



ANALYZING THE CURRENT PENETRATION OF 4G TECHNOLOGY IN INDIAN MARKET

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Abstract: *This study was conducted to know the Current Penetration of 4G technology in B2B and B2C segments. Research was conducted for, as Bharti Airtel had launched 4G as a pioneer. This study will give road map for the entire telecom player to understand the prospects customers & do the business better by tapping the current segment.*

Reason for selecting the topic is Globalization has given abundant opportunity in communication & information. This led to cropping of numerous companies resulting in acute competition in telecommunication. Indian & multinational companies are leading service providers in the telecom sector. 4G is a new service which Airtel has launched recently. Internet is the heart of information technology & we are in era of digitization. Currently Airtel is only company which provides 4G service, so it is monopoly of Airtel. The topic of my interest & so plot the road map ahead.

The significance of the study are to understand the market of Internet Service Provider, to understand the market of 4G, to know that how people can update them by upgrading network of 4G, to know the response of Internet users on 4G.

The objectives of the project are to identify internet users in market, to identify captured market by different companies, to identify potential customer for 4G by site mapping, to identify customer's perception.

The researcher had used descriptive research for the completion of this work by adopting convenience sampling & primary data collected by method of questionnaire.

4G seems to be a very promising generation of wireless communication that will change the people's life to wireless world. There are many striking attractive features proposed for 4G which ensures a very high data rate, global roaming etc. New ideas are being introduced by throughout the world, but new ideas introduce new challenges. Someday 4G networks may replace all existing 2.5G and 3G networks, perhaps even before a full deployment of 3G. Multiple 3G standards and springing up that would make it difficult for 3G devices to be truly global.

Key words: *4G network, penetration, Indian market, telecom service provider and competition*

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INTRODUCTION

The study was about identifying opportunities to increase 4G penetration in India by mapping customers. Airtel had launched his 4G network on 2012 and it is the only network who provided 4G network, so it is completely monopoly of Airtel 4G. It has been 3 years of 4G come in market, but still people are not much aware about 4G. So this project is about to know the response of customers on 4G Technology awareness & its customer perception. The data is collected from different Societies and Companies by meeting with chairmen of society and administrative staff of the company. The data is based on 50 societies, 15 companies and some individuals.

SIGNIFICANCE

- To understand the market of Internet Service Provider.
- To understand the market of 4G& current awareness.
- To know that how people can update them by upgrading network of 4G
- To know the response of Internet users on 4G.

SCOPE

The researcher had done research in different area of NCR where the big societies and companies are there as they are the targeted customers for 4G. The researcher visited around 150 societies and 35 companies and only 50 societies and 15 companies were entertained for this.

TELECOM INDUSTRY

The Indian telecommunications industry is one of the fastest growing in the world. Government policies and regulatory framework implemented by Telecom Regulatory Authority of India (TRAI) have provided a conducive environment for service providers. This has made the sector more competitive, while enhancing the accessibility of telecommunication services at affordable tariffs to the consumers. In the last two decades, the Indian Telecom Sector and mobile telephony in particular has caught the imagination of India by revolutionizing the way we communicate, share information; and through its staggering growth helped millions stay connected. This growth, however, has and continues to be at the cost of the Climate, powered by an unsustainable and inefficient model of energy generation and usage. Simultaneously, this growth has also come at significant and



growing loss to the state exchequer, raising fundamental questions on the future business and operation model of the Telecom sector.

Telecommunication services are globally recognized as one of the driving forces for overall economic development in a nation. They are also one of the prime support services needed for rapid growth and modernization of various sectors of the economy. The Government of India recognizes this fact and hence, has taken several major initiatives to provide a business friendly environment for companies in this sector.

