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# Retention of Customer Loyalty: Assessment of Factors Leading to Mobile Number Portability

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### ABSTRACT

The study is about the customer loyalty based on mobile number portability (MNP) which is an effort to know the effectiveness of mobile service provider. It serves to realize whether the customer is satisfied or dissatisfied with their service providers, this will enable the distribution to reach the customer. This process of managing has detailed information and managing all the individual customers carefully.

**Method/Analysis:** Data pertaining to seven telecom service providers were collected from a sample of 200 mobile users in Tamil Nadu, India by using simple random sampling. The descriptive survey was examined using multiple regression technique to evaluate the aggregated effects of independent variables and Anova to discern the meaning of the variables. The SPSS 21.0 version is used for data analysis.

**Findings:** The study pictures that an aggressive strategy is required to enhance the trustworthiness of telecom service providers by keeping customers' best interest at heart, offering customized services. This study drifts away from the earlier studies where marketing strategies was the prime focus and complements the recent studies where mere technology earns a competitive advantage to win customer retention. Adopting a pace forward, this study also prioritizes the order of variables affecting customer loyalty as: Marketing strategies, End – User expectation on customer satisfaction and Technology. Therefore, the research output calls for an aggressive customer loyalty in Telecom Industry.

**Keywords:** Mobile Technology, Mobile Number Portability, Customer loyalty, Mobile Service Provider.

## 1. INTRODUCTION

The Indian mobile service market is one of the highly competitive segments with 15 plus players mainly in the prepaid connectivity market. The recent statistics reveal that the churn rate in India has exceeded

14 % per month, which is a very high churn rate, (Rajeswari P S, Ravilochanan P, 2014). As the switching cost is low, the largest challenge for mobile telecom service providers is to retain the customers.

Customer loyalty is a business strategy supported by a system and a technology designed to improve human interaction in a business environment. A model for managing a company to interact with current and future customers involves using technology to organize, automate, and synchronize sales, marketing, customer service, and technical support. (Philip Kotler, 2003)

For a marketing strategy to be successful, the consumers should be the prime focus. Marketing Strategies influence and get influenced by end user's cognition, behaviour, environment and effect. From the viewpoint of consumers, marketing strategy is the stimuli enforced in order to influence (Deepak S and Anil A, 2011) for firms competing in a highly competitive environment, the optimum strategy lies in providing high quality service and implement a method that aims to contribute added value. Switching barriers should be built by telecom service providers to enhance customer loyalty and avoid customer defection (Liu and Chung, 2011).

As the competition, has become intense in mobile telecom service providers, the spectrum band is spread very thin among the players and there is no sufficient allocation. Despite this competition as far as the voice connectivity is concerned, the telecom service providers have given their best to provide an affordable connectivity in voice communication (Samarajiva, Rohan, 2010). This is the process of managing detailed information about the individual customers and carefully managing a customer's "touch point" to maximize customer loyalty. A customer touch point is any occasion on which a customer encounters the brand and product from actual experience to personal mass communications to casual observations.

Factors' contributing to customer loyalty in the mobile service provider industry is in a transition stage from the earlier school of thoughts to the modern school of thoughts. The factors have slowly started to drift away from the earlier studies and researches have been carried out to justify the change in factors.

In mobile service sector the switching cost is very less and customers tend to switch to other operators in no time. Customer loyalty is one of the prominent tools to reduce switching of customers. It is proposed that loyalty and customer satisfaction had a positive relation. To improve the customer loyalty and satisfaction the firms should focus on service quality and perceived value enhancement (Castaneda J A, 2011).

Customer loyalty is often examined from a behavioral point of view by measuring items such as the number of repeat purchases, "share of wallet" and purchase frequency. A frequent assumption is that loyalty translates into an unspecified number of repeat purchases from the same supplier over a specified period (Egan, 2004). In this line, Oliver (1999) defined loyalty as "a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior". However, the definition of loyalty based solely on repurchase behavior doesn't provide a holistic view of this complex concept. This drove researchers to propose an alternative and more comprehensive definitions. Dick and Basu (1994) suggested that loyalty has both attitudinal and behavioral elements and argued that it is determined by the strength of the relationship between relative attitude and repeat patronage. Examining loyalty under the attitudinal lens, it can be derived from psychological involvement, favoritism and a sense of goodwill towards a particular product or service (Oh, 1995 cited by Kim et. al., 2004). Overall, despite the fact that there are plenty of different approaches aiming at the definition and

conceptualization of loyalty, there is a general convergence towards the view that both behavioral and attitudinal features must be included. The behavioral view is usually based on the monitoring of the frequency of repeated purchases and brand switches, while the attitudinal approach assumes that loyalty is derived from psychological involvement and preference and focuses on issues such as brand recommendations, resistance to superior products, repurchase intention and willingness to pay a price premium (Cronin and Taylor, 1992).

In the mobile phone industry, high perceived value means satisfied with the total amount paid by the user for the combined cost of the line, voice calls, and other services included in the plan (Kim, Park and Jeong 2004). In view of the results for the US mobile phone market, if consumers feel they are getting a high-value service in relation to the price charged, they will be more likely to be satisfied and will tend to remain as customers of their current service providers. Turel and Serenko (2006) have demonstrated a strong correlation between perceived value and consumer satisfaction with mobile services in the Canadian market.

