

CHAPTER II

EVOLUTION OF TELECOMMUNICATION POLICY IN INDIA: AN OVERVIEW

2.1 Introduction

The main focus of this chapter is to present an overview of evolution of India's telecommunication policy towards provisioning and pricing of telecommunication services. This description is essential to understand the choices made by the policy makers on reforming the existing institutions that are involved in the provisioning and pricing of telecom services in India. In addition, this description provides necessary background information for analysing the economic implications of these policy changes. The major changes in the policies and programmes relating to provisioning and pricing of telecom services in India and the development in the institutional framework are overviewed below under (a) Pre-reform period subdivided by i) Pre-independence period (1850-1947), ii) Post-independence and pre-reform period and, (b) Post-reform period. As the trends in access and usage price for the landline services and cellular services will be provided in chapter III and chapter V, respectively, they are not repeated in this chapter.

2.2 Telecom sector in the pre-reform Period

The development and major landmarks in the telecom sector in India during the pre reform period is discussed under two broad heads. They are:

- i) Telecom sector in the pre-Independence Period (1850-1946) and;
- ii) Telecom sector in the post-Independence and pre-reform Period (1947-1990)

2.2.1 Telecom sector in the pre-Independence period (1850-1946)

The telecommunications sector in India has grown since the construction of first Experimental Electronic Telegraph Line between Kolkata (earlier called Calcutta) and Diamond Harbour for East India Company in November 1850. It is one among the oldest networks in the world. In the year 1881, licence was granted to private company to open telephone exchanges at Mumbai, Kolkata, Chennai (earlier called Madras), Karachi and Rangoon. Telephone exchanges at Mumbai (90 subscribers), Kolkata (102 subscribers), Chennai (24 subscribers), Karachi (11 subscribers) and Rangoon (17 subscribers) were opened in the year 1882. In 1885, Indian Telegraph Act, 1885, was enacted entitling the Government of India to be the sole operator or license others to operate telecommunication services (Dossani, 2003). The Plain Old Telephones' (POT) services originally operated by private companies were taken over by the National Government in 1943, and became a public monopoly.

2.2.2 Telecom sector in the post-independence and pre-reform period (1947-1991)

Independent India inherited a telecommunication infrastructure with 321 telephone exchanges, 82,985 direct exchange lines and 537 Public Call Offices (PCOs) from its colonial legacy. Establishment of Indian Telephone Industry (ITI) in 1948 as a Public Sector Unit (PSU) and setting up of Telecom Research Center in 1956 at Delhi were important landmarks in the early stage of development of telecommunication sectors. In November 1960, Subscribers

Trunk Dialing (STD) was commenced between Kanpur and Lucknow. First International Subscriber Dialing (ISD) was introduced between Bombay and London in 1976. In the switching field, first Cross-Bar Trunk Automatic Exchange was commenced in Chennai in February 1967. Indian telecommunications sector in eighties witnessed a major revolution in the field of switching and transmissions due to the introduction of electronics (both analog and digital). Introduction of first digital telex exchange was followed by the first Analogue Electronic exchange at Bombay in March 1982 and April 1983, respectively. Within the union Ministry of Communication, telecom was earlier under the purview of the Post and Telegraph Department. The telecommunication equipment industry was a monopoly functioning as a department of the Government till 1984. In 1984 the private manufacturing of customer premises equipments were allowed. Mahanagar Telephone Nigam Limited (MTNL) - the telecom operating company for Delhi and Mumbai, and Videsh Sanchar Nigam Limited (VSNL) - the operating company for the international telecommunication services were created in 1986. The other positive developments during 1980s were the success of the Center for the Development of Telematics in developing cheap rural branch exchanges and the installation of a wide network of PCOs all over the country, including rural areas with long distance direct dialing facility (Dossani et al, 2003). The slow growth in the telecom sector during the pre-reform years could be attributed to limited resource deployment in the sector and the policy of assigning less priority to the development of telecom infrastructure. The VII plan (1985-1990) had a plan outlay of 3.6 per cent for communication sector, which was the highest among all plan allocations in the pre-reform years. However, during this period the Government realised that inadequate telecommunication services and non-availability of new services like FAX, mobile telephony, radio paging etc. come in the way of Indian business, trade and commerce.

