

Factors Influencing Consumer Preference and Switching Behaviour :An Empirical Study of Punjab Telecom Sector

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Abstract

Indian telecom sector has witnessed exponential growth in the wireless subscribers. With the advent of advanced technologies like 4th generation and VOLTE services the competition has increased substantially. The bargaining power of subscribers has further increased due to the introduction of nationwide MNP. Cellular operators are now facing the biggest challenge of customer retention. The study attempts to investigate the factors influencing the consumer's choice of cellular operator and the reasons responsible for switching behavior. The findings of the study suggest a positive significant relationship between customer satisfaction with variables like signal strength, affordability, data services value added services, customer service etc. Indian cellular operators are now focusing away from attracting new customers, towards retaining the existing profitable customers. The study also provides policy implications to the selected cellular operators and other stakeholders.

Keywords

Customer Satisfaction, Service Quality, Mobile Number Portability, Switching intention.

Introduction

In today's highly dynamic and competitive marketplace, businesses have to be customer centric due to the plethora of choices available to them. The cellular industry in India has grown exponentially since the last two decades¹. The technology used to deliver these services has undergone a sea level change². Indian cellular industry has majority of prepaid subscribers, it is easy for prepaid users to switch or use services of multiple operators³. Therefore there is a need to analyze the switching intention of the customers.

After the deregulation of telecom sector, many private as well as foreign cellular operators have started services in India. This has led to a buyer's market as the supply now exceeds demand. To meet the challenges of price wars, customer switching, declining ARPU, cut throat competition, the firms have to employ latest technology⁴. The bargaining power of customers has further increased due to the introduction of MNP⁵. Cellular operators are increasingly becoming customer-centric to ensure customer satisfaction⁶. Satisfied customer stay longer with the company and also spread positive message about the service firm through word of mouth

communication^{7,8,9}. There is thus a need to analyze the effect of MNP on the switching behavior of the subscribers¹⁰.

Cellular operators are facing the biggest problem of customer switching¹¹. The firms can reduce switching if they are able to identify various factors influencing switching¹². The review of literature indicates a relationship between service quality and customer satisfaction^{13,14}. Also there is association between customer satisfaction, customer switching intention and recommending behavior¹⁵.

MNP was implemented by Telecom Regulatory Authority of India (TRAI) in India on 20th January 2011. MNP enables the cellular service users to retain their existing mobile number while switching to another cellular operator of the same telecom circle. Initially, in December 2010, the MNP facility was introduced in Haryana, afterwards it was extended across India on January 20th, 2011.

Due to the implementation of MNP cellular subscribers can easily switch between different service providers as per their choice. The technology used for the implementation of MNP in India is Donor led, which is based on unique porting code. Initially, the subscribers were able to switch their service provider within same circle, but in 2015, TRAI implemented Pan India number portability. Pan India number portability enables the subscribers to retain their existing mobile number throughout the country i.e., across different telecom circles.

In the present era of fierce competitive business environment, it has become vital for the firms to manage and retain their existing customers. Customer retention has become a better indicator of enterprise performance than the traditional considered indicator- profitability. Many organizations still do not give adequate emphasis to customer retention (Ramakrishnan 2005)¹⁶. Retaining the customers is a key to achieve high business efficiency. Customer retention has a direct influence on economies of scale, profitability levels, market share and other key performance indicators that enable a firm to attain competitive advantage. Were it not for the huge license fees paid, the mobile phone business may have even be the most profitable venture in corporate history of India (McDowell & Lee, 2003)¹⁷

Cellular market in India is quite competitive specifically in regard to acquiring new customers as is clear from the high valuations put on acquisition are based on high subscriber acquisition costs (Ernst & Young,)¹⁸. Due to the dwindling profit margins and declining ARPU's the cellular operators have started aiming towards implementing the business practices that aim for customer

satisfaction and retention (Fornell & Wernerfelt)¹⁹. Customer's perception of the service quality that they experience with services rendered by current cellular operator, influence their behavioral outcomes. Thus the presents study gains much relevance as the customer satisfaction and customer retention become the key to survival and growth of companies.

