

# EFFECT OF MOBILE NUMBER PORTABILITY ON CUSTOMER RETENTION IN MADHYA PRADESH CIRCLE OF BHARAT SANCHAR NIGAM LIMITED A STATE OWNED TELECOMMUNICATION COMPANY

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**Abstract-**The Government announced the guidelines for Mobile Number Portability (MNP) Service in the country on 1st August 2008<sup>1</sup> and has issued a separate license for MNP service from 20.03.2009. As per these guidelines Mobile number Portability states implementation of facility for porting of mobile number from one service provider to another which is operating in same circle. This analytical study enables BSNL in understanding trend of customer retention and defection as per prevailing socio-economic conditions in Madhya Pradesh. Most of the population in Madhya Pradesh is sustained by agro income or derive their living from similar source. Hence emphasis is to be paid in studying the trend of customer defection pertaining to this class of people. Data as collected from TRAI<sup>2</sup> and BSNL<sup>3</sup> till date is analyzed to understand correlation between Mobile Number Portability and Customer retention. The data as collected and published by TRAI, available in public domain, is used for understanding the general trend followed by customers in Madhya Pradesh<sup>4</sup>. Analytical study of correlation of MNP facility with customer retention is made. This analysis states hypothesis which can be used by state owned company BSNL which will enable it in better customer satisfaction and retention. The major factors applicable to Madhya Pradesh keeping in view the socio economic conditions are Offered Service Quality, Economic Status of Customer, Offer by Service Providers and to a large extent Mobile Number portability which enable customer to switch between operators without having to care about change in mobile number.

**Keywords-**Mobile Number Portability, Correlation, Offered Service Quality, Economic Status Of Customer, Porting.

## I INTRODUCTION

Telecommunication industry especially mobile communication has been developing since 21<sup>st</sup> century. India is the second most populated country in the world. Hence there is huge opportunity for mobile telecom operators for

providing services to them. The TimeLine regarding development of Telecommunication sector in India can be summarized in following few lines. In 1975, the Department of Telecom (DoT)<sup>5</sup> was separated from Indian Post & Telegraph Department<sup>6</sup>. DoT was responsible for telecom services in entire country. On 28th February, 1986 Mahanagar Telephone Nigam Limited<sup>7</sup> (MTNL) was carved out of DoT to run the telecom services of Delhi and Mumbai. The policy of liberalization in the 1990s helped the Indian Telecom sector to grow rapidly. With liberalization private companies were allowed to manufacture telecom equipment as well as provide value added services, paging and cellular mobile services. In 1994, the government formed the first National Telecom Policy (NTP)<sup>8</sup>. The Telecom Regulatory Authority of India was established on 20 February 1997 by an act of parliament called "Telecom Regulatory Authority of India Act 1997"<sup>9</sup> to enable regulation of various telecom operators. In 1999 better liberalization policies led to the establishment of BSNL, Bharat Sanchar Nigam Limited a state owned company for providing telecommunication services to India. BSNL finally came into existence on 1<sup>st</sup> October 2000. Apart from BSNL at present there are around 15 service providers like Bharti, Reliance India mobile (RIM), Vodafone, and Idea Cellular etc. BSNL provides telecommunication facilities to all the states and Union Territories of India. Madhya Pradesh is among one of the states. Share of various telecom operators is pictographically represented in following pie-chart.<sup>10</sup>

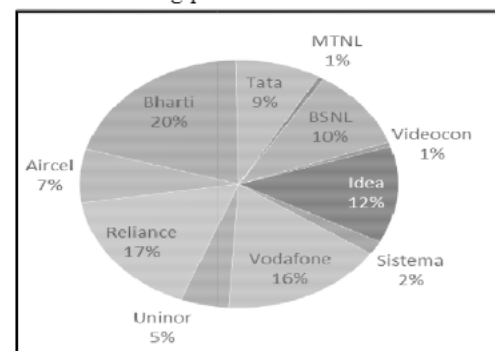


Figure 1 : Share of Telecom Operators in INDIA

Madhya Pradesh mostly constitutes rural and semi-urban population which derives their living mainly from agriculture and agro-industries. As per data collected by India Census 2011<sup>11</sup> the percentage of rural population in India is 68.84% whereas the percentage of rural population in Madhya Pradesh is 72.37%. Earlier most of the private player focused only on urban areas. Thus BSNL was the sole provider for most of the rural and semi-urban areas in Madhya Pradesh. But due to large market base in these areas recently private players have also started venturing into Madhya Pradesh. Moreover with the introduction of Mobile Number Portability it has become quiet easier for the customer to switch between telecom operators without worrying about change in mobile number.

