1.1 INTRODUCTION

This Study pertains to “Customer Perception towards BSNL Telecom Services - A Study with Special Reference to Madurai district”. Communication is the conveying of any meaningful message from one person to another. Successful communication is defined as “the transfer of information and understanding from one person to another person. It is a way of reaching others with facts, ideas, thoughts and values”
Communication is the sum of all things one person does when he wants to create an understanding in the mind of another. It involves systematic and continuous process of telling, listening and understanding. Communication serves as a major role in our day to day life.¹

In the present day, the information technology has been successful in building a super highway for communications to be shared between people from anywhere to anywhere. Communication offers, tremendous opportunities for generating efficiency and accelerating the rate of productivity. The basic infrastructure over which information flows is ubiquitous, reliable, of high quality and secure, One of the richest resources today, information and knowledge, can be made available to the largest number of people, most economically through the telecommunication network.

The term “telecommunication” is a combination of two words. “Tele” which means from a distance and “Communication” meaning exchange of information or message. Thus, telecommunication is a mode or the channel of communication from a far away distance. The telecommunication sector had a slow and uneasy start in India. As soon as telephone services came into practice people started using it extensively.²

In the field of telecommunication the evolution of telephone had first revolutionized the world. Telephonic communications began in India in 1882, with 50 telephone connections initially. The facility was then extended gradually to all parts of the country. To provide more tele communication facilities, the Indian Telephone Industries Corporation was established in Bangalore in 1948. In 1960 the first Subscriber

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Trunk Dialling facility was made available between Kanpur and Lucknow, in 1984, the DOT (Department of Telecommunication) was born delinking it from the postal department. Prior to liberalization i.e. before 1991, the provision of telecom services in India solely was vested with the state. The Central Government ran the telecommunication services through the Department of Telecommunication (DOT). But after liberalization, DOT had been trifurcated into three divisions’ viz., Bharath Sanchar Nigam Limited (BSNL), Mahanagar Telecom Nigam Limited (MTNL) and Videsh Sanchar Nigam Limited (VSNL).³

After the establishment of Bharath Sanchar Nigam Limited (BSNL) which had extended telecommunications services to the major part of India, telephone services gained momentum. Now it is the seventh largest telecom company in the world. In 1997, the Telecom Regulatory Authority of India (TRAI) was setup.

Telecommunication is one of the fast growing fields in the world. India is the fourth largest communications marketing segment in Asia. Indian telecommunication industry in 2009 with about 465 million crores connections was the third largest telecommunication network in the world and the second largest in terms of number of wireless connections. In recent years telecommunication activities gained momentum in India. This sector is moving very fast. Its contribution to Gross Domestic Product of India was approximately 2.1 per cent in 2009 and in developed countries it was 2.8 per cent. Since this is a vast field covering masses of people all over the world and in India, the growth potential for this sector is very bright.⁴

BSNL is playing a major role in the telecommunication expansion of the country. It had ushered in quality telecom network in the country and now is focusing on improving, expanding and introducing new telecom services in the rural areas. The total telephone connections as on 30.04.2013 were 897 millions, out of which 119.14 million connections were provided by BSNL alone. The total broadband connections as on 31.3.2013 were 15.05 million, out of which 9.93 million were provided by BSNL solely.  

1.2 IMPORTANCE OF THE STUDY

The telecommunications services are of two kinds. They are land line telephone facilities and the mobile phone facilities. India’s mobile phone market is the fastest growing one in the world. Both private sector companies and the Government owned BSNL are in the fray. In the wireless segment, sixteen million subscribers were added by March 2009. The tele density was four per cent till 2001. The overall tele-density had increased to 3.7 per cent. Today almost every village has the access to telephone with STD/ISD facility. Mobile phones are also in use in smaller cities and villages in addition to its wide spread usage in towns and cities. Better communications connectivity has reduced the cost of travelling and helped the common people and businessmen in expanding their business saving their precious time. Every district head quarters were connected with tele communications facilities besides bringing in the gadgets like computers from the information technology. This had brought in widespread computer literacy to the people.

Internet subscribers are increasing rapidly. Broadband connections are available in villages where basic telephone connections are provided. By November 2007

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5 Available at: www.bsnlteleservices.com.
Government of India had connected 66,822 revenue villages with Village Public Telephones (VPT) in the country under Bharath Nirman Programme.\textsuperscript{6}

In this competitive environment communication plays a vital role for the development of the private business and also for better governance of the country by the Government. BSNL being a public sector company has to compete with various private sector players like Aircel, Airtel, Vodafone, Docomo, Uninor, Idea, Reliance, Tata Indicom etc. They are tied up with their stringent rules and regulations guided by TRAI. To know about the customer’s requirements and their likes and dislikes is sine-quo non for BSNL. It is also necessary to know whether the customer receives the service on time and is it fulfilling their needs to the desired levels. This would help to plan for providing better facilities and improve customer relation management activities which assure the customer the fullest satisfaction.

Focused on their efforts, BSNL had helped the Indian Government to bridge the gap between the rural and the urban areas with regard to the Information and Communication Technology sector. Apart from that, being a public sector company, the complete share capital of BSNL is held by the Government. Committed towards providing high quality telecommunication services at an affordable price to every citizen residing in every nook and corner of the country, BSNL had played varied roles in the achievement of the salient programmes mentioned in the 1999’s telecom policy. Some of its roles and efforts are as follows:

Access to telecommunication facilities is one of the major factors for the achievement of the goals set for the social and economic development of the country.

