



Saurashtra University

Re – Accredited Grade 'B' by NAAC
(CGPA 2.93)

Shah, Rushina N., 2012, “Customer relationship management with perspective to Indian Mobile Industry and its Statistical Analysis”, thesis PhD, Saurashtra University

<http://etheses.saurashtrauniversity.edu/id/985>

Copyright and moral rights for this thesis are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the Author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the Author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

Saurashtra University Theses Service
<http://etheses.saurashtrauniversity.edu>
repository@sauuni.ernet.in

© The Author

**“CUSTOMER RELATIONSHIP MANAGEMENT
WITH PERSPECTIVE TO INDIAN MOBILE
INDUSTRY AND ITS STATISTICAL ANALYSIS”**

A Thesis submitted to the Saurashtra University for the
Degree of Doctor of Philosophy
In
Statistics

by
RUSHINA SHAH

Under the guidance of
Dr. G. C. BHIMANI
Professor of Statistics
Department of Statistics
Saurashtra University
Rajkot-360005
Gujarat (India)

July-2012

DECLARATION

I hereby declare that the research work titled “Customer Relationship Management With Perspective To Indian Mobile Industry And Its Statistical Analysis” submitted by me to the Saurashtra University, Rajkot for the award of Degree of Doctor of Philosophy in Statistics is my own and that has not been submitted to any other institution or university for the award of the Degree of Doctor of Philosophy in Statistics.

Rushina Narendra Shah

Ph. D Student

Saurashtra University

Rajkot-360005

CERTIFICATE

This is to certify that the thesis titled “Customer Relationship Management with Perspective to Indian Mobile Industry and Its Statistical Analysis” is submitted by Mrs. Rushina Shah to the Saurashtra University, Rajkot for the award of Degree of Doctor of Philosophy in Statistics is bonafide research work carried out by Mrs. Rushina Shah under my supervision.

Dr. G. C. BHIMANI

Professor of Statistics

Department of Statistics

Saurashtra University

Rajkot-360005

ACKNOWLEDGEMENT

Success is the manifestation of inspiration, motivation, diligence, perseverance, and innovation. For Completion of any task triumphantly, it requires not only help and support of many but, also a constant source of inspiration. The task of executing the work would not have been possible without the amount of support that I received from my faculty guide & staff of Saurashtra University.

I extend my gratitude to Dr. G. C. Bhimani for his constant support and guidance throughout my work. My increased spectrum of knowledge in this field is the result of his constant supervision and direction that has helped me to absorb relevant and high quality information. I would like to thank Dr. D. K. Ghosh, Professor and Head of Department Statistics for being constant source of inspiration and for intensifying my learning curve.

I'm grateful to my Parents for giving me this wonderful life and providing me all the facilities. I extend my appreciation to my in-laws for their unconditional love and support throughout my work. Their unwavering support and encouragement accompanied me through this journey. Special thanks to my father in-law Mr Virendra Singhi without whose inspiration, I would not have taken initiative to start this work. I would like to thank my husband Mr Tapesh Singhi for his continuous support and guidance. I thank him for enriching my thoughts in this field from different perspectives. Specifically I would like to thank my daughter Preksha for her cooperation during the entire project without which the completion of work would not be possible.

I would like to give my special thanks to all my family member, friends, colleagues of Amity Business School and the respondents who took time out to participate in this research, acknowledging that this study would not have been possible without their assistance and support.

ABSTRACT

Being the only industry that remained shielded from the aftermath of the Global Economic Slowdown of 2008-09, the telecom industry is all set to enter the next level of competition. With the new 3-G spectrum allocation, second round of 2-G spectrum allocation and Mobile Number Portability the telecom service providers are all geared up for the turbulent times. The billion dollar question here is that are the telecom players actually ready to face the music, have they actually understood the needs of the consumer, who with the passage of time has not only matured as a technology centric consumer but have also become prudent with the spending on telecom services. The main aim of the project is to analyze the need and usage behaviour of the consumers and to deduce conclusions regarding the questions as, what is the most preferred telecom company, what is the reason for the switching of customer loyalty from one telecom operator to another, etc. The objective is to evaluate the perceptions about mobile services and factors that affect their choice for the service provider. This study attempts to examine the effect of MNP on Consumer Behaviour of prepaid and post paid subscribers. The objective of the work is to analyze the factors influencing the selection of mobile phone service provider and 3G services .The aim of the study is to know the awareness level of Mobile internet .The research is undertaken to study the impact of the shifting costs over the brand loyalty of the mobile phone users. The study is done to verify the relations between customer trust, customer loyalty and satisfaction. In order to complete the task at hand it was essential that the opinion of the customer be taken into account. For this a questionnaire was modelled and data regarding the opinion of the customer regarding the telecom companies was gathered from people belonging to various regions like Delhi, Ghaziabad, and Noida. The data consisted of personal details, demographic details, usage characteristics (as usage of services, number of calls made and amount spent on telecommunication etc).

After this the assimilated data was processed using the SPSS software for Statistical analysis. A number of tests were conducted and analysis and comparisons made. These included cross tabulation diagrammatic representation of the data, chi-square test, KMO and Bartlett's test and Factor Analysis were conducted. The result represents that call rate is a factor that is highly influential followed by convenience, services centres and brand. The study shows that MNP is on a decline and people do not perceive it as something which creates value for them. This study also provides guideline for the marketers to understand customer preference regarding 3G service. People still prefer to use internet more from their PC rather than their mobile handsets. The study shows that the customer switching costs is reliable and valid and there are statistically significant relationships among variables.

CONTENTS

Declaration.....	i
Certificate.....	ii
Acknowledgement.....	iii
Abstract.....	iv
Contents.....	vi
1 INTRODUCTION	1
1.1 Communication in India	1
1.2 Development in Indian Telecom Industry and Milestones.....	4
1.3 Telecom Circles in India.....	7
1.4 Technologies in telecom sector	9
1.5 Telecom Wireless and wireless subscribers in India.....	11
1.6 Wireless & Wireline Segment	13
1.7 Mobile Handset Market.....	16
1.8 Customer Relationships Management and Mobile Industry.....	19
2 MNP, 3G SERVICES & MOBILE INTERNET.....	22
2.1 Mobile Number portability	22
2.1.1 Introduction to Mobile Number portability	22
2.1.2 History of Mobile Number Portability.....	23
2.1.3 Implementation in India	24
2.2 3G Services.....	25
2.2.1 Introduction of 3G Services.....	25
2.2.2 3G Wireless Market Drivers	26
2.2.3 The Growth Of 3g In India	28

2.2.4	How 3G Works:	29
2.2.5	Introduction of mobile Internet.....	29
2.2.6	Mobile broadband technology	31
2.2.7	Testimonial of advantage of Mobile Internet	32
2.2.8	Mobile Internet scenario – India and the developing world.....	32
3	SWITCHING COSTS OVER CUSTOMER LOYALTY.....	34
3.1	Introduction Switching Costs over Customer Loyalty	34
3.2	Switching cost	36
4	LITERATURE REVIEW.....	38
4.1	Mobile Service Provider	38
4.2	Mobile Number Portability	39
4.3	3G Cell Phone Technology	43
4.4	Mobile internet services	45
4.5	Switching Costs over Customer Loyalty	49
5	RESEARCH METHODOLOGY.....	53
5.1	Research Process.....	53
5.2	Justification of Paradigm and Methodology	53
5.3	Need of the Study	53
5.4	Research Design.....	55
5.5	Objective	55
5.6	Type of Research Method Used	56
5.7	Survey Method and Administration.....	56
5.7.1.	Specify the Information Needed	56
5.7.2.	Selection of Survey Method.....	57
5.7.3.	Questionnaire Distribution and Administration	57
5.7.4.	Designing the Questionnaire	57

5.7.5. Question content and Wording.....	57
5.7.6. Response Format.....	58
5.7.7. Sequence of questions.....	58
5.7.8 Exploratory Survey and revise Questionnaire.....	59
5.7.9 Sampling.....	59
5.8 Reliability and validity tests of the Instrument.....	60
5.9 Data Collection Strategy.....	61
5.10 Coding of Responses.....	61
5.11 Selecting a data analysis strategy.....	61
5.12 Research Ethics.....	62
5.13 Conclusion.....	62
6 DATA ANALYSIS AND FINDINGS.....	63
6.1 Mobile Service Provider & Mobile Number Portability.....	63
6.2 3G Services & Mobile Internet.....	81
6.3 Switching Costs over Customer Loyalty.....	94
7 RECOMMENDATIONS AND CONCLUSIONS.....	101
7.1 Conclusion.....	101
7.1.1 Mobile Service Provider & Mobile Number Portability.....	101
7.1.2 3G Services & Mobile Internet.....	102
7.2 Limitations of the Study.....	104
7.3 Recommendations for Implementation.....	105
7.4 Recommendations for Future Work.....	107
8 REFERENCES.....	108
9 ANNEXURE.....	116

Table1. 1 Telecom Circles.....	8
Table1. 2 Technology in Telecom Sector	10
Table1. 3 Highlights of Telecom Subscription.....	11
Table1. 4 Service Provider wise Wireless Market.....	14
Table1. 5 Smartphone Sales Worldwide [1st Qtr 2012].....	18
Table1. 6 Active Subscriber (Circle Wise)	131
Table1. 7 MNP Status at end of March 2012.....	133
Table 6.1. 1 Demographic Characteristic of Respondents	63
Table 6.1. 2 KMO and Bartlett's Test	65
Table 6.1. 3 Descriptive Statistics	65
Table 6.1. 4 Total Variance Explained	67
Table 6.1. 5 Rotated Component Matrix ^a	68
Table 6.1. 6 Principal components & associated Variables.....	69
Table 6.1. 7 ANOVA TABLE	73
Table 6.1. 8 subscription of particular Mobile services	74
Table 6.1. 9 Cross tabulation between MNP &Type of connection	75
Table 6.1. 10 ANOVA for service quality factors.....	77
Table 6.1. 11 External influence factor evaluation.....	77
Table 6.1. 12 Feedback on MNP from peer group.....	78
Table 6.1. 13Restraining factors evaluation table.....	79
Table 6.2.1 Details of Respondents.....	81
Table 6.2.2 Reliability Analysis	82
Table 6.2.3 Factors Influencing the Selection of 3G service.	82
Table 6.2.4 KMO and Bartlett's Test	83
Table 6.2.5 Total Variance Explained	84
Table 6.2.6 Rotated Component Matrix	86
Table 6.2.7 Factors	86
Table 6.2.8 Awareness of mobile internet.....	87
Table 6.2.9 Preference doing while surfing on Mobile.....	88
Table 6.2.10 Main ways of communicating.....	89

Table 6.2. 11 Satisfaction level of people with the Mobile Internet services .	90
Table 6.2. 12 Use/intensify the usage of Mobile Internet in terms of cost.....	90
Table 6.3.1 Cronbach’s Alpha.....	94
Table 6.3.2 Cronbach’s Alpha KMO and Bartlett's Test	94
Table 6.3.3 Rotated Component Matrixa	95
Table 6.3.4 Factors	96
Table 6.3.5 Correlation Matrix for the means of Factors	98
Figure 1. 1History of Telecom Industry	5
Figure 1. 2Teledensity.....	12
Figure 1. 3 Market Share.....	14
Figure 1. 4Operator Wise Mobile Subscriber Additions [March 2012].....	15
Figure 1. 5Dynamics of Mobile Handset Market	16
Figure 1. 6 Worldwide Mobile Device Sales [1st Qtr 2012]	17
Figure 6.1. 1 Source of MNP knowledge	76
Figure 6.1. 2 Consumers association of MNP with operators.....	76
Figure 6.1. 3 Advertisement factor evaluations.....	78
Figure 6.1. 4Effect of Advertising	79
Figure 6.1. 5Restraining factors evaluation chart	80
Figure 6.2. 1 Awareness of Mobile Internet	87
Figure 6.2. 2Awareness of Mobile Internet	89

1 INTRODUCTION

1.1 Communication in India

Communications in India is highly developed. Since 1998 India telecom sector has underwent high growth. All the parts of world are connected to India through major communications system like telephone, mobile, television telegraph and Internet. TRAI (Telecom Regulatory Authority of India) is the regulatory body of telecommunication in India. TRAI regulates all the telecommunication industries except news paper and the internet service provider industry. INSAT the largest domestic satellite system serves the automatic telephone exchanges. In earlier days telecommunications involved the use of signals such as signal flag, optical heliographs or audio messages. After becoming the second most populated country in the world, India is set to achieve another record of having half a billion wireless connections, thus becoming the second largest group of mobile phone users after China. In fewer than twenty years ago, mobile phones were considered to be rare and expensive pieces of equipment used by businesses to a pervasive low-cost personal item but now it has become a common household item. Building trust and adapting to the individual and local needs of the community are critical success factors for the diffusion and success of cutting-edge information and communication technology. With the introduction of private sector telecom service provider in the state the competition in the telecom industry has increased significantly. Now a day's telecommunications involved the use of various sources like fiber optic cable, coaxial cable, and microwave radio relay. For economic and social development of the nation telecommunication is prime support. Due to modernization there is rapid growth in telecom sector. The economic benefits by the telecom services in India are Rural and Urban development, employment, Growth in GDP,

Government Revenues, Large scale private investment and many more. Telecommunication also helps in facilitating efficiency.

Commenting on the emerging markets and use of cell phones, Bill Gates once said, ***“PC is the phone and phone is the PC.”*** In the same conference,

Craig Mundie, Microsoft Chief Research Officer continued, ***“People in those rural environments are already buying computers. They happen to call them cell phones.”***

After becoming the second most populated country in the world, India is set to achieve another record of having half a billion wireless connections, thus becoming the second largest group of mobile phone users after China. In fewer than twenty years ago, mobile phones were considered to be rare and expensive pieces of equipment used by businesses to a pervasive low-cost personal item but now it has become a common household item. Building trust and adapting to the individual and local needs of the community are critical success factors for the diffusion and success of cutting-edge information and communication technology. With the introduction of private sector telecom service provider in the state the competition in the telecom industry has increased significantly.

While cost-cutting has been a major source of earnings growth, we have seen top-line pressures decreasing which will help revenues become a larger driver of earnings growth again. We see growth within the sector coming from a number of areas including: broadband, 3G (third generation) technology, expansion in emerging markets. Broadband penetration has been accelerating as internet customers are seeking faster downloads for audio and video files. 3G services, which facilitate the simultaneous transfer of both voice and non-voice (i.e. video, downloads, SMS, etc.) data are providing mobile users with a much more robust communication platform and should finally begin to realize their growth potential in 2007. Mobile as a medium is growing fast with its easy accessibility and reach. It is not just telecom centric. From a communication tool, it has emerged as a device for all purposes. In many countries, mobile phones now outnumber land-line telephones, with

most adults and many children now owning mobile phones. Emerging market companies benefit from low penetration rates and also tend to have lower leverage, than most developed markets telecom companies.

The mobile phone itself has also become a totemic and fashion object, with users decorating, customizing, and accessorizing their mobile phones to reflect their personality. In the rationale of modern marketing, the firm's existence is dependent on customer's satisfaction. Therefore, the knowledge of "what the customer thinks" and "what consequently would contribute to his satisfaction" is at the requirement of the marketer. Easy market access for telecom equipment and a fair regulatory framework for offering telecom services to the Indian consumers at affordable prices.

Driven by various policy initiatives, the Indian telecom sector witnessed a complete transformation in the last decade. It has achieved a phenomenal growth during the last few years and is poised to take a big leap in the future also. The telecom services have been recognized the world-over as an important tool for socio-economic development for a nation. It is one of the prime support services needed for rapid growth and modernization of various sectors of the economy. Indian telecommunication sector has undergone a major process of transformation through significant policy reforms, particularly beginning with the announcement of NTP 1994 and was subsequently re-emphasized and carried forward under NTP 1999. The market size of telecom industry in 2006 was Rs 105,287 crore is expected Rs 344,921 crore by 2012 according survey which it would create direct employment for 2.8 million people and for 7 million indirectly according survey Frost and Sullivan. In financial year 2010-2011 the total revenue by telecom equipment is Rs 117,039 crore and total revenue by telecom sector of India is Rs 283,207 crore.

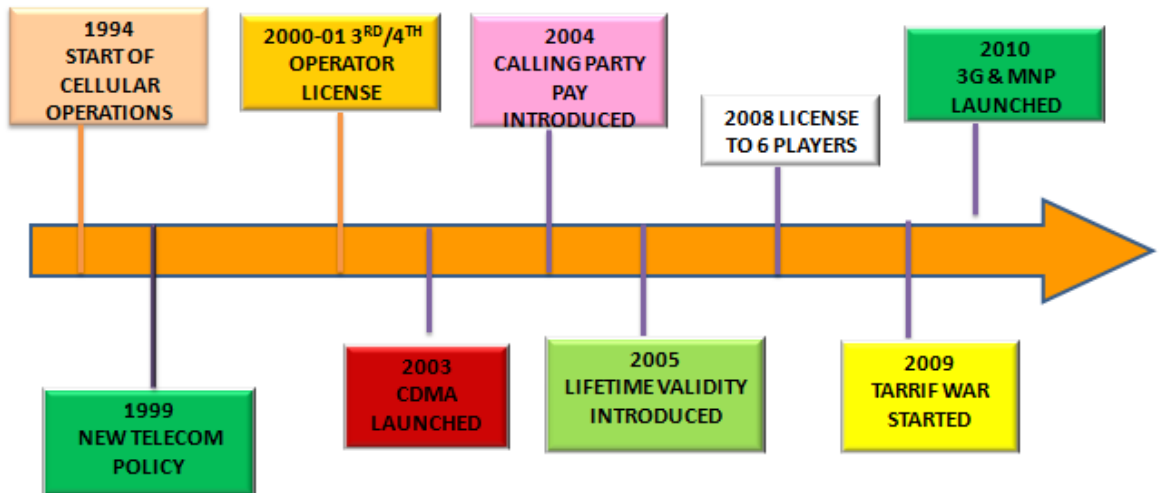
1.2 Development in Indian Telecom Industry and Milestones

The telecom industry started with the introduction of telegraph. In 1850 the first telegraph line was started between to cities Kolkata and Diamond Harbour. The telegraph department started with small office of Department of Public works. Later many telegraph line were started between various regions within limited kilometers. The development of telephone exchange in India was started with two companies namely The Oriental Telephone company Ltd. and Anglo India Telephone company Ltd. The two companies approached the India Government in 1818, the companies then opened telephone exchange in Madras, Bombay and Calcutta. In 1882 Governor General of India Council declared open telephone exchange in cities like Madras, Bombay and Calcutta. While India became independent in the year 1947, the country had about 82,000 telephone connections, which slowly rose up to 3.05 million by the year 1984.

The telecom sector in India was a government monopoly until the year 1994 when liberalization was gradually unrolled. For the first time, cellular services were launched in India in Kolkata in the year 1995. The history of telephone services in India found its beginning when a 50-line manual telephone exchange was commissioned in Kolkata in the year 1882 in less than five years after Alexander Graham Bell invented the telephone.

While India became independent in the year 1947, the country had about 82,000 telephone connections, which slowly rose up to 3.05 million by the year 1984. The telecom sector in India was a government monopoly until the year 1994 when liberalization was gradually unrolled. For the first time, cellular services were launched in India in Kolkata in the year 1999

Figure 1. 1 History of Telecom Industry



- 1885-Telegraph Act, Dot was created
- 1886 MTNL AND VSNL were setup
- 1994-National Telecom Policy in 1994 and License issued for providing mobile phone services in 4 metros. 2 operators were given license per circle for 10 years under a fixed license fee regime.
- 1995-Cellular service was commercially launched in India and Mobile licenses issued for 19 more circles.
- 1997-Telecom Regulatory Authority was created
- 1999-The new telecom policy (NTP 1999) was introduced. The Government replaced the fixed annual license fee with revenue share regime. Tele density 2%
- 2000- The national long distance market (NLD) was opened up to the private sector with no ceiling on the number of players. BSNL was hived off to form a separate corporate entity. Wireless Planning and Coordination wing of DOT was created to review and enforce the spectrum allocation policy. The Telecom Disputes Settlement and Appellate Tribunal (TDSAT) was created BSNL and MTNL were allowed to offer cellular services
- 2001- A fourth cellular operator from the private sector was allowed in each circle to launch mobile services

- 2002-A subscriber linked spectrum allotment procedure was introduced.USO fund established to improve the telecom services in the rural sector. ILD was opened up to private sector without any ceiling on the number of players. Bharati Airtel got listed in BSE & NSE. VSNL was privatized
- 2003- Access deficit charges (ADC) was introduced to compensate BSNL for losses incurred in providing services in rural areas. The Calling Party Pays regime was introduced where by subscribers no longer had to pay for incoming calls. The Unified Access License (UASL) Regime was implemented allowing subscribers to offer fixed / mobile services using any technology. R Com rolled out CDMA services which resulted in a tariff war. Internet and GPRS were allowed through cellular service providers
- 2004- Broadband policy 2004 was unveiled
- 2005- The foreign direct investment limit in telecom was raised from 49% to 74%. Motorola started manufacturing mobile phone in India. Pure-play tower companies like GTL, Quippo and Essar entered the tower market. The trend of recharge coupons with denomination values ranging from Rs 10 to Rs 200 for low end prepaid users. Introduction of lifetime validity schemes on prepaid. Aircel was acquired by Maxis
- 2006-The Government launched 'Project Most' (Mobile Operators Shared Towers) to promote passive infrastructure sharing. Demerger of tower operations by R Com into Reliance Infratel BSNL and MTNL launched the 'One India Tariff' whereby the calls anywhere in the country were charged at a flat rate of Re 1.India became the 5th country in the world to join the 100 million mobile subscribers' club. In Aug 2006 India added 5 million subscribers and overtook China to become the fastest telecom market in the world.
- 2007- Roaming rental was reduced to zero Dual technology was allowed enabling service providers to offer both GSM and CDMA under the same license subject to entry fee of 1651 cr (US \$ 366 million) Vodafone acquired 67% stake in Hutchison Essar for US \$10.9 billion.

Indus Towers was formed by Airtel, Vodafone and Idea. 570 applications received for telecom UASL license and spectrum allocation. DoT delinked spectrum from the telecom license and introduced first come first served basis.

- 2008-DoT issued 121 letters of intent for UAS licenses. Government awarded license to 6 new players – Datacom, Loop Telecom, Shyam Sistema, STel, Unitech Wireless and Swan Telecom. Active infrastructure sharing permitted, whereby the operators are allowed access to common antenna, feeder cables, radio access network. Tele density reached 26%
- 2009-Bharati Airtel crossed 100 million subscriber mark. Mobile subscribers in India crossed 500 million mark.
- 2010-Aircel sold its portfolio of 17500 towers to GTL. 3G and BWA spectrum auctioned through an open and transparent auction process. Government earned Rs 67719 cr (US \$ 15.05 billion) for 3G spectrums and Rs 38543 cr (US \$ 8.6 billion) for BWA spectrum. Mobile subscriber numbers crossed 650 million. 3G spectrum allocated to Vodafone, Tata teleservices, Bharti Airtel, RCom, Idea, Aircel and STel.