In short, the pre reform status of provisioning and pricing of telecom services are best summarized by Dossani et al (2003): “Annual reports of DOT and its predecessors justified the monopoly on the grounds of Universal Service Obligations (USO). But DOT’s record hardly scintillates: its own reports indicate that teledensity was abysmal 0.8 in 1990; only 140,000 out of 570,000 villages had a phone connection of low quality. Wait time for new connection extended to seven to eight years and quality of service was low. Access charges and long distance tariffs were among the highest in the world”. The main obstacle in the development of telecommunications service provisioning in the pre reform years was the inadequacy of resources and rigidity in regulatory and policy frameworks. Thus, an important objective of reforming India’s telecom sector is to remove these obstacles for growth of the sector. These reforms are described below.

2.3 Telecom sector in the post-reform years (Since 1991)

Since July 1991, Indian economic policy shifted from a protectionist approach to an approach where market dynamics and competition have a role in determining the economic decisions. A larger plan allocation ranging from five to six per cent was provided for the communication sector after introduction of reforms in 1991. In addition, in order to deal with the scarcity of telecom services and paucity of funds faced by the incumbent monopolists and to facilitate economic growth private sector entry in the provisioning of telecom services was allowed in the entire country. To begin with, the value added services were opened to the private sector in 1992. Till 1995, the fixed line network of DOT and MTNL represented the entire telecom network in the country. In the post reform years, the Government of India (or, in brief, the Government) emerged as a policy making body for the telecommunication sector. Private sector participation along with the resultant emergence of competition has been seen as the most expedient and

reliable way of making high quality service available through modern technology at an affordable price. In order to attract more funds for the provisioning of telecom services, corporatisation and de-monopolisation was adopted and the limits of Foreign Direct Investment (FDI) have been raised.

At present, the limits for FDI vary by different manufacturing and service activities in the telecom sector. For instance, a) FDI up to 100 per cent has been allowed in the telecom-manufacturing sector (automatic) and services like email, voicemail, internet without gateways etc (automatic up to 49 per cent) since 2000; (b) 74 per cent FDI is allowed in the case of Radio Paging, Service, Internet (with Gateways) and end-to end bandwidth providers (automatic up to 49 per cent) since 2005; (c) FDI is limited to 74 per cent (automatic up to 49 per cent) since 2005 for the basic, Cellular National/International Long distance service and Value added service.

During the period August 1991 to January 2004, as many as 926 proposals of FDI of Rs. 572601 million were approved, which is second only to Power and Oil Refinery sector and the actual inflow during the same period was Rs. 98725 million (GOI, 2004). Moreover, with a view to nurture competitions in a healthy environment, institutions for regulation and dispute settlements were created. Thus, policies were formulated in order to shape the development in the telecom sector during the post-reform years. As a result, the provisioning and pricing of telecommunication services has been experiencing remarkable changes as a consequence of privatisation, deregulations, corporatisation and globalisation.

2.3.1 Changes in the institutional and policy framework

India being a quasi-federal state there is a constitutional scheme of distribution of power between the Union and State government. While items that are of national importance are put under the Union List, the items of sub national importance are under the State List. In addition, there are certain items that are of joint importance for both the Union and the State government and are put under the Concurrent List. Industry being a concurrent listed item, the industrial policies and programmes, including for telecommunication manufacturing industries, are under the joint jurisdiction of Union and the State government. However, the development of telecommunication services in India is in the Union List. Policies and programmes for the promotion development and regulation of provisioning and pricing of telecom services comes under the jurisdiction of Union government or the telecom service policies in India are formulated at the national level for the country as a whole. The post-reform years have witnessed the development of three major institutions assigned with specific functions affecting the provisioning and pricing of telecom services in India. These institutions could be classified as i) Policy making institution, ii) Regulatory institution and, iii) Dispute settlement institution. The development of telecom service provisioning needs proper coordination between these three institutions.

(i) Policy making institution

Till 1985 telecom was under the purview of post and telegraph department within the ministry of communications and to oversee operation, maintenance and development of telecom services in India. In the year 1985, telecom was constituted into a separate department with a separate board known as Telecom Board. The superstructure of the DOT was modified in 1989 with the upgradation

of the Telecom Board to the Telecom Commission under the Ministry of Communications to formulate policy for approval of the Government and to implement the Government's policy in matters concerning telecommunications. The Telecom Commission was set up by the Government of India with necessary executive, administrative and financial powers to deal with various aspects of Telecommunications. More recently the Union Ministry of Communication has been reorganised consisting of i) Department of Posts ii) Department of Telecommunications and iii) Department of Information Technology, and newly called Union Ministry of Communication and Information Technology.