\textsuperscript{6} Archana G.Gulati, Every Village to be Connected by Telephone Bridging the Digital Divide”, Kurukshetra, October, 2006, p.9.
BSNL had provided easy and affordable access to telecommunication to the Indian citizens. This Indian telecommunication company had encouraged the growth of telecommunication facilities in most of the remotest, hilly as well as tribal areas in the republic India. BSNL had transformed the Indian telecommunications sector, including both rural and urban regions, to a competitive environment by offering equal opportunities to the different private sector players in this industry.\(^7\)

BSNL is the world’s seventh largest telecommunication company formed in the year 2000; its profit margins are comparable to and in some cases, better than India’s any of the public sector undertakings. BSNL serves its customers with its wide bouquet of telecom services. BSNL provides a wide range of telecom services such as, wireless, Code Division Multiple Access (CDMA), mobile, Global System for Mobile Communication (GSM), internet, broadband, carrier services, voice, internet protocol and intelligent network services. The company had taken the lead in providing seamless connectivity across all networks for the benefit of its customers. Also, by providing non-discriminatory inter-connection it enables subscribers of other service providers to communicate with each other. This has resulted in elective competition resulting in a high growth and quality services at lower tariffs.

BSNL is a major service provider making focused efforts and planned initiatives to bridge the rural – urban digital divide ICT sector. In fact there is no telecom operator in the country to beat its reach with its wide network providing services to every nook and corner of the country and operates across India. It is accessible even in inaccessible areas like Siachen glacier and north – eastern region of the country.\(^8\)

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\(^7\) Kuldeep Goyal, CMD, BSNL, “Focus on Rural Revenues”, Frontline, pp.110-116.

\(^8\) Ibid
In providing basic services, BSNL has gone miles ahead of its rivals, with 35.1 million basic phone subscribers i.e. 85 per cent share of the subscriber base and 92 per cent share in revenue terms. At present there are 0.6 million data one broad band customers. The company has vast experience in planning, installation, network integration and maintenance of switching and transmission networks and also has a world class (International Organisation for Standardisation) ISO 9000 certified Telecom Training Institute.\(^9\)

BSNL has nationwide licenses for providing basic, long distance, mobile and internet services. BSNL is the country’s number one internet service provider. The company is organized into 24 territorial circles and 19 non-territorial circles covering the entire country. The territorial circles are further divided into Secondary Switching Areas (SSA) which is the basic management units of the company. The non-territorial circles such as telecom stores, quality assurance, training projects and maintenance provide assistance for its specialized activities.

The objectives set out by the government were to accelerate business development in line with recent global trends, to introduce a commercial culture with the focus on service to customers to build infrastructure and accelerate network expansion through increased internal resources and tapping of capital markets, and to meet to universal service obligations. The telecom giant has met all its main objectives within six years of its formation. The company’s turn over coverage reach and comprehensive range of services had acquired for it a wide consumer base. Aiming to provide high customer

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satisfaction, BSNL has been paying greater attention to this area by opening more and more customer service centres.

In its ongoing endeavour to expand modes of bill payment options, several new arrangements are on the anvil. They are, recharge of excel prepaid cards through the Automatic Teller Machines of Punjab National Bank, SBI, expansion of bill payment through easy bill retail outlets, now available in Bangalore and Gurgaon of Noida in the national capital region to other and payment through internet and through credit cards or debit cards. BSNL provides many services to the customers.  

1.3 STATEMENT OF THE PROBLEM

This study intends to analyse the attitude of the subscribers to BSNL and its services. BSNL is an Indian state-owned company. It provides largest fixed telephony and forth largest mobile telephony services to the customers or subscribers. In addition to above two services they are also providing excellent data card, Wi-Fi, broadband services to the customers. Though they are providing this fixed telephony, mobile and broadband services to the subscribers, it has some problems also. In spite of the serious efforts taken by the BSNL in co-ordination with Telecom Regulatory Authority of India to introduce rationalised tariff plans and schemes among the customers, the subscribers have not adequately availed of the service schemes formulated for them. The main reason for this is their ignorance of the benefits to be accrued from the schemes. The subscribers of BSNL face several problems. They are tired of short term promotional offers where the tariff rates change every three months. Another common problem of subscribers is

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that the company appear to be offering the cheapest rates to its subscribers, but the roaming tariffs are raised surreptitiously.

Poor signal strength for telephone connections are experienced by subscribers inside some hotels, hospitals and other buildings in the city and towns. The networks generally do not cover underground subways and tunnels. The subscribers are annoyed over unsolicited telemarketing calls made to them by telephone firms, banks and a host of other companies using telemarketing through Short Message Service as a strategy for business promotion.

The subscribers of post paid schemes of Tamil Nadu circle cannot maintain the same number if they come to Chennai from other states. Billing is yet another problem faced by post paid subscribers. The BSNL does not respond and solve the billing quarries within the stipulated period. The technologies are either faulty or the employees do not know how to manage them.

Sometimes the computer system is faulty, sometimes the employees are not found at the counters and at other times there is a big crowd. The subscribers are in general inconvenienced while paying for their bills and in getting replacement of the instruments. The complaints are lodged but the redressal processes take more time. There is a big gap between the services promised and services offered.

The information relating to new services, such as fax services, e-mailing, internet and intranet are not known to all the prospective and existing users. Lack of existence of required tariff scheme is yet another problem faced by the subscribers as tariff schemes are most often introduced as promotional offers and they are not made available to customers continuously for a longer period of time. This has brought a situation of non-renewal of existing tariff schemes. Sometimes various tariff
schemes are offered at the same time. This confuses the subscribers in selecting a particular type of tariff scheme.

The excess tariff paid by subscribers is not refunded promptly. The order of the TRAI directs the telecommunication service companies to impulse the excess tariff collected from subscribers. But the telecommunication service providers have failed to reckon with it.

BSNL have been myopic with regard to technological aspects. The users of GSM technology get many value added services when compared to the users of CDMA technology. Usage of technology is another problem for the subscribers. Prohibitive regulatory costs such as security deposits, interconnect access charges, service tax and the like are highest in BSNL as compared to those of other private service providers.

The awareness of the subscribers towards various tariff schemes introduced by BSNL is very low in India as compared to that of other countries and other service providers.