1.3 Telecom Circles in India

There are 22 telecom circles in India which are divided into four categories: they are Metro circle, A, B, and C category. The major circles consist of Metro cities like Delhi, Kolkata, and Mumbai. The other territories are covered by circle A, B, and C. A, B, and circles are in hierarchy order with largest as A in terms of subscriber coverage. The given table below describes the circles and their territories described by the Department of Telecommunication.

Table1. 1 Telecom Circles

SN	Telecom Circle Name	Circle Type
1	Delhi Metro Telecom Circle	Metro
2	Mumbai Metro Telecom Circle	Metro
3	Kolkata	Metro
4	Gujarat Telecom Circle	A
5	Karnataka Telecom Circle	A
6	Tamil Nadu Telecom Circle	A
7	Andhra Pradesh Telecom Circle	A
8	Maharashtra Telecom Circle	A
9	Haryana Telecom Circle	B
10	Punjab Telecom Circle	B
11	Kerala Telecom Circle	B
12	Rajasthan Telecom Circle	B
13	West Bengal Telecom Circle	B
14	Uttar Pradesh (West) Telecom Circle	B
15	Madhya Pradesh Telecom Circle	B
16	Uttar Pradesh (East) Telecom Circle	B
17	Bihar Telecom Circle	C
18	Northeast Telecom Circle	C

19	Assam Telecom Circle	C
20	Orissa Telecom Circle	C
21	Himachal Pradesh Telecom Circle	C
22	Chennai	Metro
23	Jammu & Kashmir Telecom Circle	C

Source: TRAI report March 2012

The category wise growth of various circles is shown in annexure with the circle B showing highest addition and circle C with highest growth Rate in Access Service as on 31 Jan 2012

1.4 Technologies in telecom sector

The fixed line and mobile segments serve the basic needs of local calls, long distance calls and the international calls, with the provision of broadband services in the fixed line segment and GPRS in the mobile arena. Traditional telephones have been replaced by the codeless and the wireless instruments. Mobile phone providers have also come up with GPRS-enabled multimedia messaging, Internet surfing, and mobile-commerce. The much-awaited 3G mobile technology is soon going to enter the Indian telecom market. The GSM, CDMA, WLL service providers are all upgrading them to provide 3G mobile services. Along with improvement in telecom services, there is also an improvement in manufacturing. In the beginning, there were only the Siemens handsets in India but now a whole series of new handsets, such as Nokia's

latest N-series, Sony Ericsson's W-series, Motorola's PDA phones, etc. have come up.

Touch screen and advanced technological handsets are gaining popularity. Radio services have also been incorporated in the mobile handsets, along with other applications like high storage memory, multimedia applications, multimedia games, MP3 Players, video generators, Camera's, etc. The value added services provided by the mobile service operators contribute more than 10% of the total revenue.

Table1. 2 : Technology in Telecom Sector

GSM	CDMA	Fixed Line	3G
BSNL	BSNL	BSNL	BSNL
IDEA	VIRGIN MOBILE	MTNL	VODAFONE
SPICE	RELIANCE	BHARTI	AIRTEL
VODAFONE	MTNL	VODAFONE	AIRCEL
AIRTEL	TATA INDICOM	RELIANCE	RELIANCE
AIRCEL	TATA DOCCOMO	TATA TELECOM	TATA DOCCOMO
RELIANCE	VIDEOCON		TATA INDICOM
TATA DOCCOMO			VIDEOCON
TATA INDICOM			
VIDEOCON			

1.5 Telecom Wireless and wireless subscribers in India

The Indian Telecommunications network with 951.34 million connections (as on March 2012) are the third largest in the world. The sector is growing at a speed of 55% during the recent years. This rapid growth is possible due to various proactive and positive decisions of the Government and contribution of both by the public and the private sectors. The rapid strides in the telecom sector have been facilitated by liberal policies of the Government that provides Communication services in India have witnessed the phenomenal change over the last few years. India has been the fastest in growing of the telecom market. Keeping the high consumers demand in to consideration, many big players like Reliance, Airtel, Aircel, Vodafone, BSNL, Tata Indicom, Virgin Mobile etc. has launched their services in the market. Information technology has brought tremendous change in day-to-day activities of common man to entrepreneurs. India is has become one of the fastest and complete nation in the telecom sector in the world. The totals subscriber of Wireless and wireline is 951.34 million with the total subscriber of wireless as 919.17 millions on 31st March 2012. Overall monthly growth is of 0.88%.The teleWireless tele-density 76 and Wire line tele-density is 32.17 million which is decline compared to previous month the urban teledensity is 169.55and rural teledensity is 39.22 BSNL/MTNL, two PSU operators, hold 80.59% of the wire line market share

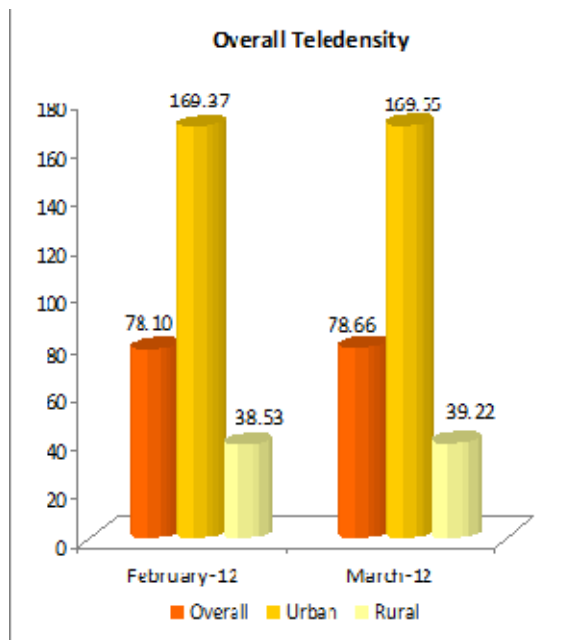
Table1. 3 Highlights of Telecom Subscription Data as on 31st March, 2012

Particulars	Wireless	Wireline	Total Wireless + Wireline
Total Subscribers (Millions)	919.17	32.17	951.34
Total Net Addition (Millions)	8.00	-0.15	7.85
Monthly Growth (%)	0.88%	-0.48%	0.83%
Urban Subscribers (Millions)	595.90	24.62	620.53
Urban Subscribers Net Addition	1.79	-0.08	1.71

(Millions)			
Monthly Growth (%)	0.30%	-0.33%	0.28%
Rural Subscribers (Millions)	323.27	7.55	330.82
Rural Subscribers Net Addition (Millions)	6.21	-0.07	6.14
Monthly Growth (%)	1.96%	-0.96%	1.89%
Overall Teledensity*	76.00	2.66	78.66
Urban Teledensity*	162.82	6.73	169.55
Rural Teledensity*	38.33	0.89	39.22
Share of Urban Subscribers	64.83%	76.54%	65.23%
Share of Rural Subscribers	35.17%	23.46%	34.77%

Source: TRAI report March 2012

Figure 1.2 Teledensity



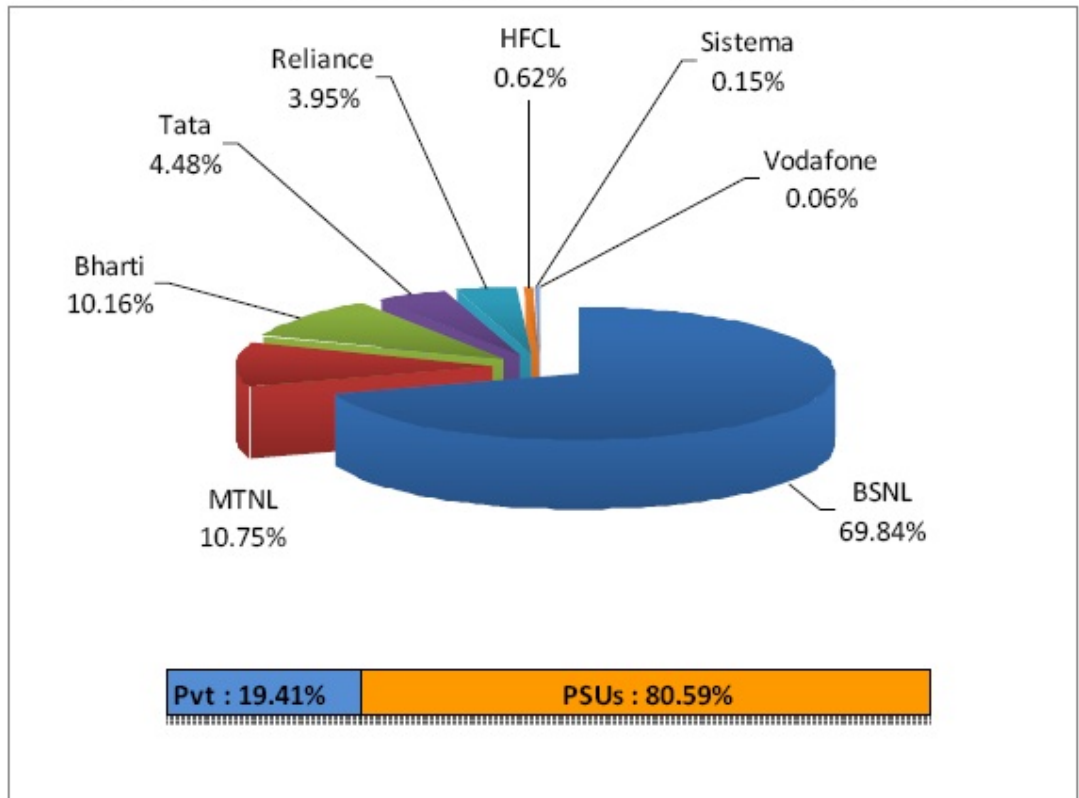
Source: TRAI report March2012

1.6 Wireless & Wireline Segment

The primary need for any call is wireless and wireline segment. Due to modernization traditional wireline instrument are replaced by cordless or wireless segment. Compared to last month there is 0.88% growth in wireless segment and with the total growth of 0.83% in the wireless and wireline segment. Presently, all the telecom services have been opened for private participation. Government owned two companies BSNL and MTNL and two largest service provider in wireline market, In the wireless segment there is significant growth Out of 88.65 Private service provider the top 5 players acquires 82.2% and market share of PSU is 11.35% which includes two PSU operators BSNL and MTNL With total wireless telecom subscribers as 919.17 million Bharti is leads top with market share 19.72%. Second position is Reliance with 16.65 market share and then follows Vodafone with market share 16.37%. All the top three service provider are very close to each . Later follow Idea with market share 12.26% has largest. The lowest market share is by HFCL there are 13 private players in wireless market. The Private players are Bharti Airtel, Vodafone, Reliance, Tata Teleservices, idea, Aircel, spice BPI, HFcl and Shyam Telelink and 2PSU in the BSNL, MTNL, in this wireless segment active in this segment

Figure 1. 3 Wire line Market Share

Service Provider wise Market Share as on 31st March 2012



Source: TRAI report March 2012

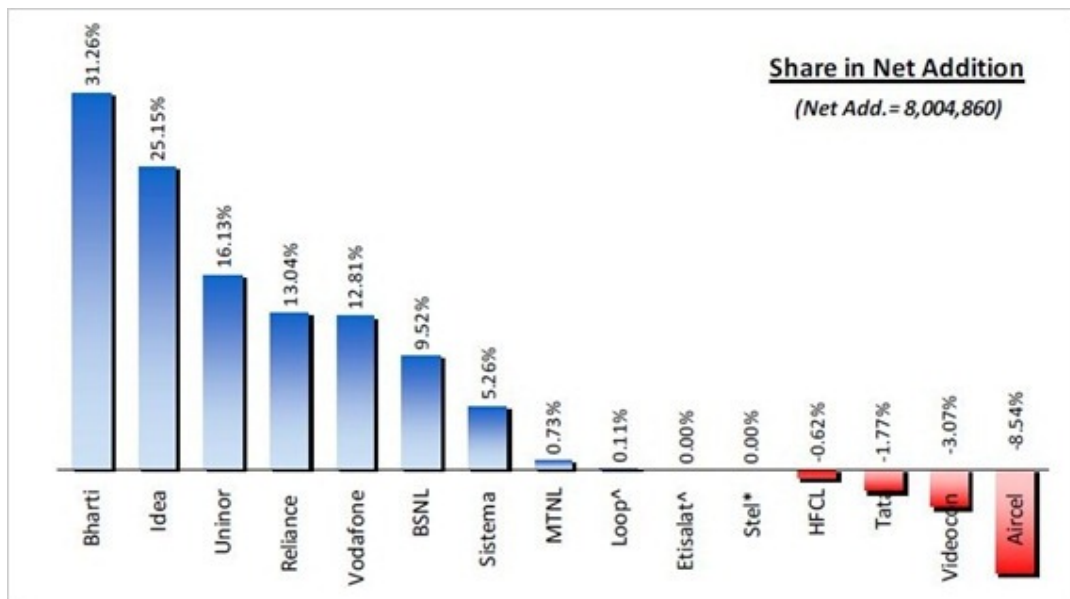
Table1. 4 Service Provider wise Wireless Market

Service Provider wise Wireless Market Share (CMS) March 2012	
Bharti	19.72%
Reliance	16.65%
Vodafone	16.37%
Idea	12.26%
BSNL	10.72%

Tata	8.89%
Aircel	6.81%
Union	4.62%
Sistema	1.72%
Videocon	0.65%
MTNL	0.63%
S Tel	0.36%
Loop	0.37%
Etisalat	0.09%
HFCL	0.14%
	100.00%

Source: TRAI report March 2012

Figure 1. 4Operator Wise Mobile Subscriber Additions [March 2012]

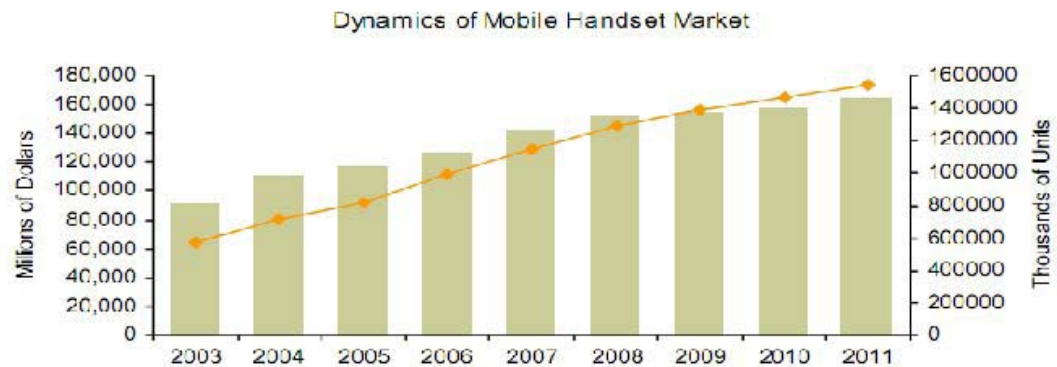


Source: TRAI report March 2012

1.7 Mobile Handset Market

The **Cellular telephone** (commonly "mobile phone" or "cell phone" or "hand phone") is a long-range, portable electronic device used for mobile communication.

Figure 1. 5Dynamics of Mobile Handset Market



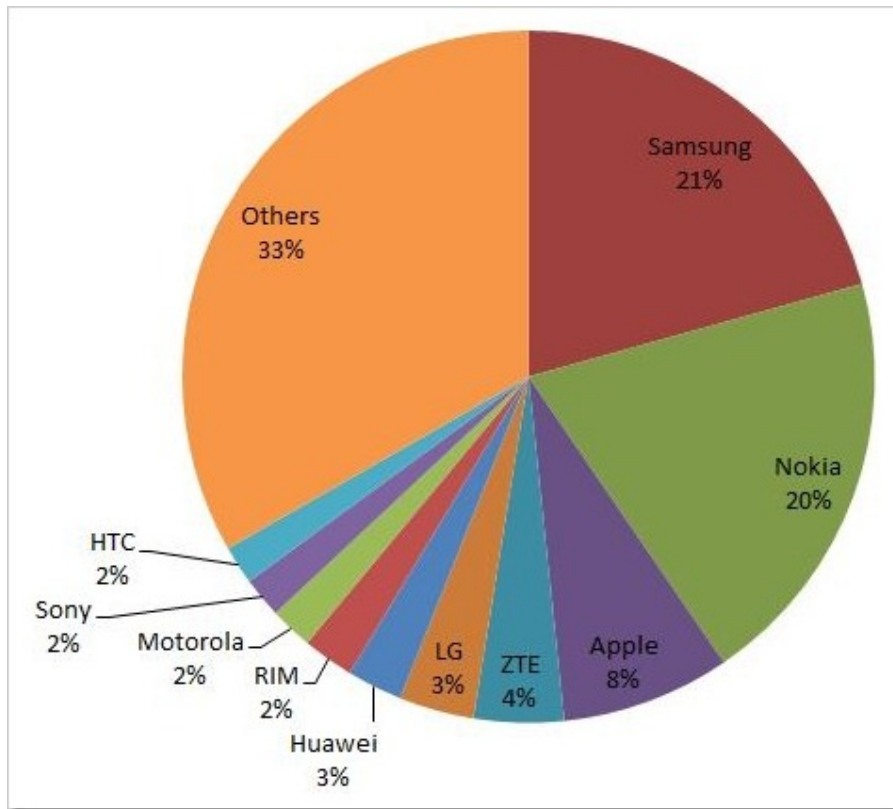
The global mobile phone industry is based on many different manufacturers and operators. The industry is based on advanced technology and many of the manufacturers are operating in different industries, where they use their technological skills, distribution network, market knowledge and brand name. Four large manufacturers of mobile phones are today dominating the global mobile phone industry & networks; Nokia, Sony Ericson, Samsung and Motorola.

The sales of the mobile handset have declines in the Q1 2012 which was earlier seen in Q2 2009 this was brought under notice by the Information Technology research firm Gartner. Among the leading manufacturers of mobile handsets Samsung topped in mobile phone sales all over the world

with Nokia slightly behind it Nokia and Samsung together captured 41% of the market share of worldwide sales of mobile devices with the market share of Samsung (21%) and Nokia (20%) There is tremendous growth in the market share of Samsung

Apple has the worldwide market share of mobile device of 8% followed by other brands ZTE, LG, Huawei Device, Research in Motion, Motorola, Sony Mobile Communication, HTC and other smaller mobile companies. Apple has seen growth in its market share compared to Q1 of 2011 which was 3.9% which in Q1 is 7.9%. So for the people who thought that apple would plums out without Steve Jobs' presence are proved to be wro

Figure 1. 6 Worldwide Mobile Device Sales [1st Qtr 2012]



Source: Gartner (May 2012)

Smartphone Sales Worldwide [1st Qtr 2012]

The market share of Android based smart phone sales have increased from 36.4 % to 56.1% where as ios based smart phones sales world wide is increase from 16.9 in Q1 2001 to 22.9% in Q12012This brings Apple at the second position after Android in sale of Smartphone worldwide which is followed by other operating system Symbian, Research In Motion, Bada, Microsoft & Other

Table1. 5Smartphone Sales Worldwide [1st Qtr 2012]

Operating System	1Q12 Units	1Q12 Market Share (%)	1Q11 Units	1Q11 Market Share (%)
Android	81,067.40	56.1	36,350.10	36.4
iOS	33,120.50	22.9	16,883.20	16.9
Symbian	12,466.90	8.6	27,598.50	27.7
Research In Motion	9,939.30	6.9	13,004.00	13
Bada	3,842.20	2.7	1,862.20	1.9
Microsoft	2,712.50	1.9	2,582.10	2.6
Others	1,242.90	0.9	1,495.00	1.5
Total	144,391.70	100	99,775.00	100

Source: Gartner (May 2012)

1.8 Customer Relationships Management and Mobile Industry

Customer Relationship Management. is methodology which enable organizations to learn more about customers' through the introduction various methodology, processes, procedures strategies, software, and web-based capabilities. CRM collect all distributes the data to all functional areas of the organization. CRM connects with people of the organization and of the organization to develop stronger relationships and understands the need and behavior. CRM is as process that help the organization to understand and manage customers through the introduction procedures and systems. CRM enables the organisation to use the processes technology and understand the need and behaviour of the customers

In today competitive environment holistic approach of CRM plays vital role. Customer relationship management (CRM) in the service industry include approach like training of employeee, modification of business strategy to unederstand cutomer need, adoptio nt o relevant IT technology, uaseage of IT servicewhich enable the organisation to grow in this competitive environment . In todays compitive environment for any company which is having competitive edge will not be able to hold on to that advantage for long as technology is changing every day. Import strategy for the business organisation is to maitain its existing customers and make new customers. The term CRM itself means descibing the businjess strategy taking into customers needs and customers satifation. To be vey effective the process of CRM should include end to end process of the organisation across all the functioal areas of the organisation. CRM helps the maitain and mange the customers in an organised way. There three different type of customers First –customers having lowest level of satisfaction. Second- medium level of satisfaction and loyalty towards the company and Third-do not have satisfaction. CRM approaches for bring the level of satifaction of customers from 3 to1. According to the mobile indusrty CRM helps the various department of the organisation to understand the customers needs and taking into consideration the goals, vision and the mission of the the ornistion. CRM is used forMaintaing the database marketin Which is used to identify the customers,

which helps the organisation to reach the customers individually, from demographic details to the customer's requirements and the buying habits are all included in the database.

It is a technology-driven tool used to reach out to identify customers in the market place. It is precisely making a one-to-one sales approach to individual customers and clients. Database Marketing applies the concept of market segmentation, yet instead of forgetting a particular group of customer's database, marketing reaches out to customers individually. The names, addresses and buying habits of individual customers are collected from databases. This will help the telesales people to create new customers. This will also help the telesales people to know the customer's requirements of 3G plans or the people who are price seekers and people who are service seekers. Database Mining is the process used to find the intentional customer cluster from enormous information records found in database. It is these are organized way to extract through a database mining and obtain the required and the relevant information.

In Complaint Handling, Many companies pay attention to complaints. Companies want to know what is wrong from their side. Companies are trying to find the loyal. Allow the organisation to form the relationship with its customers improve the relationship with the existing customers and improving their satisfaction and thus increase their profits.

With The CRM technology mobile industry can:

1. Develop the understanding between the existing customers and communicate. Keep on upgrading maintain the existing customers and develop new products
2. Develop and find out the retention strategies for the existing customers. Optimize their local call costs of its general plans so as to get a better share of the market.
3. Mobile industry can bring down the initial cost of SIM, and try to match it with the average prices offered by other players in the market.
4. It has been seen that major factors that appeal to the consumers are the flexibility in terms of bill payment and availability and value options of recharge vouchers. Thus mobile must make it a point to enhance and optimize their distribution channels so that customers can have easy access to the services which can be done through CRM
5. Through CRM telecom companies can incorporate plans to lure employees of the Private Sector as they form a major chunk of revenue.
6. Telecom Companies must seek to upgrade its Quality of Service provided in terms of connectivity, Value added services etc. as these act as major factors in the opinion of the consumers which can be developed through CRM
7. Develop brand awareness and brand building which is necessary as many people are unaware of the services and low tariff rates offered by the company.