(ii) Regulatory institution

The telecommunications sector in India needed an independent regulator to prepare the groundwork for liberalisation through initiatives that address interconnection, a level playing field for various service providers, provision of universal service, tariff re-balancing, quality of service and other conditions under which various services would be open to entry for private sector (Verma, 2003). The establishment of a necessary regulatory framework is considered to be essential in providing access to telecommunications services. In fact, the regulatory framework relate to the mechanisms for steering market behaviour regarding pricing, interconnection, service performance and so on. Thus, the functioning of the regulator has implications both for the provisioning and pricing of telecom services. There is a growing consensus that, while privatization can bring about greater improvements, it must be combined with effective regulation (Wallsten, 2001).

The President of India promulgated the Telecommunication Regulatory Authority of India (TRAI) Ordinance on the 25th January 1997. TRAI was

established on January 25th 1997 as an autonomous body with quasi-judicial powers to regulate telecommunication services in India. The creation of TRAI as an independent authority to regulate the telecommunication sector is also one of the commitments that India made while signing the GATS under WTO. TRAI is expected to protect consumers' interests, to induce efficient investment and to sustain fair competition. TRAI is endowed with the task of looking after the regulatory aspects like price capping, rate rebalancing and interconnection pricing. The DOT surrendered its regulatory role to TRAI and retained policy making, licensing and operative powers within its functional jurisdiction. In matters like issuing and revoking licenses, TRAI was given a recommendatory role. TRAI started functioning from 20th February 1997.

Since its inception, TRAI initiated a number of important steps such as tariff rebalancing for basic service, estimation of the cost of various unbundled network elements, issuing a regulation on interconnections, fixation of interconnection user charges with the access deficit charges, developing a National Numbering Plan (NNP), fixation of the parameters for the quality of services, funding of Universal Service Obligation (USO), introduction of unified licensing scheme, to mention only a few.

In order to ensure entry of private providers for the provisioning of telecom services a transparent, participatory and predictable policy framework was the need of the hour. Through the wide circulation of consultation papers on several issues distributed well in advance, followed by open house discussions, TRAI has been trying to build consensus among the various service providers and hence, setting an example for many other regulators.

(iii) Dispute settlements

The TRAI act was amended in 2000, following which TRAI's power to adjudicate disputes has been vested with the Telecom Disputes Settlement and Appellate Tribunal (TDSAT). TRAI has a recommendatory role in matters such as timing of introduction of new services and terms and conditions of licenses to the service providers. In addition to this, TRAI is also endowed with many mandatory functions like fixing tariffs, ensuring compliance with terms and conditions of licenses and establishing and ensuring standards of service to be provided by service providers. On the other hand, TDSAT has been given the powers to adjudicate any dispute between a service provider and group of consumers. Vesting the TDSAT with powers of dispute settlement and appellate functions, would mean that TRAI does not adjudicate or sit in the judgment on issues on which it made recommendation in the first place (Ganesh, 2001). TDSAT also has the jurisdiction to hear and dispose off appeals against any direction, decision or order of TRAI. Decisions of TDSAT can be appealed only in the Supreme Court of India. This is expected to speedup the settlement of dispute between various agents involved in provisioning and pricing of telecom services in India.

2.3.2 De-monopolisation, Privatisation and Corporatisation

The policy of de-monopolisation, privatization and corporatisation is intended to foster competition in telecommunication service provisioning. In particular, the Government looked for privatisation. The main objectives of privatisation in India's telecom sector are as follows:

- (1) To deal with the scarcity of telecom services and paucity of funds faced by the incumbent monopolist for the provisioning of such services.
- (2) To provide a competitive and affordable price for the telecom users.
- (3) To induce rapid expansion in the provisioning of various telecom services.

In addition, Government's decision to become a member of General Agreement on Trade in Services (GATS) under the World Trade Organisation (WTO) has implications for provisioning and pricing of telecommunication services in India. In fact, the GATS Annex on Telecommunications and Reference Paper on pro-competitive regulation, together with the GATS' Most Favoured Nation (MFN) obligates certain commitment for initiating domestic reforms including pro-competitive regulatory practice and provides a framework for the transition from monopoly to competitive markets (Roseman, 2003).

In the post-reform years, the entire telecom equipment industry has been de-licensed (i.e. prior license is not required) and de-reserved (i.e. no more exclusively manufacturing by small scale industries) [GOI, 1997]. Further, the de-monopolisation of the production (manufacturing of telecom equipments by private sector) was allowed to meet the scarcity in the telecommunication equipments. So far as telecom services are concerned, the Value Added Services (VAS) were open to the private sector in 1992. Many private players participated in the provisioning of the value added services since then. For the first time, in January 1995, open tenders were invited to give licenses to private parties for providing basic telecom services. One private operator was proposed to be licensed in each telecom circles across the country. Thus, a duopoly competitive structure was introduced in each circle. While the private (mobile as well as fixed) telephone companies operate circle wise, the incumbent DOT became a

countrywide player providing both basic and mobile telephony¹. Companies registered in India were licensed to install, operate and maintain these services. The licensees were guaranteed a duopolistic structure when one private player was allowed to compete in each circle with the incumbent, although mobile and wireline services were considered as separate services.