SWOT Analysis of Industry	
<p>Strengths</p> <ul style="list-style-type: none"> • Huge customer potential • Second largest and fastest growing network • High FDI inflow • Huge private sector small and medium business base • Booming semiconductor design industry 	<p>Opportunities</p> <ul style="list-style-type: none"> • 3G and 4G services • MVAS for healthcare, education, banking, and entertainment • Enormous equipment export potential • Employment • Horizontal integration • Providing fiber connectivity to villages • Booming handset market • Foreign investment in form of equity or technology • Reverse innovation and generation of IPRs
<p>Weaknesses</p> <ul style="list-style-type: none"> • Late adopters of new technology • High entry barrier due to huge investment • Lack of low cost long-term financing, soft loan • Low R&D: no patents and technology standards still evolving • Slow regulatory reforms • Primarily voice market • High import and negligible export of hi-tech products • Testing and certificate labs 	<p>Threats</p> <ul style="list-style-type: none"> • Regulatory and legal policies • Political instability due to scams • Competition from foreign players • International trade agreements • Weak IPR protection • Indian tax levies and duties imposed

OBJECTIVES

- 1) To identify internet users density in the market.
- 2) To identify captured market by different companies.
- 3) To identify potential customer for 4G & penetration for the service



- 4) To identify customer's perception about 4G.
- 5) Create awareness in the customers

RESEARCH METHODOLOGY

Method of Research: Descriptive method

Type of Research: Quantitative

Data Collection tool: Questionnaire

Method of data collection

- **Primary:** Questionnaire
- **Secondary:** Books, websites, journals

Sample Procedure: Non-probability Convenience sampling

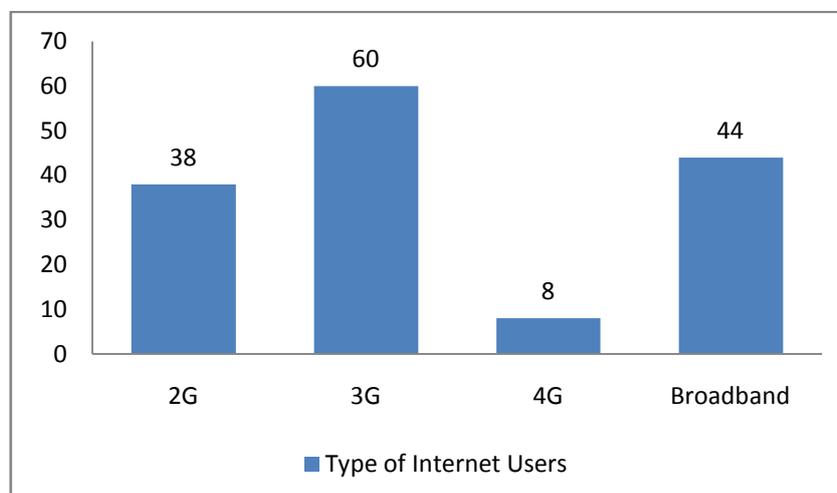
Sample size: 150 Respondents

Data Analysis, Results and Interpretation

1) Which Type of Internet do you use?

- a) 2G
- b) 3G
- c) 4G
- d) Broadband

Type of Internet	People	Percentage
2G	38	25%
3G	60	40%
4G	8	5%
Broadband	44	30%
Total	150	100%





Interpretation –

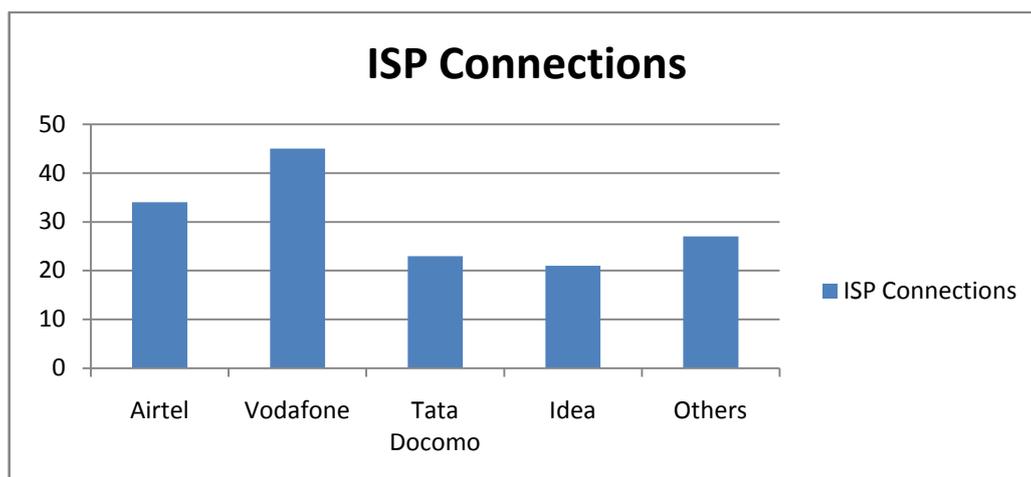
The interpretation on this question is that there is large number of people who are using 3G i.e 60 people and after 3G more people are using Broadband i.e 44 and after that 2G i.e 38 and finally 4G is using by only 8 people. Most of the people are not aware anything about 4G network, they are not aware about what is the plans of 4G, what is speed in 4G, because 4G came recently in market