Analytical study is conducted collecting data of mobile subscribers available on the site of TRAI for understanding the trend followed by customer opting for MNP. As per data from TRAI around 2 lakh subscribers had opted for MNP within 10 days of its introduction and later implementation. This emphasizes the impact of MNP on customer defection. Data as available till July '2012 stating net gain in number of subscriber by various telecom operators in India is given below.<sup>12</sup>

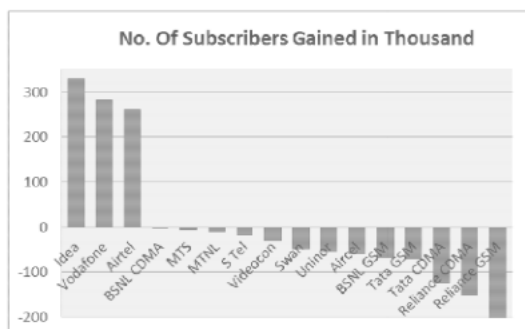


Figure 2 : Net Gain of subscribers on July'12 after launch of MNP

As evident from the figure net gain by BSNL\_GSM is negative. Hence BSNL requires performing detailed analysis for the cause of customer defection.

## II BSNL AND OTHER SERVICE PROVIDER OF MOBILE NETWORK IN MADHYA PRADESH

The major telecom service providers of mobile communication in Madhya Pradesh are Airtel, BSNL, Vodafone, Idea Cellular, Reliance Smart (GSM) and Tata Docomo and Videocon. Total number of mobile subscribers in Madhya Pradesh as on 30.07.2012 is 31,53,085<sup>13</sup>. Most of the private operator emphasize on providing services to urban population. This is due to availability of proper infrastructure and return on investment obtained while

providing services in urban areas. Due to lack of infrastructure huge investment is required for building, equipment installation and providing facility to customers for operating in rural areas. Hence most of the private subscribers use to operate only in urban areas of M.P.

## III DETAILS ABOUT MOBILE NUMBER PORTABILITY AS INTRODUCED IN JANUARY 2011<sup>14</sup>

Mobile Number Portability was introduced in Hisar, Haryana on 25<sup>th</sup> November 2010. As per guidelines Mobile number Portability required providing services for customer so that they can switch operator without changing their mobile number from one service provider to another which were operating in the same circle. MNP was finally applied to all the states of INDIA in January 2011.

A central database of mobile number which is to be ported is kept which is accessed by all the telecom operators. India is divided into various zones and each zone has a database which is used for storing information about all the mobile number which is to be ported. The job of keeping zone wise database of porting mobile numbers cannot be assigned to any of the telecom operators. Hence this job was assigned to Telecordia<sup>15</sup> and Syniverse<sup>16</sup>. Porting of mobile number is available irrespective of service provider and technology used like GSM/CDMA etc.

The process of applying for MNP is simple. The customer who wants to port his mobile number to some other operator has to send an SMS to 1900 in: PORT -(mobile number) format. The SMS reply to this request consists of a unique porting code. The customer then sends SMS to the preferred operator quoting the unique code. This code is valid only for a few days, and customer has to apply again if it expires. The existing operator of customer will check with new operator & if there are no dues then approval will be given for porting. The customer gets an SMS on the time and date when porting will take place. As per rules by TRAI the process has to be completed within 4 days of applying. After porting is completed the new operator sends SMS regarding the change of operator. The customer is not able to use his number for about 2 hours when the porting takes place. The process is kept simple so that the customer does not have to go through a lot of paperwork before switching operators.