REVIEW OF EXISTING LITERATURE

A critical examination of the existing studies in Indian and global context was carried out in order to have a deeper insight into the conceptual framework of the present study. On the basis of extensive review and the gaps found in the existing studies, research objectives and hypotheses were formulated for further investigation.

Potluri & Hawariat (2010)²⁰ conducted a research on effect of quality of services rendered by the Ethiopian Telecommunication Corporation on customer satisfaction. The present study focused on analyzing the role of serving staff in providing after sale services. Convenience sampling was used to select the sample for the study. Questionnaire was prepared to collect the data from respondent who were using fixed line telephone services. Total 450 questionnaires were distributed among the respondents, out of which 370 responses were used for analyses. Structured personal interviews with open ended questions was also followed. The results concluded that nearly 40% of the respondents have negative remarks about the after sale services rendered by the sale staff. Regarding the service quality, inaccuracy of bills, delay in resolving complaints, poor network coverage found to be significant in the study which requires improvement in these services rendered by company.

Gautam & Chandhok (2011)²¹ investigated the determinants which influence the mobile phone users to switch to another service providers. The authors found important factors which would help the companies to keep the customers loyal. The study collected secondary data from the websites, published and unpublished articles, TRAI reports. The results of the study indicated a negative relationship between customer satisfaction and customer complaints which revealed that if the level of satisfaction is high then there will be less tendency to complaint. Therefore, the authors suggested to improve the services rendered as per the need of subscribers.

Haverila (2011)²² identified the features to be included in the mobile phones which leads to customer satisfaction. The study focused on the feature preferences of male respondents in mobile phone. The author tried to establish the relationship between feature preference and

customer satisfaction and results in repurchase intention. The data was collected from 289 respondents of university and high school of Finland. Online questionnaire was developed for collecting data. Factor analysis was used in the study. Three factors were grouped for the features preferences i.e., business functionality, standard parts and processes, and aesthetics and design. The regression model was applied and indicated that business functionality, had a significant correlation with repurchase intent.

Afzal et al., (2013)²³ tried to bring out the relationship between customer satisfaction and switching behaviour of mobile phone users. The study was carried out to investigate the factors which can influence the switching intention of the subscribers. The study examined the loyalty of subscriber towards their current cellular operator. The data was collected from 104 students selected from two universities of Larkana. Questionnaire method was selected to collect the data from the students. The data was analysed by using SPSS. Pearson Correlation indicated the significant relationship between service quality and switching behaviour of respondents i.e., the services rendered by the cellular operators had an impact on the switching behaviour of respondents. The results found the significant relationship between trust and switching behaviour, whereas, there exists negative relationship between loyalty and switching intention.

Boateng & Boateng (2013)²⁴ developed a model to measure the willingness of subscribers to switch to another service operator. The study attempted to investigate the effect of implementation of MNP on the switching behaviour of mobile subscribers. The study includes the survey of six months. The data was collected through interview and questionnaire method. Convenience sampling method was used to select the sample of 200 respondents of Ghana. The results indicated that there exists a negative relationship between switching intention and the income of subscribers. However, high, average and low customer services were not statistically significant in determining the switching intention or to stay with current service provider.

Kutlu (2013)²⁵ identified and modeled the factors influencing customer's adoption for MNP in Turkey. The data was collected from 1250 respondents who were subscribers of cellular services through the questionnaire method. In the proposed model, age, type of service contract, the cellular operator and satisfaction level of the respondent were used as predictors. Multiple regression analysis was used to examine the effect of respondent's age, type of contract, network operator, and current satisfaction level on intention to opt MNP. The results of the study showed that these variables were having a significant effect on adoption of MNP by the subscribers. The

study suggested that the proposed model could be beneficial for managers of cellular service firms in order to meet the challenges posed by MNP.

