Review Paper

Subscriber Churning of Telecom Service Providers: A Conceptual Study

Peeyush Shrivastava* and D.T. Manwani

Pacific Academy of Higher Education and Research University, Udaipur (Raj), India peeyush_shrivastava@rediffmail.com

Available online at: www.isca.in, www.isca.me

Received 2nd September 2016, revised 24th September 2016, accepted 3rd October 2016

Abstract

Telecommunication sector has appeared as the fastest developing sector in the Indian development which is generating challenges for the service providers to hold the existing subscribers. In the common context, Churn is synonym for anxiety or turnover. In the corporate context, it generally denotes subscriber turnover. Churn is commonly pronounced of in a telecommunication context, where it refers to the propensity of mobile phone subscribers to switch the service providers. The existence of any business is based on its skill to retain the subscribers. Enormous amount of money is spent to obtain a new subscriber in most telecom industries and it is more costly to add a new subscriber rather than to hold a prevailing one. When a subscriber leaves, service providers not only lose the prospect revenue but also the capitals they spend to obtain the subscriber at primary stage. The core goal of this research is to learn various fundamental concepts of subscriber churning.

Keywords: Telecom Sector, Churn, Service Providers, Conceptual Study.

Introduction

The word 'Telecommunication' is derived from the Greek language meaning 'communication at distance'. This communication comes from the various signals via transmitter and receiver¹. Telecommunication also signifies the use of technology to communicate over a distance. It focuses on to give the information in fast, accurate and effective manner so that it becomes the key for survival and success². To get the better pricing in India all the operators are facing the cut throat competition. Subscribers are attracted to those companies who are offering competitive pricing. They are using the devices with the high end technology. This strategy helps to switch or churn out to the best service providers³.

The Indian telecom industry has been a torchbearer on the possibilities that the Indian market presents to the firms willing to invest in addressing the needs of the customers. The Indian telecom industry has proved to the world that a country with legacy infrastructure can and will jump technology curves. In 2003, the US had more wireless and wire line telecom subscribers than India. Today India is home to one of the largest telecom subscriber bases in the world. Indian telecom industry has gone an extra mile to understand and leverage the retail market in India to provide telecom services to the market. However, the key contributor to this substantial growth has been the ability of the telecom industry to achieve the right product/market fit. They have got their service offerings right as well as their pricing and the rapid scale as an outcome has been phenomenal⁴.

The telecommunication industry is vibrant and dynamic with a large base of customers. A crucial factor for the survival and

good profitability of any telco company is to develop effective strategies to win more customers and to retain the existing customers (e.g. through reducing the percentage of churn). These strategies can help a telco company grow and maintain a large customer base to harvest good profits through economically providing telco services (e.g. voice data transmission and broadband) in a mass scale.

Prepaid subscribers as per their will can leave the current operator and can move to the other operator of their choice⁵. After a continued strong growth over two decades, the telecom industry in India is now witnessing challenges that can potentially halt its pace. Cases in point: average revenue per user (ARPU) at historical lows, increased number of rotational churn primarily due to increasing number of operators in a circle, and onset of mobile number portability (MNP) to cause more churn⁶.

To cope up with the churn the telecom sector needs to forecast the behaviour of customer, their liking and disliking. They must identify the high risk customer at the end who are likable to churn So that they can design the proper blueprint of their retention and acquisition.

Literature Review: A Review of Literature can be defined as series of past reviews and findings of other authors. Literature Review does not symbolize any new fact.

Author inspected how much self-knowledge consumers have when choosing between different telecom service providers. The study was constructed upon 6 key mobile related attributes i.e. access cost, call rates, cell to cell phone rates, connection fee, free calls and service features⁷.

Res. J. Management Sci.

As per the authors, drawing new customer is seven (7) times more expensive than retaining an existing one, and if the company is successful in making the customer pleased, s/he will advertise about the products and the company and in a span of ten (10) years s/he will bring 100 more customers to the company. On the contrary, if the customer is dissatisfied with the company's product or services, s/he may not only switch over to the other service provider but also spread negative vibes in his surroundings which may restrict the future prospects to move up the ladder of loyalty resulting in the denting the company's image⁸.

