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A STUDY ON 3G & USB MODEM INTERNET SERVICES USERS IN CHENNAI

DR. GEETA KESAVARAJ
DIRECTOR
DEPARTMENT OF MANAGEMENT STUDIES
SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY
PARIVAKKAM, POONAMALLEE, CHENNAI – 600 056

V. PADMINI
SR. LECTURER
DEPARTMENT OF MANAGEMENT STUDIES
RAJALAKSHMI ENGINEERING COLLEGE
THANDALAM, CHENNAI

V. S. JAYARAJ
M.B.A. STUDENT
VELAMMAL COLLEGE OF MANAGEMENT AND COMPUTER STUDIES
SURAPET, AMBATTUR- REDHILLS ROAD, CHENNAI – 600 066

ABSTRACT

In recent years, the Indian telecom industry has witnessed phenomenal growth conducive business environment, favorable demographic outlook and the political stability enjoyed by the country have contributed to the growth of the industry. India achieved the distinction of having the world's lowest call rates (2–3 US cents), the fastest sale of million mobile phones (1 week), the world's cheapest mobile handset (USD 19) and the world's most affordable color phone (USD 31). Telecom in real sense means transfer of information between two or more persons situated at distant places through radio electric signals. India's public sector telecom company BSNL is the 7th largest telecom company in the world. Reliance, Vodafone, Airtel, Idea, Virgin Mobile, Tata indicom, Aircel, Uninor etc is other major operators in India. Internet service providers adopt new technologies to provide the quality services to the customers and in view of that there are more advancement in the devices and modes of internet usage. To make sure the availability of internet facility, the internet service providers brought in wireless technology to uses internet on the move. Recently launched devices like USB modem have taken a very good place in the internet world and latest technology 3G is widely used by the wireless internet users. Thus in the near future every one can expect drastic changes in the internet world, which will create high impact on the human lifestyle. This paper studies the perception, expectations and satisfaction levels of customers towards the Wireless Internet facilities.

KEYWORDS
Telecom industry, wireless technology, 3G, USB modem etc.

INTRODUCTION
3G or **3rd Generation** is a generation of standards for mobile phones and mobile telecommunications services fulfilling specifications by the International Telecommunication Union. Application services include wide-area wireless voice telephone, mobile Internet, access, video calls and mobile TV, all in a mobile environment. Compared to the older 2G and 2.5G standards, a 3G system must provide peak data rates of at least 200 kbit/s according to the IMT-2000 specification. Recent 3G releases, often denoted 3.5G and 3.75G, also provide mobile broadband access of several Mbit/s to laptop computers and smartphones.

A new generation of cellular standards has appeared approximately every tenth year since 1G systems were introduced in 1981/1982. Each generation is characterized by new frequency bands, higher data rates and non backwards compatible transmission technology. The first release of the 3GPP Long Term Evolution (LTE) standard does not completely fulfill the ITU 4G requirements called IMT-Advanced. First release LTE is not backwards compatible with 3G, but is a pre-4G or 3.9G technology, however sometimes branded "4G" by the service providers. WiMAX is another technology verging on or marketed as 4G.

USB MODEM

Netconnect High Speed 1x service offers you hi-speed wireless Internet access across India in over 24000 towns & 6 lakh villages, as well as along major highways, railway routes, airport lounges and remote locations. Access internet and e-mail on the move at a speed that's upto four times faster than dial up.

INDIAN INTERNET & BROADBAND SERVICES SNAPSHOT

Internet & Broadband Subscribers	
Total internet subscribers (including Broadband)	13.54 million
% of Growth During the Quarter	5.30%
Broadband Subscribers	6.22 million
Wireless Data Subscriber	117.82 million

According to TRAIs report, India currently has only 13.54 million Internet subscribers, which includes broadband. This is a ridiculously low number !

