems : A high resolution e- mobile system may be developed to enhance net speed and connectivity, with swift downloading and uploading of videos ,songs, and other multimedia files.

(5) Differentiation Strategies : Voice and data tariff plans can be redesigned with differentiated pricing schemes to attract the targeted segment.

(6) Affinity Marketing: Developing community centers as per different marketing segments and offering services based on each segment may be developed.

(7) Youth Marketing Strategies can be devised to attract the youth by providing companionable services for smart phones, tablets, dongles, offers, and tariff discounts for parity purchase, tariff offers for MMS, SMS, and so forth.

Managerial Implications

The outcome of this study would enlighten the Indian mobile operators to calibrate operational strategies and use the empirical model presented in this paper to improve their business performance. Based on the above mentioned strategies, the following are the implications of the present study :

(1) Network of Physical Retail Outlets : Mobile operators do business with a much larger number of retail outlets, which can support cash-in and cash-out services, as well as carry out know your customer (KYC) procedures. Secure electronic transactions captures front-end capability. The operator's control of the SIM card puts it in a unique position to offer a customer a service platform that is both secured and user friendly.

(2) Transaction Processing (Back-end) Platform : The platforms for processing prepaid mobile billing are simple since they do not need to support a high level of customer reporting (e.g., no monthly statements) or regulatory reporting. A prepaid platform would need to be modified to meet higher reporting requirements of financial transactions. In emerging markets, mobile network operators have strong brands backed by mass marketing capacity that has reached people in the lower income groups.

(3) Campaign Management : To create awareness and to generate mass promotion on various schemes in data services, the MSPs (mobile service providers) can carry out various marketing campaigns.

(4) Mobile Analytics : Based on mobile analytics, networking should be devised with high technology of wide coverage having superior signal strength (to improve network coverage, voice clarity, and reduce call drops) to reduce customer churn rates.

(5) Participative Management : MSPs can conduct contests in schools and colleges through road shows involving customers to decide upon the various new marketing elements.

(6) Social Media Marketing : To build awareness, advertisements and all sorts of promotions can be channelized through social media.

(7) Affiliate Marketing : Online advertisements, online contests, and multilevel marketing can be done through Internet services. By implementing this strategy, churn can be minimized, since majority of the customers in the present times are Internet users.

(8) Mobile Wallet Services : These services are like a real wallet to manage financial transactions. The so called m-wallets achieve the flow of transactions amid accounts as focused upon by the mobile customer. The next step is for the mobile operator to verify the accounts of these third parties and to approve transactions on their behalf. With account holding services, the accounts are held in the appellation of a third-party institution that saves the float, but account management is delegated to the mobile operator. The next level in the value chain is for the mobile transactions provider to also issue accounts where value can be stored before or after the transaction. The mobile operator is the account issuer, and becomes a financial service provider. These are prepaid or electronic money or simply mobile accounts for basic transactional deposit accounts accessible from a mobile phone.

(9) Mobile Banking : A mobile banking capability would be one that goes yonder making and getting payments, enabling the end user to manage on demand savings, balances, and potentially using a broader range of products that allow for safe storage of value, as well as for credit and insurance.

Conclusion

The present research study has presented an empirical model on customers' perception in selecting the prepaid mobile services in the Indian context. The study has two research objectives; the first objective was to determine the factors influencing the customers' perception in the selection of Indian prepaid mobile services. The list of factors influencing customers' perception were determined using correspondence analysis for respective service providers and the model was validated using the log logit analysis. Results were found to be the factors related to technology based customer care services, accessibility, roaming charges, network coverage, and call charges. The service providers - Reliance, Bharti Airtel, and BSNL need to concentrate on network coverage, call charges inclusive of roaming, schemes on recharge vouchers, and attributes associated with Internet facilities. Tata Docomo, Idea, and Aircel have to fine-tune their strategies on multimedia services by providing services like point of parity purchases, menu driven services, and offers on various add-on packages. They can devise a robust networking pattern for enhancing customer relationship marketing to build loyalty through effective customer care policies.

Based on this analysis, an empirical model was designed by integrating the respective marketing elements and operational key areas to improve the business portfolio. Finally, actionable strategies are recommended for the MSPs based on the current market scenario.

Limitations of the Study and Scope for Further Research

Unlike earlier studies, the present paper has solely focused on the analytical investigation and grouping of respective consumer perception attributes with the corresponding mobile operators. The customers' perception of the Indian prepaid segment was examined in only one state in India (Tamil Nadu). The study was conducted in 10 major cities in Tamil Nadu, and the results cannot be generalized universally .