In addition, the opening of the national and international long distance calls for competition is yet another policy shift that has taken place in the post-reform years. It is only recently the inter circle long distance calls (since, 13th August 2000) and international long distance calls (since, 31st March 2002) have been opened to competition. As a result of these changes, the usage price has come down drastically. Such introduction of competition has been a welcome step as the consumers have been able to reap the benefits of choice of services. On the other hand, pressure has also been built up upon the service providers to improve efficiency in the provisioning of telecom services and provide it at an affordable price.

Bharat Sanchar Nigam Limited (BSNL) was formed on 1st October 2000 by corporatisation of the erstwhile Department of Telecom Services and Department of Telecom Operations. BSNL is a 100 per cent Government of India owned. It is the largest Public Sector Undertaking (PSU) in the country providing all types of telecom services. This includes provisioning of all types of telephones and bandwidth on demand, Internet, long distance telecom service, Intelligent Network etc and provision of at least one public telephone in every village in the country. It also aims at providing world-class telecom services ranging from plain

¹ Initially in 1992 the mobile telephony was considered as a value added service and was licensed only to the private players. BSNL introduced cellular mobile telephony (GSM based) and mobile telephone based on WLL technology in its network during the financial year 2002-03.

telephone service to all types of value added services at affordable prices while ensuring operation with customer orientation. BSNL is working towards the following objectives:

- a) To provide state of the art technology for all types of telecom services in the country.
- b) To face the competition and excel in its operations in the Indian/overseas markets by developing proper marketing strategies and entering into joint ventures.
- c) To emphasise customer orientation in all its operations.
- d) To provide all types of telecom services at affordable rates in every nook and corner of the country, including the rural areas.
- e) To fulfill the telecommunication requirements for the growth and development of business enterprise in the country.

In fact, there are reasons to believe that these market-oriented reforms might not be able to provide a sufficient level of connectivity to the poorest and most isolated rural areas. The gaps left by the private sector can only be remedied by public intervention. To a large extent while this responsibility lies with BSNL, the required policy and regulatory support is also essential to ensure this.

The structure of telecom service provisioning in India is divided into four circle categories. Under each category there are varying numbers of circles. Each of these circles is divided into various telecom districts. Under each telecom district there are rural and urban exchanges (private or public) providing landline and/or mobile telecom services. The importance of these structures for the provisioning of telecommunication services will be elaborated in chapter III. In brief, there are 26 Telecom Circles and 2 Metro Districts for the basic telephony

services. BSNL the public sector operator operates in all the circles except in two metro districts, namely, Mumbai and Delhi. BSNL's network covers 36,618 exchanges and 41.65 million DELs as on March 31, 2004 (DOT, 2004). Further, there are 78 licences issued to 20 companies for 23 service areas/circles (see Appendix 2.1) with a maximum of 4 licences in a service area for the provisioning of cellular mobile telephone services (DOT, 2004). The number of cellular subscribers was 26.15 million by the end of March 2004, in addition to 7.55 million WLL (Mobile) subscribers. Further, about 522347 villages have been covered with VPTs by the end of 2004 (DOT, 2004).

2.3.3 Telecom Policy in India

Development in the telecom sector during post reform years and the emerging challenges due to introduction of private provisioning of telecom services and competitions need comprehensive policy guidelines. The major telecom policies that were announced during the post-reform years are documented below.

New Telecom Policy, 1994

The growing realisation that provisioning of reliable telecommunication services is essential for economic development resulted in the requirement for a comprehensive and forward looking telecommunication policy. In order to create an enabling framework for provisioning and pricing of telecommunication services in India, the Government announced a National Telecom Policy, in 1994. The main objectives of NTP 1994 include availability of telephone on demand, provision of world-class service at reasonable prices, ensuring India's emergence as a major manufacturing/export base of telecom equipment and universal availability of basic telecom services to all villages. It is worth noting here that,

NTP 1994, totally dismissed the idea of privatising the incumbent companies and made it clear that the much needed private investment will play a supplementary role in the efforts of DOT in providing basic services.