Yadav & Dabhade (2013)²⁶ identified the impact of number portability on service providers & service users. The study explored the effect of portability on sale of IDEA cellular Ltd. The study identified the strategy adopted to attract more customers by the IDEA cellular to retain their costumers after Number Portability. The self-structured questionnaire was adopted to cover 200 respondents. The study found that MNP generated fair competition among the small as well as giant player of the telecom sector. MNP compels to focus on retaining their high average revenue per user (ARPU) postpaid customers because it contributes in profit maximization. The study recommended the service providers to develop the strategies for attracting new ones as per the customer expectations and design operator's services to provide the desired proposition.

Arora & Chawla (2014)²⁷ in their study concentrated on the process of the implementation of Mobile Number Portability (MNP) and its impacts on cellular subscribers in India. The study explored the various sources of awareness which influenced the subscribers to opt for MNP. The study also made a comparison of the satisfaction level of respondents before and after switching with MNP across different mobile service providers. A self-administered questionnaire on MNP was designed to collect the data. Snowball sampling method was adopted to select the respondents for the study. Data were analyzed by using both descriptive and inferential techniques such as the percentages, paired sample t-test, ANOVA and weighted average score methods by using SPSS software. The study revealed that friends, family members, relatives motivated customers to opt mobile number portability followed by information provided by the Internet and advertisements. Satisfaction level of respondents was found to be enhanced after having their mobile number ported out to other cellular operator in terms of better connectivity, affordable tariff plans, reduced call drops, roaming network coverage etc.

Badgujar & Purewal (2014)²⁸ conducted a study to analyze the subscriber's preference towards MNP in three districts of Haryana namely Jind, Rohtak and Sirsa. A pre-structured questionnaire was devised to obtain the data from 150 cellular subscribers to analyze their perceptions about the process of porting by opting for MNP. The researchers found the pre-paid respondents to be satisfied with the services rendered by their cellular operators. The cellular operators which offer most economic tariff for calls, SMS, 3G data services, variety of roaming plans can easily lure the customers. The findings of the study opined that if a cellular operator fails in meeting customer's expectations in terms of variety of services offered, then there are

high chances of customer churn. The study concluded that MNP has increased the bargaining power of the cellular subscribers.

Joshi (2014)²⁹ conducted a survey to identify the factors which affect the experiences of customers towards cellular mobile services. The data was collected from 536 customers of Maharashtra using mobile phones. Factor analysis was used in the study for 20 statements included in the questionnaire and grouped into 5 factors. 86.7% variance was explained in the study. The results found that service performance was the major factor which affect customer experience for cellular mobile services. It was found that customers must experience services at appropriate charges and better quality in network coverage, data connectivity and high speed from their cellular operator.

Makwana et al., (2014)³⁰ made an attempt to identify various factors influencing consumer switching behaviour in cellular service industry. A self-designed pre-structured questionnaire consisting of 19 items was used for data collection. The questionnaire was largely based on 5-point Likert Scale. The questionnaire was administered on a sample size of 100 respondents (each of 50 male and 50 female students) graduating from a professional institute of Indore City. For ensuring adequacy of sample and to ensure validity Kaiser-Mayer-Olkin (KMO) and Bartlett's Test were used. Inferential techniques such as factor analysis, mean and student's t-test were applied for data analysis. The study revealed that VAS (value added services) and pricing strategies were the two important factors that had an influence on consumer behavior. The study offered valuable implications for the wireless service providers to manage consumer brand switching and also for retaining the customers while maintaining a long term profitable relationship.

Naik (2014)³¹ conducted an empirical research to investigate the level of consumer awareness and customer preference for MNP. The study aimed to identify the major influencers of customer switching by opting for MNP. The researchers used convenience sampling to draw a sample of 280 mobile service users. A structured questionnaire was framed to conduct the survey for obtaining the required MNP information for study. The research found advertisements as a main source of customer awareness about MNP. The findings of the study revealed that 45 percent of the respondents desired to switch their service provider. The study also differentiated the customers who have opted for MNP and those who never opted for MNP. The research found that 68 percent of the respondents were dissatisfied with various service attributes such as network coverage, tariff plan, call connectivity etc. the study suggested that cellular operators

should provide excellent services at an affordable cost in order to retain their customers and to develop customer loyalty.

