CHAPTER I

INTRODUCTION

The Telecom Services have been recognized by all over the world as an important tool for socio-economic development of a nation and hence telecom infrastructure is treated as a crucial factor to attain the socio-economic objectives in India. Accordingly the Department of Telecommunications (DOT) has been assigned with formulating developmental policies and projects for the accelerated growth of the telecommunication services in India. Till 1991, provision of all types of domestic telecom services in the country except Mumbai and Delhi was a monopoly of the DOT. The telecom services in the metropolitan cities of Delhi and Mumbai are already entrusted to Mahanagar Telephone Nigam Limited (MTNL), a company owned by the Government of India which came in to existence on 1st April 1986. The state owned Videsh Sanchar Nigam Limited (VSNL) was the monopoly carrier of international traffic since its inception in 1986. DOT was, all in all, the policy maker, the service provider, the licenser and regulator.

In 1991, as part of the new industrial policy unveiled by Narasimha Rao led Congress Government, the DOT for the first time invited private participation in telecom services. Today, India is one of the most deregulated telecom markets in the world and provides opportunities for both foreign operators and equipment sellers.

With the opening of telecom sector to private investment and establishment of independent regulator, the matter of separation of service providing functions of DOT and ensuring a level playing field to various service providers had been engaging the attention of the government. On these lines, the NTP-99 had enunciated to separate the policy and licensing function of DOT from the service providing function as a
precursor to corporatization of the DOT. Accordingly as a precursor to corporatization, a new department viz. Department of Telecom Services was created followed by creation of Department of Telecom Operations by carving out service provision and operational function from the licensor, i.e. The DOT.

The two newly carved out service providing departments from DOT, namely the Department of Telecom Services (DTS) and Department of Telecom Operations (DTO) were corporatized ahead of schedule and a public sector company, Bharath Sanchar Nigam Ltd (BSNL), was given all the service providing functions performed by these two Departments w.e.f. 1st October, 2000. The relation of Bharath Sanchar Nigam Limited (BSNL) is expected to provide a level playing field, in all areas of telecom services, between Government and the and private operators.

In this liberalized telecom environment, the DOT has to compete with private telecom operators and this was not possible within the departmental set up. It can’t also change the work culture prevailing in the organization. Above all, it has not been able to provide telephone on demand and connect all villages by telephone facility. The DOT requires huge amount of money for investment in the network expansion and it is not possible for a government department to directly raise money from the market. It is in this background, the Government formed the BSNL on 1st October, 2000 by corporatization of the erstwhile Department of Telecom Services and Department of Telecom Operations.

Despite the challenges from different powerful corners, the government of India has successfully introduced competition and private investment in telecom sector. Already the government had committed itself to ensuring job security and protection to all its employees, as well as ascertaining facilities such as post-retirement pension and gratuity. The employees wanted their pension to be paid out
of the consolidated fund of India and if the government agrees to do so, it would be setting a new precedent. In another sop to BSNL employees, the government had decided to offer higher emoluments compared with Mahanagar Telephone Nigam Limited (MTNL) and Videsh Sanchar Nigam Limited (VSNL). Industry analysts pointed out that this would lead to a drain on the government’s financial resources.

In the year 1961, Kerala Telecom Circle was first formed as a combined postal and Telecom Circle. After corporatization it is known as BSNL, Kerala Circles. The circle has achieved impressive record in the field of Telecommunications. This circle provides the telecom services to a population of more than 31 million people within the state. This circle involves 11 major Secondary Switching Area (SSAs) and one minor Secondary Switching Area (SSA) at Lakshadweep. Kerala Telecom Circle has attained remarkable performance record in the development, growth, and modernization of telecommunication facilities. It has been providing an internet service in the state of Kerala in a big way. Kerala Telecom circle is the first in India to fully automate all the exchanges with the STD facility, the first to provide public telephones in every Villages providing services and complete with the globalised companies in this field.

**Review of Literature**

The studies made in the area of corporatization of telecom services and the facilities extended for consumer satisfaction and employee satisfaction on the eve of corporatization of Telecom services are reviewed as under:

Amit Mitra (1994), in his study on the Telecom Tussle pointed out that in every country, where telecom reforms are under way, the very first step had been the corporatisation of the departmental operations. He pointed out that the union leaders
oppose corporatisation, as they see the hidden hand of privatisation under this velvet glove.

In an article on Telecommumication in India –Imperatives and Prospects, Pronab Sen (1994) examined the role of telecom in the economic reform process and the steps that had been taken to ensure that this infrastructure is made available to the extent that is required. The future of the Indian economy rests squarely on convincing Indian entrepreneurs and other decision makers that survival in liberalized economy requires the adoption of informatics. The study concluded that the time for a centralised, paternalistic approach to the provision of telecom services was over and telephone on demand and universal service need to become the cornerstones of telecom policy.

In an article on “Telecommunications in India”, Nair K. R. G (1995) indicated the different facets of telecommunications in today’s world and explained the importance of telecommunications particularly from the point of view of economic development and presents the telecom scenario in India by reviewing the telecom policy.

Ramkumar Kakani and R. Sridev (1996), in a study on “Telecom Sector: Achieving Sustainable Corporate Growth”, described sustainable growth in Telecom sector is possible by changing the strategy, consumer market, competitor and environment.

In an article on an over of Modern Telecommunications, Sanjib Chowdhury (1997) discussed the importance and need of telecommunication in today’s world and analysed the telephone density and productivity, efficiency, prosperity and gross national product and concluded that in order to keep pace with the development in
the global telecommunication system, India had to gear up and plan accordingly to train its technical people so that they do not lag behind in adopting the new technology.

Pinaki Das and P.V. Srinivasan (1999) made an in-depth study on Welfare Implications of Telecom Tariff Reform and concluded that the concept universal service’s on demand, price elasticity of demand and equity implications of proposed price changes and universal service had played a role in regulatory decision process even in developed countries. The service which truly become relevant in the rural areas only if telecommunication comes embodied in technologies and practices that are of direct relevance to the rural poor.