The above aspects are to be thoroughly reviewed. Therefore a study on the functioning of BSNL in Madurai District had been undertaken. The data collected are to be critically analysed so as to establish a useful strategy for the effective implementation of BSNL plans and programmes. The present study tries to probe the opinions of the subscribers of BSNL with regard to all these problems.

1.4 REVIEW OF LITERATURE

A review of literature is the mirror of the earlier studies, which enables the researcher to identify the scope for further research. Many studies on the subject of communication had been conducted in different parts of the world. However, the studies
on BSNL were comparatively fewer. The present study is concerned with the customer perception of BSNL telecom sector. An attempt is made to review the literature available on that aspect so that a greater insight into the subject can be obtained. The review had facilitated the pursuing of this research work in the area which has not been hitherto adequately dealt with in India.

Mamilla Rajasekhar et.al\(^\text{11}\) in their study had appointed out that right from its inception in 1996 till today, the Indian cellular services market had been exposed to several mega trends in terms of zooming number of customer’s competitors, mergers and takeovers and TRAI regulations. They had concluded that a majority of the respondents used electronic mail private branch exchange. A majority of the respondents used electronic mail for internal office communication and videotext for getting information relating to tour and travel, hotel, stock exchange, banking, market survey, city, current news and office operation.

Anil Jain\(^\text{12}\) in his research he has analysed the purpose of using telecom products with special reference to videotext, radio paging, voice mail and electronic mail offered by MTNL by interviewing 2,763 companies 828 bank branches and 83,970 senior executives in India through Delpi Technic. He has explored that 66 per cent of respondents use pages to cover about 35 km radially, 88 per cent of them get 60 calls per day out of which 20 calls from voice mail through electronic private branch exchange. The majority of the respondents use electronic mail private branch exchange. The


majority of the respondents use electronic mail for inters office communication and videotext for getting information relating to tour and travel, hotel, stock exchange, banking, market survey, city, current news and office operation.

Banumathi and Kalaivani\textsuperscript{13} had revealed that the customers face problems like poor coverage of area, poor voice clarity, difficulty in getting connectivity etc. They had suggested that the poor coverage of area and poor voice clarity could be minimised by installing more number of towers.

Suguna Lakshmi and Syam Ali\textsuperscript{14} had made a study to determine the customer satisfaction on the operating hours of the telephone and coverage under the Grameen Sanchar Sewak Scheme (GSS Scheme) introduced by BSNL. The findings revealed that the majority of the users of telephones under GSS scheme were dissatisfied with the operating hours of the telephone and their coverage in remote villages.

Chinnadurai M., and Kalpana B.,\textsuperscript{15} in their article had analysed the major driver of social changes, which shaped the possibilities and conduct of business is technology. Their recommendations for improving the cellular services were through effective advertisements, modification of advertisements, media selection, disclosing full information, analysis of sales promotion offers and customer oriented promotion. The use of single promotional tool or combination of tools was normally applied depending on the market conditions, market forces, behavioural pattern of consumers etc. However

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applying the appropriate promotional tool in a comprehensive and potential ways to suit market will have significantly influence the success of the venture.

In Rangeswara Reddy J.V.,\textsuperscript{16} in their article, has analysed that Thomas Watson was Alexander graham bell’s right-hand man who helped him create the telephone. Celluar phones are an offshoot of graham bell’s invention. These work and have to be activated with the help of an electronic chip which are provided by many service providers. The objective of the paper is to study the satisfaction level of customers, product awareness and consumer behaviour with reference to NOKIA mobile handset users. The type of sampling is convenient random sampling and Sample size is 100 for analysing the responses of customers, we have used simple averages and for the purpose of interpretation of analysed data some of the graphical representations were used.

Karabi Bandyopadhyay\textsuperscript{17} had stated that the mobile payment systems and services in operation world over. Mobile phones were equipped with contactless smart card use near field communication technology to exchange data between the mobile device and nearby smart card readers. Mobile wallets had become popular in developing countries such as Kenya and the Philippines.

Aggarwal S.S.,\textsuperscript{18} had observed that the majority of the customers were of the view that the telecom companies were competent to promote the new services of the telecom companies. A company has to revise its policies and has to make them attractive as to comply with the image of the brand ambassadors. In a country of one billion people there

\textsuperscript{17} Karabi Bandyopadhyay, “Paying Through Mobile Phones”, Electronics For You, Vol - 42, No.6, June, 2010, pp.118-124,
are millions of icons in several fields who had brought glory to the country through their achievements and their success stories could be suitable ambassadors for many brands. The researcher had pointed out that the advertising world should come out with some innovative ideas and good brand ambassadors.

Bedabal Ray¹⁹ had concluded that there should be a ‘big idea’ or a communication theme to promote a brand. Many companies have successfully manoeuvred big ideas well and strategized their communication to become the world’s most successful brands. Most of the telecom service companies in India thought that low price and extensive network would rule the game. These aspects are no doubt extremely important, but they should have a grand communication theme along with these traditional ideas to achieve distinct advantage over other companies and success.

Anabil Bhattacharya²⁰ had stated the history of the mobile phone industry which had made a slow start in India in 1995. The several private players who had entered the industry in 1995 had quit the business in the next few years due to the unfriendly telecom policies of the Indian government, high licensing fees and absence of a proper telecom regulatory body. The growth in the subscriber base of mobile phones remained sluggish initially, reaching the one million subscriber milestone in 1998. In 1999, the Government of India had announced a new telecom policy.

Kidwal Bhanvan\textsuperscript{21} had stated that modernisation had helped MTNL to meet the demand for new connections and improve post-connection services. Its diversification of services had helped to face the competition from private operators.

Kuldeep Goyal\textsuperscript{22} had stated that BSNL was looking at other revenue streams to increase the income from the rural sector by providing customised value-added services and deploying cost-effective technologies to make business in rural area more remunerative.