Lyons (2006) conducted an econometric analysis with time series data in 38 countries to estimate the effect of implementation of number portability, both on the price of mobile services and on consumer switching behavior. His findings showed that the quality of the portability service (based on the maximum time to complete migration of the number) helps explain the impact on tariffs and numbers of users who switched service providers. In countries where the migration process was completed within five days, portability resulted in increased subscribers and reduction in tariffs.

Number portability has been the subject of several studies (Buehler and Haucap 2004; Lyons 2006; Mzanza 2008; Shin and Kim 2008; Shin 2006; Sutherland 2007) that have examined the effects of its introduction in several countries, assessing whether expected results were actually achieved and the reactions of the participants of those markets. Sutherland (2007) studied the introduction of number portability in different countries and concluded that the demand for portability is potentially high, since consumers show resistance to switching service providers when they cannot keep their current numbers. The resistance is due mainly to non-monetary costs such as reprinting business cards or other custom materials or the repainting of signs on vehicles, for corporate clients. With the change of number, personal and professional contacts could be lost, resulting in financial losses. Sutherland concluded that in many countries, regulators have allowed carriers to adopt cumbersome procedures, rendering the porting process less attractive to potential customers, and that, as such, the primary objective of number portability had suffered from a less than stellar take-up. Mzanza (2008) looked at the results obtained from the implementation of number portability in South Africa, completed in late 2006: the number of users by switching intention remained stable after the introduction of portability, and local carriers did not experience any significant impacts after the introduction of the service, since the reduction of tariffs to attract new customers was not enough incentive for significant migration between carriers.

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

## **2. RESEARCH METHODOLOGY**

The study is of Descriptive type because each and every item is clearly described. A research instrument that is used in this study is Questionnaire. There are 39 items in this instrument, with five-point Likert-like scale. Reverse scoring for few items have done (Rajini.G, 2011)

1. Strongly Agree, Agree, Partially Agree, Disagree and Strongly disagree
2. Always, often, sometimes, rarely, never
3. Excellent, good, fair, poor, not sure
4. Highly satisfied, satisfied, partially satisfied, dissatisfied, highly dissatisfied

**Research instrument:** Which is used in this study is questionnaire. (Rajini.G and Divyasree Veeramani Sangameswari 2016). The instrument consisted of 39 items with five- point Likert scale. Four Independent variables were generated as Technology (12 items), Marketing (10 items), End user (6 items), Customer satisfaction (11 items). The dependent item was a single item scale asking for satisfaction in mobile number portability.

Data pertaining to 7 service providers are collected as sample from mobile users in Chennai, Tamil nadu to analyse the effectiveness of customer loyalty. Simple random sample is the purest form of probability sampling was used to collect data from mobile users at strategic recharge locations of select places where the randomization is based on the time interval. Since all probability samples must provide a known wonders probability of selection for each population element, the simple random sample is considered a simple case in which each population elements have to know equal chance as selection.

The SPSS Statistics 21.0 version is used for data analysis. Multiple Regression analysis was applied, which uses quite simple as well as multiple predictions to predict Y from X values. The data collected was through primary & secondary sources. The data were analysed with SPSS 21.0, where multiple regression analysis, correlation analysis of variance and reliability test were used in addition to descriptive statistics.

### Reliability Analysis

<i>Reliability Statistics</i>		
<i>Cronbach's Alpha</i>	<i>Cronbach's Alpha based on Standardized Items</i>	<i>N of Items</i>
.848	.854	40

- Cronbach's alpha value of all the 39 items were  $a = 0.854$ . This value is acceptable, the questionnaire is reliable and they are internally consistent.

**Table 1**  
**Demographic profile**

<i>Description</i>	<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
Gender	Male	148	74.0
	Female	52	26.0
Age	20-30 yrs	144	72.0
	31-40 yrs	29	14.5
	41-50 yrs	14	7.0
	Above 50 yrs	13	6.5
Occupation	Businessman	22	11.0
	Professional	21	10.5
	Employees	47	23.5
	Students	81	40.5
	Others	29	14.5

Description		Category	Frequency	Percent
Sim Type	Pre-paid		184	92.0
	Post paid		16	8.0
Service provider	Airtel		100	50.0
	BSNL		19	9.5
	Vodafone		43	21.5
	Reliance		10	5.0
	Other		28	14.0

Demographic characteristics of respondents are as follows: male and female were 74% and 26%, respectively. In age distribution, those in their 20 to 30 years took up 72%, 31-40 years took 14.5%, 41-50 years took 7.0%, and above 50 years took 6.5%. of their share In the occupational level Businessman have 11.0%, professionals have 10.5%, employees have 23.5%, students have 40.5% and others have 14.5% share and in Sim type the pre-paid users are 92.0% and post-paid users are 8.0%. the service providers by Airtel 50.0%, BSNL 9.5%, Vodafone 21.5%, Reliance 5.0% and others 14.0%.