FACTS ABOUT INDIAN TELECOM INDUSTRY

1. The Indian Telecom sector is third largest network in the world.
2. Subscriber numbers already crossed 250 million.
3. Average growth rate of over 40% in respect of subscribers.
4. 9 million Internet and 2.5 million broadband subscribers.
5. More than a thousand cities have been provided with broadband connectivity out a total of five thousand cities.

REVIEW OF LITERATURE
Girija (1998), in her article "Socioeconomic Implications of Telecommunications Liberalization: India in the International Context" says that Telecommunications restructuring have evolved differently in Asia and Latin America. While Asian governments have moved cautiously in bringing changes to the sector, Latin American nations have implemented radical ownership and market transformations. The Indian telecommunications reform falls in between these two general

regional trends. The choice of a high component of competition, increased private participation, and no privatization of the national carrier set conditions that will trigger unique socioeconomic effects. This article identifies and highlights the likely implications of the Indian reform on key economic and social issues, such as the cost of services, cross-subsidies, network interconnection, private investments, universal services, employment, and the possible rise of an information-intensive economy. It does so by comparing and contrasting the Indian experience with dominant reform strategies elsewhere in the developing world.

Chowdary (1999) discusses how Telecom reform, or de-monopolization, in India has been bungled. Shaped by legislation dating back to the colonial era and post Second World War socialist policies, by the mid-1980s India realized that its poor telecommunications infrastructure and service needed reform. At the heart of the problem lay the monopoly by the government's Department of Telecommunications (DOT) in equipment, networks and services. The National Telecom Policy 1994 spelt out decent objectives for reform but tragically its implementation was entrusted to the DOT. This created an untenable situation in which the DOT became policymaker, licenser, regulator, operator and also arbitrator in disputes between itself and licensed competitors. He discusses the question: 'Why did India get it so wrong? and What India should do now?

Anand (1999), in his article named "India's economic policy reforms" says that India was embarked on economic reforms in July 1991, in the wake of a balance of payments crisis. In this article, an attempt is made to review two books and a set of World Bank reports concerning the progress of these reforms. Issues concerning economic policy, impact of the reforms on poverty, sectoral issues relating to agriculture, industry and infrastructure are briefly discussed. As reforms enter a more difficult phase, several challenges remain. Some of this fall under the "economic agenda'' of measures needed to maintain economic growth; others can be termed the "development agenda'' - of improving human development. Progress with regard to the former is not sufficient to produce results concerning the latter.

Bhattacharya (2000) constructs a vision of the Indian telecommunication sector for the year 2020. The paper aims at isolating agents of change based on international experiences and situates India in the development continuum. The agents of change have been broadly categorized into economic structure, competition policy and technology.

Das (2000), in her paper described the Liberalisation of the Indian telecommunications services which started in mid nineties with no change in the existing public monopoly structure, entirely controlled by Department of Telecommunications (DoT). In order to evaluate any proposed industry structure, it is essential to analyse the production technology of DoT so as to determine the rationale of liberalisation and sustainability of competition. Accordingly, the researcher estimates a frontier multi-product cost function for DoT, where the cost function has been duly modified to account for the production technology of a public monopoly. The study finds that although DoT displays high allocation inefficiency, it is still a natural monopoly with very high degree of sub additively of cost of production. This study implies that the choice of any reform policy should consider the trade-off between the loss of scale and scope economies and cost saving from the reduction in inefficiency of the incumbent monopoly in the event of competition.

Rao (2000), in her article named "Internet service providers in India", provides a broad view of the role of an Internet service provider (ISP) and the factors to be considered before entering the ISP market. Describes the Internet/ISP scene within India and discusses the configuration of local, regional and national level ISPs, and the supporting infrastructure. She also identifies the various success factors. The global Internet scenario is discussed regarding the phases of the Internet in India, i.e. pre and post commercialization. The main players are described: ERNET, NICNET, STPI, VSNL, MTNL, Satyam Infoway and Bharti-BT. The financial and legal implications are highlighted in the Indian context. Many companies entered the nascent ISP business in India due to deregulation. Building local content, foreknowledge of new Internet technologies, connecting issues, competitiveness, etc. would help in their sustainability. She concludes that though many companies entered the nascent ISP businesses in India due to deregulation, many of them are unlikely to survive in the longer term.