It is observed that per second billing (PSB) tariffs will increase usage among lower end prepaid subscribers and will stop them from churning⁹. Also the subscriber's price perception relates to perception of quality, value and other beliefs. The deviations in Mobile Tariffs could result in subscriber churn¹⁰.

"Nokia Siemens Networks (NSN) carried out a study by investigating customer experience in the mobile market in ten (10) different countries, including the UK to reveal that there are six (6) key drivers for the subscriber churn. These drivers are Billing, Cost of Services, Customer Care Services, Discounted Rate Packages, Mobile Service Offering, and Network Coverage", 11.

In a study, author discovered that customer switching costs have emerged as one of the essential drivers of customer retention in Ireland. The study explored the determinants of switching costs in terms of marketing variables i.e. Advertising, Price, and Relationship Characteristics. It was established on using a hierarchical Bayes approach that by using Advertising, and Price, corporates were able to generate switching barriers for the customers. This research pointed out the key role played by competitor's marketing action in disturbing the switching costs¹².

As per authors, the churn decision is made by two (2) aspects i.e. the Social Aspect and the Economical Aspect. Subscriber often belongs to one or several social groups such as a family, a group of friends or colleges. Being in the group, subscriber constantly receive or transmit information from/to others and get influenced by other or being an influence. When any of the group members churns due to any of the reason say, some unhappiness with the current mobile operator or a superior deal from a competitor, this information is spread over the group, affecting other group member's opinion and this action become concern of churn. Another important factor is most subscribers are members of more or other connected groups. Number of calls within the group members is quite high. Hence, subscribers choose to continue their subscriptions to the same service provider to enjoy the low calling rate inside mobile network¹³.

In one of the study, author proposes neural network (NN) based approach to predict subscriber churn in subscription of cellular wireless services carried out on the churn data set from the UCI

Repository of Machine Learning Databases at the University of California, Irvine. The data set consists of 20 different variables of information about 2,427 subscribers, along with an indication of whether the subscriber churned or not. The findings indicated that "Customer Service Calls is the most important field, followed by International Plan, Day Minutes and Day Charge. So, those customers who repeatedly call customer service numbers, having international calling plan and spending much time in calling others during day time, may become potential churners"¹⁴.

In one of the studies, authors have written about Word of Mouth and Customer Behaviour. Authors highlighted that the Call Detail Records (CDRs) can play a very crucial role to establish and predict the subscriber's decisions in the context of churn. The result of the study also delivered evidence that "Word of Mouth had a major influence on customers' churn and purchase decisions".¹⁵.

Based on one of the study, it was established that subscribers who make more frequently out-net calls will be quite likely to churn. The increase in the frequency of out-net calls may be the first warning signal, and then later become the basis of churn. The key indicators of subscriber churn according to J48tree are: Age, City, Marital Status, International Call Expenses, Number of SMSs/Calls receives, Number of Out-net calls, and Tariff Plan. Findings from J48 tree technique confirm the known fact that prepaid subscribers are more sensitive to churn¹⁶.

One of the studies carried out on a randomly selected sample size of 241 subscribers to explore post-churn impacts on brand image in telecommunication sector, so that companies can make use of the result to develop their brand image and to win over the competitors. Questionnaire seeks information about Brand Dynamics, Brand Image, and Demography. Independent sample t test and two related sample test were used to compare perceptions of non-churner and churner towards brand image. Significant differences are revealed in some brand attributes such as Connection, Coverage, Easiness, Internet, and so on. The result of the study can be used by the service providers to develop their brand image and to win over their competitors¹⁷.