Chowdary. T. H. (1999), in a study on Telecom De-monopolisation in India, highlighted the Indian telecom reform, duopoly in long distance, telecom de-monopolisation, license fee, private network inter connection, telecom tariffs, telecom liberalization National Telecom Policy (NTP), internet service provision and the way the National Telecom policy (NTP) was being implemented by the DOT is not graceful and now the BSNL faces loss except in Kerala circle on account of Indian telecom policies.

Damodharan. K. V. (2000) made a detailed study on the Financial Management in the Department of Telecom analysed the Value Added Service (VAS), financial powers and its delegation, system of financial propriety resources for the revised targets, resources for new plans, management of working capital, general system of financial management and budgeting systems and procedures and concluded that crores of rupees worth of Assets are recorded under suspense heads and the profit shown by the Department is far from reality.
In an article titled “Towards People – Orient Telecom Services” Chowdary.T.H. (2000) analysed various factors relating to telecom services in India. Dr. Chowdary opined that the persons appointed in the TRAI and the manner of appointment was totally non-transparent and it only helped to make the regulator a captive of the DOT. He suggested that a citizens’ charter in regard to the quality of telephone service had to be insisted upon to be drawn and adopted.

Bodhisatva Ganguli (2000) narrated the beginning stage of competition in basic telephone services and pointed out that Bharti’s VPT target was 11 per cent of all phones installed, but, according to DOT statistics, it has only installed all of 12 phones but still the issue remains in covering rural areas.

Amod Gore (2000) made an in-depth analysis of the various aspects in telecom field through his article in Telecom. He analysed the targets of DOT, Five year plan Targets, FDI inflows in telecom sector and service wise FDI inflows in telecom field and structural changes of DOT during 2000.

The paper on “And Phone for All? Not a Chance” (2000) narrated that the NTP 1999 was doomed to fail because inconsistent plans cannot be fulfilled in their totality by definition and that the government was committed to provide access to all people for basic telecom services at affordable and reasonable price.

In an article on Telecommunication and the Poor, Jose Ricardo Melo (2000) made an overview of how liberalization and privatization affects access of the poor to telecommunication services, and possible ways to improve this group’s situation with respect to these services through private participation in infrastructure and highlighted that the astonishing development of the telecommunication sector is needed for the improvement of social and economic living conditions of the poor. But there was a
danger that if it left behind these groups of the population it would be actively helping further separation between the haves and the have not’s. The structure of telecommunication market and the supply of services to the poor, some characteristics of the demand, characteristics of sector’s policy and regulatory instruments, how they affect the possibilities of developing private participation in infrastructure and possible effects of increased competition over PPI and over provision of services to the poor was also highlighted. He argued for fixation of tariff by considering the technological impact and extended more services.

Ashok Jhanjhanwala (2001)\textsuperscript{14} described the implications on revenue sharing, operators’ struggles, financing options and specific issues of NTP 99 particularly in the area of basic service operations. The study concluded that policy instruments need to be used to provide incentives to expand telecom and Internet operations in small towns and rural areas and to provide service to lower-income groups in urban areas, and only such explicit policies would enable India to expand its network to the required extent.

A Review of the Indian Telecom Sector by Rekha Jain (2009)\textsuperscript{15} analysed the rural telecom services, NTPs, Private participation and emergent issues and pointed out that the mode of disinvestment and corporatization of the DOT, VSNL, and MTNL are crucial to the development of Telecom, and for a positive response to the multinational challenge after 2004.

Rakesh Basanth (2001)\textsuperscript{16} conducted a study on the Structural Issues and Constraints of the Indian Telecom Sector pointed out the linkages between competition and sectoral (telecom) authorities in different countries.
Vibha Singh (2001)\(^{17}\) pointed that the private cellular operators had to bring down their tariffs in reaction to the MTNL’s offer and provided free voice mail services using a separate ‘secret’ number for each subscriber and that BSNL’s entrance into mobile services sector made the private operators cut down their rates.

Vaishna Roy and Narayan Krishnamurthy (2001)\(^{18}\) in an article highlighted that the survey of cellular users by MBIL Techno search listed two major causes for consumer dissatisfaction, the lack of information about discount hours and periods, and the lack of transparency about total cost that getting a refund from a cellular provider was extremely difficult.

In an article on Limited Mobility Services Contraversy-Issues and Way Out, Chowdary, T. H. (2001)\(^{19}\) remarked that the disquiet and controversy over the proposal to have limited mobility service in SDCAs should be the occasion for a thorough and profound look into the information and telecommunications technology policies for the country.

Balakrishna. P (2001)\(^{20}\) in his article on India’s Telecom Transformation described the changes which took place in India’s telecom sector. It is viewed that the cellular industry was changing with deregulation and consolidation. So also the policy changes provide increased opportunities to equipment suppliers and that the government did not favour the big bang approach to reforms or develop a long term road map.

In the study WLL, Governance, Corporatization and Swansi – A Review of Institutional Developments, Rekha Jain (2002)\(^{21}\) narrated the corporatization of DOT, Political interventions in the telecom sector, corporatization of VSNL and the functions of TRAI. It also pointed out that the corporatizations of VSNL had little
immediate impact as few changes had been made in the existing administrative structure. It also described that the key issue in telecom regulation is to design appropriate interventions that achieve both static and dynamic efficiency and the political interference in organizational issues would create impediments to an independent functioning and the fixing of responsibility for decisions.

Daljit Singh (2004)\textsuperscript{22} pointed out in his work that the development in wireless communications to facilitate the development of any time, anywhere application is necessary and analysed the basics of Telephony, Data communication and the Internet, technological development, Competition in telecom sector, interconnection, tariffs and cross- subsidies and how the Indian telecommunications sector was balancing the conflicting requirements of economic efficiency and equity.