Vrmani (2000) estimates the contribution of telecommunication (or telecom) services to aggregate economic growth in India. Estimated contribution is distinguished between public and private sectors to highlight the impact of telecom privatization on economic growth. Knowledge of policy determinants of demand of telecom services is shown to be essential to enhance growth contribution of telecom services. Using a recent sample survey data from Karnataka State in South India, price and income determinants of demand for telecom services are estimated by capacity of telephone exchanges Estimation results offer evidence for significant negative own price elasticity and positive income elasticity of demand for telecom services.

Narinder (2004), in his article "Enhancing Developmental Opportunities by Promoting ICT Use: Vision for Rural India" talks about the foremost benefits of Information and Communication Technologies (ICTs) in developing countries that can be helpful in improving governance including public safety and eradication of illiteracy. The benefits of ICTs have not reached the masses in India due to lack of ICT infrastructure, particularly in rural areas, where two-third of the population of the country lives. Even in cities and suburban areas, use of ICTs is not popular due to lack of awareness to its use, computer illiteracy, and absence of practical applications. India is the largest country in South Asia, with a population of over one billion people and its telecom sector is presently experiencing fast growth phases. However telephony penetration in villages is less than two percent of the rural population and about 15 percent of the villages are still without any telephony service. Universal access to ICTs in rural areas has been planned and is being implemented through Public Tele Info Centers having voice data and video, as majority of villagers in India cannot afford a separate home connection. Illiteracy in rural areas is as high as 40 percent and in some tribal belts hardly about 20 percent people are literate. There are 35 million children in age group of 6–11 years, who are out of school and one out of four drops out during primary classes. Education and training, therefore, must be given the top priority if advantages of ICTs are to be harnessed. Indian economy is agriculture based and employs maximum workforce. Improvement in agriculture productivity can help in reducing rural poverty. Adoption of ICT in agriculture will play an increasingly important role in crop production and natural resource management. The other critical factor is technological challenges for universal access to ICTs to bring down the network access cost.

Nikam, Ganesh, Tamizhchelvan (2004), analyses that changing face of India in bridging the digital device. He reiterated - "India lives in villages" said the Father of the Nation, Mahatma Gandhi. With 1,000 million people and 180 million households, India is one of the biggest growing economies in the world. With the advent of the Information, Communication and Technology (ICT) revolution, India and its villages are slowly but steadily getting connected to the cities of the nation and the world beyond. Owing to the late Rajiv Gandhi, India is now a powerful knowledge economy, and though India may have been slow to start, it certainly has caught up with the West and is ahead in important respects. The Government, the corporate sector, NGOs and educational institutions have supported rural development by encouraging digital libraries, e-business, e-learning and e-governance. The aim of this paper is to touch upon and highlight some of the areas where, by using ICT, the masses have been reached in this way. A follow-up paper will outline collections of significant cultural material which, once national IT strategies are fully achieved, could form part of a digitally preserved national heritage collection.

Dey (2004), in her article talks about the discussions between the Federal Communications Commission (FCC) and communications policy makers and regulators in other countries and how they have gleaned several clusters of issues where further research would directly benefit them. Recently, there have been two notable shifts. First, as the acceptance of the competition model over the monopoly model for telecommunications markets takes deep effect in regulators all over the world, questions regarding process and procedure for regulation are becoming ever more urgent. This paper discusses current questions regarding decision making, enforcement, and understanding consumer issues that arise often in the FCC's discussions with other regulators. Second, technological change is potentially shifting market definitions. In the FCC's discussion with other regulators over the last two years, the overlap of wireline telecom, wireless telecom and cable television has become more pronounced.