So that is why company creates awareness among people of city by doing roadshows in different societies and IT parks.

2) Which Internet Service Provider connection do you use?

- a) Airtel
- b) Vodafone
- c) Tata Docomo
- d) Idea
- e) Other

ISP	People	Percentage
Airtel	34	22.66%
Vodafone	45	30%
Tata Docomo	23	15.33%
Idea	21	14%
Other	27	18%
Total	150	100%



Interpretation –

This question is asking about internet service provider which people are using. As shown data, Vodafone is using by more people that is 45, after that Airtel by 34, Tata docomo 23,



and Idea 21. Others are using by 27 people, in this there are following companies which they are written

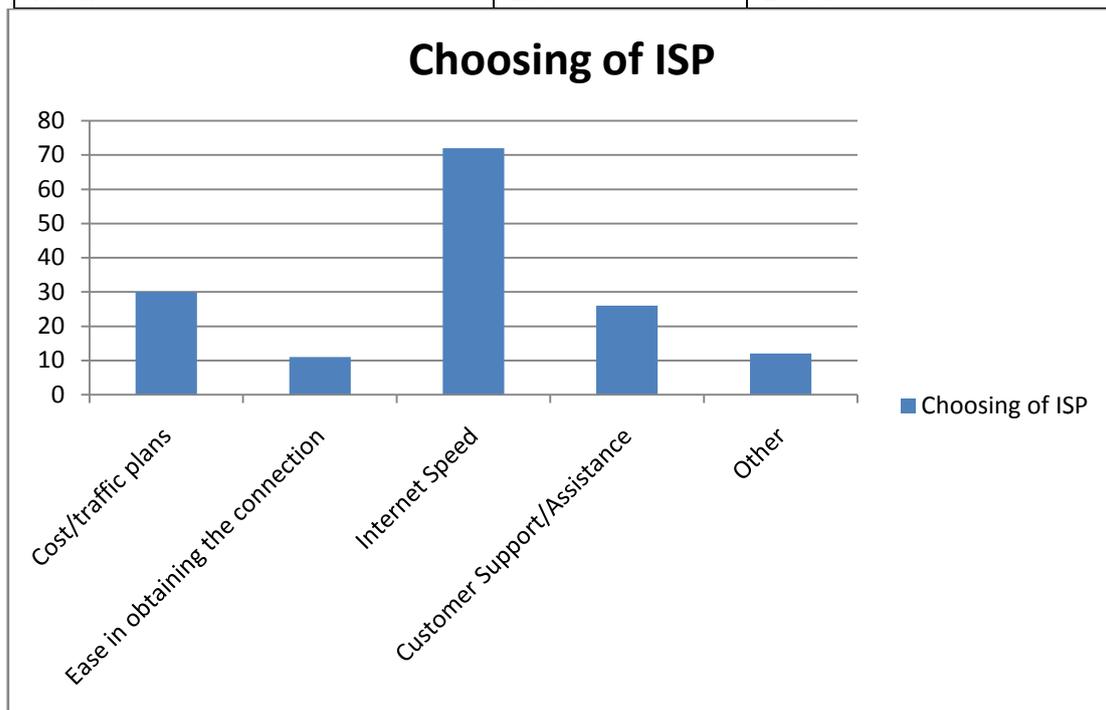
- BSNL
- Hathway
- Tikona
- Jadhav

According to this data the researcher interpreted that most of the market is captured by Vodafone which is 30%, Airtel is 22.66%, Tata docomo 15.33%, Idea 14%.