Rahul & Majhi (2014)³² attempted to examine the level of satisfaction and loyalty of mobile users towards their cellular operators. The data was collected through questionnaire method, distributed among 300 respondents out of which 240 were valid and used further. Factor analysis was used to drop the items having factor loading less than 0.05. KMO test resulted in value of 0.8 indicating goodness of data. Structural equation model was used in the study to measure the satisfaction level and loyalty of customers. The study concluded that there exists positive effect of satisfaction on the loyalty of mobile users. The study suggested that the company can predict the satisfaction level of customers and loyalty so that steps can be taken to reduce the churn.

Boafo et al., (2015)³³ investigated the influence of mobile number portability on the process of service delivery. The researchers made an attempt to ascertain the factors influencing customer's decision to port. The study mentioned advantages and limitations of MNP for both the service provider firms as well as the cellular subscribers. The authors made a comparison between the quality of services rendered before and after the implementation of MNP. Both purposive and accidental types of sampling techniques were used to draw a sample of 164 respondents. The findings of the study revealed a significant influence of price fairness, customer's perception of service quality and company's brand image over the porting behavior of respondents. The main managerial implication of the study was that firms should focus on enhancing service quality in order to aim for customer retention.

Kumaresh & Praveena (2015)³⁴ attempted to measure the impact of implementation of mobile number portability on the switching intention of mobile phone users. The study focused on identifying the factors which can influence the customers to switch to another cellular operator by adopting mobile number portability. The data was collected through structured interview scheduled from 100 mobile users of Tamil Nadu state. Random sampling method was used to select the sample. Factor analysis was used to identify the group of factors, factor loading. Discriminant analysis, percentages were used to test the hypotheses framed. Garrett ranking method was applied which indicated that the majority of the respondents used mobile phone because of their personal needs. In the study, advertising was found to be the major source of information about information of MNP. The study revealed that poor network quality and lack of promotional activities were the main reason to switch to another competitor.

Rationale for the present Study

Telecom industry has not only attracted the investments, but also academic researchers. The cellular services sector of India has witnessed a paradigm shift due to advancements in technology. This paradigm shift has led to growing emphasis on initiatives that aim at ensuring customer satisfaction and retention. The expectations of both the service providers as well as cellular subscribers have increased with the introduction of latest technologies such as 4G and VOLTE. Further the implementation of nation –wide mobile number portability by TRAI has transformed the already fierce competition among the cellular operators into a war. The cellular operators have started experiencing all time high subscriber churn rates due to the implementation of MNP. With almost similar types of services offered and competitive call rates, cellular operators are left with only one alternative to differentiate their services from the competitors. That alternative is to provide high quality of services to the customers and create a high level of customer satisfaction.

Due to the dwindling profit margins and declining ARPU's the cellular operators have started aiming towards implementing the business practices that aim for customer satisfaction and retention (Fornell & Wernerfelt)³⁵. Customer's perception of the service quality that they experience with services rendered by current cellular operator, influence their behavioral outcomes. Thus the presents study gains much relevance as the customer satisfaction and customer retention become the key to survival and growth of companies.

Methodology

Research Objectives

1. To explore the subscriber's perceptions of key service quality dimensions and investigate the relationship between selected dimensions and customer preference.
2. To identify the determinants of subscriber's switching intention and examine the relationship between switching intention and overall customer satisfaction for the services rendered by selected cellular operators of Punjab telecom circle.
3. To examine the role of Mobile Number Portability on the switching intention of the subscribers of selected cellular operators of Punjab telecom circle.

Research Hypotheses

H1: There exists a positive relationship between overall customer satisfaction and different dimensions of service quality towards services rendered by selected cellular operators of Punjab telecom circle.

H2: There exists a significant relationship between switching intention and customer's perceptions about mobile number portability.

SCOPE OF THE STUDY

The study was conducted on a sample size of 200 subscribers from Punjab telecom circle. Both prepaid as well as post paid subscribers were included in the study. Both Primary and Secondary sources of data were used. Primary data was collected through pre-structured questionnaire largely based on the SERVQUAL scale of service quality. Most of the responses were sought on five point likert scale. After data collection data was processed and analyzed with the help of MS Excel and SPSS version 20. Various journals, books, documents, official websites such as TRAI, COAI, D.O.T etc. were referred for study variables and the testing of hypotheses was achieved through various inferential statistical techniques.