Vegad Bhawna\textsuperscript{23}, had pointed out that the growth story of the Indian telecommunication industry had provided the common man with an opportunity to access the essential facility in an affordable and effective manner. Indian telecom industry had been growing in a rapid phase. The investors world over were looking forward to have a pie of the ever expanding Indian telecom market with a vast untapped rural segment and to keep phase with the ever growing demand in the maturing urban segment for more data intensive services by way of 3G technology.

Dhurjati Mukherjee\textsuperscript{24} had pointed out that it is obviously imperative to gear up the development of the physical infrastructure in the country and this has rightly received top most priority even in the 2007-08 budget. It is thus expected that along with rural electrification, facilities should be created so that telecommunications could spread far and wide into the remotest villages and the backward regions. Such connectivity will

\textsuperscript{24} Dhurjati Mukherjee, “Rural telecommunication: increase in teledensity to transform villages”, Kurukshetra, Vol-57, No-12, October, 2009, pp.43-46.
have a positive impact on opening up rural markets, boost up the income levels of the people and improve their standards of living, thereby transforming the rural sector.

Correspondence\textsuperscript{25}, had stated that, BSNL was the only service provider that was taking initiatives to bridge the rural urban digital divide. BSNL served its customers with a wide bouquet of telecom services. BSNL’s biggest challenge was to compete with private operators and retain its market share without resorting to purely commercial practices in its business model. It also had to shoulder the responsibility of providing telecom facilities in rural and remote areas, which were less remunerative and affects its profitability. In order to keep its market share, maintain profitability and remain afloat, the company had to adopt innovative techniques.

Archana G. Gulati\textsuperscript{26} had analysed that India still had 66,822 villages which are uncovered by Village Public Telephones (VPTs). Under Bharat Nirman Plan the Department of Telecommunications had the responsibility of providing telecom connectivity to these villages. This rural connectivity programme is to be funded under the universal service support policy of the Government. VPTs and Rural Community Phones (RCPs) through USO funding had provided public access while private service providers were being assisted by USO fund to penetrate into the rural areas for several activities which include maintenance of existing VPTs and replacement of VPTs installed on Multi Access Radio Relay (MARR). It is hoped that these measures would lead to increase in rural teledensity and provide rural users access to information of value and transact business.

\textsuperscript{25} Correspondence “Connecting India”, Frontline, Vol – 24, January 16th, 2009, pp.113-118,

Ashok Jhunjhun and Sangamitra Ramachander had stated that India had become the fastest growing telecom market in the world; the distribution of telephones within India was highly inequitable with rural teledensity in 2004 being below 1.5 per cent as against 20.7 per cent for the urban areas. Department of Telecommunications and many private telecom operators are making significant contributions towards connecting rural India. Evolving technologies like broadband, DECT, OFDM and MIMO based technologies will improve rural connectivity even more in the years to come.

Maxwell Chanakira in his analysis although a comparatively newcomer on the internationalisation stage, China has now become a major economic and trade power and a leading source of Foreign Direct Investment (FDI) in Africa. This paper adopts a single industry approach in analysing the impact of the outward internationalisation of Chinese telecommunications enterprises in Africa. Investments in Africa have been expanding from traditional sectors such as mining and energy (resources) into manufacturing and service sectors especially telecommunications. Conducted in Kenya, Nigeria and Senegal, the study utilises focus group interviews involving 110 telecommunications practitioners. The empirical evidence suggests that China’s investment in telecommunications in Africa is warmly welcome, and is rising on a platform of perceived mutually beneficial trade arrangements and favourable pricing. Chinese investment is creating employment, facilitating access to telecommunication services and fuelling the modernisation of telecommunication infrastructure. However, there is some criticism as well. Charges abound that China is unwilling to transfer manufacturing technology to her African

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partners or doing enough to improve governance and accountability on the continent. There is room to enhance the relationship. These findings are important in informing development specialists, politicians, academics, investors engaged in or with intentions to enter Africa.

Subaharan P.,\(^{29}\) had stated that the telecom service is becoming a commodity from the consumer’s point of view. The quality of experience that the consumer had with the chosen telecom service provider is what is going to retain the consumer. India telecom service provider would need to move from customer acquisition numbers to customer lifetime value. Service providers simply cannot afford to lose high-value subscribers. This is even more important in a 3G scenario, where data is expected to help boost revenues, and to get more voice users to access data or other revenue generating applications on their phones.

Chitra S.,\(^{30}\) had stated that the method that individuals choose to communicate their message had an impact on the effectiveness of those messages. The main purpose of every communication is to obtain some results that are to secure an action by the receiver.

Chandran P.,\(^{31}\) had detailed the strategies followed by the cellular phone service providers till date. This article listed the different promotional strategies followed by service providers.

Chennappa D.,\(^{32}\) had concluded that most of the countries allow FDI after the tele-density and the per capita incomes have gone up to certain levels. When compared to


them, India lags behind on both tele-density and per capital income levels. India, first needs to strengthen domestic manufacturing units and niche market and increasing the FDI cap is not sufficient for increasing higher rural teledensity.

The same writer had again concluded\(^{33}\) that the Indian telecom service sector is becoming one of the fastest growing sectors in the world. The Government of India in 2005 had increased the limit on FDI in telecom providers from 49 per cent to 74 per cent. The higher FDI had led to the increase in urban teledensity. Linking FDI to the parameters of the reduction of tariffs, increase of teledensity, and higher FDI automatically brings telecom services into the areas not being served earlier.

Paramashivaiah P., and Aravind S.,\(^{34}\) had pointed out the successful adoption to the mobile handsets among the end users. This could be attributed to unique features like innovativeness, reachability and convenience. This showed that the market is on a growth path with more than 85,000 villages yet to come under the tele-connectivity.