## IV MOBILE NUMBER PORTABILITY AS CHANGED IN NATIONAL TELECOM POLICY OF 2012<sup>17</sup>

As per National Telecom Policy Guidelines of 2012 mobile numbers portability is to be extended for the whole nation. Customer can now switch from one mobile operator/service to another irrespective of circle or state. One nation Mobile Number Portability would not be having significant impact on customer defection specifically to Madhya Pradesh. This is because most of the mobile subscribers of Madhya Pradesh do not move from one state to another frequently. Hence One Nation Mobile Number Portability is not going to affect them. This point will be visible in future data collected by TRAI.

## V HYPOTHESIS CONCEPTUALIZED KEEPING IN VIEW SOCIO-ECONOMIC AND GEOGRAPHY OF MADHYA PRADESH

The major factors which are considered in this research for formulating hypothesis as applicable to Madhya Pradesh keeping in view the socio economic conditions are Offered Service Quality, Economic Status of Customer, offer by Service Providers and Mobile Number portability.

### (a) Offered Service Quality-

Zeithaml et al (1996)<sup>18</sup> has developed a conceptual model of service quality which affect customer satisfaction and hence retention. The service quality ensures whether customers will remain loyal or leave the provider. In case of mobile communication the availability of network to the subscriber plays a significant role. This is particularly applicable in rural areas where there is problem of signal reception due to lack of number of towers and associated equipment.

**Hypothesis 1:** Offered service quality specifically availability of mobile network by the service provider has a significant effect on customer satisfaction and hence retention.

### (b) Economic Status of Customer –

Kollmann (2000)<sup>19</sup> had stated the importance of price in telecommunication market specifically for the mobile telecommunication service providers. This is particularly applicable to Madhya Pradesh which has almost 50% less per capita income compared to India in general. Due to prevailing economic condition of customers in rural areas of Madhya Pradesh the price of services offered should be kept as low as possible. Moreover the bulk of consumers derive their living from agriculture and hence most of the subscribers would like to have lower tariff for voice communication.

**Hypothesis 2:** As per prevailing economic condition in Madhya Pradesh service providers should provide lower tariff for voice communication.

### (c) Offer by Service Providers -

Mobile service providers mainly provide pre-paid and post-paid services to its customers. Analysis done by Chinnadurai and Kalpana (2006)<sup>20</sup> on increasing competition and changing preferences of the customer's all over the world shows the importance of promotional offer. The customer now would like to avail of promotional offer and change the service provider if the offer is not extended beyond a stipulated initial period keeping in view the facility of Mobile Number Portability. Madhya Pradesh mainly constitute of semi-literate people in the rural areas. The literacy rate is 63.7%. Hence a service provider has to advertise in a suitable way so that the customer is able to understand the essence of offer. Technical jargons creates barrier between service provider and customers.

**Hypothesis 3:** Promotional offers by service provider should be able to convey the essence of the offer in simpler terms and should have less technical jargons which are better suited to major population in Madhya Pradesh keeping in view of their socio-economic condition.

### (d) Mobile Number Portability –

Previously before MNP was introduced the customer had to evaluate various pros and cons before switching operator. One of the factors effecting their decision to switch operator was change in mobile number. As the customer had to inform all of his contacts about change in mobile number. But due to introduction of MNP the customer now do not have to change his mobile number. Hence MNP has enabled customer to decide the change in service provider based on other factors. Hence all other factors have become a subset of this major factors affecting customer retention with service provider.

**Hypothesis 4:** MNP has succeeded because the subscribers do not have to change their mobile numbers.

## V RESEARCH METHODOLOGY

MNP data available of website of TRAI was also used for understanding the general trend of customer defection in Madhya Pradesh. Data was also collected through questionnaire survey. 16 questions were given in the questionnaire. The person answering questions were given the option of stating their name in the first question. Next three questions were related to demographic variables which are age, gender and family monthly income. Rests of the question were given to understand Choice of Services Provider, Offered Service Quality, expenditure on Mobile services, understanding of promotional offers, and Mobile Number Portability.

## VI Analysis of customer data collected – TRAI and BSNL.<sup>21</sup>

For understanding the trend followed by subscribers opting for MNP specifically to BSNL-M.P. Circle author has collected data from BSNL office. This data is presented in bar chart format for better understanding the port in and port out requests. Port in request are generated when mobile subscriber wants to subscribe for BSNL and Port Out request are generated when subscriber wants to leave BSNL and join some other subscriber network.