2 MOBILE NUMBER PORTABILITY, 3G SERVICES & MOBILE INTERNET

2.1 Mobile Number portability

2.1.1 Introduction to Mobile Number portability

The Indian telecom market in the past year has seen a number of highs and lows-falling ARPUs (Average revenue per user) of operators, tariff wars, spectrum dilemmas, coupled with a unique market that has 13 operators with new entrants in the past year and present year, and steadily growing telecom density with the highest number of mobile subscribers in the world.

India, the 8th nation in Asia to launch Mobile Number Portability (MNP), which for a typical mobile user will mean that one can switch telecom service providers while continuing with the same mobile number. MNP is generally more effective only in those markets which are highly competitive and is beneficial for both the operator as well as the subscribers. India being a highly competitive market with more than 11 incumbents trying their level best to increase their sub-scriber base and revenues, it is expected that mobile number portability will surely make it difficult for them to achieve their goals amidst highly competitive environment.

On the positive side, MNP offers flexibility to the customer wherein he can change his operator, but the negative side is that it fuels a lot of competition among the players. Thus in a highly competitive market like India, the real beneficiaries will be the subscribers. Charles Darwin's theory will become more apt for the competitive scenario in India and thus it will be the survival of the fittest.

As per the Frost and Sullivan report on MNP, there has been mix and match of successes and failures in Asian telecom market. In markets like South Korea and Hong Kong it has been proved successful, whereas it has been ineffective in Taiwan, Japan and Singapore. Indian Telecom sector is focusing more on rural penetration now and the sector will drive the next phase of growth. This strategy will surely reduce ARPU with in-creased competition once the MNP is introduced. With MNP in place, the India consumer will truly be a king.

2.1.2 History of Mobile Number Portability

Number Portability allows consumers and businesses to keep their existing telephone numbers when they switch operators. It, literally, means that numbers are portable from operator to operator - whether that operator is a mobile, wire line, or VoIP service provider. Number Portability benefits everyone. It gives subscribers the freedom to choose operators based on criteria like services, price, and customer service. Their freedom of movement is not influenced by the inconveniences and costs that come with changing numbers.

It also makes it easier for operators to compete for customers, precisely because it eliminates a major barrier to churn - that is, reluctance to change numbers. Although this increased risk of churn is a concern among some operators, number portability has been a huge success around the world, because it helps to level the playing field, giving all operators more opportunities to grow their subscriber bases and revenues.

Though it was introduced as a tool to promote competition in the heavily monopolized wire line telecommunications industry, number portability became popular with the advent of mobile telephones, since in most countries different mobile operators are provided with different area codes and, without portability, changing one's operator would require changing one's number. Some operators, especially incumbent operators with large existing subscriber bases, have argued against portability on the grounds that providing this

service incurs considerable overhead, while others argue that it prevents vendor lock-in and allows them to compete fairly on price and service. Due to this conflict of interest, number portability is usually mandated for all operators by telecommunications regulatory authorities. Singapore mobile subscribers were one of the first in the world to enjoy mobile number portability through this Call-Forwarding solution when it was launched there in 1997. Hong Kong, the UK, and Holland followed in 1999 and now over 54 countries around the world have implemented mobile number portability.

2.1.3 Implementation in India

The much awaited MNP (Mobile Number Portability) was finally launched on 20th Jan 2011 in India, empowering mobile phone consumers to change service provider conveniently. Mobile Number Portability (MNP) allows the mobile subscribers to retain the existing mobile phone number when the subscriber switches from one access service provider (Operator) to another irrespective of mobile technology or from one technology to another of the same or any other access service provider, in a licensed service area.

The project was started long back in India. The first mile stone came when The Telecom Regulatory Authority of India (TRAI) issued draft Regulations to facilitate Mobile Number Portability (MNP) implementation in India and submitted recommendations to DoT on 8th March 2006. The draft regulations lay down the business process for implementing mobile number portability.

The Department of Telecom (DoT) had accepted TRAI's recommendations on 10th December 2007. DoT had also accepted the suggestion of TRAI that a Steering Committee be formed under the aegis of TRAI, to deliberate upon various issues involved in the implementation of MNP in the country. Accordingly, the TRAI constituted a Steering Committee consisting of

representatives from TEC, Service Providers and their Associations. Based on the report of the Steering Committee and decision of the Authority, a draft “Request for Proposal” (RFP) was prepared and submitted to DoT for initiating the process for MNPO (Mobile Number Portability Operator). Subsequently, the DoT issued guidelines for MNP service license on 1st August 2008. The DoT guidelines envisaged geographical division of the country into the two Number Portability Zones (Zone 1 – North West & Zone 2 – South East), each consisting of 11 licensed service area.

DoT issued the tender Document on 25th November 2008 for MNPO. Based on the selection parameters set in the guidelines for MNP service license, one MNP service licensee in each zone was selected. M/s Syniverse Technologies (I) Pvt. Ltd was granted license for operating in Zone-1 (North-West India) and M/s MNP Interconnection Telecom Solutions (I) Pvt. Ltd (Telcordia) was granted license for MNP Service Zone-2 (North-East India).

Further, on 6th May 2009, DoT issued detailed instructions to all Access Provider/NLD/ILD licensees regarding provisioning of MNP.

On 25th Nov 2010, MNP had been implemented in Haryana as a pilot LSA to observe implication of MNP on voice as well as non voice calls. Finally, 20th January 2011, MNP had been implemented across the India.

Mobile Number Portability requests increased from 129.85 lakh subscribers at the end of June 2011 to 155.48 lakh subscribers at the end of July 2011

2.2 3G Services

2.2.1 Introduction of 3G Services

Third Generation (3G) mobile devices and services will transform wireless communications into on-line, real-time connectivity. This 3G wireless technology will allow users to have access to location-specific services that

offer information on demand. The first generation of mobile phones consisted of the analog models that emerged in the early 1980s. The second generation of digital mobile phones appeared along with the first digital mobile networks about ten years later. During the second generation, the mobile telecommunications industry experienced growth both in terms of subscribers as well as new types of value-added services. Mobile phones are rapidly becoming the preferred means of personal communication, creating the world's largest consumer electronics industry.

The rapid and efficient deployment of new wireless data and Internet services has emerged as a critical priority for communications equipment manufacturers. Network components that enable wireless data services became the fundamental to the next-generation network infrastructure. Wireless data services are expected to see the same explosive growth in demand that Internet services and wireless voice services have seen in recent years.

3G is the third generation of the wireless protocol for wireless mobile devices. 3G standards require that both data and voice can run simultaneously and provide 200 kilobytes per second of transmission. 1G was the original analog cellular signal. 2G introduced digital cellular, and 3G allowed for multimedia transmissions on cellular devices. Many smartphones and laptops can access 3G networks. This typically requires a subscription to a cellular provider that offers 3G network access. The speed of most 3G networks is suitable for many Internet applications; however, for heavy downloading and streaming high quality video, 4G may be a better alternative.

2.2.2 3G Wireless Market Drivers

Telecommunications service providers and network operators are embracing the recently adopted global third generation (3G) wireless standards in order to address emerging user demands and to provide new services. The concept of 3G wireless technology represents a shift from voice-centric services to

multimedia oriented services. In addition, heavy demand for remote access to personalized data is fueling development of applications, such as the Wireless Application Protocol WAP and multimedia management, to complement the 3G protocols. Complementary standards, such as Bluetooth, will enable interoperability between a mobile terminal and other electronic devices, such as a laptop/desktop and peripherals, providing added convenience to the consumer and allowing for the synchronization and uploading of information at all times.

According to Lehman Brothers, approximately 50 percent of current voice services subscribers are expected to use wireless data services by 2007, instead of 25 percent as previously forecast¹. Lehman Brothers further predicts that, within seven years, 18 percent of cellular revenues and 21% percent of PCS (personal communications services) revenue will come from wireless data services. Cellular subscriptions are forecast to exceed one billion by 2003², compared with the 306 million that was forecast at the end of 1998, representing a compound annual growth of 29 percent. Demand for voice services has traditionally been a market driver. However, today, demand for data services has emerged as an equally significant market driver. After many years of stasis, the telecommunications industry is undergoing revolutionary changes due to the impact

of increased demand for data services on wireline and wireless networks. Up until recently, data traffic over mobile networks remained low at around 2% due to the bandwidth limitations of the present second-generation (2G) wireless networks. Today, new technologies are quickly emerging that will optimize the transport of data services and offer higher bandwidth in a mobile environment. As a case in point, the increased use of the Internet as an acceptable source for information distribution and retrieval, in conjunction with the increased demand for global mobility has created a need for 3G wireless communications protocols.

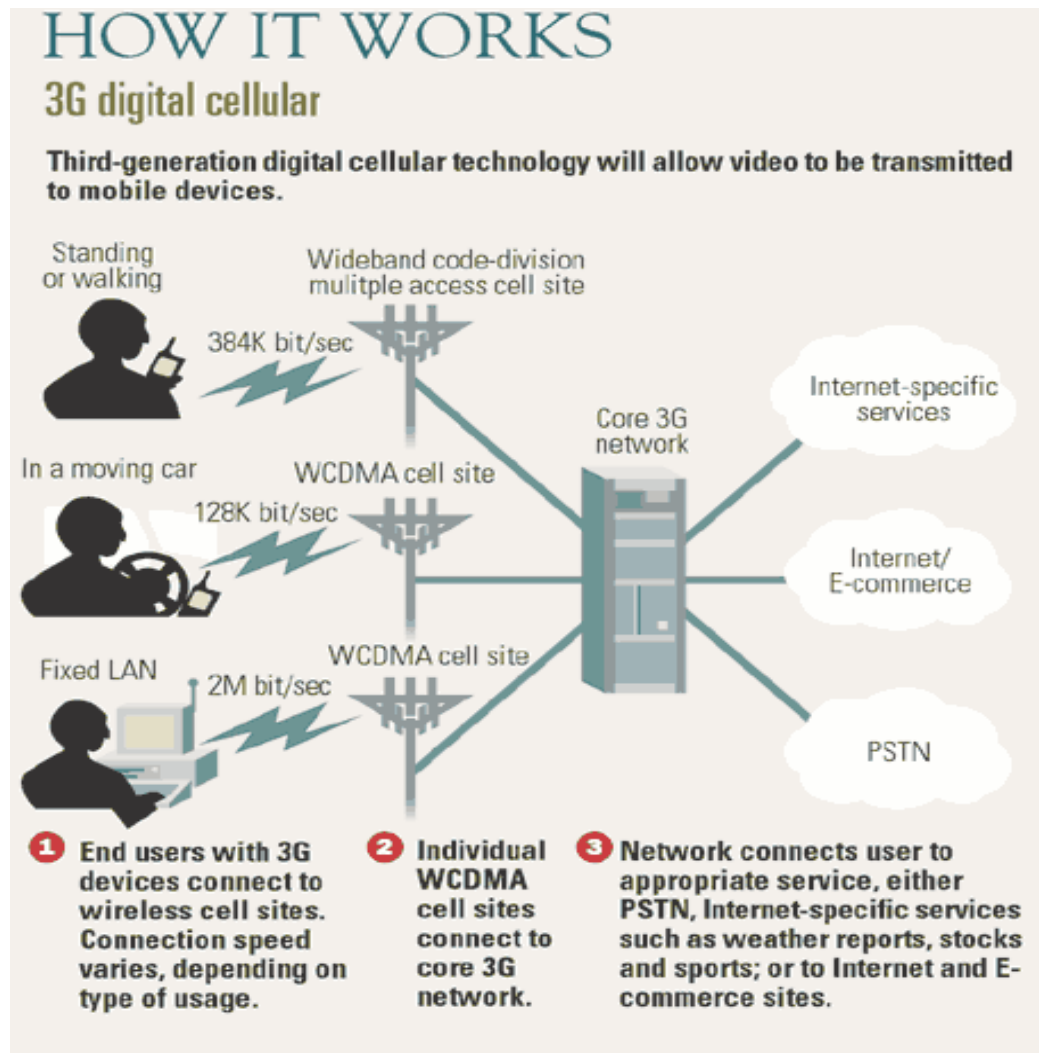
The third generation of mobile communications will greatly enhance the implementation of sophisticated wireless applications. Users will be able to utilize personal, location-based wireless information and interactive services. Also, many companies and corporations are restructuring their business processes to be able to fully exploit the opportunities provided by the emerging new wireless data services. Many advanced wireless services are already available today, and the introduction of 3G wireless technologies will add to their ubiquity.

2.2.3 THE GROWTH OF 3G IN INDIA

India is seeing an unprecedented increase in the mobile users. According of one of the latest TRAI reports released in November 2008, the total number of mobile users in India has reached 325 million. In October 2008 alone, 10.42 million new subscribers added.

These figures are bound to shoot up with the launch of 3G network. Some of the major mobile players in India are BSNL mobile, Airtel mobile, Reliance mobile and Tata mobile. At one time Aircel mobile was leading the market; however, it has now lost the market share to BSNL mobile, Airtel mobile and other leading mobile players.

2.2.4 How 3G Works:



2.2.5 Introduction of mobile Internet

Economic advancement and a significant growth in the income level of people have led to increased spending even among the middle class of India. The penetration of Mobile handsets is increasing at a fastening pace. The main utility of the mobile handset of just calling or SMS has long been passed and now people use mobile handset for other functions like Music, gaming and also a lot of people are also using their handsets for surfing internet on their Mobile handsets. With evolving technology of Smartphones and Tablets

exploding the market and with the evolution of internet like 3G. The use of mobile internet is expected to grow at a fastening pace.

Mobile Internet has been quite active in Japan and many of the developed countries since the start of the millennium. However in India it is quite a recent phenomenon. Only 1% of the Indian population uses mobile internet compared to 30% population which uses internet in China. Also different people have different interests while surfing internet on mobile. Few surf for entertainment, few for connecting with people and few for gaming

Mobile internet, which had just been a distant dream till a few years ago is progressing at a lightening pace that it is kind of revolutionizing the communication framework .Mobile internet provides as an extension of internet wherein because of its mobility one can conveniently use internet while the person is moving. However, that is not the only function of mobile internet.

Mobile internet goes much beyond this function of mobility. It basically provides solutions to all types of communication requirements of man today as it integrates telecommunication technologies and internet. The way we have communicated has changed as a lot of progress has been achieved in wireless technology, sophisticated software and hardware design; the way we communicate has changed in quite a major way.

In the last few years the preference of people through which they want to communicate with each other as also the use of cell phones has increased considerably. Mobile internet today is the best method for people to stay in touch while they are still in move. Today, with high technology cell phones which support numerous internet functions, people are using their favorite social networking sites like Facebook and Twitter while they are on the move.

2.2.6 Mobile broadband technology

With mobile broadband technology the next generation evolution took place and changed the whole way we communicate. Basically with the help of mobile broadband, the computer users can surf the internet, send and receive email from anywhere they like even outside their home. Basically the mobile broadband works on the same technology on which the cell phones work. It is about radio frequencies and waves. The cell phone radio towers and cell phones send packets of information packets can be data like streaming video, music files, web pages, and emails.

Basically, there are two technologies which are used to operate the networks of cell phones- CDMA (Code division multiple access) and GSM (Global System for mobile communications). GSM is quite popular in Asia and Europe while CDMA is popular in the US. There are quite major differences between these systems and the way that they operate. Both of these use different types of algorithms which allow several cell phone users to share the same frequency without interfering the usage of others.

Mobile broadband is known as third generation mobile technology or 3G. CDMA and GSM both have their 3G technology solutions for allowing users to deliver high speed access to the internet on mobile devices.

Mobile internet and broadband technology is the new trend in cell phone users. People prefer to listen to music, watch videos, send and receive emails and communicate to each other while they are on the move, and to be able to do that they need mobile broadband or mobile internet. With so many people hooked on to the virtual world and the mobile technologies, there is no doubt that there would still be many more developments in this field.

In the past 15 years, the internet has fundamentally changed the way we work, play and communicate. Evolving wireless and mobile broadband technologies are now enabling the next major wave — the Mobile Internet. The next-generation Mobile Internet will enable consumers and businesses to connect and access new types of applications and new forms of information

wherever and whenever they want. The development of this new Mobile Internet marketplace has just begun.

In the next decade, the expansion of the Mobile Internet will likely be the fastest growing marketplace in the telecommunications industry.

2.2.7 Testimonial of advantage of Mobile Internet

Buying a mobile phone was the wisest \$20 Ranvir Singh ever spent. Mr Singh, a farmer in the north Indian state of Uttar Pradesh, used to make appointments in person, in advance, to deliver fresh buffalo milk to his 40-odd neighbors. Now his customers just call when they want some. Mr. Singh's income has risen by 25%, to 7,000 rupees (\$149) a month. And he hears rumors of an even more bountiful technology. He has heard that "something on mobile phones" can tell him the current market price of his wheat. Mr. Singh does not know that "something" is the internet, because, like most Indians, he has never seen or used it. But the phone in his calloused hand hints at how hundreds of millions of people in emerging markets—perhaps even billions—will one day log on.

2.2.8 Mobile Internet scenario – India and the developing world

Looking at the present scenario only 7% of the total population regularly uses the internet but the recent brutal price war mean that 507m own mobile phones. And also with calls costing as little as \$0.006 per minute. Indian operators like Bharti Airtel and Reliance communications sign up 20m new subscribers a month.

In many other developing countries to the scenario is that there are more mobile phones than internet connection. In countries like Brazil, Russia, India, China and Indonesia there are approximately 610m regular internet users but a staggering 1.8 billion mobile phone connections, according to Boston

consulting group, they have basically predicted that by 2015 there will be 1.2 billion users which will dwarf countries like America and Japan.

The new internet users will log onto the internet mostly through their mobile phones. This will tend to be cheaper and easier than most of the other options that are available. This tends to be cheaper and easier than any other option. In Brazil fixed line broadband is often prohibitively expensive, in Russia where it can be much cheaper, it is often unavailable In India where infrastructure is always a headache, it is hard to get a good basic landline, let alone broadband.

In developing countries Poor people seldom have personal computers. In the BRICI countries where the combined population is more than 3 Billion, the numbers of PC's are only 440 m. People can use internet cafes but again they are inaccessible to the people staying in the rural areas

The stakes are quite high as in developing countries for a 10 percentage point increase in mobile phone penetration yields an extra 0.81 percentage points of annual growth, this is according to a 2009 World Bank study. The mobile internet could be even more powerful. The unemployed will search for jobs online. Farmers in remote areas will find customized advice on crop planting.

The drawback of the internet is that one has to be literate to use it. That is a huge problem in India where till now the literacy level is only 60%

3 SWITCHING COSTS OVER CUSTOMER LOYALTY

3.1 Introduction Switching Costs over Customer Loyalty

In this competitive market environment companies are working with the products which are having the shorter product life curve. Mobile market is one such market where the products are having very low product life cycle. In this particular market acquiring new customers is too tough and maintaining the customer loyalty is also a tough job for the firms. It was known that „the cost of attracting a new customers have been found to be up to six times higher than the costs of retaining existing ones“. Oliver defines customer loyalty as a deeply held commitment to re buy or re-patronize a preferred product/service consistency in the future, thereby causing repetitive same brand or same brand-set purchasing despite situational influences and marketing efforts having the potential to cause switching behaviour. There are many different definitions about the customer loyalty there are two basic approaches like stochastic loyalty and deterministic loyalty. The issue is not with the definition of customer loyalty but how to attain loyal customers. To improve the customer loyalty firms has to maintain things like satisfaction by quality, customers trust in the firm and last but not least the increase in switching cost which is costly for customers to change the company. Jackson says that switching cost as the total of economic, psychological and physical costs. This switching cost is not only a monetary value but also the psychological effect over the customers to become a customer for the new brand. Switching costs will help firms to reduce the customer sensitivity towards the price. Switching cost influences customers when they are sensitive with the product quality, attributes. The Indian mobile phone market is one bigger market in the world where the population of the country is nearly 1.2 billion and the mobile phone connections are nearly 737 million. The mobile phone devices usage is also high when compared to any other mobile phone device market. The market leader of the mobile devices is NOKIA in the Indian market where SAMSUNG

is following it at the back. Now-a-days as the smart phones are inside the market the market leaders are facing a tough competition from other competitors like APPLE, HTC, and MICROMAX. At this kind of situation the switching costs plays a key role to improve the customer loyalty. The smart phone market is giving the tough issues of technology where the market leaders like Nokia are losing its loyal customers in this particular segment. But whereas Samsung in the other hand is coping up with the competition and other issues. (BILAL, 2010) Has specified that there is a good relation between the customer satisfactions, customer trust on customer loyalty directly and there is a direct relation for customer loyalty with switching costs. The hierarchy also specifies that all these attributes will show a positive impact over the shifting from one service provider to another.

M.Sathish, 2011 forecasted that there will be 864 million mobile phone users in India by 2013. The churn rate of the customers from the top brands of mobile service providers will be high by this point. To retain the loyal customers of the service provider will use the switching costs. The service providing quality will be increased by them. As all this information will be the useful one to study the particular research over mobile phone devices. The churn rate in mobile phone devices is heavy these days as the customers are losing their loyalty over the brands.

The impact is high on the smartphone segment as the applications are making a major change. The operating systems of the smart phones are also playing a key role over the switching behaviour of the customers.

There are the market leaders like Nokia and Samsung till date in the Indian market. When the market had a large shift towards smart phone categories these market leading brands are facing problems as the loyal customers of these brands are shifting from this brand to other mobile phone brands.

There was a huge market share decline for Nokia when HTC Android entered the market. Many loyalists of these companies shifted to other mobile brands. The research is undertaken to study the impact of the shifting costs over the brand loyalty of the mobile phone users.

The study is done to verify the relations between customer trust, customer loyalty and satisfaction. The study was done by issuing the questionnaire to the customers and the data is analyzed and the results would be helpful for the mobile phone vendors to improve their products to maintain the customer loyalty

3.2 Switching cost

Porter defines switching costs as „one-time costs facing the buyer of switching from one supplier’s product to another product“. As Klemperer statement there are three types of switching costs like transaction cost, learning cost and contractual cost. The transaction cost is nothing but the cost incurred by the customer to shift from one firm to another firm for example if a user wants to shift from Nokia to Apple the cost that incurred to leave the Nokia mobile and to buy the Apple I phone is called as the transaction cost. Another switching cost is learning cost which is nothing but the cost incurred to learn about the new technology or product by the customer. The last switching cost is nothing but the contractual cost which is also called as repeat-purchase cost.