Authors in this study focus on identifying the factors influencing consumer switching behavior in telecommunication industry. A questionnaire was filled by a sample of 100 respondents from Indore city. The study reveals that: i. The most important factors that influence the subscribers to switch on to other service providers are Value Added Services and Pricing Strategies. ii. By providing best value, good customer services, enhancing the brand loyalty, and keeping the price fairness, telecom service providers can control the churn ¹⁸.

Rationale of the Study

In order to survive in any of the business, the ability to retain the customers is of utmost important thing that everyone should

the energian and austeman

take care of. Churn reduction in the telecom industry is a very serious, hot and burning issue, because of which huge amount of money is invested to acquire a new customer and it is more expensive to gain a new customer rather than to retain an existing one. The importance of this research is to identify and study the factors responsible for Prepaid Subscriber churning of telecom licensed service providers. This will help the leading telecom operators to plan their promotion strategy well, develop their products by sensing the need of the Customer and to generate & maximize additional revenue.

Objective: The objective of this study is to devise a conceptual based study on subscriber churn and its main causes.

Methodology

Public relations can be used as a precious tool for instituting Industry Awareness, Name Recognition, and Professional Credibility which together help to build brand image and reduce the churn¹⁹.

A faithful subscriber base generates more Predictable Sales, Steady Cash Flow and an improved Profit Stream. Telecom service providers have now realized that consistently high levels of customer loyalty not only create long term relationships with subscribers, but also results in to competitive gain²⁰.

Any promotional approach is designed to Increase the Sales, Maintain or Improve the Market Shares, Create Brand Recognition, Built a favorable climate for future sales, inform and educate the market, construct a competitive advantage. Promotion always shows an imperative role as a in the choice of mobile service provider²¹.

Service Quality has been used to develop products. By developing service quality, telecom service providers are successful to win loyal and profitable subscribers²². Author have also described that Service Quality repeats the buying behaviour of loyal customers²³. According to the author, consumer will not choose at the cost of service quality²⁴.

Discussion

Customer satisfaction is based on the quality issues, good coverage and sound tariff plans. Customer delight is possible only through slow and steady growth and improvement in the services in the available time. Today subscriber anticipates more and wide variety of services from mobile operators. More good are the services, less likely they are willing to churn. Value added services with new features are now helpful in attracting the new customers²⁵.

Conclusion

Various concepts are given by the researcher to study the level of churn in the telecom sector. It is the most complex topic as churn is directly related to the operator services and customer satisfaction level. The suggestive recommendation is to study the current market trend and need of subscriber so as to reduce the churn level.

Abbreviations: ARPU - Average Revenue Per User, CDR - Call Detail Record, MNP - Mobile Number Portability, NN - Neural Network, NSN - Nokia Siemens Network, PSB - Per Second Billing, Raj - Rajasthan, SIM - Subscriber Identity Module, SMS - Short Message Service, TRAI - Telecom Regulatory Authority of India, US - United States, UK - United Kingdom.

References

- 1. INFORMR (2015). brief history telecommunications. Informr, http://theinformr.com/features/brief-history-telecommuni-cations/. [Accessed on 12/Dec/2015]
- **2.** Shoretel (2015). History Telecommunication. https://www.shoretel.in/history-telecommunication. [Accessed on 12/Dec/2015].
- 3. Bruce Allen W. (2012). India's Experience with Mobile Number Portability. https://ns-dn.neustar.biz/creative _services/biz/neustar/www/resources/whitepapers/data-services/india-experience-with-mobile-number-portability .pdf, 1-18. [Accessed on 12/Jun/2014]
- **4.** Karthik Ananth (2011). A Bright Future. *Voice & Data*, 18(2), 73.
- 5. Radosavljevik D., Putten P.V. and Larsen K.K. (2010). The Impact of Experimental Setup in Prepaid Churn Prediction for Mobile Telecommunications: What to Predict, for Whom and Does the Customer Experience Matter?. *Transactions on Machine Learning and Data Mining*, 3(2), 80-99.
- **6.** Sanyal K. (2011). Co-opetition is Key to Drive Telecom Growth. *Voice & Data*, 18(4), 66.
- 7. Riquelme H. (2001). Do Consumers Know What They Want. *Journal of Consumer Marketing*, 18(5), 437-448.
- **8.** Payne A. and Frow P. (2005). A Strategic Framework for Customer Relationship Management. *Journal of Marketing*, 69, 167-176.
- **9.** Barrantesa R. and Galperin H. (2008). Can the Poor Afford Mobile Telephony? Evidence from Latin America. *Telecommunication Policy*, 32(8), 521-530.
- **10.** Munnukka J. (2008). Customer's Purchase Intentions as a Reflection of Price Perception. *Journal of Product & Brand Management*, 17(3), 188-196.
- 11. Nokia Siemens Networks (2009). How to Generate Customer Loyalty in Mobile Markets. Global Summary Report, http://www.google.co.in/url?url=http://networks.nokia.com/system/files/document/AR_Mobile_A4_0107.pdf&rct=j&frm=1&q=&esrc=s&sa=U&ei=J9A5VY-