Revathy R., and Padmavathy S.,\(^{35}\) had mentioned in their study is confined to preference in cellular service providers with special reference to Aircel limited and BPL cellular limited, Thiruchirappalli District, Tamilnadu, India. This study is an attempt to analyse the awareness cellular service users, problems faced by the users and examine the factors which influence the choice of cellular service provider. The researcher has undertaken a pilot study with 20 respondents. Based on the outcome of the pilot study, the present study reveals that the respondents of BPL cellular limited and Aircel limited

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face many problems and they have an idea of switch over to other service providers, Thiruchirappalli District, Tamilnadu. Aircel limited and BPL cellular limited should pay special attention to the above factors and to the product revealed by the users. If these things have been seriously considered, their business will grow up and they compete with others in the global market.

Srivastava et al.,\(^{36}\) had concluded that price plays an important role in growing or emerging market like the telecom sector. For telecom companies to survive, to be competitive or even grow, they continuously need to provide extra value added features and high quality services at competitive prices to customers so that they did not switch over to other operators.

Vijay Kumar and Ruthra Priya P.,\(^{37}\) had pointed out that the mobile phone had become an essential and important device for communication in the modern days. Mobile phone communication is a part of telecommunications system which comes in the form of oral communication. Mobile devices are growing in popularity with reduction in prices and improved functionality. Consumers prefer the flexibility and versatility of mobile phone devices. The level of satisfaction derived by the users can further be improved by way of increasing the number of value added services.

Revathi\(^{38}\) found that the product mix focuses on different tariff schemes introduced by the cellular communication service companies. This confuses the subscribers in selecting a particular type of tariff scheme offered by these companies. The


promotion measures helps the cellular communication service companies in informing, sensing and persuading the users. In this context, different constituents of promotion such as advertising, publicity, sales promotion, personal selling, word of mouth promotion and telemarketing are useful. But these companies have not been assigning due weightage to the promotional measures. The contribution of cellular communication service companies to economic developments is highly significant and there is need to integrate with the main stream of marketing system. TRAI is taking steps from time to time for the regulation of cellular communication service companies. Cellular communication service in India is not only a business like service, but also a social oriented service looked at from various angles. Development in cellular communication business can be attributed to a better healthy rural India in future.

Ganesan S., had stated that the FDI is a catalysing factor for growth especially in the telecommunication sector. The present government is interested to bring a new model of reform, combining the largest use of external resources. The telecom services had now become a basic human need. To seek, receive and impart information had been treated as a basic human right. The Government of India recently increased the limit of FDI in telecom providers from 49 percent to 74 percent. The higher FDI has led to the increases of urban teledensity. FDI equity has led to the reduction of tariff significantly in mobile and long distance service.

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Hema Malini M., and Samuel S.,\textsuperscript{40} had found that the SERVQUAL is a valid instrument to measure service quality in cellular mobile telephone operators in Trichirapalli city.

Rajeswari K., et.\textsuperscript{al}\textsuperscript{41} had stated that in Sivakasi, the main users of mobile phones were businessmen. Mobile phones helped them to carry out their business effectively and efficiently. Their business could not be carried on will not be completed without communications through mobile phones. The main focus of this study was to understand the opinion of the mobile phone users with regard to the services of mobile phone service providers. They had concluded that to excel and flourish in the fast changing global scenario, satisfying the subscribers more than their expectations through beneficial services were the need of the hour for the mobile phone service providers.

Divya B.S. and Vishvanatha A.R \textsuperscript{42} had pointed out that many NGGOs and private telecommunication companies including public sector player BSNL with their farmer friendly programmes had added a new charm to the face of rural India. Lifeline India, Tata Tele Consultancy, BSNL and others were the best examples in this regard. They were experimenting new programmes with the mobile phones. Life line India in northern parts used local languages to give timely information about pest management, crop selection and the like. BSNL had also started MANDI news on mobile service.


Siya Ram Yadav\textsuperscript{43} had opined that employment potential in telecommunication sector was enormous. Telecom is such a field which can pay very well. This is one of the fastest growing fields in the world. India is the fourth largest tele-communication market in Asia. Telecommunication sector is also called lifeline of Information Technology (IT) industry.

Subramaniyan A.,\textsuperscript{44} said that the 2G grid in 2010 had 1640 Base Transceiver Stations (BTS) 327 more BTS sites would be commissioned over the next few months. The 3G network of 531 node and three towers were also being strengthened with the addition of 40 more BTS sites. Chennai Telephones had an estimated 14 lakh mobile users, including one lakh 3G subscribers, on its cell one network in addition to about one million landline connections.

Sundar S.,\textsuperscript{45} had pointed out that teething problems with new installed software in the BSNL billing system was causing inconvenience to subscribers at the Customer Care Centre (CSC) in Tallakulam, Madurai.

Dinesh Varma M.,\textsuperscript{46} had viewed that BSNL Chennai telephones had emerged as the country’s top performing telecom circle in the Rs.1,000 crores revenue category. This was accrued by Chennai telephones during 2010-11 through its enterprise business activity. Karnataka circle, which included Bangalore, topped the circles with revenue of Rs. 2,000 crores. Chennai Telephones also managed to post a net profit of Rs.50 crores in

2010-11 and was able to wipe out Rs.50 crores deficits incurred from the previous fiscal. Tamil Nadu circle was also seeking a quick turnaround in fortunes presently. The trade union and the management of BSNL Tamil Nadu circle had joined hands to raise customer satisfaction levels and lead the service provider to the top spot in the mobile telephony market.

Makam S. Balaji\(^{47}\) had pointed out that perceived quality is an important predictor to customer satisfaction, which ultimately resulted in trust, price tolerance and customer loyalty. The findings provided valuable managerial insights for managing customer satisfaction and loyalty.

Chang Ee Ling and Ernest Cyril de run\(^{48}\) had arrived at certain findings in their Survey. These findings indicate that important variables for measuring satisfaction levels included supporting services, product (handy reliable, coverage, friends and family likes) and promotional efforts of the firm; while for loyalty levels they refer to convenience, services, satisfaction and costs. The findings indicate that telecommunication service providers should look beyond price was to keep their customers satisfied and loyal.