Floyd and Eugene Alonzo (2004)\textsuperscript{23} in an article on An Econometric Analysis of the Factors Affecting the deployment of Advanced Telecommunications Services” examined the decision of local exchange companies in USA to deploy advanced telecommunications services within each of their areas such as supplier, buyer, market and regulators.

In a study on Information and Communication Technologies for Classes and Masses, Chowdary, T. H. (2004)\textsuperscript{24} illustrated that the competition was used as a tool to bring in the latest technologies, to cut down costs and therefore prices. When the telecoms in a country were a monopoly just as they were more or less in the US till the AT & T had been broken up and in our country till recent times, how the rural telephony was subsidized was not much of a concern nor did it merit any rigorous economic and financial analysis and inquiry but when once competition is introduced, it would be unjust to expect any, especially the incumbent, only to undertake the obligation of universal access and the quality of service in a sufficiently competitive
market would be determined by the market forces i.e., by the competitors in their
effort to gain consumers; consumers will choose the quality of service that they can
afford in relation to the price charged for this service. The study concluded by saying
that if instead of retired civil servants, former practitioners of monopoly for allegedly
bringing in a “Socialist pattern of society” through government servants’, young -
new generation, competition and private enterprise believing professionals were
placed in the policy and regulatory bodies, the hope of ICTs for classes and masses
can be realized sooner and less painfully.

Quality of Service of Performance of Mobile Service for the Quarters ending
September 2004, the consultation paper of TRAI (2004)\(^25\) described the quality of
service of mobile service by analyzing 82 number of mobile service providers’
performance. The paper analysed call success rate, call drop rate and billing
complaints per 100 bills. The parameters of the paper were fault incidence and repair,
network performance and billing complaints.

David Souter, Nigel Scott, Professor Rekha Jain, Professor Ophelia
Mascarenhas and Kevin Mc Keme(2005)\(^26\) in s study on The Economic Impact of
Telecommunication of Rural Livelihoods in India stated the DFID for the benefit of
developing countries was mainly aimed at identifying usage patterns and impacts of
telephony and other ICTs on those who currently make some use of telephony. The
demographic and economic characteristics of current users vary between countries.
The study finds that most rural households are dependent on income from a variety of
occupations and that telephone is highly valued for social networking by all socio-
economic groups.

Consultation paper (2005)\(^27\) of TRAI dealt with the quality of service of
telecom sector. The paper narrated the parameters such as provision of telephone after
registration of demand, fault incidence, mean time to repair, percentage of repeat faults and time taken for refund of deposit after closures and discussed the service quality of cellular mobile service also along with Basic service.

Sam Thomas and Veeva Mathew (2005) in a study on Service Quality and Competitiveness, analysed the service quality and competitiveness of cellular industry in Kochi and opined that the firms had to take concrete measures to reduce the service quality gaps and thus competitiveness could be improved for avoiding the negative gaps on all the dimensions of the service quality.

Revathi. S and S. Padmavathy (2005), in their study on the Preference in Cellular Service Providers in the Post Liberalisation Era, attempted to analyse the awareness of cellular service users, problems faced by the users and examined the factors which were influencing the choice in cellular service providers.

Ranganathan. K. G. (2005), in his study on Quality of Service analysed various parameters like Dial tone Delay, Grade of Service and Call Completion Rate with in a local network and proved that the services were not up to the mark.

Chalam .G. V. (2005), in a study on Quality of Services in Telecom Sector-Users Perception –An Analysis, expresses the views of Telecom users about the quality of services rendered by the department at Guntur in terms of credibility of proper usage of STD facility, telephone bill details, waiting time to get new connection, the impact of new Telecom Policy by the way of entry of private operators and their threat to the department. The study concluded that the department had to win over the users’ confidence by implementing some consumer-oriented policies and innovating new techniques.
Francis.K. Sudhakar and Lydia Nutan (2005), in the work, “An Objective Study of Consumer Behaviour’ in BPL Mobile Cellular Limited” made an indept study on the reasons for migration from prepaid to post paid and vice- versa and concluded that a considerable amount of information should be given through advertisement.

Selvaraj.V.M. and Ganesan Malathi (2005) in an article “A Study on Subscriber Behavior Towards Cell Phone Users in Thoothukudi City” pointed out the progress of subscribers in each category of private and Govt. mobile companies by mentioning that BSNL and MTNL, the govt. companies, had the highest number of subscribers during the period 2001- 2002. The study also identified the problems faced by the subscribers .

Vijaya Kumar (2005) in an article on “Basic Facilities in Telecom Sector” narrated the growth and development of telecom sector in India by considering the rural telephony and the telephony in international level. The study concluded that the new broadband policy had reduced the tariff by seventy per cent and it may increase the rate of broad band connections and that the rate of broad band connection would also be affordable to ordinary people, just like that of mobile phones.

In an article on “The Role of Telecom in Aurangabad- An Analysis”, Warbhuvan.S.S. [SDE, BSNL] (2005) analysed social and economic impact of telecom by taking four important aspects such as selection of media, selection of period, unit setting and space measurement method.

Chowdary. T. H. (2005) in his article opined that almost all the officers in DOT whose operations were corporatised as BSNL, had been opposing the de-monopolization, liberalisation and competition in telecoms. Many of them used to
think that telecommunications were their property and should not be allowed to be provided by anybody else. But if all the employees in DOT/ BSNL were with such a mind setup, the BSNL would not have to face loss, and the BSNL would have been a profitable public sector undertaking.

Sanjeev Panandikar and Rahul Rajput (2005)\textsuperscript{37} in their Comparative Study on Service Quality of Mobile Operators – An Approach of Multidimensional Profile Analysis made an in depth analysis on the service quality of mobile operators such as service quality, service standards, consumer expectation and company offerings.

TRAI’s consultation paper (2005)\textsuperscript{38} in their study on “Quality of Service of Cellular Mobile in Lutayen’s and NDMC Areas of Delhi” described the growth of mobile service in Delhi, problems associated with exponential growth in mobile sector, initiatives taken by the industry to address the problem and problems relating to spectrum and the issue affecting the service quality of mobile services all over Delhi. The study reveals that the operators are facing shortage of spectrum due to high growth and delay in allocating additional spectrum.