3) What made you choose your ISP?

- a) Cost/traffic plans
- b) Ease in obtaining the connection
- c) Internet Speed
- d) Customer Support/Assistance
- e) Other (Please Specify)

Criteria	People	Percentage
Cost/traffic plans	30	20%
Ease in obtaining the connection	11	7.33%
Internet Speed	72	48%
Customer Support/Assistance	26	17.33%
Other	12	8%
Total	150	100%





Interpretation –

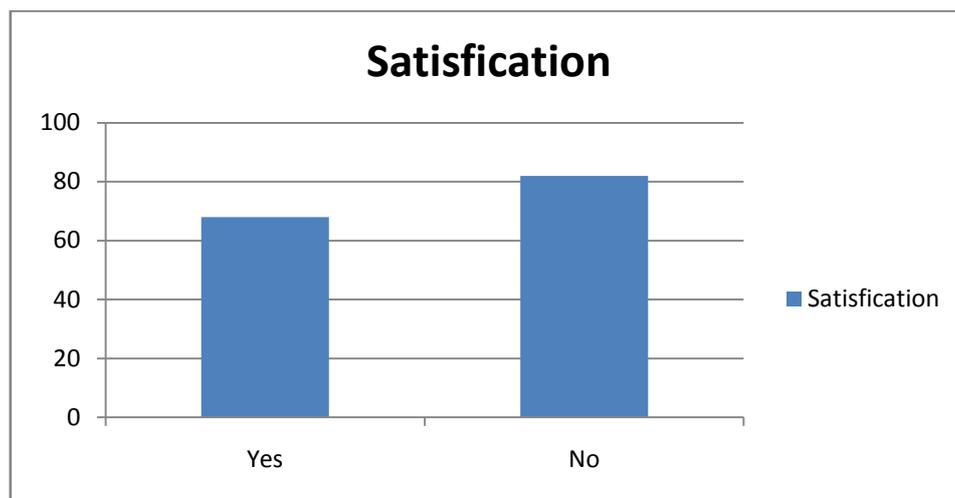
This question is asking about how people choose their ISP. So According to this data more people are choosing by the Internet speed that is 72 people, after that traffic plans that is 30 people, than customer support that is 26, ease in obtaining the connection is 11 people and other is 12.

So by this it is interpreted that people are more conscious about internet speed; they can spend more in speed. So this is advantage for Airtel 4G because their speed is too high.

4) Are you satisfied with your current ISP?

- a) Yes
- b) No, why

Satisfaction	People	Percentage
Yes	68	45.33%
No	82	54.66%
Total	150	100%



Interpretation-

According to this data more people are dissatisfied their ISP, their main reason was the internet speed, they can't access websites as they want, another reason is traffic plans according to the people cost should be low. So these people are searching for other network which satisfied them and Airtel 4G have biggest opportunity in this.

Those people who are satisfied with their ISP are because the speed and the cost.