Francis Sudhakar K. Lydia Nutan \(^{49}\) had mentioned that the factors influencing the emigration to post-paid from prepaid among the cell phone users are economy, attractive schemes, reference group influence, enhance limited usage and advertisement whereas the factors influencing the migration to post paid from prepaid are the schemes and tariff plans are the increased use of mobile connection, need for additional services,


low air time rates, reference group influence, availability of corporate connection and economy.

Vijay Kumar R., 50 found that the important factors influencing the satisfaction derived by the subscribers of Airtel network are the clarity of signals, availability of plan options call charges and the activation formalities. Majority of the respondents opined that Airtel offers plenty of value added services convenient plan options, activation formalities and moderate call charges. There is a significant association between the profile of respondents and their attitude towards the services offered by Airtel.

1.5 SCOPE OF THE STUDY

The present study is an attempt to analyse the customer perception towards BSNL in Madurai District. This Study may help the BSNL authorities to measure their performance level compared to those of other players in the field. This study may be useful to the policy makers in the Government and the academic fraternity in the various universities. This Study may be of use to the various public and private sector communication systems to gauge their present status. This Study may be of interest to the discerning public and future researchers in this field. On the whole it is a timely study and is the need of the times.

1.6 OBJECTIVES OF THE STUDY

The study analyses the customer perception towards BSNL telecom services in Madurai district. The major objectives of the study are:

- To trace out the origin and development of telecommunication system in India

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• To study the growth and development of BSNL in India, Tamil Nadu and Madurai District.
• To examine the various schemes offered by BSNL telecom for land line and mobile communications and their performance.
• To analyse the customer perception towards BSNL landline and mobile phone services in Madurai district.
• To analyse the customer perception towards service quality of BSNL in Madurai district and
• To offer various suggestions on the basis of research findings.

1.7 HYPOTHESES OF THE STUDY

Six hypotheses were framed for analysis of the customers’ perception. They are as follows,

• There is no significant difference in the perception scores on service quality of BSNL among the different groups based on the gender of the customer.
• There is no significant difference in the perception scores on service quality of BSNL among the different groups based on the age of the customer.
• There is no significant difference in the perception scores on service quality of BSNL among the different groups based on their education.
• There is no significant difference in the perception scores on service quality of BSNL among the different groups based on their marital status.
• There is no significant difference in the perception scores on service quality of BSNL among the different groups based on their occupation pattern.
There is no significant difference in the perception scores on service quality of BSNL among the different groups based on their income.

1.8 OPERATIONAL DEFINITION OF CONCEPTS

1.8.1 Customer

Every person who uses any of the services offered by BSNL is a customer of BSNL. A customer is one who receives a product or service from an organisation.

1.8.2 Services

Services are those separately identifiable, essentially intangible activities that provide satisfaction which are not necessarily tied to the sale of the product or to another service. Service means service of any description which is made available to a potential user for a fee. It does not include a contract of personal service.

1.8.3 Customer Services

It is the process of satisfying the needs of the customers at the right time in the right manner. The customer service broadly includes, giving expeditious assistance, explaining various tariffs and schemes to them.

1.8.4 Perception

The particular interpretations given to objects observed or ideas generated or otherwise brought to the customers attention.

1.8.5 Customer Perception

It is the level of a person’s felt state resulting from comparing a product’s visible performance (or outcome) in relation to the person’s expectation of the “perception level”. It is a function of the difference between performance and expectations.

1.8.6 Service Quality
Service quality is a judgemental issue relating to the difference between an individual’s expectation of a service and the actual service performed. Many definitions are presented to the concept of service quality. Phrases such as “meeting customer wants, when they want them at an acceptable cost” are well-known explanations of the meaning of quality.

1.8.7 Wire line

Wire line (cabling), a cabling technology where current is sent to down whole logging tools in oil well exploration and completions

1.8.8 Wireless

Wireless is a term used to describe telecommunications in which electromagnetic waves (rather than some form of wire) carry the signal over a part or the entire communication path. Some monitoring devices, such as intrusion alarms, employ acoustic waves at frequencies above the range of human hearing. These are also sometimes classified as wireless.

1.8.9 Broadband

Broadband refers to telecommunication that provides multiple channels of data over a single communications medium, typically using some form of frequency or wave division multiplexing.

1.8.10 Internet

The internet in simple terms is a network of the interlinked computer networking worldwide, which is accessible to the general public. These interconnected computers work by transmitting data through a special type of packet switching which is known as the IP or the internet protocol.

1.8.11 CDMA
CDMA - Code Division Multiple Access, uses advanced mathematical techniques to allow multiple wireless devices to transmit messages simultaneously on the same frequency. Every device, such as a mobile phone, is assigned a unique mathematical signature. It applies this signature to the original signal and transmits the modified signal. A receiver applies the inverse of the mathematical operation to recover the original signal.

1.8.12 GSM

Global System of Mobile is based on TDMA and is the most widely used of the three digital wireless telephone technologies (TDMA, GSM and CDMA). Digital systems offer higher transmission rates, low noise, improved security, international roaming capabilities and better spectrum.

1.8.13 SMS

SMS stands for short message service. Short Message Service is available to send texts containing 160 Characters. SMS is also often referred to as texting, sending text messages or text messaging. The service allows for short text messages to be sent from one telephone to another telephone or from the Web to another telephone.

1.8.14 MMS

Multi-media Messaging Service, through which, one can send and receive messages containing text, audio or video or combination of any or all. The mobile handset shall be compatible for MMS applications.

1.8.15 GPRS
GPRS (General Packet Radio Service) is a non-voice service added to existing TDMA networks, to one of the 2.5G technology upgrades. TDMA is the underlying transport mechanism used by GSM networks. GPRS provides the transmission of IP packets over existing cellular networks.