The Managerial Economics (2005)\textsuperscript{39} of IGNOU on “Competition in Telecommunication Service Provision” described various factors in telecom sector such as regulatory structure of telecom sector; policies in 1994 and 1999; service providers and their area, subscriber base, Interconnection, state of telecom market and changing market structure. A fair and reasonable interconnection policy was a critical input to foster competition in telecommunication markets and concluded that in order to become globally competitive, India had to keep pace with developments world – wide in telecommunication services and technology.
TRAI’s consultation paper (2005) made an indepth study on the “Quality of Service of Cellular Mobile Service in Mumbai Metro Circle” by analyzing the services of various services providers like Airtel, Hutch, BPL, MTNL, Tata and Reliance and revealed that all the service providers had coverage problems in some of the common locations and the operators were facing shortage of spectrum due to high growth and delay in allocating additional spectrum which affect the quality of service of mobile services all over the Mumbai.

Ashok.V. Desai (2006) analysed various factors like the impact of technology, regulated competition, the influence of financial markets, reforms within a socialist framework, migration to a new regime, foreign participation, interconnection and license unification. He opined that a more competitive market structure was possible, but it required a very different approach to the present one where the government licenses operators and the regulator fitfully interferes in tariffs.

An attempt was made by Rekha Jain (2006) on “Interconnection Regulation in India: Lessons for Developing Countries” to bridge the gap by highlighting the nature of interaction among the regulator, incumbent, Judiciary and the political environment. The role of formal models was setting interconnection charges and the implications of rapid technological changes in the field of telecom sector in a developing country. It was concluded that while TRAI followed a transparent process in “form” through consultation papers and reviews, it needed to augment this by transparency in “processes” which would require more regulatory capability and dependence on proficiency in specific areas.

In a study on “Satisfaction Drivers by the Airtel Subscribers in Coimbatore”, Vijay Kumar. R. and P. Ruthra Priya (2006) suggested that the level of satisfaction derived by the users of Airtel network could further be improved by way of increasing
the number of value added service of Airtel network, introduction of new, attractive and innovative schemes under the pre-paid options. The study hopes that the improvement in the quality of the services of Airtel would attract more new subscribers and would help to retain the existing subscribers in the future competitive market.

In an article on “Consumers Attitude Towards Cell Phones Service in Telecommunication System”, Banumathy. S. and S. Kalaivani (2006) analysed the attitude of consumers towards cell phone services and suggested that the service provider had to install more towers where they were not having their wide service area coverage and thus the network coverage problems could be overcome. Also suggested that the subscribers were in need of bridging the gap between the services promised and services offered by analyzing the monthly charges, period and nature of usage, type of calls attended and surrendering of Land line connections.

Kala Seetharam Sridhar and Varadharajan Sridhar(2006) in their paper on “Telecommunication and Growth Casual Model Qualitative and Quantitative Evidence” examined whether telecommunication services accelerate economic growth or overall economic growth that created the demand for more telecommunication services for the growth to occur, the relationship between telecom infrastructure, economic growth in developing economies, as these countries could use diffusion of telephones for spreading growth more rapidly. It was concluded that most developing economies had leap-fogged in cellular telephony as a quick and inexpensive way of increasing telecom penetration.

that successful adoption of the mobile handsets among the end users through perceived values increases consumer satisfaction.

In a study on the “Role of Competition in Growing Markets in Telecom Sector”, Srivastava. R, Jatin Bhangde, Nirav Bhat, Kunal Gogri, and Hemal Marfatia(2006) made an attempt to study the impact of competition on developing markets in India. They also tried to understand the importance of value additions and pricing strategies. The study concluded that price played an important role in growing or emerging market in the telecom sector.

Padma Sreenivasan (2009) in the work on “Corporate Ownership Structure and Acquisitions in the Indian Telecom Sector-The Idea Cellular Case”, analysed the issues crept up in the acquisition and management of IDEA cellular by Tatas and Birlas. It also analysed the shareholders agreements, arbitration clauses and corporate governance questions on the right of refusal by the acquires and concluded that there exists conflicting interests of acquirers and withholding of information.

An empirical study on “Telecom Reforms and State Level Economic Development in India”, Sudeshna Ghosh Banerjee and Shreyasi Jha(2009) analysed the impact of privatisation and competition in the telecom sector on state level economic development using a comprehensive state-level data set from India. The study also emphasised the privatisation on Industrial productivity, the telecom policies and initial phase of telecom reforms. It is found that telecom reforms had a positive effect on industrial productivity; tele-density was a significant determinant of gross domestic product and concluded that telecom privatisation did not appear to be an important determinant of state level FDI in India, and they could detect a positive effect of telecom privatisation on industrial productivity.

Harshavardhan Singh, Anita Soni and Rajat Kathria (2010) 51 in a study on “Telecom policy Reform in India”, analysed the existing structure of Telecom Sector, the NTP 1994 and 1999 and key issues of policy and assessed the regulatory reform. It is concluded that the liberalisation of the Indian telecom sector had been riddled with uncertainty and had raised questions regarding India’s commitment to the reform process. So the policy statements for the telecom sector have been periodically reviewed with the changing telecom scenario.

The review of the previous studies revealed that there were not much research studies examining the level of satisfaction of the subscribers and the employees on the eve of corporatisation of DOT.