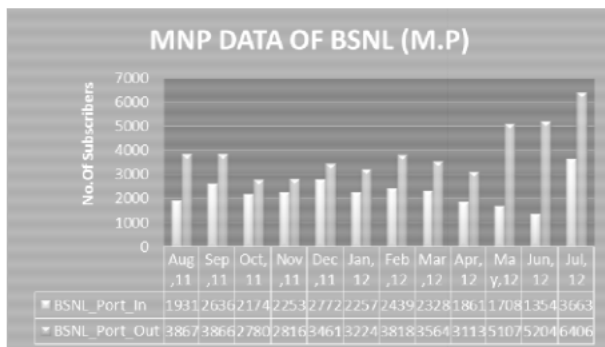


Figure 3: Mnp Request Of Port In And Port Out For M.P. Circle Of Bsnl From Aug'11 To Jul'12.

It is quite evident from the above bar chart that more number of subscribers are porting out of BSNL from May 2012 to July 2012. The data collected from August 2011 to July 2012 clearly state that more number of subscribers are porting out of BSNL. In October, November and December the number of subscribers porting In and Out of BSNL are comparable but the recent figure of May, June, July 2012 states that more number of subscribers are porting out of BSNL than the number of subscribers porting in. This trend depicts that subscribers of BSNL are not satisfied with the services provided to them.

## VII DATA COLLECTION THROUGH SURVEY OF MOBILE SUBSCRIBERS.

For collecting data from mobile subscribers a total 150 questionnaire forms were distributed in Bhopal district of Madhya Pradesh. The total number of 109 people responded to the survey. Information about the respondents are provided in the following table

Variable	Total Number	Percentage (%)
Gender	Male	92
	Female	17

Age	Below 18 Years	7	6.4
	18-30 Years	100	92
	30-40 years	2	1.6
	Above 40 Years	0	0
Monthly Family Income	Below 10,000	52	47.71
	10,001-25,000	44	40.37
	Above 25,000	13	11.93

Table 4: Consolidated Information about respondents.

As per above data most of the respondents were male with age between 18-30 years having monthly income less than 25,000. This data is also verified by the author as the forms were distributed to employees of a call center. Only 6.42% of the mobile subscribers opted for BSNL as the service provider. Rests of the respondents were using some other service provider. 89% of the subscribers were satisfied with the quality of signal and 69% of these subscribers had not opted even once for MNP. Hence hypothesis 1 given above is true which states that signal quality or availability of mobile network at all places is one of the factor which helps in retaining the customer.

Around 94% of the respondents were using pre-paid service connection. And around 96% of them require lower tariff. This is as per hypothesis 2 which requires that lower tariff should be given to subscribers. It is hereby stated that lower tariff should also be given as incentive to subscribers who remain loyal to their service providers for longer duration. This will help in retaining the subscribers.

In the survey respondents were asked whether they are able to understand the advertisement or promotional offers by their service providers. Around 83% of the respondents replied in affirmative. And as per the MNP data of these respondents around 69% of these subscribers had never opted for MNP. Hence the hypothesis 3 holds true which states that subscriber remain loyal to the service provider if they are able to understand the offers by the providers.

Respondent were asked if they would switch service provider if they have to change their mobile number. 70% of the subscriber stated that they would not switch service provider if they have to change their mobile number. This is as per Hypothesis 4 which states that MNP has succeeded mainly as it enables customer in retaining the mobile number even after switching operator. As per the data collected from survey the entire hypotheses formulated have been verified.

## VIII CONCLUSION

This analytical study regarding effect of mobile number portability states various hypotheses that are responsible for customer retention specifically to Madhya Pradesh. The hypotheses are mainly based on prevailing socio-economic and geographical location of subscribers in Madhya Pradesh.

The data analysis is centered on BSNL. Hence BSNL can use these hypotheses for formulating policies for providing better services to the customers. The main factors as conceptualized and predicted through hypothesis are to a certain extent proved by statistics and data of TRAI. The hypothesis states the effect of offered service quality or availability of mobile network, economic status of customer, promotional offer and mobile number portability on customer retention. This research can also help academicians and researchers in better performing analysis of telecommunication sector. The hypothesis formulated can also act as basis for performing further research for understanding subscriber's intention to switch operators keeping in view One Nation-Mobile Number Portability.

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