Singh (2005), in his article "The role of technology in the emergence of the information society in India" describes the role that information and communication technologies are playing for Indian society to educate them formally or informally which is ultimately helping India to emerge as an information society. Though India has a huge population, the illiteracy rate is also huge in this country. The paper has taken an approach to find the historical situation and present the prevailing scenario as well as the change that are taking place with the application of ICT to the advantage of the society in different areas including daily life. India is making all out efforts to be counted among the developed nations of the world. The article also describes the considerable attention India is taking for application of technology, development of infrastructure and human resource for meeting national needs. Basically India is building an information society. Technology has helped society to cut across the traditional boundaries for getting converted into anemerging information society. The study concludes that The Indian software and services industry has significantly helped to boost the Indian economy. In IT-enabled services too, India has been clearly perceived to be the

dominant hub. The Indian software sector is being recognized as the single largest contributor to incremental market capitalization in India but the sector is still small in terms of contribution to GDP, especially when compared to other large sectors in the economy like agriculture and manufacturing. Similarly, the telecommunication sector has contributed a lot but still has a considerable way to go. The paper also enforces that comparisons of India's telecommunication statistics with those of developed and other emerging economies show that the country is still far behind its contemporaries.

Banka (2006) gives an overview of the mergers and acquisitions in the telecommunication industry. According to him Governments decision to raise the foreign investment limit to 74% is expected to spur fresh rounds of mergers and takeovers in India. He foresees a sector that represents humongous opportunity waiting to be tapped by Indian and foreign conglomerates.

Thomas (2007), in his article describes the contribution made by telecommunications in India by the state and civil society to public service, this article aims to identify the state's initial reluctance to recognize telecommunications provision as a basic need as against the robust tradition of public service aligned to the postal services and finds hope in the renewal of public service telecommunications via the Right to Information movement. The article follows the methodology of studying the history of telecommunications approach that is conversant with the political economy tradition. It uses archival sources, personal correspondence, and published information as its research material. The findings of the paper suggests that public service in telecommunication is a relatively ''new'' concept in the annals of Indian telecommunications and that a deregulated environment along with the Right to Information movement holds significant hope for making public service telecommunications a real alternative. The article provides a reflexive, critical account of public service telecommunications in India and suggests that it can be strengthened by learning gained from the continual renewal of public service ideals and action by the postal services and a people-based demand model linked to the Right to Information Movement. All studies done by the researcher suggests that the right to information movement has contributed to the re-vitalization of participatory democracy in India and to a strengthening of public service telecommunications.

Cygnus Business Consulting & Research Pvt. Ltd. (2008), in its "Quarterly Performance Analysis of Companies (April-June 2008)" has analysed the Indian telecom industry in the awake of recent global recession and its overall impact on the Indian economy. The analysis is done in the background of wake of global recession and rising inflation. Cygnus estimates, the Indian telecom industry is expected to maintain the growth trajectory in the next quarter as well. With almost 5-6m subscribers are being added every month, and the country is witnessing wild momentum in the telecom industry.

Maheshwari (July-September 2008), in her report analysed the Indian telecom industry and ascertain that Indian telecommunications has been zooming up the growth curve at an mounting pace, and India is has surpassed US to become the second largest wireless network in the world. This growing subscriber base is basically created by tapping into rural India, which is an emerging market for the industry. The estimate for the next five to ten years is that the rural market will form 40 % of the subscriber base. The study has analysed the human resource management process of the industry, and specially the latest trends of recruitment of this massively growing industry.