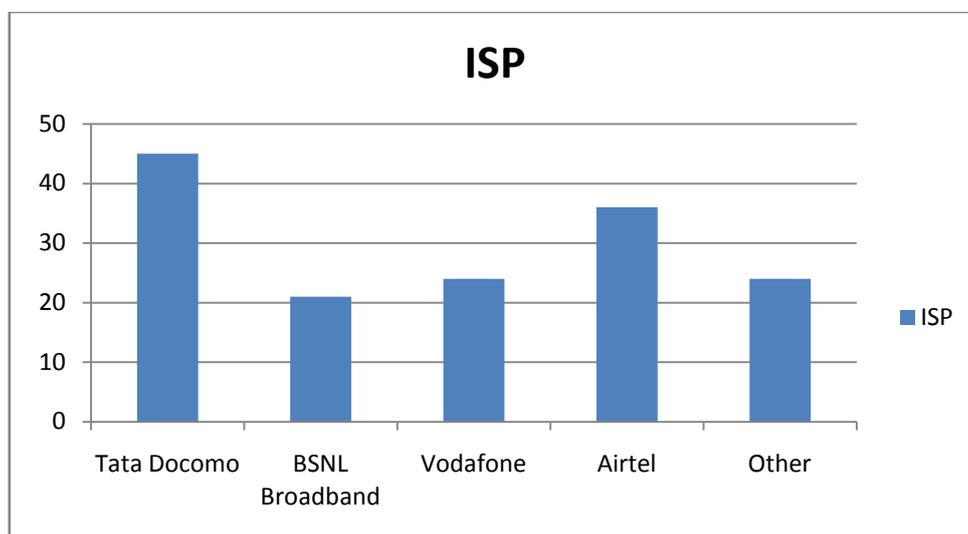
5) If given an option to choose another ISP which one would you prefer? (Objective 1)

- a) Tata Docomo



- b) BSNL Broadband
- c) Vodafone
- d) Airtel
- e) Others

	People	Percentage
Tata Docomo	45	30%
BSNL Broadband	21	13.5%
Vodafone	24	16.5%
Airtel	36	24%
Other	24	16%
Total	150	100%



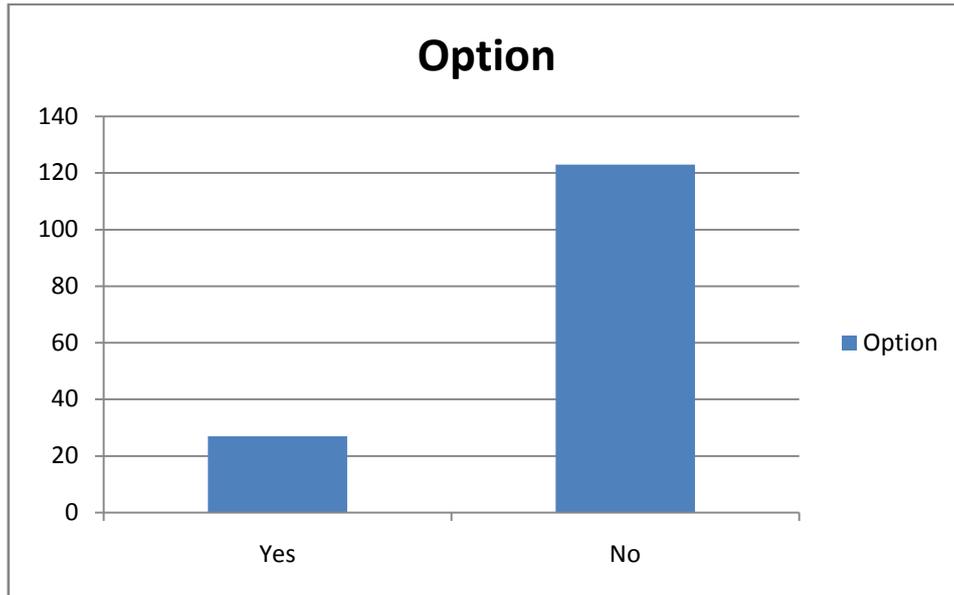
Interpretation –

According to this data, more people would like to use tatadocomo that is 45, after that Airtel that is 36, after those others 37, in the others there companies like Idea, Hathway, Tikonna, after that Vodafone 24 and BSNL Broadband that is 22.

6) Have you ever used Airtel 4G?

- a) Yes
- b) No

Option	People	Percentage
Yes	27	18%
No	123	82
Total	150	100%



Interpretation –

According to this data there are 27 people from 150 people who used 4G and there are 123 people from 150 people never used 4G. From that 123 people many of them don't even know about 4G. The researcher asked the experience of 4G to that 27 people, some people were said Good, some were said better than 3G or Broadband. So according to this data Airtel have to promote more or create more awareness among the audience.

7) If you have used 4G or know someone who has, how was your/their experience?