**Statement of the Problem**

In the central sector there was Department of Telecommunications, one of the premier public sector undertakings in India, was in charge of extending communication through Telephone, Telex, Pager, Mobile and Internet. All these facilities were under the direct control and direction of the Department of Telecommunications. It is an integral part of the infrastructure facilities for the development and growth of the economies of the world in general and India in particular. On account of globalization there are numerous Multinational Companies, in this sector also, having new generation technology and it is introduced in various countries of the world including India. Their way of dealings, cheaper cost and more
facilities attracted subscribers and employees towards them. To tackle this situation by retaining employees, gaining their support and co-operation and for retaining the subscribers becomes a crucial one as far as Department of Telecommunications is concerned. This shift led to immense competition and the Government as a measure to tackle this issue Department of Telecommunication Sector was converted into a company known as Bharath Sanchar Nigam Limited (BSNL). Now this company is offering numerous services by reducing the charges and extending benefits to employees as well as subscribers since corporatization. Even today the situation is becoming more and more crucial because of new comers in this field with multifarious facilities in mobile and internet technology. The subscribers go for better service rather than stick on to the same service provider. No pertinent research study was made in this area to know the stakeholder level of satisfaction (subscribers and employees). To fill up this lacuna, the present study on Corporatisation of Telecom Sector - A Study of BSNL in Kerala is undertaken.

**Objectives of the Study**

The specific objectives of the study are:

1. To identify the tentative major and minor set of variables to determine the subscriber satisfaction before and after corporatisation.

2. To examine the level of satisfaction of subscribers during pre and post corporatisation periods.

3. To identify the tentative major and minor set of variables to determine the employee satisfaction before and after corporatization.

4. To look into the views of employees towards corporatisation and their job satisfaction before and after the corporatisation.
5. To Study the variations in the stakeholders’ satisfaction due to the regional and other personal traits variations.

**Hypothesis of the Study**

Based on the objectives, the hypothesis formulated for the study are:

1. **H01:** The major satisfaction variables of subscribers are not the same during the pre and post corporatization periods.

2. **H02:** There is no significant difference in subscribers’ satisfaction during the pre and post corporatization of DOT.

3. **H03:** The major job satisfaction variables of employees are not the same during the pre and post corporatization periods.

4. **H04:** There is no significant difference in Employees’ job satisfaction during the pre and post corporatization of DOT.

5. **H05:** There is no significant difference in subscribers’ satisfaction on corporatization of DOT in respect of subscribers at different regions viz., rural and urban areas.

6. **H06:** There is no significant difference in subscribers’ satisfaction on corporatization of DOT in respect of Male and Female Subscribers.

7. **H07:** There is no significant difference in subscribers’ satisfaction on corporatization of DOT in respect of respondents at different districts viz., Thiruvananthapuram, Ernakulam and Kannur.

8. **H08:** There is no significant difference in subscribers’ satisfaction on corporatization of DOT in respect of respondents at different age groups viz., below 35 years, 35-50 years and above 50 years.
9. H09: There is no significant difference in subscribers’ satisfaction on corporatization of DOT in respect of respondents at differently educated groups viz., Below Degree, Degree and Above Degree.

10. H010: There is no significant difference in Employees’ job satisfaction on corporatization of DOT in respect of employees at different regions viz., rural and urban areas.

11. H011: There is no significant difference in Employees’ job satisfaction on corporatization of DOT in respect of Male and Female employees.

12. H012: There is no significant difference in Employees’ job satisfaction on corporatization of DOT in respect of respondents at different districts viz., Thiruvananthapuram, Ernakulam and Kannur.

13. H013: There is no significant difference in Employees’ job satisfaction on corporatization of DOT in respect of respondents at different age groups viz., Below 35 years, 35-50 years and Above 50 years.

14. H014: There is no significant difference in Employees’ job satisfaction on corporatization of DOT in respect of respondents at differently educated groups viz., Below Degree, Degree and Above Degree.

**Significance of the Study**

In BSNL, there are more than 494 million subscribers in India with an outlet of 1050 Exchanges and 16763 staff at the rural and urban areas. Now on account of globalization several mobile and internet technology companies extend new and improved services at cheaper cost. The consumers are benefited much out of this. The higher the level of competition the better the services available to consumers or subscribers. So consumers often go for gaining the benefits which leads to shift over from our traditional government owned system to global systems. This in turn affects
the attitude of both the employees and the consumers. A fresh look on whether the benefit extended by the government owned and controlled sector to its stakepart is enough or not is an urgent necessity for the existence and survival of this sector.

Scope of the Study

The study is confined to analyzing the stakeholder level of satisfaction ie, subscribers and employees. The information is collected from those who have been in service since 1990s onwards. The study analyses the level of satisfaction of subscribers and employees during the pre and post corporatization. A predictor equation is also fitted for the pre and post corporatization at the subscriber and employee level so as to identify the major factors of satisfaction. The study also formulates certain hypotheses to test the significance of the variation in service at different points of time and among different category of beneficiaries.

DESIGN AND METHODOLOGY

Data Source: Both secondary and primary data have been made use for the study.

Secondary Data

Growth and structural changes of DOT before and after corporatization of DOT are taken from the secondary source. For this purpose, the reports presented by the government at the centre and at the state were made use of. Moreover data were collected from libraries; Kerala Circle Office of BSNL, Thiruvananthapuram; CTMS, Hyderabad; and the related websites.

Primary Data

The views of respondents are collected for knowing the level of satisfaction. On the basis of various research studies conducted in the area, various tentative sub-components are identified. Primary data on the variables identified and personal profile were collected through Interview schedule specifically designed for this
purpose. A seven point rating scale was developed to indicate the scores of opinion of the respondents. A pilot survey has also been conducted for pre-testing the interview schedule.

The Universe

The study focuses on the stakeholder satisfaction which is regarded as the sum of the subscribers’ satisfaction and employees’ satisfaction on the various factors before and after the corporatization of DOT. Therefore, the study focuses on the opinion of subscribers and employees of BSNL who were the stakeholders from 1991 to 2011. The details of subscribers who become the target population under the study is given in Table 1.1.

Table 1.1.