Anderson (2008), in his single executive interview titled "Developing a route to market strategy for mobile communications in rural India An interview with Gurdeep Singh, Operations Director, Uttar Pradesh, Hutch India" suggests that managers need to go beyond traditional approaches to serving the poor, and innovate by taking into account the unique institutional context of developing markets. His practical implication says that the experience of Hutchison Essar in India provides some important lessons for mobile network operators (MNOs) and other firms in other developing markets who are hoping to serve the rural poor: Hutchison has recognized the value of corporate and noncorporate partners. The company has proactively established relationships with individual entrepreneurs, and has provided has provided development support to other partners such as distributors. The company has recognized the value of leveraging existing local institutions, and has seen gaps in local infrastructure or missing services as potential opportunities rather than barriers to growth. The company has seen the rural market as an opportunity – not just an obligation to be served because of universal service obligations. Also this article demonstrates that MNOs can deliver availability and affordability to achieve increased individual or household penetration through business model innovation.

Mani (2008) addresses a number of issues arising from the growth of telecom services in India since the mid-1990s. It also discusses a number of spillover effects for the rest of the economy and one of the more important effects is the potential to develop a major manufacturing hub in the country for telecom equipment and for downstream industries such as semiconductor devices. The telecom industry in India could slowly become an example of the service sector acting as a fillip to the growth of the manufacturing sector. A beginning towards this has been made. The formation of a Telecom Equipment Export Forum and the announcement of the Indian Semiconductor Policy 2007 are steps in this direction. Success crucially depends on the response of the private sector to these incentives. Given the importance that a regulatory agency can play in this crafting, no effort should be lost in strengthening the powers of the TRAI. The benefits to the Indian economy from having both a strong services and manufacturing segments in the telecom sector cannot be undermined.

Narayana (2008) estimates the contribution of telecommunication (or telecom) services to aggregate economic growth in India. Estimated contribution is distinguished between public and private sectors to highlight the impact of telecom privatization on economic growth. Knowledge of policy determinants of demand of telecom services is shown to be essential to enhance growth contribution of telecom services. Using a recent sample survey data from Karnataka State in South India, price and income determinants of demand for telecom services are estimated by capacity of telephone exchanges. Estimation results offer evidence for significant negative own price elasticity and positive income elasticity of demand for telecom services.

Sharma (2009) deals with the major challenges faced by India's telecom equipment manufacturing sector, which lags behind telecom services. Only 35% of the total demand for telecom equipment in the country is met by domestic production. This is not favourable to long-term sustained growth of the telecom sector. The country is also far behind in R&D spending when compared to other leading countries. India needs to see an increase in R&D investment, industry-academia-government partnership, better quality doctoral education and incentives to entrepreneurs for start-ups in telecom equipment manufacturing. In 2006-07, 65% of the total consumption of equipment was met through imports. This trend has far-reaching implications for the economy and should not be allowed to continue for long. In a country like India which has a problem of massive unemployment, the manufacturing sector should be promoted to create more employment opportunities.

Shah (February, 2009), has analyzed Indian telecom industry and studied the sector keeping in mind three companies; namely Bharti, R.Comm and idea in the background of recent global meltdown. The study suggests that though there is no sign of slowdown in this sector, but surely a strong turmoil is going on in the industry. The study states that the sector is fairly immune from the current economic downturn & does provide a good defensive bet in medium term. With the help of newer technologies, wireless penetration is expected to increase in the near future, which is basically fuelling the growth of the sector. While the 3G / Broadband adoption would ensure long term growth momentum, the article has thoroughly investigated about the intense competitive scenario, pricing pressure, high capital intensity & substantial regulatory uncertainties currently faced by the industry. The article has also described the cause of being relatively safe of this industry.

The causes described by Shah are increasing rural coverage, rising affordability, declining handset/subscription costs, substantially low tariffs & established brand/distribution. However, the study also cautions the telecom industry that a steeper economic slowdown could start impacting the subscriber usage patterns as well as operator capital investments & thereby could substantially restrict revenue growth rates going forward.