Burnham who developed a topology over switching cost to identify three types of switching costs they are (1) Procedural switching costs (2) Financial Switching Costs (3) Relational Costs. Where procedural switching costs consists of economic risk, evaluation cost, learning cost and set-up cost. Financial switching cost consisting of benefit-loss costs and monetary-loss cost. Relational switching cost consisting of personal relationship-loss costs and brand relationship-loss costs.

As the product life cycle different mobile devices in India are getting less and the mobile device users are shifting their mobile devices very soon and they are shifting the brand also. How much the customer Loyalty is playing a role in their shifting decision.

As the market leaders like Nokia and Samsung are facing a major competition from different other companies in smart phone segment. The research has a significance to study the impact of the switching cost impact over the retention of loyal customers and how the customer trust and satisfaction are showing their impact over the customer loyalty. This research may give answers to all the mobile companies to retain their existing customer by using switching costs and using their trust levels and satisfaction levels to retain the customers.

As the product life cycle different mobile devices in India are getting less and the mobile device users are shifting their mobile devices very soon and they are shifting the brand also. How much the customer Loyalty is playing a role in their shifting decision. As the market leaders like Nokia and Samsung are facing a major competition from different other companies in smart phone segment. The research has a significance to study the impact of the switching cost impact over the retention of loyal customers and how the customer trust and satisfaction are showing their impact over the customer loyalty. This research may give answers to all the mobile companies to retain their existing customer by using switching costs and using their trust levels and satisfaction levels to retain the customers.

4 LITERATURE REVIEW

4.1 Mobile Service Provider

The usage of mobile phones has converted the world into a global village. The connectivity across the globe and at any hour of the day has reduced the distance among the people. **Aggarwal Vir Bala and Professor, Kumar Anil** The demographic characteristics of consumers impact the choice of service provider to a great deal. In India, youth is the driver of the growth of the mobile services. The constant development and innovation in mobile phones influenced the tech savvy people to spend more into the mobile phones. **(Bhatt, a study of Mobile phone Usage among the Post Graduate Students, 2008)**. But on the same time, it is found out that gender also plays a significant role in choice of mobile phone usage as people make it a point that what services they are purchasing are being in use. They purchase the features and technology that they can understand.

In a global village, where there are number of competitors around, every company focuses on the fact that they have a strong base of customers who are loyal and are ready to be with the company for long. The company looks to maintain the existing customer and to acquire a huge base of customers. **(Debnath, Roma Mitra, Benchmarking Telecommunication Service in India, 2008)**. Since Government of India has allowed the private participation in telecom sector, the competition has increased manifold which has impacted the marketing strategy of the existing service provider. Initially state owned telecom service providers had a monopoly in the market but in last few years, industry has witnessed a tremendous change in the industry because of economic liberalization and hence it has forced the companies to adopt the strategies which not only acquire customers but also look forward to maintain them. It is important not only because company wants to have a huge base of customers and a market share but also because the choice of other people are highly influenced by the reference group. And if current customer base is

not satisfied, there are few chances that company will get new customers easily.

The purchasing behavior of a customer does not depend only on the features and technology of the mobile phone but also largely depends on the fact that what is the level of the services of the mobile service provider **(Liu, C.M.), 2002, 42-51)** There is no benefit of purchasing the Hi tech mobile phones since the usage of features depend upon the mobile service provider to a great extent. If the service provider is not efficient, there is no use of purchasing a mobile phone that has a feature of Internet. The choice of customer regarding the features of mobile phones is changing rapidly and service providers have to be along with them, if they want to maintain their market share for long. **(Riquelme, 2001,)**the customer is aware what they want, what are their requirements when they are availing the mobile sets and what are the services that they do require from the mobile service providers as per their mobile phones. The customer would not settle on lesser than the best according to their needs and that's what drives the service provider to come up with the best of all services. **(Fernandez, Fronnie, Added Services (2007)** the consumer wants the value added services that justifies the value of the mobile phone and their services. More of Value added services, more satisfaction is the tradition prevailed and hence it is the requirement on the part of service providers to bring out the best possible services at least possible prices.

4.2 Mobile Number Portability

Rana N. (2011) This newspaper excerpt from DNA focuses on what the customers are facing as a challenge when they are trying to avail the MNP service. It highlights the areas where the technology is failing, which is causing dissatisfaction among the consumers. It portrays the real picture of how the scenario is in the market after the implementation of MNP. It also shows the trends which are prevalent in the market and the inclinations of

consumers. This article gives a firsthand insight into the telecom market and the direct impact of MNP on it. This article also brings out how telecom operators are flouting TRAI guidelines. **Nielsen (2009)** This study is done to gauge the consumer attitudes and behaviors towards mobile operators in India. It showed that close to one in five (18%) subscribers would change their mobile operator if MNP is introduced into the market. Among the respondents one in four Reliance and Tata subscribers would be keen to change their operator if MNP would be introduced followed closely by BSNL customers. More than half (55%) of all respondents were generally satisfied with their mobile operator and 48 percent were satisfied with the network quality. However, satisfaction scores on network quality dropped for almost all operators, with Airtel, BSNL and Reliance registering the greatest drops.

Khattar V. (2006) This paper highlights that the primary dimensions of product quality include Performance, Features, Reliability, Conformance, Durability, Serviceability, Aesthetics and perceived quality. Increasingly, service quality is also attracting a lot of attention. These service quality dimensions include Responsiveness, Reliability, Accuracy, Knowledge of Employees, Courtesy, Consistency and Speed. These listed dimensions of product and service quality are, in a broad sense, generic to most situations, although variations exist from one industry to another. **Australian Competition and consumer commission (1999)** This paper identifies the issues which, in the Commission's opinion, are relevant to its consideration of whether it should direct the ACA to set out rules about mobile number portability in the numbering plan and sets out background material about those issues on which the Commission seeks comment from industry participants, other stakeholders (including end-users) and the public more generally. This paper specifically focuses on the technical aspects of MNP and how it can be related to consumer satisfaction. **Tomar V. (2011)** This paper checks the feasibility of MNP and how the benefits can be transferred to the consumer at the end. This paper clearly defines what is the technology involved in the porting process and which sources are responsible for them.

So consumers if facing a problem can directly understand the step at which their process is stuck and can directly approach the respective authority for the same. It also tells what problems are faced by the companies when the porting process takes place in technical terms and how they can streamline the process to pass on the benefits to the consumers. **Iqbal T. (2009)** This paper explores Pakistan's experience in introducing MNP and investigates the suitability of introducing the same in India and other emerging South Asian microstates such as the Maldives. The paper also considers phone subscribers at the Bottom of the Pyramid (BOP) and the impact of the low-cost, low-ARPU pricing model implemented in South Asia will affect porting rates. The study is mainly based on secondary data collection (existing reports, market trends and opinions of key stakeholders) while the BOP data is sourced from LIRNE, Asia's large sample study, teleuse@BOP3, carried out in six-countries in 2008. **Krishnan V. (2011)** This paper explains the underlying MNP technology and its impact to the telephony ecosystem. The paper also deals with how Tech Mahindra, a R&D and engineering services powerhouse, can shape this evolution. After a prolonged deliberation, the Mobile Number Portability has been tabled on the Indian Telecom space and it is set to liberalize the final frontiers of competition in the Telephony space. Subscribers have been unwillingly tied on to service providers irrespective of deteriorating service standards, thanks to locked in number series per provider. Now MNP is going to change that all for good.

Systor (2007) This paper tells that number portability gives service subscribers the possibility to keep their phone number or number range when changing subscription from one service provider to another, when changing from one set of services to another or when changing the geographical location. The phone numbers are now seen as being allocated to the subscribers rather than the operators and the subscribers can more easily change operator or service provider. The Number Portability service is a network service which ensures true competition in the telecommunications market. This paper also talks about different types of portability options. **Zillur R. (2006)** This study deals with the measurement of service quality at cellular

retail outlets in the Indian environment with a focus on perception and expectation of service quality from the customer's perspective. Tangibility, Reliability, Responsiveness, Assurance, Empathy; cross-sectional survey design with a seven-point Likert scale; the Indian cellular telecommunication industry received strong ratings on the tangibles dimensions. It is possible that the understanding and interpretation of questions may differ amongst language groups. **TRAI Report (2011)** gives a detailed outline of how the telecom market is currently swinging post MNP implementation and gives a statistical overview of the prevalent market conditions. This report summarizes the trends that are currently seen after the introduction of MNP in the Indian market. **Ganguli S.(2008)** This study aims to explore the variables of both service quality and service features with regard to Indian cellular services; variables-Process Quality, Service Competitiveness, Service Reliability, Market Reputation, Supporting Services, Network Performance, Customer Convenience; pilot survey followed by convenience sampling using Likert Scale; Customer satisfaction is directly related to the five variants mentioned, Convenience sampling is used so generalization of the research must be done with caution, the study isn't specific to Delhi/NCR. **Vanniarajan T., Gurunathan P.(2009)** To examine the linkage between service quality and customer loyalty, service reliability, voice quality, price, VAS; Multiple item five point Likert measurement scale; perceived service quality is a necessary but not sufficient condition for customer loyalty; The customer loyalty may be examined among the customers belonging to various service providers **Ojha S.(2009)** examines the use of Value Added Services (VAS) by the mobile phone subscribers, SMS, Roaming, Picture Messaging, GPRS; Random sampling for different age groups. Younger the respondent, greater is the awareness about VAS, Limited to Godhra District only.

PIN-FENN CHOU and CHIN-SHAN LU(2009) empirically investigated service quality, switching costs and customer loyalty from home-delivery services' customers' perspective, accessibility, timeliness, convenience, tracking,

standard prices, guaranteed delivery, service availability 365 days per year, door-to-door delivery, delivery at night, special time delivery, service quality and product freshness, survey questionnaire; the most satisfactory home-delivery service quality item was 'range of delivery' not related to the telecom services. **Ling Hu Anne Wan, San Hwang Ing (2006)** The homogeneous strategies often employed by service providers in an oligopoly market have led to consumer awareness of the different types of switching costs, Switching to a new provider may entail certain hidden costs or expenses. The rate plan or monthly fees offered by a new provider than those at present, Switching to a new provider may ultimately entail some unforeseen difficulties, on-site surveys and printed questionnaires, the greater the homogeneity of providers' price formulas, the less evident the inverse correlation in past studies between financial switching costs and willingness to switch.

4.3 3G Cell Phone Technology

Manas Bhattacharya, IES (Deputy Director General (Finance), Department of Telecommunications, Ministry of Communications & IT, Government of India) in his Article "Telecom Sector in India: Vision 2020" mentioned that one notable break with the past is that with opening up of the developing economies and widespread sartorial reforms, catching up process has become faster. Developing countries with liberal policies have much better opportunity to leapfrog than before. Mobile experience of the low-income countries bears testimony to this process. India is a participant in this global process. There is tremendous appetite to absorb new technology. At the higher end of the market, India will mimic the most sophisticated telecom technology of the world and face all types of uncertainties that are associated with any new technology anywhere in the world. It will take time for the market for new technologies to consolidate. 'Market maturing' will be a continuous process at some of the segments of telecom sector. This holds good even today. Today's market does not guarantee 'reliable revenue stream' to investors in new technology like VoIP, broadband and 3G since they lack an

existing client base¹. Side by side, a process of diffusion will continue unhindered in respect of established technology in the mass market. Christo Jacob (June 2010) in his article “**3G: Will it Revamp the Face of India?**” mentioned that The only concern for these winners is to play the card right coupled with the right push to mobile app developers encouraging more 3G apps to be developed and also to develop a clear understanding between the operator and the mobile startups so that both can flourish. For 3G, there is much to gain from the buzz created by online app stores of Apple, Nokia, Samsung, and Sony Ericsson, and on Facebook and Orkut as well, where developers can sell directly to consumers. Of course, they must pay a yearly fee and 30 percent of their revenues to the service platform, perhaps much lesser initially, which may encourage more mobile app developers. Kushan Mitra (July 2010), in his article “3G what’s Next?” mentioned that it seems that the first and most vital role that 3G will play will be: better quality voice calls. It is not as if 3G applications or technologies such as video services or faster Internet access are not available, it is just India has not auctioned adequate amount of spectrum or the radio waves on which phone signals ride upon. “In many other countries, operators have been given 20 MHz of radio spectrum each. In India, operators have been given a quarter of that, despite having several times the user base,” points out Sudhakar Ramakrishna, Vice President, Wireless Broadband Access Solutions, Motorola. In other words, 3G technology, which promises 10 times more efficient use of spectrum than current day second-generation phone systems, will first be used to fix the Indian phone user’s big bugbears: poor quality voice, call drops and, at times, even interference.

Alankar & K.R. Balasubramanyam, in “How Long for 3G” mentioned that For about six months now, DoT has been threatening to come out with a 3G policy, but it hasn’t yet delivered on the promise. According to DoT officials, the policy would be out in a month’s time. This time around, there’s another problem. The new Telecom Minister, A. Raja, who took charge on May 16,

2007, hasn't yet got up to speed on the issues, and may need time to make a decision. As far as allocating the spectrum is concerned, it is almost certain now that the government will conduct an auction. TRAI has recommended a minimum price of Rs 1,500crore per license, but among the operators, only Ratan Tata of Tata Teleservices seems willing to the idea. Others believe that the allocation of spectrum should be need based that is, dependent on the number of subscribers an operator has. **NorazahMohdSuki** in "Subscribers intention towards 3G mobile services" mentioned that the main factors that affect the consumer's intention towards the 3G services are Ease of use, Price, Complexity involved, Security, Entertainment and the speed of the data transfer, The importance of perceived ease of use towards 3G mobile services' in terms of how easy or effortless it is to communicate with each other is more important. 3G offers a vertically integrated, top-down, services provider approach to delivering wireless Internet access. For practitioners and stakeholders of 3G deployment, these are the two most important factors to keep in mind when offering 3G services.

4.4 Mobile internet services

Kim, M.C. (2003) The mobile Internet system differs from the stationary Internet system. First, the mobile Internet system usually offers a lower level of available system resources. Second, it provides instant connectivity, which makes it possible to use the mobile Internet at the moment of need, anywhere and anytime. Third, it is more personal than the stationary Internet. These characteristics of the mobile Internet may have a considerable influence on the preference of customers for services across the three major business domains. In the commerce business, customers prefer to buy low-risk rather than high-risk products for several reasons. First, mobile systems cannot provide enough of the information needed to lower the uncertainty associated with most high-risk products. Second, users can get low-risk products conveniently with minimal search costs. In the communication domain, mobile Internet users prefer to use SMS services, because of the instant connectivity

and privacy provided by those systems that offer a convenient real-time communication method. In the content domain, customers prefer low-intensity content. Due to low-resource availability, mobile Internet systems cannot provide a high level of information processing. At the same time, customers prefer more individually customized content on the mobile Internet because its personalization level is higher than that of the stationary Internet. We cannot directly apply these results to other countries and cultures. However, we believe that since Korea is one of the most active mobile Internet markets, our study will prove to be the basis for tracking the growth of the mobile Internet and finding the direction it should be heading in for the future.

Ozajkasi (2009) et. al In comparison to the slow diffusion of computer-based Internet access, mobile Internet services gained immediate acceptance in Japan. Although a mobile is by no means a substitute for computers, it has been successfully adopted by the traditionally marginalized users including women, the less educated and the less affluent. We argue that the diffusion of mobile internet in Japan is an example of the way in which a new technology provides a possible alternative to overcome unequal to ICT. Instead of appalling to small group of technophiles, the developers of mobile internet reached out to the masses specified by lowering the level of technological rediness needed to use the new technology. Given this development, we find that mobile internet access is less constrained by demographics and SES characteristics that in computer-based internet access in Japan. To risk oversimplification, not everyone owns a mobile phone in Japan, but those who do use it to access the internet regardless of gender, income and education level. Mobile internet access is also determined by keyboard skill and interest in innovation. Our finds thus show that mobile phones have lowered the barriers to internet access

Lee, S. (2009) The preference of consumers differs according to demographics which include age and service categories. Entertainment services have become one of the most important sources of mobile internet and one of the most browsed because of the usages like music, music videos, The consumers are not much bothered by how a service is delivered but by

with the resulting quality. The mobile internet services are classified into four different kinds of services: Information Pull, information push, transaction and access. Information pull involves the users actively using services like news and weather broadcasting. Information push includes services that are sent to the customer such as location based advertising and at last comes transactional services which include executing some old values and services such as mobile banking and stock trading. For the wireless data services, consumers adopting this new technology will heavily depend on the price of the data, data rate provided by the wireless network, quality of the service, extent of the geographical coverage, and perceived customer service. For teenagers communication is the most important aspect because of which they surf net, consumers in their 20's are more concerned about .**Ozajkasi, S. (2009)** Traditional media, PC internet and mobile internet generally have a complimentary effect at an attitudinal level. There is a harmonious co-existence between the different forms of media. Mobile users often reinforce the search that they have done via a PC internet when the involvement is high with the product or the research is something of great importance. Also the wireless internet could become a complimentary medium to wired internet according to the level of information relevance and needs. In case of information which is low involvement, speed of the information that is required is much less than the depth of the information that is required. In this case mobile internet may be preferred over PC internet. If the consumers come to know that the global performance of Mobile internet is far superior to the performance of PC internet, they will feel close to Mobile internet. The paper also states that people who are receptive to mobile internet will also be receptive to new products.

Taylor, C.A. (2008)This paper has discussed the motivations the lead people to access the internet on their mobile phones, what do people exactly do while surfing the internet and where do people really surf their mobiles The man motivations to surf the mobile internet are the desire to stay current, to keep oneself informed in general. Examples: scanning email and checking news sites. The next motivation is the desire to be efficient, to manage projects, or

get things done. Examples: looking up an address; checking traffic maps; looking for supplies/ jobs/ roommates; getting instructions for a class assignment. But after all this the interest in an unfamiliar topic, often based on a tip or chance encounter. Examples: looking up information about a country of interest; looking up information to settle a friendly bet in a bar. The next motivation is to the desire to engage with other people. Examples: arranging to get together. Also the behavior was classified into various different subheadings. Forefront among this behavior was status checking, checking a specific piece of non-static information. Examples: weather; news; sports scores (during a game); email/Facebook for a new message; a repeat visit to the same site to see what's changed. The next behavior is browsing, trolling for new information of interest without any apparent goal. Examples: following site links selected on the fly. The next behavior is information gathering, looking up information about a particular topic. Examples: searching multiple sources about a band; finding information about a news topic or a country; seeking information for the common interests of a social group. The behavior to check a specific piece of static information. Examples: who starred in a movie; the definition of a word; sports scores (after the game is over). Also to seek information to aid the immediate course of action. Examples: checking to see the movies/times while walking to the local theater; looking up the driving directions for a business to run the next errand. And at last engaging in a two-way sharing of information with another person or group. Examples: communicating through email; using social networking sites to respond to others' posts; posting pictures/text with the expectation of sharing.

Petrova, K. (2006) M Commerce development is driven by rapidly changing technology which is evolving at a rapid pace. More recent developments include Internet enabled handheld devices, which can take advantage of new mobile technologies such as General Packet Radio Service (GPRS) and Third Generation (3G). Consequently new value-added mobile services such as playing a game or watching news while on the move have also emerged. While electronic commerce (ecommerce) services are delivered using the publicly available Internet/ WWW infrastructure, commerce utilizes mobile

communication networks providing content to subscribers only; typically a mobile phone is used.

4.5 Switching Costs over Customer Loyalty

BILAL, (2010) The author had done his entire research on the relationship of factors that are influencing the customer loyalty in banking industry. This helps our research also by helping us to give an overview in preparing our questionnaire. The paper gives us valuable information which is nothing but the model that describes the determinants. The research has given a design that relates the attributes like perceived quality, Satisfaction, Switching costs with the loyalty and that model is called as the Loyalty Model. The research has proposed the other model for loyalty of customers where they incorporated the issues like commitment, Trust, Perceived Quality, Switching Costs and Satisfaction and their relation with the customer loyalty. As the research is very close to our research but the only problem is the research was done over the banking sector but we are doing it in Mobile phone sector. Even though the research is more helpful for us to prepare the questionnaire and to get an overview over the customer loyalty influencing factors.

Butscher, (1998) Specifies that many companies realized that retaining the existing customer is important than acquiring the new customers. The paper discusses about the different offers offered by different industries as loyalty schemes. The majority of loyalty offers are nothing but the discounts on their purchases or in the form of soft currency. The research has given some valuable strategies that the companies have to start value-oriented customer loyalty. The companies have to concentrate on the powerful package of advantages consisting of hard and soft benefits to their customers to improve the loyalty. The success of any loyalty program depends on the quantity and quality of the benefits. Discounts may save money for the customer and many customers like to save money but that never create loyalty for the company. As giving discounts is giving away profit with no guarantee of loyalty. The

paper discusses that smart marketers use sophisticated pricing strategies that attract customers to earn discounts rather than giving them away. Butscher specifies some pricing schemes for loyalty. They are the mixture of benefits with hard and soft benefits where as hard benefits include discounts, rebates, coupons etc. The soft benefits include magazine, travel aids, special services and events, VIP treatment, etc. There are different benefits and discounts like multi step quantity discounts, multi person discounts, price guarantees, contracts and exclusively agreements and two part tariffs. There are price strategies like time and loyalty based pricing and multi-product pricing. This particular paper has given valuable information about the loyalty creation and different pricing strategies that will ensure the loyal customers.

Joseph Omotayo Oyeniyi, (2009) Conducted the research at Nigerian telecommunication market to find out the impact of switching costs over loyalty. The results of the research are saying that the customer satisfaction is positively affecting the customer retention and switching cost affects significantly on customer retention. The research also did an extensive study over the literature review. The research has been concluded that the switching cost can be used as an implication to affect the consumer behavior over the switching from the company to company. **Koskela, (2002)** The research has conducted to find out the factors that are influencing after sales activities. The whole research conducted over suppliers to find out who they manage their customer care activities in the mobile telecommunications market. The study primarily relied on case study process. There after the qualitative research methods were integrated into the formal quantitative information. This information was collected personally from the suppliers and customer organizations. The satisfaction loyalty relationship with a provider tends to be non-linear. The satisfaction, loyalty and customer needs are linked in complex ways. The satisfaction and loyalty are linked to compare the separate and combined characteristics. This particular study is not relevant to the study which is undertaken and it never given any useful inputs.

M.Sathish, (2011) Stated that there will be nearly 864.8 million mobile phone users in India by 2013. The research objectives are to find out the switching

the service provider by the customer in India. As the research is undertaken on the switching costs. The research has done an extensive study over it. The research has been undertaken in and around Tamil Nadu and Chennai and the research used a Cluster method. The study at last ended up with the call rates and the impact of the service quality to retain the customer and to attract the new customers.

(Moon-Koo Kima, 2004) The research totally conducted on the customer satisfaction and the switching barrier in the Korean telecommunication industry as the research has been done over the service provider satisfaction. The research has been utilized to find out the real relation between the customer satisfaction and switching barriers. The research also concluded with the relation of the customer satisfaction leads to the customer loyalty which will decrease the customer churn rate. The research also concluded the customer satisfaction doesn't have a linear relation with the customer loyalty.