SSA wise Subscribers who got land line before 1.1.1991 and still continuing (as on 1-1-2012)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>SSAs</th>
<th>No. of Exchanges</th>
<th>No. of Subscribers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thiruvananthapuram</td>
<td>94</td>
<td>15858</td>
</tr>
<tr>
<td>2</td>
<td>Kollam</td>
<td>19</td>
<td>9169</td>
</tr>
<tr>
<td>3</td>
<td>Pathanamthitta</td>
<td>84</td>
<td>6172</td>
</tr>
<tr>
<td>4</td>
<td>Alleppey</td>
<td>85</td>
<td>8321</td>
</tr>
<tr>
<td>5</td>
<td>Kottayam</td>
<td>72</td>
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</tr>
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<td>6</td>
<td>Ernakulam</td>
<td>182</td>
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</tr>
<tr>
<td>8</td>
<td>Palakkad</td>
<td>93</td>
<td>7838</td>
</tr>
<tr>
<td>9</td>
<td>Malappuram</td>
<td>70</td>
<td>6441</td>
</tr>
<tr>
<td>10</td>
<td>Kozhikode</td>
<td>120</td>
<td>15314</td>
</tr>
<tr>
<td>11</td>
<td>Kannur</td>
<td>170</td>
<td>19402</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1050</td>
<td>155101</td>
</tr>
</tbody>
</table>

Source: Office records of DGM, BSNL Circle Office, Thiruvananthapuram.
The details of employees who become the target group under the study are given in Table 1.2.
Table 1.2.

Employees who joined in DOT before 1-1-1991 and still continuing as on (1-1-2012)

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Staff Category</th>
<th>No. of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Group A</td>
<td>467</td>
</tr>
<tr>
<td>2</td>
<td>Group B</td>
<td>2700</td>
</tr>
<tr>
<td>3</td>
<td>Group C</td>
<td>12187</td>
</tr>
<tr>
<td>4</td>
<td>Group D</td>
<td>761</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>16115</td>
</tr>
</tbody>
</table>

Source: Office records of DGM, BSNL Circle Office, Thiruvananthapuram.

**Sample Size**

The MaCorr sample size methodology was used to determine the sample size. It is a known fact that a small, representative sample will reflect opinions and behavior of the group from which it was drawn. The larger the sample, the more precisely it represents the target group. However, the rate of improvement in the precision decreases as the sample size increases. For example, to increase a sample from 250 to 1,000 only doubles the precision. Therefore, the sample size is determined based on factors such as time availability; cost consideration; and the required degree of precision.

The three factors considered for determining the sample size are: (i) Population size; (ii) Margin of Error or Degree of accuracy; and (iii) Confidence level. The formula for computation of sample size as per the MaCorr methodology is given below:

\[
\text{Sample Size (SS)} = \frac{Z^2 \times p \times (1-p)}{C^2}
\]

Where, \( Z \) = Z value (e.g. 1.96 for 95 per cent confidence level)
\[ P = \text{Percentage picking a choice expressed as decimal (0.5 used for sample needed)} \]
\[ C = \text{Confidence interval expressed as decimal (eg.0.04 = } \pm 4) \]

Correction for finite population

\[
\text{New Sample Size} = \frac{SS}{1 + \frac{SS - 1}{Pop}}
\]

Where Pop = Population

**Sample size for Subscribers and Employees**

The size of population on subscribers is 155101 (Table No: 1.1) and that of employees is 16115 (Table No: 1.2). The sample size for subscribers and employees as per the MaCorr Calculator works out to 383 and 375 respectively for 95 per cent confidence level and 5 per cent margin of error or degree of accuracy.

**Sample Selection**

The study considered a ‘Multi-stage Stratified Purposive Sampling Method’ for selecting the respondents, viz., Subscribers and Employees of BSNL. The first stage involves selection of districts, the second consists of selection of Exchanges and the third stage consists of selection of stakeholders viz., the subscribers and employees. The details of sample selection are explained below:

**Selection of Sample Districts**

There are 155101 subscribers who had been the subscribers of DOT and then of BSNL after the corporatisation and are spread over eleven Secondary Switching Areas, the details of which are shown in Table 1.3. For the sake of sampling, 3 districts, one each from South, Central and North zones viz., Thiruvananthapuram, Ernakulam and Kannur with high representation of subscribers in the respective zones were selected.
Selection of Exchanges

The exchanges in the selected SSAs are classified into urban exchanges and rural exchanges from which 10 per cent of exchanges were selected on the basis of exchanges having the highest number of subscribers. The details of the exchange selection is shown in Table 1.3.

Table 1.3.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regions</th>
<th>Thiruvananthapuram</th>
<th>Ernakulam</th>
<th>Kannur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>1</td>
<td>Total</td>
<td>26</td>
<td>69</td>
<td>55</td>
<td>158</td>
</tr>
<tr>
<td>2</td>
<td>10 per cent</td>
<td>3</td>
<td>7</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: Office records of DGM, BSNL Circle Office, Thiruvananthapuram.

Selection of Stakeholders

The stakeholder respondents consist of subscribers/consumers and employees.

The selection of subscribers and employees are detailed below:

a. **Subscribers / Consumers**

From the selected urban and rural exchanges in the three districts of Kerala, 383 subscriber respondents were selected purposively from those who had service from 1991 to 2011. The details are shown in Table 1.4.
Table 1.4

**Selection of Subscribers**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Regions</th>
<th>Area</th>
<th>Thiruvananthapuram</th>
<th>Ernakulam</th>
<th>Kannur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rural</td>
<td></td>
<td>53</td>
<td>77</td>
<td>75</td>
<td>205</td>
</tr>
<tr>
<td>2</td>
<td>Urban</td>
<td></td>
<td>40</td>
<td>84</td>
<td>54</td>
<td>178</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>93</td>
<td>161</td>
<td>129</td>
<td>383</td>
</tr>
</tbody>
</table>

Source: Office records of DGM, BSNL Circle Office, Thiruvananthapuram.

b. **Employees**

From the selected exchanges, the employees were selected purposively from the selected districts of Thiruvananthapuram, Ernakulam and Kannur, who have put in at least 20 years’ service i.e., from 1991 to 2011. Thus 375 employees were selected for survey whose details are shown in Table 1.5.