1.8.16 Roaming

Customers can carry the mobile connection beyond home. In such cases, it is said to be that customers on roaming. Roaming service activation is absolutely free. While on roaming outgoing/incoming call charges are applicable as per tariff plan.

1.8.17 Prepaid

Pre-paid mobile connection is a normal mobile connection where customer get a SIM card but he has to regularly recharge it with recharge coupons/scratch cards which they buy whenever our the prepaid account gets exhausted. Each recharge has a validity period also.

1.8.18 Post Paid

The customers can pay for the cellular services utilized by them at the end of the specific period (generally every month). It includes fixed amount for the services. It is just like telephone and electricity bills which have to be paid at regular intervals.

1.8.19 Grace Period

Grace period is the period of 15 days after the validity period beyond which the customers are not allowed to make any outgoing calls or send SMS. Presently, incoming calls & SMS are allowed. If customer recharges within the grace period, the balance talk value in their account gets added to the recharged account.

1.8.20 Night Calling
They are calls made between 11.00 p.m. and 06.00 a.m. The call charges will depend on the plan chosen by customer.

1.8.21 On-net

It means, own network i.e. BSNL network (GSM, CDMA, Wire line Broadband, Data card).

1.8.22 Off-net

It means other network of private operators i.e. other than BSNL.

1.8.23 Top-up Vouchers

Top-up vouchers are used to extend the usage value and the validity of the plan under use.

1.8.24 C-Top-up

Channel top-up is an electronic recharge/top-up facility. Recharge or top-up can be done through C-top-up for the specified values as preferred by customer.

1.8.25 SIM Validity

It is normally for seven days. Within this period users shall activate user’s connection by using FRC (First Recharge Coupons).

1.8.26 Plan Validity

The specified period of validity of the plan chosen by users.

1.8.27 Life Time Validity of a Plan

Life time validity denotes the license period of the operator. The License period for cellular services of BSNL is 20 years with effect from 29.02.2000. However, the license is understood to be renewable further on its expiry. To continue the lifetime plan the recharge conditions specified along with the plan should be fulfilled.

1.8.28 India Telephone Card
ITC is a pre-paid card which gives freedom to a customer to make local, STD, or ISD calls from any BSNL/MTNL landline or GSM phone. Cost of such call is debited against the paid credit of the ITC. The phone line from which call is made is not charged. There is no hassle of dynamic locking of the phone and sharing password with anyone else in the family. Each member of the family may use a separate ITC sharing the same phone line. In case our ITC is stolen the loss is limited only to the credit balance left in that ITC only.

1.8.29 Call Now Card

It is a normal ITC plan but is a specifically designed tariff to suit the requirement of users making heavy international/STD calls. Dialling procedure and features are same as that of ITC but the tariff is different from ITC and also different for different denomination of call now cards.

1.8.30 EVDO

Evolution-Data Optimized / Evolution-Data (often abbreviated as EV-DO or EVDO and often EV) is a telecommunications standard for the wireless transmission of data through radio signals, typically for broadband Internet access. It provides fast wireless broadband internet service directly to the customers’ laptop/Desktop.

1.8.31 Licensed Service Area (LSA)

Licensed Service Area is the area within which mobile services are provided by the service provider (i.e. BSNL) under the license issued by the competent authority. For example Tamil Nadu Circle and Chennai Telephones Area (Chennai, Kanchipuram and Tiruvallur) are considered as single LSA.
1.8.32 Subscriber

The user of the telephone is called the subscriber. The term ‘subscriber’, ‘user’, ‘consumer’, ‘customer’, and ‘respondent’ are synonymously used in this thesis.

1.8.33 Value Added Service

VAS means such services as may be available over a telecommunication system in addition to voice telephony or data services, and specifically those services listed as “value added services”.

1.8.34 Time Division Multiple Access (TDMA)

This is a digital communication technology used by some carriers to provide service. Other technologies used are CDMA and GSM.

1.8.35 Activation

It is the process of programming a wireless phone so that it is ready to transmit and receive calls.

1.8.36 Subscriber Identity Module (SIM Card)

SIM is a subscriber identity module card and is commonly used in a GSM phone. The card holds a microchip that stores the user’s personal profile, other information and encrypts voice and data transmissions. The SIM card also stores data that identifies the caller to the network service provider.

1.8.37 Tele density

It means number of telephones per 100 people.

1.8.38 Service Provider

A company which provides mobile or cellular service to the users is called a service provider and it is also termed as cellular company. In this study it indicates only
the companies offering cellular services in Tamil Nadu that is BSNL. The terms service provider and cellular operator are synonymously used.

1.8.39 Telephone

Telephone refers to the wire line (land line) and wireless (mobile) telephone connection.

1.8.40 IPTV

BSNL also offers the 'Internet Protocol Television' facility which enables customers to watch television through internet.

1.8.41 FTTH (Fibre To The Home)

FTTH facility offers a higher bandwidth for data transfer

1.8.42 Helpdesk

BSNL's Helpdesk (Helpdesk) provides help desk support to their customers for their services.

1.8.43 VVoIP (Voice and Video over Internet Protocol)

BSNL had launched Voice and Video over Internet Protocol (VVoIP). This will allow making audio as well as video calls to any landline, mobile, or IP phone anywhere in the world, provided that the requisite video phone equipment is available at both ends.

1.8.44 WiMax

BSNL had introduced India's first Fourth Generation High-Speed Wireless Broadband Access Technology with a minimum speed of 256kbit/s. The focus of this service is mainly the rural customer where the wired broadband facility is not available.

1.9 METHODOLOGY
There are two types of data viz., Primary and secondary data were used in the Study. Secondary data were collected from the various books obtainable from very many libraries, journals, magazines and newspapers and the internet. The primary data were collected by the survey conducted through the questionnaire prepared. The survey was also conducted through personal interviews with the samples by telephone and by mail.