Rate: 1 to 5

1: completely dissatisfactory

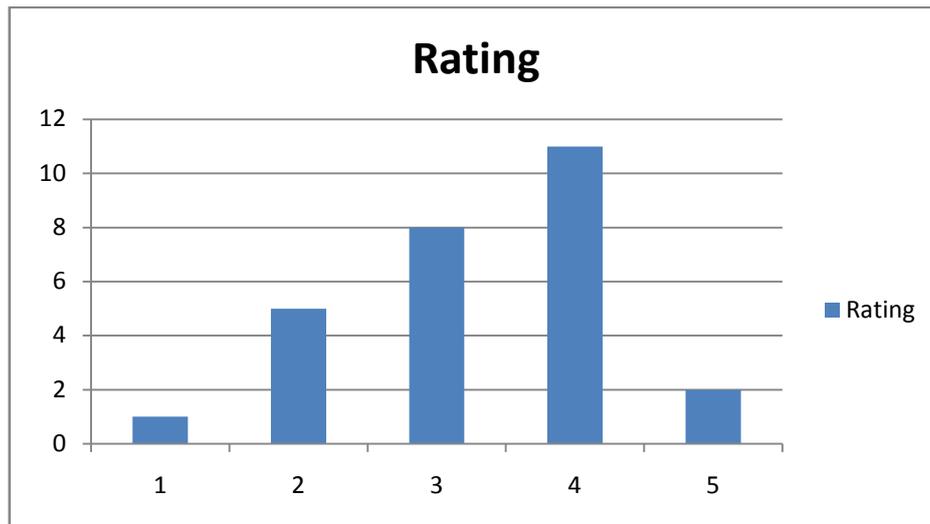
2: Dissatisfactory

3: Neutral

4: satisfactory

5: completely satisfactory

Rating	People	Percentage
1	1	3.70%
2	5	18.51%
3	8	29.62%
4	11	40.74%
5	2	7.40%
Total	27	100%



Interpretation –

This data is taken by only that 27 people who used 4G before; here is rating of their experience. As we shown in data more people are satisfied with 4G because of their high speed internet. Less people are neutral with that, 5 people are dissatisfied, 1 completely dissatisfied and 2 people are completely. So according to this data response of Airtel 4G is more than average because here people are also dissatisfied and completely dissatisfied with 4G.

8) Do you have any suggestions for increasing penetration 4G?

Interpretation –

This is open handed question, in this there are different suggestions from different people. So the researcher cannot tell actual number of option. But it can be possible to tell conclusion of this suggestions.

Conclusion – Many people said increase your coverage and some were said launch this service in phones also as soon as possible. So most of the people were saying about network of 4G, they are satisfied with the plans of 4G as they did comparison with 3G.

Driven by 3G and 4G services, it is expected that there will be huge machine-to-machine (M2M) growth in India in 2016-17, according to UST Global. There is also a lot of scope for growth of M2M services in the government's ambitious US\$ 1.1 billion Smart City program. The rapid strides in the telecom sector have been facilitated by liberal policies of the Government of India that provide easy market access for telecom equipment and a fair regulatory framework for offering telecom services at affordable prices. According to a study by GSMA, it has been expected that smartphones will account for two out of every



three mobile connections globally by 2020 and India is all set to become the fourth largest smartphone market.

CONCLUSION

There is huge opportunities for Airtel 4G to penetrate in NCR's market. around 40% people are using 3G. According to the data people are more conscious about speed and 4G is provide better speed than others. More people are using 3G comparatively 2G now & soon 2G will be history. Speed of Airtel 4G is far better than 3G and their plans are cheap, so the people who are using 4G are satisfied. Vodafone is leading company by users by capturing 30% of market.

Airtel is only company who are provide 4Gnow , so there is monopoly of Airtel 4G. Companies are supposed to taking more interest in 4G because almost all companies are using Internet, so there is huge market in B2B selling. According to the data 54.66% people are not satisfied with their current ISP, because of their speed; they are not satisfied with speed. According to the data, only 18% people are used Airtel 4G. So Airtel have to promote more in the market.

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