Table 1.5

**Selection of Employees**

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Regions</th>
<th>Area</th>
<th>Thiruvananthapuram</th>
<th>Ernakulam</th>
<th>Kannur</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rural</td>
<td></td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>2</td>
<td>Urban</td>
<td></td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>225</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>125</td>
<td>125</td>
<td>125</td>
<td>375</td>
</tr>
</tbody>
</table>

Source: Office records of DGM, BSNL Circle Office, Thiruvananthapuram.

**Pilot Survey**

A Pilot survey was conducted on a cross-section of the subscribers and employees in Thiruvananthapuram SSA. Ten selected subscribers and six employees were purposively selected for the pilot survey. At the end of the survey, questions found irrelevant in the draft schedule were deleted and new questions which were not there in the interview schedule but, found vital were added. After conducting a thorough analysis based on the feedback received from the pilot survey, the style of administering some questions was modified in order to avoid probable ambiguities.
pertaining to the meaning of the questions and to obtain more reliable, unbiased and accurate answers.

**Tools used for Collection of Data**

A structured interview schedule developed for this study and is made use for the collection of primary data. The Interview schedule so modified is administered for the final collection of data. The full text of the Interview schedule is given in Appendix I and II.

**Interview Schedule**

For collecting the opinion of subscribers and employees on the above said variable, structured interview schedules were formed. Interview schedule consists of the variable V1 – Personal Profile of subscribers / employees and five (5) main variables with sub-components selected from the independent variables (V2 to V6).

The opinions of the respondents (Subscribers and Employees) are collected by conducting interviews with them. Structured interview schedules were formed for this purpose. The interview schedule covers five variables under each of which is appended a number of questions (items). Apart from the variables, the Interview schedule is accompanied by Four questions (items) grouped under the heading ‘Personal Details’ of the functionaries. For scaling the answers to questions, the researcher developed a seven point rating scale indicating the response mood of the functionaries (Figure 1.1)

![Figure 1.1: Seven Point Rating Scale](image)
A seven point Rating Scale (Figure 1.1) was drawn in a card board and presented before each respondent. Each question is asked by the interviewer to the respondents. Care has been taken to give sufficient time to the respondent to think over and answer the questions. They are requested to look at the Rating Scale Board and say to which ‘per centage’ each of their answers belong and state whether his / her opinion stands in 1 or 2 or 3 or 4 or 5 or 6 or 7. The interviewer ticked the answer accordingly and proceeded to the next question.

Each question within different variables of the interview schedule is framed after a close study of the previous research works, theories, models, interview schedules and questionnaires. Multi-factor Stakeholder Satisfaction Questionnaire (MCSQ) formed its base.

A study of the nature of subscribers and employees of BSNL in India with particular emphasis on those in Kerala has also been made. A draft interview schedule has also been made use of in the pilot study on one of the selected Secondary Switching Areas (SSA) in Kerala.

**Variables Used for the Study (both Subscribers and Employees)**

There is no set procedure for assessing the stakeholder satisfaction especially with that of telecom sector. The satisfaction level of both subscribers and employees are to be subjected to a detailed study. From the available literature and the theories in this field suggests framing tentative variables and their constituent sub-variables or items that together stands for signifying the stakeholder satisfaction.

**Subscriber Level**

70 sub-variables or items were identified under major five variables, viz., Organisational Dimension, Peoples Dimension, Technological Dimension, Planning
and Management Dimension and Operational Dimension in respect of checking the level of satisfaction of subscribers during both pre and post-corporatisation.

The details of sub-variables under each variable are detailed below:

I. Organisational Dimension (V2): There are 21 sub-variables (items) identified under the Organisational Dimension viz., (1) Extent of entrepreneurship in the organization; (2) Strength of company’s market research system; (3) Company’s consumer performance feedback system; (4) Company’s competitor intelligence system; (5) Company’s linkage with suppliers; (6) Company’s linkage with consumers; (7) Reputation of the company; (8) Ethnical diversity; (9) Loyalty to the organization; (10) Quality of organization; (11) Fairness of organization; (12) Proud on organization; (13) Organisational Dynamism; (14) Preference to operator; (15) Trustworthy of operator; (16) Frontline employees structure of operator; (17) Long and continual services from operator; (18) Preference to operator ignoring price; (19) Worth recommendation to friends and relatives; (20) Worth recommendation to other people; and (21) Ability to provide the best service.

II. People Dimension (V3): There are 19 sub-variables (items) identified under the People Dimension viz., (1) Employee morale; (2) Employees’ interaction with Subscribers; (3) Employees’ interaction with suppliers; (4) Active suggestion system; (5) Opportunities for Customer relations; (6) Degree of trust; (7) Leadership in employees’ unit; (8) Degree of freedom; (9) Degree of trust and confidence; (10) Service Satisfaction; (11) Considerations to employee opinions; (12) Valuing employees; (13) Employee Commitment; (14) Frontline employees’ willingness to help; (15) Personalized services to meet consumers’ need; (16) Comfort with the operator; (17) Severity of Staff turnover; (18) Performance effectiveness; (19) Satisfaction with work and responsibilities.
III. Technological Dimension (V4): There are 13 sub-variables (items) identified under the Technological Dimension viz., (1) Innovation programmes; (2) Low cost technology; (3) Appropriate technology for services’ coverage; (4) Preference for technology to cost; (5) Adaptability; (6) Compatibility; (7) Punctuality in after sales service; (8) Consistent quality service; (9) Timely information on new services; (10) Easiness for benefits from promotional offers; (11) Trustworthiness in policies and practices; (12) Secured service process; and (13) Overall service quality.

IV. Planning and Management Dimension (V5): There are 11 sub-variables (items) identified under the Planning and Management Dimension viz., (1) External environmental sensitivity; (2) Transparency in pricing policies; (3) Attractiveness of pricing of products and services; (4) Rea sonability of calling rate; (5) Flexibility of pricing for services; (6) Reputation of operator; (7) Social responsibility of operator; (8) Brand image; (9) Monitory worthiness of promotional offers; (10) Achievement of proposed reward; and (11) Trustworthiness of billing system.