The customer satisfaction in Telecommunication industry is highly guided and influenced by the service quality and price of the mobile operator. The service provider which provides services better in terms of quality and price will be the one ahead of the other brands in the competitive market. If the service quality and price is good and reasonable as compared to other brands, then the brand which is better will be more advised by the reference group to people, which will make the brand more popular, and help in earning and retaining more customers. So now I will give a glimpse about the two important aspects of a mobile service provider that helps in differentiating it from other brands and in earning more customer satisfaction. The two aspects are Service Quality and Price

The aim of study was to objectively understand the behavior of mobile phone users in Delhi region and further capture their satisfaction level that is influenced by various technical and non technical factors. Specific aspects to be studied were usage pattern in terms of the purpose for which mobile phones are generally used by various categories of consumers, level of the satisfaction of users, reasons for dissatisfaction, if any, level of satisfaction

with gadgets and added services provided, liking for various attributes of the mobile phone instrument and usage pattern of functionalities and added services. The methodology to conduct the study was composed of different tasks such as review of literature on consumer satisfaction in telecom industry, empirical research based on a stratified random sample survey, a series of structured interviews and analytical framework aimed at getting an insight in to the behavior of consumer by analyzing the data / information gathered through empirical research.

5 RESEARCH METHODOLOGY

This chapter highlights the research process, the method of designing the questionnaire, the sample frame and size, and also the way in which data is collected to attain the desired objective. This chapter contains the flow of the entire research.

5.1 Research Process

The research has conducted a descriptive research method to get the insights to approach the problem. A questionnaire is designed to collect the primary data. Then the questionnaire is checked for incompleteness, edited the changes and issued the questionnaire finally. The questionnaire is issued to the total population who are reliable to collect the data. The collected data is analyzed as per the strategy planned to analyze. The hypothesis test is conducted to verify the hypothesis acceptance. The final result is generated after analyzing the hypothesis and achieving the objectives of the research.

5.2 Justification of Paradigm and Methodology

The research should have a research methodology as research methodology is a framework or blueprint for conducting a marketing research. It obtains the information needed to structure or solve the marketing research problems.

5.3 Need of the Study

In past few years, the industry that has witnessed a drastic revolution is mobile phones. The usage of mobile phones has expanded to horizon in last

decade and hence there is an immense development in the mobile phone services. In India, there are numerous mobile services provider with varied facilities and services, persuading the huge customer base to avail their services. This paper attempts to understand the consumers' buying motives, attitude and perceptions about the mobile phone services. The paper evaluates the perceptions about mobile services and factors that affect their choice for the service provider.

After introduction of MNP in India, initially there was a lot of hype but newer services like 3G etc. have sidelined it. Occasionally there have been articles that portray the problems faced by consumers in availing this facility. A study needs to be done to find out if the consumers are availing this service on a continuous basis or it was just hype for some time. The study also tries to locate the problems faced by MNP users if they faced any or in the other words, the factors that cause porting decisions.

With the launch of 3G enabled Mobile and Data services by Government owned Bharat Sanchar Nigam Ltd. In 2008, India entered the 3G arena. The International Telecommunications Union (ITU) defines the third generation (3G) of mobile telephony standards IMT-2000 to "facilitate growth, increase bandwidth, and support more diverse applications". The project is to analyze the factors influencing the selection of mobile phone service provider and 3G services i.e. the factors that make customers select 3G services and also the role demographic factors play in selection of 3G services.

Mobile Internet has been quite active in Japan and many of the developed countries since the start of the millennium. However in India it is quite a recent phenomenon. Only 1% of the Indian population uses mobile internet compared to 50% population which uses internet in China. Also different people have different interests while surfing internet on mobile. Few surf for entertainment, few for connecting with people and few for gaming. Therefore it is important to investigate the main factors while surfing internet.

The low product life cycle in the mobile handset industry and the low customer loyalty over big brands like NOKIA, SAMSUNG etc. The research is to be conducted to find out the impact of switching costs which any company will apply to safeguard its loyal customers. This research will identify the various relations between switching costs and customer loyalty, customer satisfaction and customer trust.

5.4 Research Design

Marketing research design is the specification of procedures for collecting and analyzing the data necessary to help identify or react to a problem or opportunity. Here the problem is majorly consumer centric and there is a lot of data available online as there have been researches on the onset of the service. Secondary data (exploratory research) collected from sources like TRAI website, published interviews with dealers etc. is analyzed to find out variables which are relevant for mobile number portability decision. On these variables factor analysis is done using SPSS19 and set of final variables decided. The research is conducted from December 2011 to February 2012. The data analysis strategy is already formulated to find out the results.

5.5 Objectives

- To discuss the various factors affecting the mobile phone user behavior in the Delhi Region and to reduce these factors to a minimum number through the use of factor analysis.
- To know whether the service operator selection variables influence the mobile service provider choice.
- To find consumer behavior towards MNP
- Factors affecting port out current operator or to avail MNP
- Factors restraining to avail MNP
- To study the factors influencing the selection of 3G services.

- To study the inter-relation between social, economic and entertainment factors in selection of 3G service.
- To study the awareness level of Mobile Internet In NCR
- To understand the consumers perception and usage of Mobile internet
- Comparative study of Internet usage between PC and Mobile handsets
- To analyze the relation between customer loyalty and switching costs
- To analyze the relation between customer satisfaction and switching costs
- To analyse the relation between customer trust and switching costs

5.6 Type of Research Method Used

As Malhotra also specifies that the research will formulate a problem which the research has formulated, identified the alternative courses of action, developed the hypothesis. The research has got the insights from the secondary data and developed an insight to approach the problem.

This research is conducted to determine the degree to which marketing variables are associated with the problem. In research descriptive research method was used.

5.7 Survey Method and Administration

5.7.1. Specify the Information Needed

The research needs some information from the respondent like the present mobile brand, purchasing power, time of changing the mobile. Then the research will move to know the customer satisfaction level by knowing their satisfaction on the liker scaled questions. Then research will know whether the respondent has changed his mobile ever or not. If the respondent changes the mobile then the research will continue to know the reasons to change. At the end the research is needed with the personal details of the respondent.

5.7.2. Selection of Survey Method

The survey which the research has selected is a mixture of questions. The survey consists of liker scaled questions where the respondents have to mark their response on a 5 pointer scale. The research has selected a fixed alternative survey method to design the questionnaire.

5.7.3. Questionnaire Distribution and Administration

The questionnaire is issued to respondents via hard copy and the responses are collected directly from them. The questionnaires are collected and secured in a safe manner to protect the confidentiality. There is no respondent who is treated differently while collecting the responses. Some more insights are collected from the respondents to analyse their behaviour. The use of Google forms to circulate the questionnaire to the respondents at distant places. The research was conducted throughout India at the same time. To reach more respondents the questionnaire is distributed through online methods.

5.7.4. Designing the Questionnaire

The questionnaire is designed to get the responses from the already existing mobile phone users. The design was done by considering the purchase power of the respondent and the frequency of the change in the mobile by the respondent. It is a mixture both multiple choice and liker scaled questions to avoid the vagueness in the responses. Then the questionnaire was concentrated on the change done by the respondent then the reasons behind the change of the mobile are known.

5.7.5. Question content and Wording

The questions are based on the usage of 3G services, internet on mobile switching the mobile service provider mobile phones and the expenditure that can be done over the mobile phone by the respondent. The wording is simple to understand by the respondents and they can answer the questions without confusion. The questions are asked to know the loyalty of the respondents.

Then they are also questioned to know the trust over their previous mobile brand and present mobile brand.

5.7.6. Response Format

The response formats of the questions of the questionnaire are based on two types of questions they are closed questions and liker scaled questions. In the liker scaled questions the respondent will mark on 5 point scale where each number will differ from low to high. The close ended questions are asked to know the personal details, usage status etc. There are no other response formats other than these two formats.

5.7.7. Sequence of questions

The First questionnaire has been designed keeping in view the flow of questions. Initially the questions are very basic and deal with the basic knowledge level of the consumers about the telecom sector. Then the questions focus more on the objective at hand and also include the variables identified previously. The questions have been framed in a way so as to give a clear idea of the flow of questions. likert scaling technique has been used to find out the customer preferences at many points. The questionnaire has ended with questions on demographics. The language has been specifically refined to keep out technical jargons and to make it more respondent friendly.

Second Questionnaire started with questions relating usage of 3G service, type of connection, current cellular operator providing MNP service, perception of the operator going to switch satisfaction level of the current operator the awareness of the respondents regarding the mobile internet, followed by the perception of respondents which will help to understand the factors with which the respondents are highly satisfied and the factors with which they are highly dissatisfied. Also the factors which are very important for the consumers, also what will motivate the respondents to use the mobile internet further.

The sequence of the third research questionnaire is started from the present mobile brand of the respondent. Then the customer satisfaction levels over their present mobile like sound, video, internet etc. The purchase power of

the respondent is known after these questions. Then the questions are posed to know whether the respondent has changed the mobile ever or not. If yes is the response from the respondent for the previous section then it follows further to know the problem in their previous mobile brand. If the respondent has given a response of NO then the questionnaire will guide the respondent towards their personal details section.

5.7.8 Exploratory Survey and revise Questionnaire

The research undergone a pilot study with the secondary data and the questionnaire is revised as per the insights obtained by the exploratory survey. A deep theoretical framework was done for the research by the extensive literature review. The exploratory survey has given the insights that the customer loyalty is directly affected by the switching costs implemented by the companies and the customer trust is also having a positive relation with the switching costs. The customer satisfaction leads to the customer loyalty and which may not differ with the switching costs implementation. These are the insights which the exploratory research has been given to approach the research problem. The questionnaire was also redesigned by these insights.

5.7.9 Sampling

The research has used a justification sampling. The research has taken responses from the mobile device users. As per Malhotra, (2008) no sampling formulae is used for deciding the sample size for research which is following justification sampling for collecting the responses from a specific respondents.

Convenience Sampling- This sampling technique has been used as the data generally pertains to common people and the type/ demographics of the respondents does not affect the purview of the research. Also this aids in getting data from diverse samples without additional effort.

Target population- Survey conducted on all those having mobile phones, without looking for demographic profiles and geographical limit being Delhi-NCR area.

Sampling Frame- Online questionnaire to tap youth population and in field survey to approach people having limited internet knowledge, non- English speaking and illiterate people.

Sample size: First questionnaire study has been has been conducted on the sample size of 210 respondents from Delhi region to study the consumer motives and perception about the mobile phone services. Both male and female respondents have been included in the sample. A large sample size has been taken so that appropriate statistical tools may be used and conclusive inferences may be drawn.

A specific sample size of a definite number of respondents is chosen because it is not possible to study the whole population. As the size of sample is increased, margin of error will be decreased. Keeping in view the time and cost factor and the scale of the research, sample sizes of 150 been decided for second questionnaire.

The third research questionnaire has been conducted on population of 500 in which 300 is taken as a sample. Convenience sampling is used to select the sample size of the research. As the population is high and the respondent errors and some of the questionnaires were missed from the respondents. The research selected the sample of 300 for the reliable data for the analysis. The research is conducted in India during December 2011 to February 2012.

The present study collects data personally through interview method from Delhi NCR.

5.8 Reliability and validity tests of the Instrument

The reliability test was done over the questionnaire and the alternative forms of instrument are analyzed. The validity of the instruments was tested by the convergent validity test. The instrument is reliable and valid till the day the research was completed. Other tests like Z test to test hypothesis as the sample size is more than 30 and chi square tests are used to test parametric

and non parametric data. Cross tabs are also used so as to find out clear relations among factors.

5.9 Data Collection Strategy

The data is collected by issuing the questionnaire in person to the respondent. The research will issue the questionnaire in various formats and collect the data. To eliminate the respondent error and interviewer error the data is collected directly from the respondents. The data is collected from the reliable respondents to avoid the respondent errors. The respondents are eligible to participate if they are mobile users as the research is conducted over mobile phones.

5.10 Coding of Responses

The questionnaire was coded to analyze them easily in the following process. As the questionnaire consisted of liker scaled questions which are a 5 pointer scale differ from 1-very low to 5- very high. Where the other numbers are coded accordingly with 5-neutral and the multiple choice questions are coded with the 1-Yes and 0-No. The other multiple choice questions are also coded similarly with the same numbers.

5.11 Selecting a data analysis strategy

The data collected for the research is analyzed by the following strategy. A KMO-Bartley (Malhotra, 2008) is conducted to verify the data weather it is eligible for factor analysis. The objectives of the research are satisfied by applying chi-square for the responses applicable to each objective. The final stage is to compare all the analyzed data and find out the end result which the research is expecting.

5.12 Research Ethics

The research was conducted genuinely by meeting all the respondents in person and collected the data with care. All the responses and the data used in the research are reliable and the tests applied on the data collected have generated genuine results. The research has no response errors or the notification errors in it. All the respondents of the research have given equal priority and time. Not even a single respondent is treated differently than others. The data was collected from the respondents according to their and no force applied on single respondent. The research has done with fair practices.

5.13 Conclusions

The research has been formulated a methodology which is a mixture of exploratory and descriptive to analyze the present results. The research has selected a sample by convenience sampling and a pilot study was undertaken to redesign the questionnaire. The questionnaire was issued to the reliable respondents to collect the data. The data analysis strategy was plotted to analyze the data.

6 DATA ANALYSIS AND FINDINGS

6.1 Mobile Service Provider & Mobile Number Portability

Table 6.1. 1 Demographic Characteristic of Respondents

	Categories	Count	Percentage
Gender	Male	112	53.3
	Female	98	46.7
Age	Less than 18 years	44	21.0
	19 to 25 years	73	34.8
	26 to 35 years	47	22.4
	36 to 50 years	29	13.8
	Above 50 years	17	8.1
Education Level	Higher Secondary	33	15.7
	Graduate	57	27.1
	Post Graduate	78	37.1
	Professional Degree	39	18.6
	Others	3	1.4
Monthly Income	Below 8000	49	23.3
	8000 to 15000	44	21.0
	15000 to 25000	41	19.5
	Above 25000	76	36.2

The data presented in the above table indicates that sample is dominated by male respondent as it is indicated by 53.3% respondent in the sample. Age analysis of respondents indicates that most of respondents fall in the age group of 19-25 years as it was indicated by 34.8 percent respondents in the sample. The information related to educational qualifications of the respondents indicates that majority of the respondent falls in those categories who are educated upto post graduation to their credit. Information pertaining to level of education of respondents sample is dominated by those respondents who are having monthly income above 25000

Factor Analysis

Factor analysis is a method of data reduction. It does this by seeking underlying unobservable (latent) variables that are reflected in the observed variables. The purpose of factor analysis is to discover simple patterns in the pattern of relationships among the variables. In particular, it seeks to discover if the observed variables can be explained largely or entirely in terms of a much smaller number of variables called factors. In our case suppose each of 210 people, who are all familiar with different kinds of motivating factor in selecting a particular mobile service provider, rate each of 10 variables on the question. We could usefully ask about the number of dimensions on which the ratings differ.

In order to accurately capture the respondent's perception, reliability analysis is carried out. So first reliability analysis was carried out with the help of Reliability Test Here, the reliability is shown to be good using all 10 items because alpha is .852 (Note that a reliability coefficient of .60 or higher is considered "acceptable" in most social science research situations.

Table 6.1. 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.848
Bartlett's Test of Sphericity	Approx. Chi-Square	779.142
	Df	45
	Sig.	.000

The above table indicates KMO and Bartlett's test of sphericity. This measure varies between 0 and 1, and values closer to 1 are better. The Bartlett's Test of Sphericity tests the null hypothesis that the correlation matrix is an identity matrix. These tests provide a minimum standard which should be passed before a factor analysis (or a principle components analysis) should be conducted. This section analyzes the comparative mean score of various factors which influence employees to remain with the present organization.

Table6 .1. 3 Descriptive Statistics

	N	Mean	Std. Deviation
Call rate	210	6.04	1.450
Proximity of Service Center	210	4.91	1.629
Satisfaction with time gap between service sought and deliver	210	4.64	1.864

Relationship with Vendor/Sales person	210	3.95	1.802
Trust in Company/Brand name	210	5.12	1.626
Accessibility to the customer care on phone	210	5.20	1.549
Responsiveness of Customer Care	210	5.24	1.554
Network Quality	210	5.97	1.388
Advance features provided in services	210	4.56	1.703
Overall satisfaction level with the service provider	210	5.73	1.577
Valid N (list wise)	210		

Descriptive statistics of mean and standard deviation of various variable influencing selection of mobile phone service provider by the consumer of Delhi state indicates that Call Rate scored highest mean (M=6.04) it was followed by Network Quality with mean (M=5.97). Consumer are of the opinion that Responsiveness of Customer care is most helpful to them in selecting particular service provider as it scored mean 5.24. The Accessibility to the customer care on phone has also found place in customer preference as it score mean of 5.20. The higher standard deviation of variable like Satisfaction With Time gap Between Service sought and Deliver, Relationship with Vendor/Sales person, and Advance features provided in services indicates that customer response to such variable are very inconsistent which infers that some customer give high preference to such factors where as some give very low preference to such factors.

To reduce the total number of variables to a manageable number, factor analysis was carried out through SPSS 17 version. For convenience we have shown variance table which is as below:

Table6.1. 4 Total Variance Explained

Variable	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.375	43.754	43.754	4.375	43.754	43.754	2.489	24.887	24.887
2	1.128	11.281	55.035	1.128	11.281	55.035	2.019	20.195	45.081
3	1.017	10.174	65.209	1.017	10.174	65.209	2.013	20.128	65.209
4	.874	8.738	73.947						
5	.697	6.965	80.912						
6	.481	4.813	85.725						
7	.438	4.383	90.108						
8	.381	3.810	93.918						
9	.346	3.459	97.377						
10	.262	2.623	100.000						
Extraction Method: Principal Component Analysis.									

Table 6.1. 5 Rotated Component Matrix^a

	Component		
	1	2	3
Call rate	.036	.171	.740
Proximity of Service Center	.504	.041	.510
Satisfaction with time gap between service sought and deliver	.825	.125	.284
Relationship with Vendor/Sales person	.812	.146	.078
Trust in Company/Brand name	.541	.638	.051
Accessibility to the customer care on phone	.449	.707	.085
Responsiveness of Customer Care	.535	.463	.354
Network Quality	-.101	.832	.293
Advance features provided in services	.156	.049	.668
Overall satisfaction level with the service provider	.278	.369	.672

After careful examination of the factor loadings, the 10 variables were associated with the respective dimensions as shown in table below. Principal components & associated Variables indicates that first factor indicating the customers preference in favor of particular service provider is the combination of Satisfaction with time gap between service sought and deliver, Relationship with Vendor/ Sales Person and Responsiveness of Customer Care accounting 43.754% variance of the total variances. The second Factor is the combination of Trust in Company/Brand Name, Accessibility to the customer care on phone and network quality which accounts 11.281% variance of total variance. Third factor is the combination of Call rate, Proximity of Service Center, Advanced features provided in services and Overall satisfaction level with the service provider which account 10.174 % variance of the total variances.

Table 6.1. 6Principal components & associated Variables

Service Factors	Brand Factors	Economic and Convenience Factors
Satisfaction with time gap between service sought and deliver	Trust in Company/Brand name	Call rate
Relationship with Vendor/Sales person	Accessibility to the customer care on phone	Proximity of Service Center
Responsiveness of Customer Care	Network Quality	Advance features provided in services
		Overall satisfaction level with the service provider

Hypothesis: “There is no significant relationship between various factors affecting selection of a particular service operator and current service provider of the respondents.”

Table 6.1.7 depicts the relationship between the various factors affecting selection of a particular service operator and the current service provider of the respondents at 5% level of significance. There is a significant relationship between the various factors such as call rate, proximity of service center, satisfaction with time gap between service sought and deliver, relationship with vendor/ salesperson, responsiveness of customer care, advance features provided in services, overall satisfaction level with the service provider and the current service provider of the respondents and hence the hypothesis is rejected. There is no significant relationship between the various factors such as trust in company/ brand name, accessibility to the customer care on phone, network quality and the current service provider of the respondents and hence the hypothesis is accepted.