Res. J. Management Sci.

- bGcyB8gWy14CIAw&ved=0CBMQFjAA&usg=AFQjCNFUhiRN7jf-6sMQijqQqJfnSe2vw. [Accessed on 24/Apr/2015].
- **12.** Polo Y. and Sese F.J. (2009). How to Make Switching Costly: the role of marketing and relationship characteristics. *Journal of Service Research*, 12(2), 119-137.
- **13.** Richter Y., Yom-Tov E. and Slonim N. (2010). Predicting Customer Churn in Mobile Networks through Analysis of Social Groups. International Conference on Data Mining, Society for Industrial and Applied Mathematics (SIAM), 732-741.
- **14.** Sharma A. and Panigrahi D. and Kumar P. (2011). A Neural Network Based Approach for Predicting Customer Churn in Cellular Network Services. *International Journal of Computer Applications*, 27(11), 1-6.
- **15.** Dierkes T., Bichler M. and Krishnan R. (2011). Estimating the Effect of Word of Mouth on Churn and Cross-buying in the Mobile Phone Market with Markov Logic Networks. *Decision Support Systems*, 51(3), 361-371.
- **16.** Nguyen E.H.X. (2011). Customer Churn Prediction for the Icelandic Mobile Telephony Market. Master's thesis submitted to University of Iceland under the Faculty of Industrial Engineering, Mechanical Engineering and Computer Science, 3-109.
- **17.** Aufar M. (2014). Study of Post-Churn Impacts on Brand Image in Telecommunication Sector. Proceedings of 7th

- Asia-Pacific Business Research Conference, Bayview Hotel, Singapore. ISBN: 978-1-922069-58-0.
- **18.** Makwana K., Sharma N. and Arora S. (2014). Factors Influencing Consumer Brand Switching Behavior in Telecommunication Industry: An Empirical Study. *Prestige e-Journal of Management and Research*, 1(1).
- **19.** Spiegel R. (1985). Public Relations-Creating a Marketing Environment. *Information Today*, 2(6), 12-13.
- **20.** Asser J.R. and Lovelock C. (1992). Zero Defection: Quality Comes to Services. Managing Services, Marketing, Operations and Human.
- **21.** Rowley J. (1998). Promotion and Marketing Communications in the Information Marketplace. *Library Review*, 47(8), 383-387.
- **22.** Berry L.L. (1995). Relationship Marketing of Services Growing Interest, Emerging Perspectives. *Journal of the Academy Of Marketing Science*, 23(4), 236-245.
- **23.** Byrne K. (2005). How Do Consumers Evaluate Risk in Financial Products?. *Journal of Financial Services Marketing*, 10(1), 21-32.
- **24.** Berry L.L. and Seiders K. (2008). Serving Unfair Customers. *Business Horizon*, 51, 29-37.
- **25.** Ruth N.K. and Chelagat G. (2014). Study of Customers Expectations toward Cellular Service Providers in Rural Area. *Pacific Business Review International*, 7(1), 23-28.