The present study has mainly focused on the perception of the customers of prepaid mobile services. From this study, it was found that there are unsought segments in services, which need to be tapped by the marketers .One untapped segment is the predictive analysis about the integration of mobile subscription through the banking

system. Customers favour easiness and availability of prepaid mobile subscriptions. Future research studies can focus on how customer convenience can be enhanced and how can mobile operators come up with e-prepaid subscriptions by pinging their official web subscription with the banking system and how can the mandatory procedures of document verification be done online.

References

Abadi, H.R.D., Kabiry, N., & Forghani, M. H. (2013). Factors affecting Isfahanian mobile banking adoption based on the technology acceptance model. *International Journal of Academic Research in Business and Social Sciences, 3* (5), 611-623.

Assael, H. (1992). *Consumer behavior and marketing action* (4th Ed.). USA: PWS-Kent.

Clancy, K.J., Berger, P.D., & Krieg, P. (2013). Problems with derived importance measures in brand strategy and customer satisfaction studies. *Indian Journal of Marketing, 43*(1), 5-13.

Coleman, R. P. (1983). The continuing significance of social class to marketing. *Journal of Consumer Research, 10* (3), 265-280.

DeSouza, G. (1992). Designing a customer retention plan. *The Journal of Business Strategy, 13* (2), 24-28.

Gourville, J. T., & Soman, D. (1998). Payment depreciation: The effects of temporally separating payments from consumption. *Journal of Consumer Research, 25* (2), 160-174.

Holbrook, M.B. (1994). The nature of customer's value: An axiology of service in consumption experience. In R. T. Rust, & R. L. Oliver (Eds.). S*ervice quality: New directions in theory and practice* (pp. 21 - 71). Thousand Oaks, CA: Sage Publications.

Koga, G.A., Maccari, E.A., Kniess, C.T., Ruiz, M.S. (2013). Consumer's perception regarding recycling of mobile phones: A prospective assessment in the state of São Paulo, Brazil (pp. 2005 -2016). *Technology Management in the IT-Driven Services (PICMET), 2013 Proceedings of PICMET '13* , July 28, 2013 -August 1, 2013.

Murray, K.B. (1991). A test of services marketing theory: Consumer information acquisition activities. *Journal of Marketing, 55* (1), 10-25.

Mobile subscribers largest in Uttar Pradesh, Tamil Nadu. (2013, May 5). *The Hindu*. Retrieved from http://www.thehindu.com/business/Industry/mobile-subscribers-largest-in-uttar-pradesh-tamil-nadu/article4686257.ece

Raheem, A. R., Nawaz, A., Mujeeb, M., & Vishnu, P. (2014).Factors that motivate the mobile phone users to switch from 2G to 3G technologies in Karachi. *Research Journal of Recent Sciences*. DOI : http://ssrn.com/abstract=2432458

Ranjith, P. V., & Goyal, E. (2011). A study on consumer perception A case study for laptops. *Indian Journal of Marketing , 41*(6), 42 - 54.

Reichheld, F.F., & Sasser Jr., W.E. (1990). Zero defections: Quality comes to services. *Harvard Business Review, 68* (5), 105-111.

Telecom Regulatory Authority of India. (TRAI). (2014). *Highlights on telecom subscription data as on December 31, 2013* [press release no. 09/2014]. Retrieved from http://www.trai.gov.in/WriteReadData/PressRealease/Document/PR-TSD-Dec,%2013-17022014.pdf

UKEssays.com. (2013). Factors affecting customer perception. Retrieved from http://www.ukessays.com/essays/beauty-therapy/factors-affecting-customer-perception.php

Velmurugan, M.S., & Velmurugan, M.S. (2014). Consumers' awareness, perceived ease of use toward information technology adoption in 3G mobile phones' usages in India. *Asian Journal of Marketing, 8* (1), 1-23. DOI: 10.3923/ajm.2014.1.23

Webster Jr., F.E. (2000). Understanding the relationships among brands, customers, and resellers. *Journal of the Academy of Marketing Science, 28*(1), 17-23. DOI: 10.1177/0092070300281002

Wel, C.A.B.C., Alam, S.S., Omar, N.A., & Noor, S.M. (2013). Students' intention to use mobile chatting services in Malaysia. *International Proceedings of Economics Development & Research, 57* (24), 128-132. DOI: 10.7763/IPEDR

Wilson, A., Zeithaml, V.A., Bitner, M. J., & Gremler, D. (2012). *Services marketing: Integrating customer focus across the firm* (2nd Ed.). NY: McGraw Hill.