Factors	Vodafone		Airtel		Reliance		BSNL		Idea		Tata Indicom		Virgin Mobile		Aircel		F value	Sig.
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Call Rate	6.16	1.304	6.02	1.469	5.78	1.436	6.50	.674	6.44	.870	6.50	.535	6.00		7.00	.000	4.575	.000
Proximity of Service Center	4.68	1.955	5.26	1.396	5.19	1.101	4.67	1.073	4.88	1.424	5.63	1.598	7.00		5.40	.548	4.938	.000
Satisfaction with time gap between service sought and deliver	4.95	1.967	4.59	1.568	5.35	1.438	4.42	1.443	4.16	2.192	3.75	1.909	6.00		5.40	1.342	4.691	.000
Relationship with vendor	4.50	1.758	3.62	1.899	4.41	1.641	4.08	1.084	4.16	1.650	2.38	1.408	4.00		3.20	.837	4.492	.000

/salesperson																		
Trust in Company/ Brand name	5.23	1.878	4.79	1.714	5.51	.989	5.42	1.311	5.28	1.595	4.88	.835	2.00		5.00	.000	1.225	.286 NS
Accessibility to the customer care on phone	5.16	1.638	5.07	1.336	5.59	1.404	5.42	1.505	5.20	1.633	4.50	1.773	3.00		6.00	.000	1.097	.367 NS
Responsiveness of customer care	5.27	1.679	5.21	1.424	5.59	1.279	5.75	1.055	5.52	1.531	4.88	.835	5.00		5.60	.894	4.956	.000 S
Network Quality	6.00	1.514	5.97	1.256	5.76	1.362	5.92	1.621	5.96	1.306	6.63	.518	6.00		6.60	.894	.481	.868 NS
Advance features provided in	4.63	1.987	4.48	1.719	4.70	1.450	3.33	1.435	5.08	1.038	4.63	1.302	4.00		6.00	1.225	2.290	.023 S

service																		
Overall satisfaction level with the service provider	5.80	1.645	5.84	1.281	6.14	.918	4.75	2.050	5.56	1.417	6.50	.926	3.00		6.80	.447	4.687	.000

Table 6.1. 7 ANOVA TABLE

Table 6.1. 8 Classification of Customer on the basis of subscription of particular Mobile services

S. No.	Name of Service Provider	No of respondent	Percentage
A	Vodafone	56	26.7
B	Airtel	58	27.6
C	Reliance	37	17.6
D	BSNL	12	5.7
E	Idea	25	11.9
F	Tata Indicom	8	3.8
G	Virgin Mobile	1	.5
H	Aircel	5	2.4
I	Other	8	3.8
	Total	210	100.0

Over the last few years the competition in the mobile services industry has increased significantly as these services started as one dominated by private sector enterprises and the government honestly followed a policy of “managed competition” by licensing more than one service provider in a telecom circle. Almost all service providers are based on new technologies that were state-of-the art and supposed to be having the cheapest mobile telecom tariffs in the world. Since all the services providers were new and had the same vintage of technology, their competition was more in terms of price and conditions of sale. Keeping this into consideration an attempt was made to know the market share

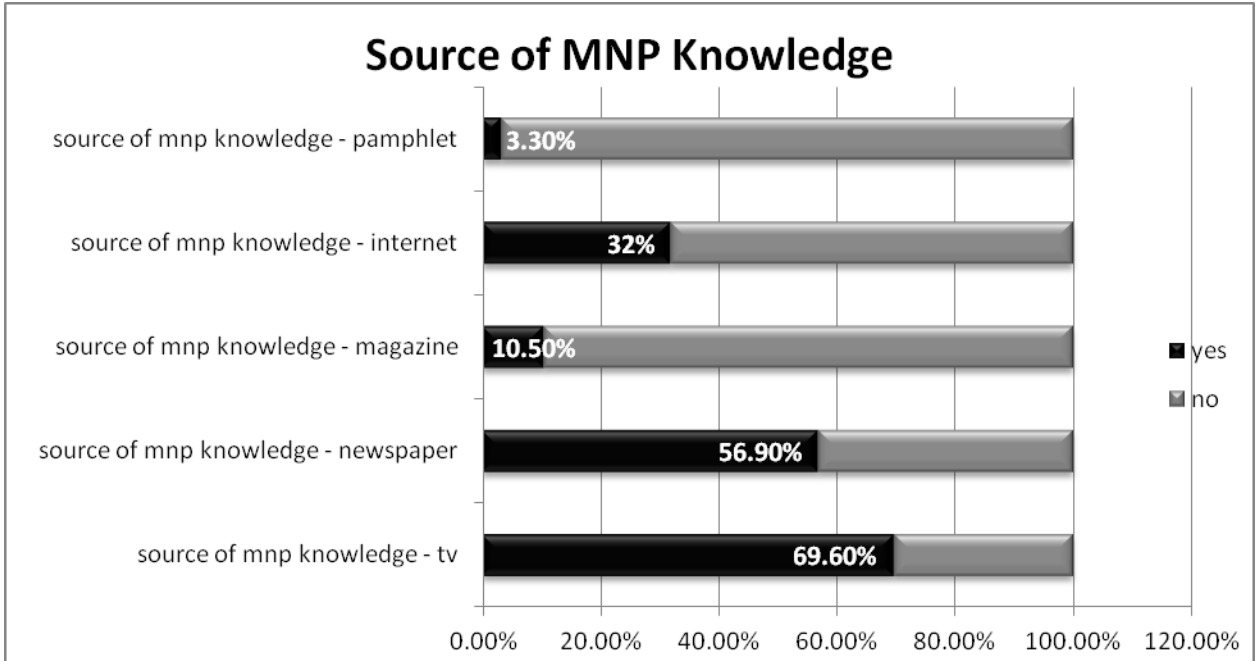
of mobile telecom service providers on the basis of customer subscription of mobile services by the customers of Delhi state. It is seen that Vodafone and Airtel having neck to neck competition with 26.7% and 27.6% customers with them. Reliance was indicated by 17.6% respondents. Tata Indicom and Others such as MTS was indicated by 3.8% respondent each. Idea was indicated by 11.9%. BSNL was indicated by 5.7% and Virgin mobile has the lowest number of respondents i.e. 0.5%.

Table 6.1. 9Cross tabulation between MNP acceptance and type of connection

			Have you planned to avail this mnp service	
			Yes	No
Type of connection	prepaid	Count	36	114
		% within type of connection	24.0%	76.0%
	postpaid	Count	26	33
		% within type of connection	44%	56%

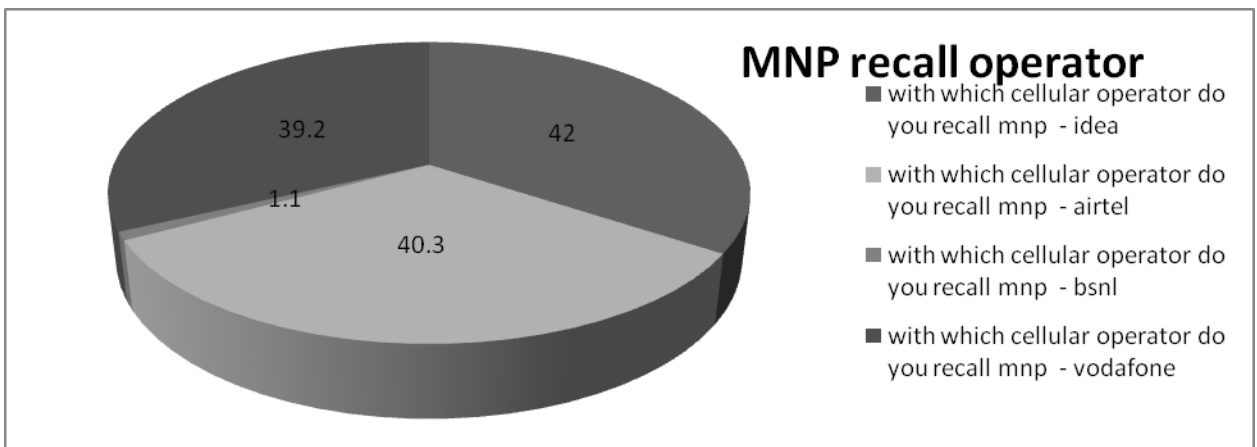
Chi square value tells that there is no direct statistically significant association between type of connection and usage of MNP. Such association states that the research objective has been attained and alternate hypothesis will be accepted. We can see from the table that prepaid and postpaid customers both equally plan to avail MNP service. It can also be seen that in both cases of prepaid and postpaid, majority does not want to avail MNP service.

Figure 6.1. 1 Source of MNP knowledge



This graph states that Television is the major source of MNP awareness and pamphlets are the worst source of MNP awareness. Newspaper closely follows the television in terms of spreading awareness.

Figure 6.1. 2 Consumers association of MNP with operators



Customers mostly associated MNP recall with the company Airtel closely followed by Idea. BSNL on the other hand has a surprisingly low recall with customers.

Table 6.1. 10 ANOVA for service quality factors

	Anova - Sig.
The current operator is providing satisfactory service quality	0.835
I like my operator's tariff plans	0.126
The customer support provided is upto the mark	0.321
The billing system is fair	0.302
I am satisfied with the VAS provided	0.017
The network coverage is the best	0.005

The ANOVA table states that only two service parameters i.e. VAS and network coverage have significance values lesser than 0.05. This tells that the means for these two parameters differed from the others. Hence these are the two factors which cause points of significant difference among operators.

Table 6.1. 11 External influence factor evaluation

Has any of your friends or relatives availed MNP	
Yes	45.10%
No	54.90%

This table shows that most of the people had friends or relatives who had not availed MNP service. This shows that they had less exposure to MNP from their peer group.

Table 6.1. 12Feedback on MNP from peer group

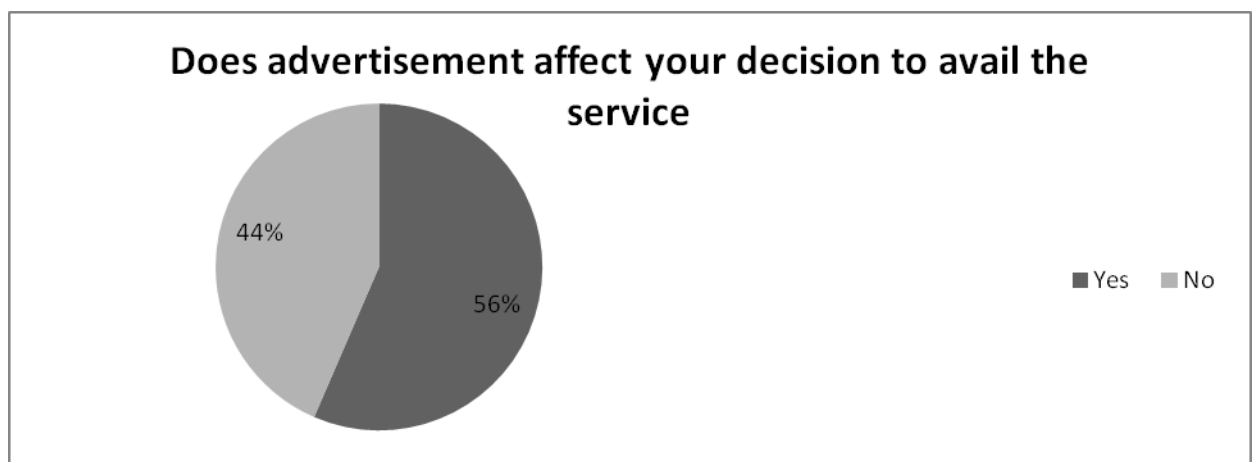
One Sample test	t	sig.
Kind of feedback on MNP from peer group	9.986	0

H0: Got a good feedback

H1: Did not get a good feedback.

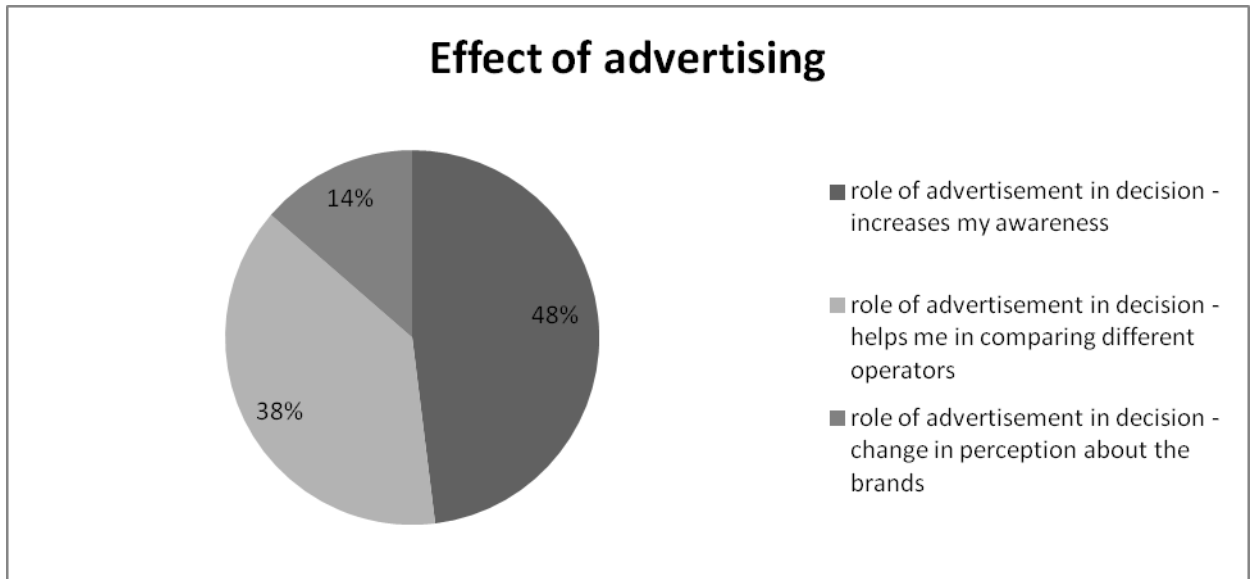
Alternate hypothesis accepted. This states that from all whose friends and relatives had availed MNP, most of the people give a negative feedback of the service. So the influence of peer group for availing MNP is either NIL or negative. This also results in lower MNP acceptance. This means that influence of peer group is not a factor for port out.

Figure 6.1. 3Advertisement factor evaluations



When asked about influence of advertising affecting decision, 56% people said that it did affect their decision. Contrary to other factors studied above, advertisement showed a positive influence for availing MNP.

Figure 6.1. 4Effect of Advertising



This graph shows that 48% of the people who were affected by advertising were only affected to the extent of increasing their awareness. It did not change the perception about brands or helped them compare between operators.

TESTS FOR FACTORS RESTRAINING TO AVAIL MNP:

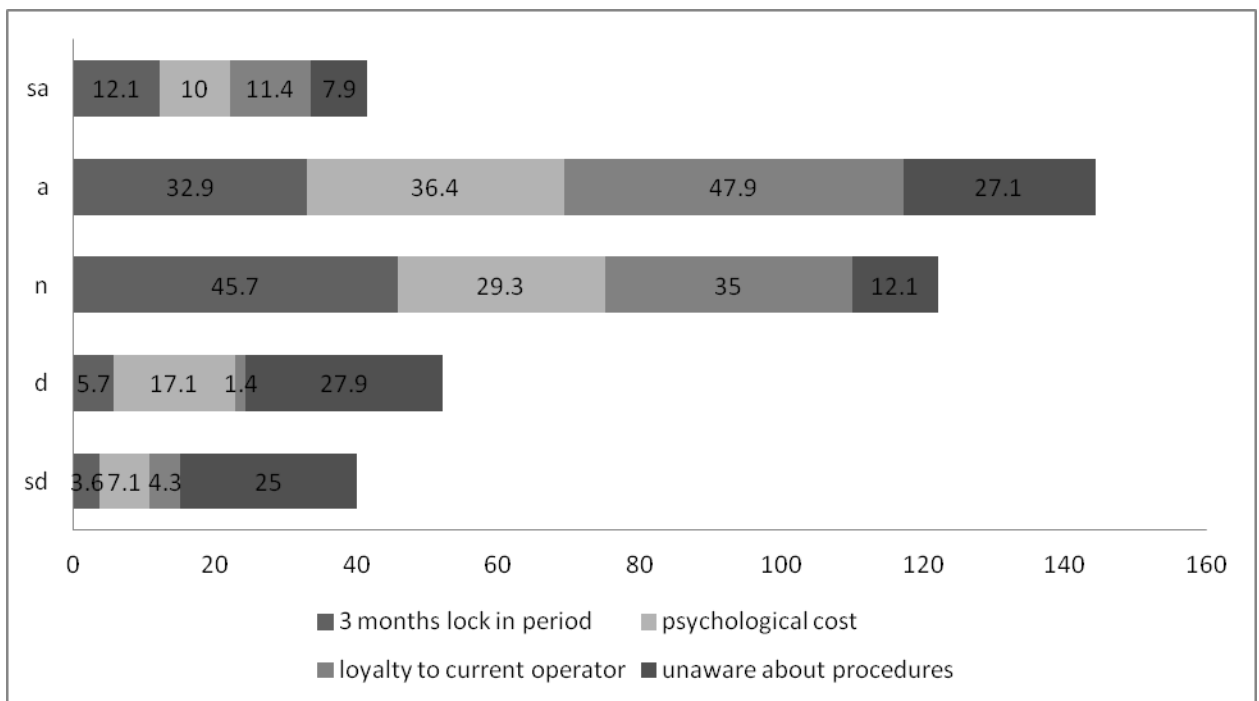
Table 6.1. 13Restraining factors evaluation table

	possible restraining factors - 3	possible restraining factors -	possible restraining factors - loyalty to current	possible restraining factors - aware about
--	--	--------------------------------------	---	--

	months lock in period	psychological cost	operator	MNP but unaware about procedure
Mean	3.44	3.25	3.61	2.65

The mean of Loyalty to current operator is the biggest restraining factor for people. Unawareness about the procedure to port is the least possible reason for people not availing MNP. This tells that people stick to their operator as they do not find value enough to port out.

Figure 6.1. 5Restraining factors evaluation chart



This chart states that most of the people agree to the fact that all these factors combines cause enough reasons not to avail MNP.

6.2 3G Services & Mobile Internet

Table 6.2. 1 Details of Respondents

	Categories	Count	Percentage
Gender	Male	94	62.7
	Female	56	37.3
Age	18 to 21 years	22	14.7
	22 to 25 years	116	77.3
	26 to 31 years	10	6.6
	32 to 56 years	2	1.4
Network	Airtel	56	37.3
	Vodafone	43	28.7
	Idea	15	10.0
	Reliance	14	9.3
	Aircel	8	5.3
	Tata Indicom	4	2.7
	MTNL/BSNL	9	6
	Virgin	1	.7
Plan	Prepaid	117	78
	Postpaid	33	22

The data that is represented in Table No.1 shows that the sample is male dominated as male respondents are 62.7% of the total sample size. The respondent's age analysis shows that most of the respondents are in the 22 to 25years of age group, as we can see in the above table i.e. 77.3% of the sample. Looking at the network connection used by the respondents it is found that majority of the respondents are Airtel subscribers i.e. 37.3% and it is closely followed by Vodafone subscribers which is 28.7%. Majority of the respondents were subscribers for prepaid connection i.e. 78%.

Table 6. 2. 2 Reliability Analysis

Cronbach's Alpha	No. of Items
.812	13

Here in order to accurately capture the customer's response reliability analysis is carried out. As we can in the above table the Cronbach's Alpha value is .812 which is greater than 0.5 thus we can safely conclude by looking at Table No.1 that the sample size and the data collected are reliable and also the reliability is shown to be good using al 13 items.

Table 6.2. 3 Factors Influencing the Selection of 3G service.

	Mean	Std. Deviation
Value Added Services	3.31	1.259
Low cost	5.97	1.145
faster Internet	5.10	1.151
gaming		1.218
	4.10	
video calling	5.73	1.183
easy to use	2.86	1.176
better network	3.58	1.057
watching live TV	3.89	1.157
faster audio and video	5.43	1.198
downloads		
better voice clarity	3.63	1.803

live information on Mobile	4.67	1.065
better customer care	3.41	1.050
less call drop	3.65	1.068

From the above Table No.3 we can find the descriptive statistics of mean and standard deviation of various factors that influence the selection of 3G services by the consumers in Delhi. It has been found that low cost rate (with Mean=5.97) has been an important factor that drives customers to use 3G services on their handsets. It is then followed by video calling (with Mean=5.73), which implies that other than cost, customers also, want to use 3G for video calling service. Thereafter, Followed by that customers use 3G services for faster audio and video downloads (with Mean=5.43). Using 3G in order to get fast internet connection has found place among one of the reasons why the customers want to use 3G, it had scored a (Mean=5.10). Using 3G service for better voice clarity has a high standard deviation of 1.803 which shows that some of the customers choose 3G for voice clarity, while others don't, as this factor shows high variation.

Table 6.2. 4 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.826
Bartlett's Test of Sphericity	Approx. Chi-Square	772.560
	Df	78
	Sig.	.000

The Table No.4 shows KMO and Bartlett's test scores. The scores varies between 0 to 1. Closer the score is to 1 the better it is considered. This test is done to arrive at a decision whether to conduct Factor Analysis or not. As in the case above KMO value is .826 which is greater than 0.5 and a significant Chi-Square value tells us that we can proceed with the Factor Analysis.

Table 6.2. 5Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.692	36.096	36.096	4.692	36.096	36.096	4.326	33.277	33.277
2	2.038	15.675	51.771	2.038	15.675	51.771	1.947	14.977	48.253
3	1.446	11.124	62.895	1.446	11.124	62.895	1.903	14.641	62.895
4	.813	6.254	69.149						
5	.697	5.361	74.509						
6	.669	5.149	79.658						
7	.511	3.934	83.592						
8	.482	3.709	87.301						
9	.416	3.198	90.499						
10	.406	3.127	93.626						
11	.310	2.382	96.008						
12	.294	2.260	98.267						
13	.225	1.733	100.000						

Table 6.2. 5Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.692	36.096	36.096	4.692	36.096	36.096	4.326	33.277	33.277
2	2.038	15.675	51.771	2.038	15.675	51.771	1.947	14.977	48.253
3	1.446	11.124	62.895	1.446	11.124	62.895	1.903	14.641	62.895
4	.813	6.254	69.149						
5	.697	5.361	74.509						
6	.669	5.149	79.658						
7	.511	3.934	83.592						
8	.482	3.709	87.301						
9	.416	3.198	90.499						
10	.406	3.127	93.626						
11	.310	2.382	96.008						
12	.294	2.260	98.267						
13	.225	1.733	100.000						

Extraction Method: Principal Component Analysis.

On conducting the variance Analysis we can see in Table No.5 that 62.895% of the cumulative variance is achieved with 3 components, i.e. we can summarize the 13 variables into 3 major factors.

Table 6.2. 6 Rotated Component Matrix

	Component		
	1	2	3
Value Added Services	.808	-.033	.094
Low cost	.795	-.014	.009
faster Internet	.859	.021	-.005
Gaming	.206	.780	.085
video calling	.538	.294	.046
easy to use	-.013	.792	.089
better network	.783	.251	-.086
watching live TV	.452	.608	-.049
faster audio and video downloads	.727	.227	-.135
better voice clarity	.781	.151	-.034
live information on Mobile	-.112	.338	.605
better customer care	.003	.005	.855
less call drop	.046	-.055	.867

Table 6.2. 7 Factors

SOCIAL FACTORS	ENTERTAINMENT	ECONOMICAL AND CONVINIENCE
VALUE ADDED SERVICES	GAMING	LIVE INFORMATION ON MOBILE
LOW COST	WATCHING LIVE TV	BETTER CUSTOMER CARE
FASTER INTERNET	EASY TO USE	LESS CALL DROP
BETTER NETWORK		

The social factors are interrelated to the dimensions like value added services, low cost, faster Internet and better network. The ability to watch live TV and ability to play games with the help of the 3G services play an important role in showing how the factor of entertainment is related to the use of 3G services; however 3G is not easy to use.

When it comes to the economical and convenience value related to the 3G services live information on the mobile supplemented by better customer care and less call drop shows how 3G is a technology for the future.

Figure 6.2. 1 Awareness of Mobile Internet

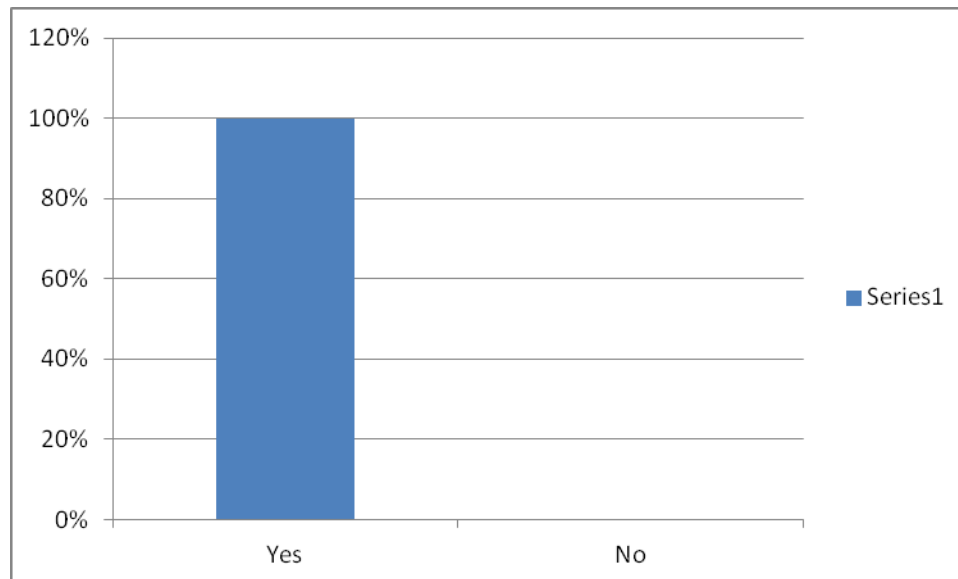


Table 6.2. 8 Awareness of mobile internet and the source through which they came to know about mobile internet.