Test of Goodness was performed to use the adequacy and reliability of the questionnaire. The KMO test shows that the samples are adequate and useable for inferential statistical analysis. As per statistical analysis, $KMO > 0.5$ is considered to be an appropriate indicator of adequacy of data. The Bartlett's test of Sphericity also confirms that the data is significant at $P < 0.05$.

Table:1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.809
Bartlett's Test of Sphericity	Approx. Chi-Square	1241.065
	df	482
	Sig.	.000

Table: 2 Correlations among the Seven Dimensions

Dimensions	Overall Service Quality
Reliability	0.429*
Responsiveness	0.608*
Assurance	0.416*
Empathy	0.327*
Tangibles	0.213*
Convenience	0.410*
Customer perceived network quality	0.537*

* Correlation is significant at the 0.01 level (2-tailed).

The findings indicate that there is strong correlation among the seven quality dimensions and overall service satisfaction at $p < 0.01$ level. Thus, users of cellular services give weightage to all the seven dimensions of service quality.

Interpretation of data

Table 3: Demographic profile of the respondents

Measures	Items	Frequency	Percentage
Age	Up to 21 years	24	12.90323
	21 to 25 years	41	22.04301
	26 to 30 years	46	24.73118
	31 to 35 years	32	17.2043
	36 to 40 years	23	12.36559
	41 years & above	20	10.75269
Gender	Male	95	51.07527
	Female	91	48.92473
Connection Type	Postpaid	28	15.05376

	Prepaid	158	84.94624
Network Operator	Airtel	53	28.49462
	Vodafone	36	19.35484
	BSNL	29	15.5914
	Idea	33	17.74194
	Reliance	21	11.29032
	Tata Docomo	14	7.526882
Association with network	Up to 6 months	39	20.96774
	6 months to 1 year	46	24.73118
	more than 1 year but less than 2 years	55	29.56989
	More than 2 year but less than 3 years	19	10.21505
	More than 3 years	27	14.51613

Table 4: Regression Analysis

Independent Variables	Beta (β)	Sig. T
Reliability	0.368	0.000
Assurance	0.246	0.000
Tangibles	0.042	0.040
Empathy	0.182	0.000
Responsiveness	0.442	0.000
Convenience	0.242	0.000
Customer perceived network quality	0.349	0.000

Table 4, the results indicate that perceived service quality is influenced by all the seven dimensions with responsiveness as the most important dimension, β coefficient = 0.442,, and tangibles appearing to be the least important (with β co-efficient = 0.042).

Table 5: Mean Scores and Standard Deviation of Service quality Dimensions

	Dimensions	Mean	Std. Dev
1	Tangibility	3.223	.68743
2	Reliability	4.0643	.52562
3	Responsiveness	3.899	.6247
4	Assurance	3.8634	.71755
5	Empathy	3.6418	.68743
6	Network/Reception Quality	4.0150	.67015
7	Pricing	3.9686	.65250
8	Value Added Services	3.1757	.77028

Table 5 presents the mean scores and standard deviation of service quality dimensions, namely. Tangibility, Reliability, Responsiveness, Assurance, Empathy, Network Quality, Pricing and Value Added Services. Mean score of all the dimensions are more than 3, which signifies that, on an average the respondents have agreement with the statements related to service quality. Highest score was found for the Reliability (4.0643), followed by Network Quality (4.0150). Lower scores were found in tangibility and Value added services with mean score 3.223 and 3.18 respectively.