**Table 2**  
**Reason for Selecting Service Provider:**

Description	Frequency	Percent	Cumulative percent
Call rates/tariffs	46	23.0	23.0
Good network coverage	113	56.5	79.5
Their promotional offers/values added services	11	5.5	85.0
Roaming facilities	2	1.0	86.0
Influences from the friends/relatives	28	14.0	100.0
Total	200	100.0	

The reason for selecting the service provider is based 56.5%, on good network coverage 23.0%, on call rates/tariffs, 14.0%. on influences from friends/relatives 5.5% on promotional offers/value added services and roaming facilities is just 1.0%,

### 3. MULTIPLE REGRESSION ANALYSIS

**Ho:** Mobile number portability on services provider does not depend on the TECHNOLOGY, MARKETING, ENDUSER and CUSTOMER SATISFACTION.

A multiple regression model has selected to measure the combined effects of independent variables (TECHNOLOGY  $X_1$ ; MARKETING  $X_2$ ; and ENDUSER  $X_3$ ; and CUSTOMER SATISFACTION  $X_4$ ) against dependent variable (MOBILE NUMBER PORTABILITY). The general form of equation derived from the previous theory is given as:

$$Y = C + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

C = regression constant

$b_1, b_2, b_3$  &  $b_4$  = regression coefficient of independent variables.

The statistical significance of regression coefficient was worked out and tested by applying the 't' test. The coefficient of determination,  $R^2$ , was compared to determine the percentage variation in dependent

variables. F-Value was to compute the significance of  $R^2$  with F-distribution at 5% level of significance (Rajini.G and Gomathi.S, 2003).

**Table 3**  
**Model Summary**

<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of the Estimate</i>
1	.475 <sup>a</sup>	.225	.209	.864

<sup>a</sup>Predictors: (Constant), Customer Satisfaction, End user, Technology, Marketing

<sup>b</sup>Dependent Variable: Mobile number portability from one service to another services is

**Table 4**  
**ANOVA**

<i>Model</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>
1 Regression	42.115	4	10.529	14.114	.000 <sup>a</sup>
Residual	144.719	194	.746		
	186.834	198			

<sup>a</sup>Predictors: (Constant), Customer Satisfaction, End user, Technology, Marketing

<sup>b</sup>Dependent Variable: Mobile number portability from one service to another services is

**Table 5**  
**Coefficients**

<i>Model</i>	<i>Unstandardized coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
1 (Constant)	.369	.482		.766	.445
Technology	.054	.011	.392	4.899	.000
Marketing	.028	.017	.137	1.646	.101
End-user	.016	.018	.064	.889	.375
Customer satisfaction	-.011	.014	-.063	-.746	.457

<sup>a</sup>Dependent Variable: Mobile number portability from one service to another services is

The prediction ability of the model is expressed by  $R^2$  with value. 225in which 22.5% of variance in the dependent variable only belongs to independent variables with the F-value 14.114.

The beta weight of 0.296 for variable 1(TECHNOLOGY) meant that when other variables were held constant, mobile number portability (Dependent variable) would increase by quarter the standard deviation (0.392). the predictive importance or order of importance was 0.392, 0.137, 0.064 and -0.063 for variables 1,2,3 and 4 respectively. The Test confirmed that the results were generalised to the total population by value was 0.06, which is less than 0.05, and so it was concluded that the regression was a good model.

The equation includes all the three variables mentioned

$$\text{Mobile Number Portability} = 0.369 + 0.054 (\text{TECHNOLOGY}) + 0.028 (\text{MARKETING}) + 0.016 (\text{ENDUSER}) - 0.011 (\text{CUSTOMER SATISFACTION})$$



**Result:** The model depicts that mobile number portability depends on one's Technology, Marketing, End user and Customer satisfaction but technology alone has significant contribution on the customer loyalty towards the service provider.

#### 4. CONCLUSION

The study examined the mobile service providers on the effectiveness in customer loyalty. The technology like providing proper network coverage alone enhances the customer loyalty. Technology which enables the end user with updated setting from the service providers and send regular service messages about the value-added service, provide the uninterrupted internet facility to the customers because, now a days internet have vital role in tele-communication, the customers are satisfied in technology mainly the cost of the connection and service, internet facilitate the end user with the high-speed connection. This makes customers to feel the technology of service providers and its impact. Customers should avail the special offers on festive time and the recharge coupon or by electronic service easily without difficulties. The other value added services like (mobile banking, online purchase, and other smart activities) are enhance the customer to service provider and the technology satisfy the customer to retain in same connection, the important strategy is in need to enhance the trustworthiness of service providers by keep the customers' best to the heart and providing the customized services by providing the sustainable technology, Rajini.G. (2015). The service provider is focusing in Technology, because that is significant aspect that affecting the customer perception and customer loyalty. Some of the respondent was using the service first time and they were not able to differentiate among their product properly. Lack of time is the basic limitation of the study. Some people refuse to cooperate with the queries. The  $R^2$  is less than .5 which is a limitation to the study though the other criteria fulfils the interpretation of Multiple Regression Analysis.

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