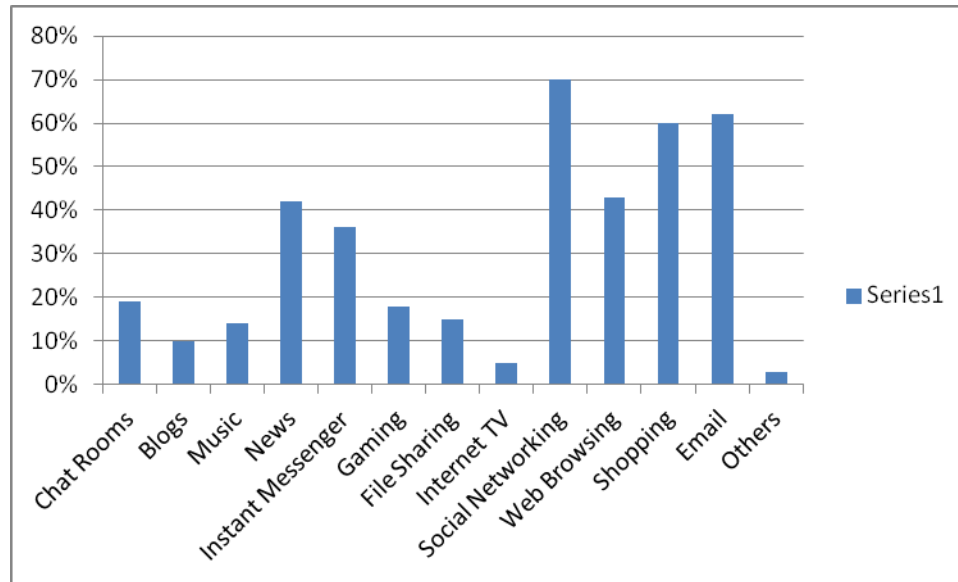
Source	Frequency
TV Ad's	41
Friends	64
Customer care	18

Somewhere else	5
----------------	---

Table 6.2. 9Preference doing while surfing on Mobile

Activities	Percentage
Chat Rooms	19 %
Music	14 %
Blogs	10%
News	42 %
Music	14 %
Instant Messenger	36%
Gaming	18%
File Sharing	15%
Internet TV	5%
Social Networking	70%
Web Browsing	43 %
Shopping	6 %
Email	62 %
Others	3 %

Figure 6.2. 2Awareness of Mobile Internet



Majority of the respondents prefer to log on to social networking websites i.e. 70 % of the respondents while surfing internet on the mobile followed by emailing i.e. 62

Table 6.2. 10Main way of communicating

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Email	39	39.0	39.0	39.0
Voice over IP (Skype)	7	7.0	7.0	46.0
Chat Rooms	7	7.0	7.0	53.0
Applications Over Wassup	47	47.0	47.0	100.0
Total	100	100.0	100.0	

Out of 100 respondents, majority of the respondents i.e. 47 respondents preferred to communicate through Wassup followed by email i.e 39 respondents

are the main mode of communication, majority of these respondents spend Rs 100 per month.

Table 6.2. 11 Satisfaction level of people with the Mobile Internet services

	Mean	Std. Deviation	Analysis N
Speed	2.2400	.91143	100
Service Provider	2.1700	.82945	100
Handset Support	2.0000	.86457	100
Convenience	1.9900	.88186	100
Instant Connectivity	2.1900	.98160	100

The service with which respondents were highly satisfied was the convenience of surfing mobile internet with mean of 1.99. The service with which the respondents were highly dissatisfied was the instant connectivity and the speed with mean of 2.19 and 2.24.

Table 6.2. 12 Use/intensify the usage of Mobile Internet in terms of cost

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid When Cost are reasonable	42	42.0	42.0	42.0
MI offers value for money	58	58.0	58.0	100.0
Total	100	100.0	100.0	

Majority of the respondents i.e. 58 respondents felt that they will start using mobile internet or intensify the usage of mobile internet if mobile internet offers value for money. 42 respondents felt that they will start using mobile internet or will intensify the usage of mobile internet when the cost is reasonable.

Table 6.2.13 Comparative usage of internet on mobile as well as on PC

		How often use Internet on PC				Total
		Everyday	More than once a week	Once a month	Less than once a month	
How often do you surf Internet on Mobile	Everyday	43	11	4	4	62
	More than once a month	12	6	2	2	22
	Once a month	4	0	0	0	4
	Less than a month	9	3	0	0	12
Total		68	20	6	6	100

Respondents who surf Internet everyday on mobile also surf Internet everyday on PC. Infact majority of the respondents surf daily both on PC as well as mobile,

even the respondents who do not surf on the internet on mobile everyday, surf internet on PC everyday.

Table 6.2.14 Usage of surfing internet on mobile and surfing internet on PC

Functions	Surfing only on mobile	Surfing only on PC	Surfing both on mobile and PC	Total
Chat rooms	6	61	13	80
Blogs	6	60	4	70
Music	1	74	13	88
Instant messenger	7	46	29	82
Gaming	8	38	10	56
Internet TV	5	15	0	20
Social Networking	6	19	64	89
Shopping	4	47	2	53

Majority of the respondents logged on to Chat rooms through their PC. Out of 80 respondents who logged on to chat rooms, only 13 respondents logged on chat rooms both through their PC as well as their mobile.

Out of 70 respondents who visited blogs on the internet, majority of the respondents visited blogs on the PC i.e. 60 respondents, no of respondents who visited blogs only through their mobile were 6. The number of respondents who visited blogs both through their mobile as well as through their PC was 4

Out of 88 respondents who downloaded or listened to music online, 74 respondents did it only through their PC, while only 1 respondent did it only through their mobile. While 13 respondents did it both through their mobile as well as through their PC.

Out of 82 respondents who logged on to Instant messenger on internet, 46 respondents logged on them only through their PC, while 29 respondents logged on them only through their mobiles, 29 respondents logged on to instant messenger both through their PC as well as mobile.

Out of 56 respondents who played games online, 38 respondents played them only through their PC, while 8 respondents played them only through their mobile. 10 respondents played them through both mobile as well as their PC.

Out of 20 respondents who watched Internet TV, 15 respondents watched it only through PC, while 5 respondents watched it only through their mobile. None of the respondents watched it through both PC as well as mobile

Out of the 89 respondents who visited social networking websites, only 6 respondents visited these sites only through their mobiles, whereas 19 respondents visited these websites only through their PC's. Majority of the respondents i.e. 64 respondents visited social networking websites both through their PC as well as through their mobiles

Out of 53 respondents who did shopping online, a whopping 47 respondents did their shopping online by using their PC, whereas 4 respondents did shopping by using their mobile alone. Only 2 respondents did their shopping by using both their mobile as well as their PC.

6.3 Switching Costs over Customer Loyalty

Table 6.3. 1 Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.688	.695	19

The reliability of the research data was calculated by Cronbach's Alpha. The research data has proved its reliability by the above result which was given in Table 6.3.1. The Cronbach's Alpha is result is 0.688 which can be taken as reliable data because it is more than 0.5. If it is less than 0.5 than the data is not reliable.

Table 6.3. 2 Cronbach's Alpha KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.720
Bartlett's Test of Sphericity	Approx. Chi-Square	766.827
	Df	91
	Sig.	.000

The KMO and Bartlett's Test will show weather the data is reliable for factor analysis or not. The research has conducted a KMO and Bartlett's test to find the

reliability of the research data for conducting Factor analysis. The test result is 0.72 which is more than 0.5 and near to one.

Table 6.3. 3Rotated Component Matrixa

	Component			
	1	2	3	4
Videoclarity	.321	.052	.686	-.087
Audio clarity	-.097	.101	.662	-.313
user friendliness	.689	-.036	-.243	.206
Upgrades	.747	.038	.317	-.333
Latest apps	.722	-.082	.410	-.227
Brand loyal	.757	-.001	.013	.201
Value for money	.591	.302	.199	.050
Internet	.699	.037	.473	-.217
post purchase services	.176	-.129	.809	.201
Not trustworthy	.112	.176	-.121	.844
Not competing	.126	.791	.034	.160
No apps	-.136	.844	-.054	.230
Not durable	-.149	.449	.000	.717
lacking upgrades	.125	.880	.023	.029

a. Rotation converged in 7 iterations.

The above table shows the rotated component matrix with four components or factors. The research data is reduced into four factors and the attributes will be declared to a particular factor if the value is near to one. In the above table an attribute called video clarity has 0.686 which lies under factor 3. That will give an impression that the attribute is more favorable towards the factor. The final factors and the attributes are shown in the following table.

Table 6.3. 4Factors

Customer Value	Switching cost	Satisfaction	Customer Trust
User Friendliness	Compatibility	Video clarity	Trust worthy
Upgrades	Applications support	Audio Clarity	Durability
Applications	Upgrade Support		
Value for Money			
Brand Loyal			

The above given Table 6.3.4 shows the final 4 factors of the research data into which it got reduced. The 4 factors were customer value, switching cost, satisfaction and customer trust. The factors were named in the manner because

of the attributes which were lying under them. For the first factor customer value the attributes like user friendliness, upgrades availability, applications performance, value for money products and brand loyalty are lying under these factor which are the attributes of customer value. The attributes like compatibility to any platform, applications support from the brand, upgrading support from the brand lies under the factor 2 so on called as switching costs. The attributes of satisfaction are nothing but the video clarity and audio clarity. The final factor would be the trust worthy and durability comes under the Trust factor. The total variance of the factors can be viewed in Annexure I. The following given table was the one way Anova which is showing us the impact of the factors on the mobile brands specifically. The ANOVA has been given an interpretation that the brand Nokia has neutral customers and there is less brand loyalist for Nokia. The mean of brand loyal is 2.73 which is less than 3 which is neutral area. Then the brand also lost its trust in smartphone and the mean of the responses says it is about 2.35 which are very nearer to rejected category. The response has given some good insights about lacking in upgrades and the respondent mean lies in the area of rejection of this particular part. Apple is the brand which is having all the attributes above neutral and very nearer to accepted and it also shows that the brand is not providing any future applications. The durability of the product and user-friendliness has the highest acceptability for this particular brand. Samsung is having the overall good mobile brand track record and the customers are very much loyal to this brand because of the user-friendliness, video and audio clarity and the switching cost offered by the brand is also having a significant role over the customer loyalty towards this brand. HTC is proved to be the best brand but the responses has given a result that the brand is lacking with the customer trust and the satisfaction and switching cost offered by the brand is good. Micromax has very low durability but the customer trust over the brand is high and the satisfaction is neutral for this particular brand. LG is facing a bigger trouble in the market and the market response is rejected for all the attributes other than upgrades to the mobile. Other mobile brands like blackberry are facing

the problem of customer satisfaction and customer trust. By analysing the above tests the research has declared that the customer loyalty and customer satisfaction are positively related to each other after analysing the significance level also. The research has plotted the correlations between these factors and showed a result that customer loyalty has a positive relation between customer trust, switching cost and customer satisfaction. The correlation matrix shows that the significance level between these factors is nearly negligent but the correlation with the switching cost for customer loyalty. The correlations between these two factors were 0.12 which is a weakly positive relation between these two factors. Customer satisfaction and customer loyalty has strong relation which is 0.72 and Trust is speaking more negatively related with the loyalty with these the research has achieved its objective.

Table 6.3. 5Correlation Matrix for the means of Factors

		Customer Value	Switching Cost	Satisfaction	Customer Trust
Customer Value	Pearson Correlation	1	.012	.074	-.101
	Sig. (2-tailed)		.895	.419	.268
	Sum of Squares and Cross-products	137.233	1.237	8.183	-10.340

	Covariance	.789	.010	.067	-.085
	N	175	123	123	123
Switching Cost	Pearson Correlation	.012	1	.964**	.657**
	Sig. (2-tailed)	.895		.000	.000
	Sum of Squares and Cross-products	1.237	107.662	112.236	70.634
	Covariance	.010	.882	.920	.579
	N	123	123	123	123
Satisfaction	Pearson Correlation	.074	.964**	1	.468**
	Sig. (2-tailed)	.419	.000		.000
	Sum of Squares and Cross-products	8.183	112.236	125.964	54.420
	Covariance	.067	.920	1.032	.446
	N	123	123	123	123
Customer Trust	Pearson Correlation	-.101	.657**	.468**	1
	Sig. (2-tailed)	.268	.000	.000	
	Sum of Squares and Cross-products	-10.340	70.634	54.420	107.492
	Covariance	-.085	.579	.446	.881
	N	123	123	123	123

The above table gives the correlation between various factors which were generated after the factor analysis. The particular table gives an interpretation that the switching cost and the customer value which is very much inter-related to customer loyalty has a positive relation with 0.12 which is more than 0 but less than 0.5. This particular correlation states that there is a positive relation but not a very strong relation between these two factors. The research declares that there may be an impact of switching costs over customer loyalty or may not. This gives an uncertainty condition of the relation in one consent. The relation is weak between these two factors but whereas the significance level is 0.895 which shows a stronger impact of switching cost on customer loyalty.

7 RECOMMENDATIONS AND CONCLUSIONS

7.1 Conclusion:

7.1.1 Mobile Service Provider & Mobile Number Portability

Information technology has brought tremendous change in the present socio-economic environment. The telecommunication services in India have increased its horizon. The craze for mobile services in India is increasing substantially. The entry of private sector in the field of communication industry has intensified the competition. Therefore, the knowledge of “what the customer thinks” and “what consequently would contribute to his satisfaction” is at the requirement of the marketer. The present study aims to assess the consumer’s awareness and their attitude towards different mobile service provider’s companies operating in Delhi State. It also intends to know the consumer’s satisfaction and factor affecting their purchase decision and its future impact on socio economic changes.

The study concludes that a large number of factors of a service operator can be reduced into three main factors. So the company should ultimately focus on these three areas, which in turn results into the acquisition of a large number of customers. The study also concludes the relationship between various service operator selection factors and the current service provider of the respondents. The call rate followed by the network quality is the most important factor which influences the decision of choosing the particular service provider. It is concluded that Airtel is having the highest market share in the field of telecommunications.

It can be concluded that the MNP when launched had a great impact on the telecom industry but now people don’t find any significant difference between

operators and hence people are not availing this service as they were initially. The TRAI report also superimposes the results which are consistent with the India results for MNP. Consumers are not much influenced by the service parameters or peer group influences. Advertisements create awareness among the consumers but they evaluate the products thoroughly before going for MNP. Until customers find a significant point of difference between operators, they won't port as the hassle for porting is much more than the benefits received. So it can be concluded that MNP started with a boom but now is becoming a boomerang.

7.1.2 3G Services & Mobile Internet

The study highlighted that the respondents considered value added services, low cost, faster internet, better network, gaming, watching Live TV, Live information on Mobile, Better Customer care and less call drop as relatively important factors influencing the selection of a Mobile phone service Provider and 3G service. The factors which were taken into consideration were social, economic and entertainment, so for the mobile service operators to create a wide customer base through their 3G services and they should aim at providing low cost, better connectivity and better customer care services. Most of the people use 3G services for Both leisure and business purpose and then next for their personal purpose .Most of the people like to use internet service at most among any other 3G services, and then the next rank given for Content download and then for followed by Video call, Location info. Services and Mobile TV. Many consumers use Internet service almost daily, and then content download more often and then followed by Location info. Services like GPS and Maps and then Video calling, online gaming and Mobile TV. For most of the consumers “ The Speed of the data transfer “ is the most important factor to adopt 3G services, and then the next important factor to adopt 3G services is Price of the Services and then

followed by Security, Ease of Use and Usefulness and Entertainment. The satisfaction level of customers for 3G services is not dependent on the service provider. The spectrum in which the 3G services are being provided in India is the reason for satisfaction level for consumers in India. According to the consumers the changes are highly required in Price of the services and then in the Data speed followed by Accessibility and Ease of Use. Association exists between age and Video call, Location info Services and online gaming. And Association doesn't exist between Age and Mobile TV, Internet, Multimedia Messaging and content download.

Mobile internet is gradually and slowly gaining ground as all the respondents were aware of mobile internet and surfed internet on mobile though the use and frequency of surfing varied. Friends play a major role in influencing each other in using mobile internet.

Generally people who surf everyday on the internet were the people who knew about the different plans that their subscribers offered them and respondents who did know about the different plans seldom surfed internet on mobile. For majority of the people the main function of mobile internet is logging on to social networking websites followed by emailing. The main preferred channel of communication while using mobile internet is using the WASSUP application. Respondents who use emailing spend the maximum monthly on their mobile internet while the people who use Skype as preferred medium of communication spend the least on their mobile internet. Coverage was the most important factor for people when it came to mobile internet as greater coverage would mean uninterrupted service wherever they went. They were also highly satisfied with the convenience with which they could mobile internet anywhere and everywhere.

The main motivating factor to start using mobile internet in case they are not using or to intensify the usage of mobile internet will be when their family members will start using mobile internet followed by when there will be 3G

phones available in the market at more affordable rates. Also they feel that they will start using it or intensify the usage of mobile internet when the subscribers offer value for money.

People still prefer to use internet more from their PC rather than their mobile handsets. Except for visiting social networking websites for rest of the functions i.e. chatrooms, music, shopping etc people still prefer using internet on the PC compared to using internet on the mobile.

7.1.3 Switching Costs over Customer Loyalty

The research has also concluded that there is a positive relation between the switching cost and customer loyalty and the relations between customer loyalty, switching cost and customer satisfaction has a positive correlation but whereas switching cost has a weak positive correlation with customer loyalty. The customer satisfaction has a strong positive correlation with customer loyalty. The research has concluded that the customer Trust have a negative correlation with the customer loyalty.

7.2 Limitations of the Study:

The research has a time constraint involved with it and due to this the data collection was done from a fixed geographic location. Survey taken in urban region not in rural region. The respondents were majorly of same age group and the responses are a bit biased by various other factors. The research hasn't considered all the attributes of switching cost and customer loyalty. There are some response errors possible in the data collection process.

7.3 Recommendations for Implementation:

The research prescribes the following recommendations for implementation they are

From the research, it is observed that there is poor awareness about advance features provided in the mobile phone services, so the telecom players should focus on spreading the awareness about advance features provided by them. Service provider should make customers aware about the advance features which help them in increasing their market share.

The two other important factors which influence the decision of choosing the particular service provider are call rate and the network quality. So the telecom players other than Airtel should focus on these two factors, in order to become competent in the market.

Telecom Companies should provide service package by considering the usage, purpose and age of the customers. They should aware the customers about the benefits and drawbacks of the pre-paid and post-paid according to the individual customers.

As all the variables are reduced into three broad factors through the use of factor analysis, the telecom companies should focus on these three factors in order to increase their potential market share that are service factors, brand factors, and convenience factors..

The companies need to create significant differences in positioning among themselves so that people looking for specific qualities among subscribers find a reason to avail MNP and switch

As the speed of the data transfer of 3G services is the most important factor for the consumers to adopt these services, the service providers should concentrate much on the speed they are serving to their consumers.

Price is the second most important factor for adopting 3G services, and thus the charges have to be reviewed by the providers in order to satisfy the consumers and maintain them to stay connected with them in future.

As the satisfaction level is not dependent on the providers being served, the spectrum has to be maintained efficiently by the telecom ministry of India, and the service should be effective as the spectrum of 3G in India is far low when compared to that in other countries like USA and U.K etc.,

The Improvements are much expected in Price and the data speed in the 4G services if they are about to launch by their service providers, followed by the accessibility and Ease of Use, so this has to be considered while introducing the new spectrum for 4G services in India in future.

More than advertising, it is the awareness that the companies need to focus on in order to increase the reach of mobile internet.

More features should be added to applications like WASSUP, as these applications can be the catalyst through which more and more people start using mobile internet.

One of the reasons that mobile internet can be preferred by people is because of its ease of use while still on the move, therefore coverage is one aspect which the companies should focus on.

In order to offer value for money for the customers, emphasis should be laid on greater customer service and the download limit and the speed of the internet.

Surfing on mobile should be made more users friendly along with increasing the download limit and increase of speed in order to convert the people who spend majority of the time surfing on their PC rather than mobile.

There is strong relation between satisfaction and loyalty so the brands have look after the customer satisfaction to maintain the loyal customers.

The customers are also affected by the switching costs implemented by the company. So they have to offer the switching cost to maintain the loyal customers and even acquire the new customers.

Most of the brands like HTC, Micromax are lacking in their upgrades because of which they are losing the customers. They have to concentrate on this issue of upgrades and durability of the products.

7.4 Recommendations for Future Work:

The following recommendations for the future work is also provided by the research they are

- There is a scope for further studies to find out why the factors influencing port out decisions of the subscribers play such a crucial part and what can companies do to prevent port out or to attract customers to avail MNP in their benefit.
- The research was having a time constraint so the future work should b done by taking much more time to reach more respondents for finding more inputs.
- Few similar age groups were considered in this research future work has to improve their age groups so that the work would give different results and more reliable data.
- The research is based on just Delhi-NCR mostly and few responses from other places so the future work can be done in various different areas so that the preferences may differ.

8 REFERENCES

Aggarwal Vir Bala and Professor, Kumar Anil, A study of Mobile Usage Behavior of Students of Himachal Pradesh University

Bhatt, a study of Mobile phone Usage among the Post Graduate Students, 2008

Debnath, Roma Mitra, Benchmarking Telecommunication Service in India, 2008

Liu, C.M., The effects of Promotional Activities on Brand Decision in the Cellular Telephone Industry, *The Journal of Product and Brand Management*, 11(1), 2002, 42-51

Riquelme, H., Do Consumers know what they Want? *Journal of Consumer Marketing*, 18(5), 2001, 437-448

Fernandez, Fronnie, Understanding Dynamics in an Evolving Industry: Case of Mobile Value Added Services in India, 2007

Fernandez, Fronnie, Understanding Dynamics in an Evolving Industry: Case of Mobile Value Added Services in India, 2007

Australian Competition and consumer commission (1999), "Discussion Paper: Mobile Number Portability".

Ganguli S. (2008), "Underpinnings of Customer satisfaction in Indian Cellular Services: Service Quality, Service Features, Demographics and cellular Usage Variables", *The Icfai University Journal of Services Marketing*, Vol. VI, No. 3, 2008.

Iqbal T. (2009), "Mobile Number Portability in south Asia", LIRNE Asia.