STATEMENT OF THE PROBLEM

Wireless internet users are looking for convenient and satisfied services, so service providers are coming up with new wireless internet devices. The introduction of new wireless devices would create selection bias among customers. Here the research problem is on knowing, what is the preference of customers for their wireless internet needs. There are many Wireless devices in the market for internet connectivity, among them 3G and USB Modem Internet facilities are unique. Thus a Study on these two devices would reveal the user's i.e the customer's preference and perception on them.

OBJECTIVES

1. To understand the Perception of Customers on the Wireless Internet Facilities
2. To analyze the customer expectations on wireless internet facilities with different parameters.

3. To study the Satisfaction level of customers on the tariff.
4. To know the overall Satisfaction level of Customers on the Wireless Internet Facilities

RESEARCH DESIGN TO MEET THE OBJECTIVES

Location	Chennai
Sampling Unit	Corporates
Sampling Size	200
Sampling Method	Convenience Sampling
Instrument for Information	Structured Questionnaire

STATISTICAL TESTING FOR RESEARCH HYPOTHESIS

CHI SQUARE TEST 1

CURRENT SERVICE PROVIDER FOR WIRELESS INTERNET AND TARIFF SATISFACTION LEVEL

H0-There is no significant association between current service provider and Tariff satisfaction level

H1- There is a significant association between current service provider and Tariff satisfaction level

Degree of Freedom = (Row – 1)*(Column – 1) = (5-1) * (4-1) = 12

Level of significance = 0.05

TABLE SHOWING CURRENT SERVICE PROVIDER WITH TARIFF SATISFACTION LEVEL

Current service provider	Tariff satisfaction level					Total
	Highly Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat dissatisfied	Totally Dissatisfied	
Reliance	13	27	30	0	0	70
MTS	0	17	1	0	2	20
TATA	6	39	11	7	2	65
BSNL	1	37	5	2	0	45
Total	20	120	47	9	4	200

χ^2 Tabulated = 21.03, χ^2 Calculated = 22.70492

Inference:

From the above analysis, the calculated value is greater than the tabulated value, so reject the null hypothesis; therefore there is significant association between the current service provider and tariff satisfaction level.

CHI SQUARE TEST 2

Purpose of using wireless internet with Data limit

H0-There is no significant association between Purpose of using wireless internet with Data limit used.

H1- There is a significant association between Purpose of using wireless internet with Data limit used

Degree of Freedom = (Row – 1)*(Column – 1) = (4-1) * (3-1) = 6

Level of significance = 0.05

TABLE SHOWING PURPOSE OF USING WIRELESS INTERNET WITH DATA LIMIT USED

Purpose	Usage				Total
	2GB	4GB	5GB	Unlimited	
Business	32	11	17	24	84
Entertainment	24	9	12	18	63
Educational	20	7	12	14	53
	76	27	41	56	200

X^2 Tabulated = 12.59, χ^2 Calculated = 13.37

Inference:

From the above analysis the calculated value is greater than the tabulated value, so reject the null hypothesis; therefore there is significant association between the Purpose of using wireless internet with Data limit used.

WEIGHTED AVERAGE METHOD

TABLE SHOWING RATING WIRELESS INTERNET FEATURES ON THEIR EXPERIENCE 3G INTERNET

Parameter	Very good	Good	Average	Below Average	Very poor	Total Weighted	Weighted Average	Rank
Network	103	40	57	-	-	846	1.69	2
Speed	112	54	34	-	-	878	1.75	1
Portability	27	46	95	32	-	668	1.33	3

INFERENCE

Through weighted average method, according to respondents experience it is found that Speed is rated very good in 3G services, followed by Network and Portability.

TABLE SHOWING RATING WIRELESS INTERNET FEATURES ON THEIR EXPERIENCE USB INTERNET

Parameter	Very good	Good	Average	Below Average	Very poor	Total Weighted	Weighted Average	Rank
Network	106	51	43	-	-	863	1.72	2
Speed	87	68	45	-	-	842	1.68	3
Portability	133	41	26	-	-	907	1.81	1

INFERENCE

Through weighted average method, according to respondents experience it is found that Portability is rated very good in USB services, followed by Network and Speed.