The secondary data are of two types viz., internal and external.

Internal records of the study unit included formation about the product being researched, its history, companies’ background, market share and competitors’ information. Such data were garnered from the accounting, sales departments and corporate cell in the company for scouting marketing intelligence.

External secondary data contained information available from public sources such as business newspapers and business magazines. A prominent source of data was gathered from the Centre for Monitoring Indian Economy, which publishes monthly reports on various aspects of Indian economy and industry.

1.10 PERIOD OF THE STUDY

The study covered the periods from 2000-01 to 2011-2012.

1.11 SAMPLING DESIGN

Primary data were collected through survey method. Data collection had been done by using structured interview schedule. Samples were chosen among the multitude of subscribers in Madurai district. Three hundred samples were chosen on the basis of multistage random sampling method from Madurai district.
Madurai district has seven revenue taluks. The researcher had classified the study area into three viz, urban, semi urban and rural and taken 100 sample respondents each from urban, semi urban and rural area.

1.12 FIELD WORK AND COLLECTION OF DATA

Field work for this study was carried out using the interview schedule for collecting data from samples. After collecting the information through the interview schedule the data were verified and edited. A copy of the interview schedule is appended vide Appendix-A. The survey was conducted during the period from December 2011 to April 2012.

1.13 CONSTRUCTION OF TOOLS

After the collection of data, the filled in interview schedules were edited. A master table was prepared to sum up all the information contained in the interview schedule. The classification of the tables had been made for analysis. While analyzing the data the following tools were applied in the study.

Simple Percentage Analysis, Arithmetic Mean, Standard Deviation, Co-efficient of Variation, Kruskal Wallis test or H test, Correlation of co-efficient, Compound Annual Growth Rate, Weighted Average Method and Multiple regression.

1.14 SERVQUAL MODEL

To measure the service quality of the BSNL, the modified version of SERVQUAL model suggested by Parasuraman et.al. was used.

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From the past literature, various services related variables were identified which were broadly categorised under five broad dimensions viz., (1) Tangibility, (2) Reliability, (3) Responsiveness, (4) Assurance, (5) Empathy. These five broad dimensions include the ten individual instruments/factors each.

1.15 FACTORS MEASURING CUSTOMER SERVICE QUALITY

To measure the opinion of the customers on the quality of services various factors which are germane to them were identified fewer than five broad dimensions. A seven point scale was constructed for each of these parameters. The parameters identified are given below:

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<th>Sl. No.</th>
<th>Dimensions</th>
<th>Statements</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>1. Customer service counter is well equipped with up to date facilities</td>
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<td></td>
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<td>2. Physical layout of equipment and furniture are comfortable</td>
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</table>
| I | Tangibility | for customer interaction with the service provider  
3. Service providers are smart and articulate.  
4. Material and information associated with the service are visually appealing at the customer service counter  
5. Space and layout of area of the service provider is adequate for the customer interaction  
6. Telephone bill is received in time at the correct address  
7. Information provided in the bill is easier to understand  
8. Billing information through touch screen is convenient  
9. The instrument provided by the Service provider is of good quality  
10. Parking spaces are available |
| II | Reliability | 1. The service provider delivered the services as promise  
2. The service provider was sympathetic and reassuring to customer grievances.  
3. The service provider was dependable  
4. The service provider keeps the transaction records accurately  
5. Billing statements were clear  
6. No hidden charges  
7. Area coverage was larger than other service providers.  
8. There is no chance for excess billing  
9. All staff were well qualified  
10. Uniform level of service at all times. |
| III | Responsiveness | 1. The service provider fixes a time limit as to exactly when the service will be performed  
2. Prompt service from the service provider  
3. Service provider is helpful  
4. Service provider does not appear to be too busy not to respond to customer requests  
5. Service provider try to rectify the problem through the phone  
6. Service provider intimates the bill payment before the due date  
7. Employee should never be too busy to respond to customer when made calls for couple of times. |
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<td><strong>1.16 LIMITATIONS OF THE STUDY</strong></td>
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| **IV  Assurance** | 8. New schemes and offers are effectively communicated  
9. Remedial measures for excess billing complaints through is promptly handled  
10. Billing information by SMS to the mobile phone is good. |
| **V  Empathy** | 1. The service provider can be trusted  
2. Safe to conduct business with the service provider  
3. Polite customer service staff  
4. Employee should inform the subscribers before any kind of changes made.  
5. The service provider conveys the information in customer known languages  
6. The Service provider offers different plans  
7. Employees in the call center should serve on time.  
8. New telephone connection is provided quickly.  
9. Automated answer machine is useful to the customers.  
10. Deactivation of caller tune of the telephone is promptly attended |
|   |   |
Individual subscribers were alone considered in this study. Others such as statutory body, government, trust, society, company, firm, association and foreign national were not considered. As such the results cannot be applied to all places in Madurai district or other districts of the State. The results are applicable to a particular place and period only under similar situation and not applicable to any other time or place. For certain query answers could not be elicited from the BSNL officials or the customers. Within these constraints the study was conducted.

1.17 CHAPTER SCHEME

The Report of the study has been presented in seven chapters.

The First Chapter deals with the Introduction and Design of the Study. The contents of the chapter are Introduction, Importance of the study, Statement of the problem, Review of literature, Scope, Objectives, Hypothesis, Operational definitions of the concepts, Methodology, Period of the study, Sampling design, Field work and Collection of data, Construction of tools, Limitations of the study and chapter scheme.

The Second Chapter deals with the Origin and Development of Telecommunication System in India.

The Third Chapter is titled as Growth and Development of BSNL in India, Tamil Nadu and Madurai District.

The Fourth Chapter presents Various Schemes Offered by BSNL Telecom for Land line and Mobile Communications and their Performance.

The Fifth Chapter analyses the Customer Perception towards BSNL Landline and Mobile Phone Services in Madurai District.