Khattar V. (2006), "Qos and customer satisfaction: A Study", *IMRB International*, Volume 3, Issue 2.

Krishnan V. (2011), "Mobile Number Portability: Riding the wave", Tech Mahindra White Paper.

Ling Hu Anne Wan, San Hwang Ing (2006), "Measuring the Effects of Consumer Switching Costs on Switching Intention in Taiwan Mobile Telecommunication Services", The Journal of American Academy of Business, Cambridge, Vol. 9, Num . 1, March 2006\

Nielsen (2009), "Mobile Number Portability More Attractive To India's Postpaid Users and High Spenders", Indiaprwire, Mumbai.

Ojha S. (2009), "Consumer Awareness of VAS of Telecom Sector of India: A Study of Vadodara District of Gujarat", the Icfai University Journal of Infrastructure, Vol. VII, No. 1, 2009

PIN-FENN CHOU and CHIN-SHAN LU (2009), "Assessing Service Quality, Switching Costs and Customer Loyalty in Home-Delivery Services in Taiwan", Transport Reviews, Vol. 29, No. 6, 741–758, November 2009

Rana N. (2011), "The Big Switch – Hitch", DNA, Ahmedabad, Pg 2.

Systor (2007), "Number Portability White Paper".

Tomar V. (2011), "Mobile number portability in India".

TRAI Report (2011), "Highlights of telecom subscription data as on 31st July 2011", Press Release, No. 47/2011.

Vanniarajan T., Gurunathan P. (2009), "Service Quality and Customer Loyalty in Cellular Service Market: An Application of 'Sem'", Journal of Marketing & Communication September - December 2009 Vol. 5 Issue 2

Zillur R. (2006), "Superior Service Quality in Indian Cellular Telecommunication Industry: A Source of Sustainable Competitive Advantage in an Emerging Economy", Services Marketing Quarterly, Vol. 27(4).

Manas Bhattacharya, IES(Deputy Director General (Finance), Department of Tele communications. Ministry of Communications IT, Government of India): "Telecom sector in India: Vision 2020", April2010, Vol. 3 Issue 2, p34-39, 6p

Kushan Mitra (July 2010) "A brief Study on 3G, What's Next?", Interdisciplinary Journal of Contemporary Research in Business; July2010, Vol.2 Issue 4, p20-29, 10p

Christo Jacob (June 2010) "3G: will it Revamp the Face of India: An Empirical Study", Journal of Business Strategies; Vol.12 Issue 4, p69-75, 7p

Sanaa, Arakstore Enterprise (April 2010) "3G in India: Operator launch Strategies", Journal of Contemporary Research in Business; April2010, Vol.3 Issue 2, p112-130, 19p

Alankar, K.R. Balasubramanyam (Dec 2010)"How Long for 3G", Article, Times of India, 19 Dec 2010, p6

Norazah Mohd Suki "A Study on Subscribers intention towards 3G mobile services", International Journal of Mobile Services; Jan 2011, Vol.1, p130-148, p19

Min Kuyongkim “A Brief Study on the Critical Success Factors for Accelerating the Diffusion of 3G Video Calls”, Journal of Contemporary Research in Business; April 2011, vol2, Issue 9, p240-259, p20

3G Adoption in India i.e. analyzing the successes and failures of attempts to expand the distribution of Internet and mobile services in India. (November 7, 2010) (<http://shefali1130.blogspot.com/2010/11/3g-adoption-in-india.html>)

Alain Yee-Loong Chong, Nathan Darmawan, Keng-Boon Ooi , Binsha Lin(2010), “Adoption of 3G services among Malaysian consumers: an empirical analysis”, international journal of Mobile Communications, volume 8, issue 2, February 2010, Inderscience Publishers Inderscience Publishers, Geneva, Switzerland.

Taiwan Teng, Weichen Lu, Hsi-Peng Yu, Hueiju (2009), “Exploring the mass adoption of third-generation (3G) mobile phones”, Journal : Telecommunications Policy, Volume 33 Issue 10-11, November, 2009, Pergamon Press, Inc. Tarrytown, NY, USA.

Erlanger, Leon (2006), “3G TODAY: Broadband on Every Corner (cover story).”, InfoWorld; 4/24/2006, Vol. 28 Issue 17, p38-44, 7p.

Clark, Robert (2004), “Finally, customers demand 3G” , Wireless Asia; Jul/Aug2004, Vol. 7 Issue 6, p4-4, 1p.

Ramnath, V. (2010), “3G what next?”, Business Today; 7/25/2010, Vol. 19 Issue 15, p90-92, 3p, 2 Color Photographs

Michael Bayot (2010) studied Trends in the cellular phone markets in China, Japan and USA, ACTV7 news, June 26 2010.

Euromonitor International. (2008). Mobile Phone Market in the World. London: Global Marketing Information Database.

Leung, L. and Wei, R. (2000). More than just talk on the move: Uses and gratifications of the cellular phone. *Journalism and Mass Communication Quarterly*, 77, 308- 320.

M.Sathish, K. Santhosh Kumar and K.J.Naveen, V.Jeevanantham (2011) gave A Study on Consumer Switching Behaviour in Cellular Service Provider: A Study with reference to Chennai, *Far east journal of Psychology and Business*, Volume 2 No.2 February 2011.

Mohd. Sohel Islam studied the analysis of customer loyalty in Bangladeshi Mobile phone Operator Industry, *World journal of Management*, Vol.2, No.2, September 2010 page 130-145

Lee, S. (2009). Mobile internet services from consumers perspectives. *INTL Journal of Human - computer interaction*, 390 - 413.

Ozajkasi, S. (2009). Effects of displacement– Reinforcement between traditional media, PC internet and mobile internet. *INTL journal of advertising* , 77 - 104.

Petrova, K. (2006). Mobile Gaming A reference model and critical success factors. *Emerging trends and challenges in information technology Management*, 40 - 45.

Taylor, C. A. (2008). Skimming the surface : Understanding real world mobile internet use . *Mobile Internet user eperience*, 26 - 30.

Kim, M. C. (2003). What's so different about the Mobile internet ? *Communication of the ACM*, 240 - 247.

Ono, M. A. (2008). The diffusion of mobile Internet in Japan. *The Information society*, 292 - 303.

Bilal, I. A. (2010). Determinants of customer loyalty and proposing a customer loyalty model for the banking sector of pakistan. *Institute of information technology abbotabad*, 73-90.

Breur, T. (2004). Satisfaction, Loyalty and Customer Profitability. London: Loyalty World Conference.

Butscher, S. A. (1998). Using Pricing To Increase Customer Loyalty. The Journal Of Professional Pricing, 29-32.

DEVASHISH DAS GUPTA, A. S. (2009, june 13). Customer Loyalty and Approach of Service Providers: An Empirical Study of Mobile Airtime Service Industry in India. Lucknow, Uttar Pradesh, India.

Joseph Omotayo Oyeniya, J. A. (2009). SWITCHING COST AND CUSTOMERS LOYALTY IN THE MOBILE PHONE MARKET: THE NIGERIAN EXPERIENCE. Business Intelligence Journal, 111-122.

Koskela, H. (2002). Customer Satisfaction and Loyalty in After Sales Service: Modes of Care in Telecommunications Systems Delivery. Finland: HUT Industrial Management and Work and Organizational Psychology.

M.Sathish, K. K. (2011). A Study on Consumer Switching Behaviour in Cellular Service Provider: A Study with reference to Chennai. Far East Journal of Psychology and Business, 71-82.

Malhotra, N. K. (2008). Marketing Research . New Delhi: PHI Learning Private Limited .

MANOJ EDWARD, B. P. (2010, june 13). The Impact of Switching Costs Upon the Service Quality–Perceived Value–Customer Satisfaction–Service Loyalty Chain: A Study in the Context of Cellular Services in India. Southern Mississippi, Hattiesburg, Mississippi.

Moon-Koo Kima, M.-C. P.-H. (2004). The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services. South Korea School of Business Review, 145-159.

Pingjun Jiang, B. R. (2004). Customer intention to returnonline: price perception, attribute-level performance, and satisfaction unfolding over time. *The Emerald Research Journal*, 150-175.

Serkan Aydin, G. k. (2005). How switching costs affect subscriber loyalty in the Turkish mobile phone market: An exploratory study. *Journal of Targeting, Measurement and Analysis for Marketing*, 141-155.

Bibliography

- Kotler and Keller , Marketing Management 12th edition (12e)
- Henry Assael (2005), Consumer Behavior-A Strategic Approach-Biztantra
- Jean, Strategic Brand Management: 2nd edition
- Newspapers “The Times of India” and “Economic Times”
- CNBC TV 18 Channel
- CNNIBN Channel
- NDTV Profit Channel
- www.mtnl.net.in
- www.trai.gov.in
- www.ideacellular.com
- www.aircel.com
- www.airtel.in
- www.bsnl.co.in
- www.rcom.co.in
- www.tataindicom.com
- www.vodafone.in
- www.virginmobile.in
- www.siliconindia.com
- www.mgovworld.org
- india-telecom-industry.htm
- 600-Million-Mobile-Phone-Subscribers-in-India-54047.shtml
- Telecom-Companies-in-India.html
- mobile-number-portability-in-india-likely-by-mid-2009.html
- www.wikipedia.com
- www.ndtv.co.in
- Harvard Business Review

9 ANNEXURE

QUESTIONNAIRE: 1

1. Which kind of mobile connection are you using?

a) Prepaid

b) Post-paid

2. Which is your current Cellular Operator?

a) Vodafone

f)Tata Indico

b) Airtel

g)Virgin Mobile

c) Reliance

h)Aircel

d) BSNL

i)Idea

e) Other (specify)_____

3. Use the scale below and circle the number that corresponds best with your opinion while selecting a particular service operator.

1	2	3	4	5	6	7
Very unimportant	Unimportant	Moderately unimportant	Undecided don't know	Moderately important	Important	Very important

a) Proximity of Service Center..... 1 2 3 4 5 6 7

b) Call Rate..... 1 2 3 4 5 6 7

c) Satisfaction With Time gap between Service sought and Deliver..... 1 2 3 4 5 6 7

d) Relationship with Vendor/Sales Person..... 1 2 3 4 5 6 7

- e) Trust in Company/Brand Name... 1 2 3 4 5 6 7
- f) Accessibility to the
Customer care on phone..... 1 2 3 4 5 6 7
- g) Responsiveness Customer care. 1 2 3 4 5 6 7
- h) Network Quality..... 1 2 3 4 5 6 7
- i) Advance features in services..... 1 2 3 4 5 6 7
- j) Overall satisfaction of
Service provider..... 1 2 3 4 5 6 7
4. How long have you been using this connection?
- 0-6 months
 - 6-12 months
 - More than 1 year
5. What's your satisfaction level with the service?
- Fully satisfied
 - Satisfied
 - Neutral
 - Dissatisfied
 - Fully Dissatisfied
6. Which of the following Cellular Operators you have availed service in the past?
- Airtel
 - Vodafone
 - Idea
 - BSNL
 - Any other _____
7. Are you aware about Mobile Number Portability (MNP)?
- Yes
 - No
8. How you came to know about MNP?
- TV

- b) Newspaper
 - c) Magazine
 - d) Internet
 - e) Pamphlet
9. With which Cellular operator can you recall MNP service?
- a) Idea
 - b) Airtel
 - c) Vodafone
 - d) BSNL
 - e) Any Other(Please specify)_____

10. Mark your opinion about the statements

“There is a strong need for MNP service in Indian Telecom Market”

- a) Strongly Disagree
 - b) Disagree
 - c) Neutral
 - d) Agree
 - e) Strongly Agree
11. Have you planned to avail this service?
- a) Yes
 - b) No

12. If no, mark your preference about the possible restraining factors-

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Three months lock in period is too long					
Psychological cost(formalities, 3 hrs phone off, SIM change) is a constraining factor					

I am loyal to my current operator					
I am aware about MNP but doesn't understand the procedure					

13. If yes, what is your perception about the operator you are going to switch to?

1::Strongly Disagree 2::Disagree 3: neutral 4: Agree 5: Strongly Agree

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The operator is providing satisfactory service quality					
I like the operator's tariff plans					
The customer support provided is up to the mark					
The billing system is fair					
I am satisfied with the VAS provided					
The network coverage is the best					

14. Has any of your friends/relatives availed the MNP service?

- a) Yes
- b) No

15. If yes, what kind of feedback you got from him/her

- a) Strong positive

- b) Positive
- c) Neutral
- d) Negative
- e) Strong Negative

16. Does advertisement affect your decision to avail this service?

- a) Yes
- b) No

17. If yes, what role does advertisement play in your decision?

- a) Increases my Awareness
- b) Helps me in comparing different operators
- c) Change in perception about the Brands
- d) Any other _____

18. How much on an average do you spend monthly on your mobile phone (in terms of usage)?

- a) Less than Rs 150
- b) Rs 151-Rs 300
- c) Rs 301-Rs 500
- d) Any Other(Please specify) _____

19. On the scale of 1-5, rate the following factors on following parameters for your current operator

1::Strongly Unsatisfied 2: Unsatisfied 3: neutral 4: Satisfied 5: Fully Satisfied

Statement	Strongly disagree	disagree	Neutral	Agree	Strongly agree
I like the video video clarity of my mobile					
I like the audio clarity of my mobile					

The customer support provided is up to the mark					
The billing system is fair					
I am satisfied with the VAS provided					
The network coverage is the best					

20. If you will change your operator then to whom?

- a) Airtel
- b) Vodafone
- c) Idea
- d) Any other (please specify) _____

21. From which Age Group you belong?

- a) Less than 18 years
- b) 36 to 50 years
- c) 19 to 25 years
- d) 26 to 35 years
- e) Above 50 years

22. Education Level?

- a) Higher Secondary
- b) Professional Degree
- c) Graduate
- d) Post Graduate
- e) Others

23. Gender?

- a) Male

b) Female

24. Profession

- a) Student
- b) Service Personnel (Govt./Public Sector)
- c) Service Personnel (Private Sector)
- d) Self Employed Professional
- e) Business Person
- f) Retired Person
- g) Other (Please specify)_____

25. To which income group you belong? (Monthly Income)

- a) Below 8000
- b) 15000 to 25000
- c) 8000 to 15000
- d) Above 25000

NAME:

QUESTIONNAIRE: 2

1. Are you aware of mobile internet?
 - a) Yes
 - b) No
2. How did you come to know about mobile internet?
 - a) TV Ad
 - b) Friends
 - c) Customer care
 - d) Somewhere else (Specify) _____
3. Do you know about the different plans offered by your provider?
 - a) Yes
 - b) No
4. How often do you use the internet on your mobile phone?
 - a) Everyday
 - b) More than once a week
 - c) Once a month
 - d) Less than once a month
5. Q5) which of the following do you prefer doing while surfing on mobile?
 - a) Chat rooms
 - b) Blogs
 - c) Music (eg I Tunes)
 - d) News
 - e) Instant messenger (MSN, Yahoo)
 - f) Gaming
 - g) File sharing
 - h) Internet TV
 - i) Social Networking
 - j) Web Browsing
 - k) Shopping
 - l) Email
 - m) Other (Specify)

6. What is the main way of communicating with others using mobile internet?

- a) Email
- b) Voice over IP (eg Skype)
- c) Chat Rooms
- d) Applications like Wassup

7. What are your average monthly expenses on internet?

- a) Rs 100
- b) Rs 150
- c) Rs 300
- d) > Rs 500

8. How important were each of the following factors when choosing the mobile phone?

Very Important Neutral Not very Important Not at all Important

- a) Cost of rental
- b) Network Provider
- c) Line Quality
- d) Coverage/reception
- e) Customer Service

9. How satisfied are you with the mobile internet on following parameters?

Very Good Good Neutral Bad Very Bad

- a) Speed
- b) Service Provider
- c) Handset Support
- d) Convenience
- e) Instant connectivity

10. When will you use/intensify the use of mobile internet?

- a) I will use mobile internet if the service is widely used by people in my community
- b) I will adopt mobile internet if my supervisors / seniors use it
- c) I will adopt mobile internet if my family members/ relatives use it
- d) When there are 3G phones available at affordable rate

11. When will you use mobile internet?

- a) The costs of using mobile internet are reasonable
- b) Mobile internet offers value for me

12. How often do you use the internet on your PC?

- a) Everyday
- b) More than once a week
- c) Once a month
- d) Less than once a month

13. Which of the following do you prefer doing while surfing on PC?

- a) Chat rooms
- b) Blogs
- c) Music (eg I Tunes)
- d) News

14. Use the scale below and circle the number that corresponds the factors the influence in selection of 3g Services

1	2	3	4	5
Highly Rejected	Reject	Moderate	Accept	Highly Accepted

use 3G services for Value Added Services	1	2	3	4	5
use of 3G services if they are Low cost	1	2	3	4	5

use of 3G services for faster Internet	1	2	3	4	5
use of 3G services for gaming	1	2	3	4	5
use of 3G services for video calling	1	2	3	4	5
not easy to use 3G services	1	2	3	4	5
use of 3G services for better network	1	2	3	4	5
use of 3G services for watching live TV	1	2	3	4	5
use of 3G services for faster audio and video downloads	1	2	3	4	5
use of 3G services for better voice clarity	1	2	3	4	5
use of 3G services for live information on Mobile	1	2	3	4	5
use of 3G services for better customer care	1	2	3	4	5
use of 3G services for less call drop	1	2	3	4	5

15. If you will change your operator then to whom?

- a) Airtel
- b) Vodafone
- c) Idea
- d) Any other (please specify) _____

16. From which Age Group you belong?

- a) Less than 18 years
- b) 36 to 50 years
- c) 19 to 25 years
- d) 26 to 35 years
- e) Above 50 years

17. Education Level?

- a) Higher Secondary
- b) Professional Degree
- c) Graduate
- d) Post Graduate
- e) Others

18. Gender?

- a) Male
- b) Female

Name:

QUESTIONNAIRE: 3

1. Which mobile handset you are using

- a) Nokia
- b) Apple
- c) Samsung
- d) HTC
- e) LG
- f) MicroMax
- g) Others_____

2. Within how many months you will change your mobile handset

- a) 3-6 months
- b) 6-12 months
- c) 1-2 years
- d) More than 2 years

3. What amount you spend on your mobile handset?

- a) Less than 10,000
- b) 10000-15000
- c) 15000-20000
- d) More than 20000

4. Use the scale below and circle the number that corresponds best with your opinion

Statement	Highly Rejected	Reject	Moderate	Accept	Highly Accepted
I like the video clarity of my mobile	1	2	3	4	5

I like the audio clarity of my mobile	1	2	3	4	5
I won't change my mobile due to its user friendliness	1	2	3	4	5
The present mobile brand gives me the latest upgrades	1	2	3	4	5
The present mobile brand gives me the latest upgrades	1	2	3	4	5
I'll get the latest apps in my mobile on time to time basis	1	2	3	4	5
I don't feel like changing my mobile brand	1	2	3	4	5
The present brand provides me devices which are value for money	1	2	3	4	5
I like the internet performance of my mobile	1	2	3	4	5
I like the post purchase facilities provided by the present mobile brand	1	2	3	4	5

5. I'm using my present mobile from
a) 3-6 months

b) 6-12 months

c) 1-2 years

d) More than 2 years

6. Have you ever changed your mobile phone brand?

a) Yes

b) No

If yes please answer the following questions If No please go to question no: 20

7. Use the scale below and circle the number that corresponds best with your opinion

Statement	Highly Rejected	Reject	Moderate	Accept	Highly Accepted
The brand is not trust worthy	1	2	3	4	5
The platform of the brand is not competing with the smart phone platforms	1	2	3	4	5
It is not providing any apps on time-to-time basis	1	2	3	4	5
It is not providing durable mobile devices	1	2	3	4	5

It is lacking with time-to-time up gradation	1	2	3	4	5
--	---	---	---	---	---

8. From which Age Group you belong?

- a) 18-20
- b) 20-25
- c) 25-30
- d) More than 30

9. Profession

- a) Business
- b) Service Personnel (Private Sector)
- c) Government
- d) Student
- e) Other (Please specify)_____

Name:

Table1. 6 Active Subscriber (Circle Wise)

All Figures in Million	Population	Reported Subscriber Base as on 31st Jan, 2012	Active Subscriber as per VLR (31st Jan, 2012)	%Active Subscribers	Active Penetration (%)
Metros					
Bombay	17.95	37.38	23.10	61.79%	128.68%
Delhi	18.2	42.08	30.75	73.08%	168.98%
Kolkata	14.43	24.65	16.41	66.56%	113.72%
A Circles					
Gujarat	56.04	51.49	40.14	77.96%	71.64%
Andhra Pradesh	83.65	66.07	50.45	76.35%	60.30%
Karnataka	58.01	54.82	40.77	74.38%	70.29%
Tamil Nadu	69.57	76.65	49.97	65.20%	71.83%
Maharashtra & Goa	89.87	69.19	54.46	78.71%	60.60%
B Circles					
Punjab	27.73	31.52	23.42	74.32%	84.47%
Rajasthan	62.03	48.01	36.76	76.57%	59.26%
MP & Chattisgarh	89.11	50.87	40.24	79.10%	45.16%
Kerala + Lakshadweep	35.02	34.33	24.52	71.44%	70.02%
Haryana	21.81	21.84	15.41	70.58%	70.67%
Uttar Pradesh - West (UPW)	69.17	52.56	37.23	70.84%	53.83%
Uttar Pradesh - East (UPE)	120.98	72.91	54.21	74.35%	44.81%
WB& AN, Sikkim	74.56	45.27	32.73	72.30%	43.90%
C Circles					
Bihar & Jharkhand	120.68	61.91	44.27	71.51%	47.40%
Orissa	40.4	25.97	17.38	66.94%	59.00%
Assam	29.26	14.01	11.21	80.05%	44.20%
North East	12.8	8.25	6.16	74.66%	60.50%
Jammu & Kashmir	11.13	6.10	5.02	82.33%	53.00%
Himachal Pradesh	6.67	7.85	5.33	67.99%	111.70%
Total for India	1,129.09	903.73	659.98	73%	75.60%

Source: TRAI report March 2012

Table1. 7 MNP Status at end of March 2012

one wise MNP Requests February 2012 (in Mn)	
Zone 1	
Service Area	No of MNP requests
Delhi	1.64
Gujarat	3.43
Himachal Pradesh	0.14
Haryana	1.64
Jammu & Kashmir	0.01
Maharashtra	2.91
Mumbai	1.30
Punjab	1.44
Rajasthan	3.25
UP East	2.03
UP West	2.04
Total Zone 1	19.83
Zone 2	
Service Area	No of MNP requests
Andhra Pradesh	3.46
Assam	0.09
Bihar	0.78
Karnataka	3.94
Kerala	1.86
Kolkotta	0.78
Madhya Pradesh	2.26
North East	0.03
Odisha	0.79
Tamil Nadu	2.23
West Bengal	1.06
Total Zone 2	17.28
Total All India	37.11

Source: TRAI report March 2012