ONE WAY ANOVA

Showing parameters that meets the expectation of the customer by the Internet Service Provider

Parameters	Highest Valued	Highly Valued	Average	Low Valued	Least Valued	Row Total
Network	173	20	7	-	-	200
Tariff	164	27	9	-	-	200
Data Transfer Limit	192	8	-	-	-	200
Customer Service	134	45	21	-	-	200
Column Total	663	100	37	0	0	800

NULL HYPOTHESIS H_0: There is no significant relationship between the expectations of the customer and the Internet Service provider.

ALTERNATIVE HYPOTHESIS H1: There is significant relationship between the expectations of the customer and the Internet Service provider.

ONE WAY ANOVA TABLE

SOURCES OF VARIANCES	SUM OF SQUARES	DEGREES OF FREEDOM	MEAN SQUARE	F-RATIO	5% TABLE VALUE
Between Columns	80734.5	(c-1)4	20183.62	3.62	F(4,15)
Within Rows	83434	(n-c)15	5562.27		3.0556
TOTAL	164168.5	20			

Calculated Value = 3.62, Table Value = 3.0556

Since the Calculated Value is greater than Table Value, we reject Null Hypothesis at 5% significant level. Hence there is a significant relationship between the expectations of the customer and the Internet Service Provider.

FINDINGS

1. 65% of the respondents use USB Modem and only 35% use 3G internet services.
2. 43% of respondents rank their service provider with rank 1, 21% of respondent's rank 2 to their service provider, 19% of respondent's rank 4 to their service provider and 17% of respondents rank 2 to their service provider.
3. According to respondents experience it is found that Speed is rated very good in 3G services, followed by Network and Portability.
4. According to respondents experience it is found that Portability is rated very good in USB services, followed by Network and Speed.
5. 67% of the respondents say that Customer service should be the highest valued one in any service provider, 22.5% respondents say it should be high valued and 10.5% respondents say it should be average.
6. 38% of respondents use 2GB transfer limit, 13.5 % of respondents use 4GB transfer limit, 20.5% of respondents use 5GB transfer limit and 28% respondents use unlimited transfer plan.
7. 57.5% of respondents say that 3G wireless internet is affordable to them and 42.5% of respondents say USB Modem internet is affordable to them.
8. 84% of the respondents are not using other wireless connectivity solutions and 16% of respondents use other wireless connectivity solutions.
9. 45% of respondents say that CDMA modem is constraint to them, 33.5% respondents say non affordability is the constraint and 21.5% say that dual internet and mobile is a constraint.
10. Wireless Internet users suggest that Data transfer limit should be standard one.
11. Network is fluctuating, hence updating of technology is mandatory.

RECOMMENDATIONS

1) It has been found that the overall satisfaction of the customers on their service provider is low, thus Service provider should know the pulse of the customers so that Service provider can increase the overall quality of the service.
2) Portability of both 3G and USB Modem Internet can be increased.
3) Internet users should get the wireless devices in an affordable price so the service provider should sell the device at a nominal rate. Through this more broadband users and Wi-fi modem users will shift or change to Wireless internet connections.
4) Internet service providers can monitor the network quality now and then, more value added services can be bonded with service.

CONCLUSION

Technology has invaded all industries and its use in field of communication system is tremendous. Adoption of new technologies makes communication easier and common man is highly benefited by this. Among them 3G and USB modem plays a vital role and this study has revealed many things about them. The customer expectation was known by this study and their experience is shared. The future is completely depending on faster communication systems and adoption of new technologies would be the only option for mankind. Telecom industry is taking a new avatar; TRAI is licensing and regulating the industry. With the support any individual who likes to connect to the world will surely have a solution.

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