Table 6: Mean and Standard Deviation of Switching Intention of Customers

	Items	Mean	Std. Deviation
1	Switch to another cellular operator if offered low call rates.	3.8624	0.47913
2	Change the cellular operator if found low SMS plan.	3.0670	0.70152
3	New cellular operator charges less for data services	3.3280	0.60016
4	Change the cellular operator if I am offered more variety of value added services by another operator.	2.9650	0.45109
5	Motivated from special offers and attractive packages by the competitors	3.4520	0.31944
6	Switch the cellular operator if unreliable customer care services of current cellular operator.	3.7149	0.50206
7	Switch the cellular operator if hidden charges are levied by current cellular operator.	3.7730	0.48968
8	Switch to another cellular operator if inaccuracy in billing/balance deduction noticed with current cellular operator.	3.9860	0.54568
9	Switching to new cellular operator if colleagues, friends or family	3.1440	0.81510

	members switch their cellular operator.		
10	Influence of poor network coverage and poor call quality of current cellular operator.	4.1630	0.50645
11	Switching due to inability to resolve my complaint by current cellular operator	3.6480	0.49985
12	Switching cellular operator due to relocate factor.	3.0140	0.56478
13	Switching due to poor roaming network.	3.5420	0.49733
14	To experience services offered by other cellular operator.	2.8840	0.63646
15	I would switch to new cellular operator to experience MNP.	2.7390	0.78000

Table 6 shows the mean score of switching intentions of customer to other cellular operators. High mean score was found 4.1630 if respondents faced poor network coverage and poor call quality, followed by mean score 3.9860 if there is inaccuracy in billing/balance deduction.

Table 7: Mean and Standard Deviation of Mobile Number Portability

	Items	Mean	Std. Deviation
1	MNP is needless as similar type of services offered by all cellular operators	2.5120	0.86360
2	MNP is beneficial in switching cellular operator.	4.2320	0.52463
3	MNP procedure is quick and hassle free.	3.8680	0.46554
4	Introduction of MNP results into healthy competition among cellular operators.	3.6120	0.57188
5	MNP is an ultimate solution to all the service problems encountered with the cellular operator.	3.4820	0.69777
6	MNP is helpful as it focused on strong preference to retain the existing number while switching to a new cellular operator.	3.9150	0.51915

Table 7 presents the highest mean score of 4.2320 to customer perception of MNP being beneficial in switching cellular operator followed by mean score 3.9150 to MNP is helpful as it focused on strong preference to retain the existing number while switching to a new cellular operator.

Findings and Suggestions

The description of the demographic characteristics of respondents such as gender, age, connection type, network operator and duration of association with current network were

analysed which revealed that the majority of the respondents were found in the age group of 26-30 years (24.7%) followed by the respondents in age group of 21-25 years (22.04%). 51% male and 48.9% female were covered under the study. The study revealed that out of total 186 respondents 85% were subscribers of pre-paid services and the rest 15% respondents were subscribers of post-paid services. Majority of the respondents were using Airtel network i.e 28.49% followed by 19.35% of Vodafone. The duration of association with current network revealed that 29.5% respondent's lie in the category of 1-2 years of duration of service usage with their current cellular operator followed by 24.73% respondents having 6 months to 1 year of service usage. The hypothesis H1 and H2 are accepted.

The two main factors found responsible which influence the switching intention of customers were poor network coverage and poor call quality mean score 4.1630, followed by mean score 3.9860 if there is inaccuracy in billing/balance deduction. The main reason for opting MNP is the ability to retain the existing mobile number while switching to another service provider.

Conclusion and Implications

The present study aims to determine the factors influencing switching intention after the implementation of MNP. The findings suggest a negative relationship between customer satisfaction and propensity to switch. If the subscribers have no intention to change their current service provider then they continue using the services of existing service provider. Therefore the cellular operators who aim to retain their existing profitable customers should make an effort to maximize customer satisfaction by creating exit barriers. These exit barriers could be superior network quality, prompt complaint resolution, affordable services, variety of value added services etc.

Limitations and future research

The scope of present study is limited to Punjab telecom circle which may not be generalized for other geographical areas. Many subscribers who intend to switch their current service provider are not completely aware of the MNP process. The cellular operators and government should organize various communication activities such as advertisements, conferences and seminars related to the porting process. The present study is limited to intra-circle MNP a similar study can be conducted at national level to analyze the switching intention for inter-circle number

porting. There is also a scope for research focusing on customer satisfaction before and after opting for MNP.

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