V. Operational Dimension (V6): There are 6 sub-variables (items) identified under the Operational Dimension viz (1) Performance stability; (2) Public image; (3) Environmental adaptation; (4) New ideas; (5) Social impact on the society; and (6) Advertising efficiency.

Employee Level

84 sub-variables or items were identified under major five variables, viz., Organisational Dimension, Peoples Dimension, Technological Dimension, Planning and Management Dimension and Operational Dimension in respect of checking the level of satisfaction of employees during both pre and post corporatisation. The details of sub-variables under each variable are detailed below:
I. Organisational Dimension (V2): There are 20 sub-variables (items) identified under the Organization Dimension viz., (1) Number of layers in the organization; (2) Degree of centralization; (3) Emphasis on structure and procedure (formality); (4) Extent of entrepreneurship in the organization; (5) Strength of company’s market research system; (6) Company’s consumer performance feedback system; (7) Company’s competitor intelligence system; (8) Company’s linkage with suppliers; (9) Company’s linkage with consumers; (10) Adequacy of resources; (11) Reputation of the company; (12) Physical work environment; (13) Cross-department relations; (14) Communication between units; (15) Gender balancing; (16) Loyalty to the organization; (17) Quality of organizations; (18) Fairness of organization; (19) Proud on organization; (20) Organisational dynamism.

II. People Dimension (V3): There are 37 sub-variables (items) identified under the People Dimension viz., (1) Employee involvement in design; (2) Employee involvement in planning; (3) Employee education; (4) Employee training; (5) Employee well being; (6) Employee morale; (7) Employees’ interaction with Subscribers; (8) Employees’ interaction with suppliers; (9) Active suggestion system; (10) Employee autonomy; (11) Support for professional activities; (12) Hiring practices in the unit; (13) Clarity of performance criteria; (14) Fairness of workload distribution; (15) Promotion opportunity; (16) Fairness of hiring external candidates; (17) Recognition for employees’ contributions; (18) Recognition for employees’ expertise; (19) Guidance from employees’ supervisor; (20) Feedback on employees’ performance; (21) Authority to make employees’ decisions; (22) Availability of Mentoring; (23) Relationship with senior administrators; (24) Leadership in employees’ unit; (25) Pressure feeling to perform; (26) Degree of freedom; (27) Preference for job to salary; (28) Degree of trust and confidence; (29) Comfort with
the operator; (30) Satisfaction with salary; (31) Company benefits and retirement plans; (32) Relationship with colleagues; (33) Sense of teamwork; (34) Supervisor keeps employee informed; (35) Severity of Staff turnover; (36) Co-workers’ performance effectiveness; (37) Satisfaction with work and responsibilities.

III. Technological Dimension (V₄): There are 10 sub-variables (items) identified under the Technological Dimension viz., (1) Process used by the Firm; (2) Research and development intensity; (3) Innovation programmes; (4) Low cost technology; (5) Adaptability; (6) Compatibility; (7) Specialisation in job; (8) Enjoyment in working; (9) Reliability on subscribers’ interests; (10) Professional competence.

IV. Planning and Management Dimension (V₅): There are 11 sub-variables (items) identified under the Planning and Management dimension viz., (1) Long term objectives; (2) Action Plans; (3) Short term objectives; (4) External environmental sensitivity; (5) Planning flexibility; (6) Quantum of employees’ input in decision making; (7) Pay parity; (8) Working relationship; (9) Sense of common purpose; (10) Caring; (11) Transparency in pricing policies.

V. Operational Dimension (V₆): There are 6 sub-variables (items) identified under the Operational dimension viz., (1) Profit growth; (2) Sales revenue; (3) Financial strength; (4) Operating efficiency; (5) Performance stability; (6) Employee morale.

Tools of Analysis

The collected data are validated, tabulated and classified. Statistical tools used for analysis are the Per centage, Mean, Standard Deviation, Co-efficient of Variation, Multiple Correlations and Multiple Regression using Statistical Package for Social Sciences (SPSS). An item wise analysis for all the sub-components (items) of entire main variables was made using the average opinion scores. Multiple Regression analysis is made for framing predictor equations of stakeholder satisfaction model by
taking the dependent variable and independent variables thereon. For the purpose of testing the hypotheses, Correlation Co-efficient, One sample t test, Analysis of Variance – One way (ANOVA) were used as tools.

Period of Study
The period of study is from 1991 to 2011. It is taken in this manner for studying pre (before 1991 to 2000) and post corporatization (after 2000).

Limitations of the Study
The analysis of the study is made on the basis of the information supplied by the respondents in the sample. An earnest effort is made to counter check it by discussing the matter with the experts and the executives of this sector.

Chapter Scheme
The study report is presented in six chapters as detailed below:

Chapter I : INTRODUCTION : This Chapter deals with the methodological description of the study. It includes the design, objectives, scope, sample design and limitations of the study.

Chapter II : TELECOM SECTOR–AN OVERVIEW : This chapter devotes for giving an overview about DOT and BSNL and the corporatization of Telecom Sector in India and in Kerala.

Chapter III : SUBSCRIBERS’ SATISFACTION–AN ANALYSIS ON PRE AND POST CORPORATISATION : This chapter analyses the satisfaction of Subscribers / consumers during pre and post-corporatization.

Chapter IV : EMPLOYEES’ JOB SATISFACTION – AN ANALYSIS ON PRE AND POST CORPORATISATION: This chapter explains the satisfaction of employees during pre and post-corporatization

Chapter V : INTER AND INTRA STAKEHOLDER SATISFACTION – AN ANALYSIS: This chapter deals with the stakeholder satisfaction
association and similarity with respect to demographical dimensions.

Chapter VI: SUMMARY OF FINDINGS, CONCLUSIONS AND SUGGESTIONS:

This chapter gives the summary of findings, conclusions drawn and suggestion for improvement in stakeholder satisfaction.
REFERENCES