NTP 1994 had an objective of providing at least one PCO per 500 urban population and coverage of all 6.1 lakh villages by 1997. DOT could achieve only an urban penetration of one PCO per 522 populations and has been able to provide telephone coverage to only 3.1 lakh villages by the end of the target period. The target was revised to be completed by the end of the Ninth Plan in 2002. Public providers as well as the licensed private operating companies were jointly held responsible for the accomplishment of the revised target. As per the terms of the license agreement, private operating companies are to provide a minimum of 10 per cent Direct Exchange Lines (DEL) as Village Public Telephones (VPTs)².

Internet Policy, 1998

In November 1997, the Government of India cleared the Internet Privatisation Policy, [Prior to this VSNL was the sole Internet Service Providers (ISP) in India] aimed at increasing the number of internet users (Netizens) in the country. The policy for privatisation of internet service as per the recommendation of the Bimal

² Studies, such as, Chowdary (2000) have questioned the technical and operational feasibility for the private telecommunication companies (P-telcos) to put up VPTs and provides alternative suggestions for provisioning and funding of VPTs. These suggestions include suggestion of contributing 5 per cent of revenue to a Universal Service Fund by every telephone company including BSNL. It would be economical, in terms of subsidy and capital investment if the obligation is placed only on BSNL. However the Private telecom companies should be allowed to install VPTs if they so desire. A committee of economists and telecom engineers must workout the deficits in the provision and operation of VPTs. The extent of deficit incurred by the providers may be reimbursed from the Universal Service Fund (Chowdary, 2002). Another alternative suggestion was to invite bidding for VPTs and choose the one that bids for least annuity payment (subsidy). The choice of technology should be left to the access provider (Chowdary, 2002).

Jalan's Implementation Committee (comprising of inter-departmental members) report was announced in November 1998. The committee was set up to suggest ways of encouraging internet usage in the country (Gupta, 2000). The Internet Policy 1998 has the following features:

1. Any company registered in India under the Companies Act 1956 is eligible to set up an ISP.
2. The foreign equity holding is limited to 49 per cent
3. License period would be for 15 years. There is no licence fee for the ISPs for the first 5 years and Re 1 thereafter. However, the ISPs were required to pay a processing fee of Rs 5000/- only.
4. There will be separate licenses for different areas. The three categories are: 'A' category for whole of India, 'B' for 20 telecom circles including Delhi, Mumbai, Kolkata, Chennai, Ahmedabad, Bangalore, Hyderabad, Pune, and 'C' category covering secondary switching areas.
5. A company can get any number of licenses and there is no limit on the number of ISP licences that can be granted in a particular service area. Moreover, two ISPs are permitted to interconnect among themselves.
6. Bank guarantees have to be furnished by the ISP.
7. International connectivity should be through the gateways, VSNL or authorised organisations. Private ISPs have to obtain security clearances. However, direct connectivity between two separately licensed ISPs shall be permitted.
8. ISPs are free to fix their own tariff, but may be reviewed by TRAI.
9. Telephone on the internet is not allowed.

This policy was liberal without any entry barrier, pro-competition and customer friendly. Later on, internet telephony was partially allowed when calls

from Personal Computer (PC) to PC was made legal. Moreover, an international call from PC to phone was allowed. But calling from a PC to Telephone within the nation is still not made legal. Even when Voice over Internet Protocol Telephony (VoIP) was not allowed, many were using it (Ramu, 2001). The government through the proposed NTP 2005 intends to free up use of VoIP for domestic telephony (Rastogi, 2006). Allowing VoIP is expected to have positive implications for the provisioning and pricing of telecom services.

New Telecom Policy, 1999

Apart from the shortfall in the realisations of the target set in the NTP-1994, the recent developments in telecommunications in the form of convergence of both the markets and the technologies allowing operators to use their facilities to deliver certain services that are reserved for other operators necessitated a re-examination of the legal framework. The Government declared the NTP (1999) with the following major objectives:

- Strive to provide universal service to all uncovered areas including rural areas.
- Strive to provide high-level services capable of meeting the needs of the country's economy.
- To create a modern and efficient telecommunication infrastructure taking into account the convergence of information technology, media, telecom and consumer electronics.
- Convert PCO's wherever justified into Public Tele-Info Centers having multimedia capabilities like ISDN services, Remote database access, Government and community information systems.
- To provide equal opportunities and level playing field for all service providers in rural and urban areas.

- Achieve telecommunication coverage to all villages in the country and provide reliable media to all exchanges by 2002.

However, NTP-1999 also makes it clear that the functions of licensor and policy maker would continue to be discharged by the Government in its sovereign capacity. Since the declaration of the New Telecom Policy a number of follow up actions have also been taken in terms of policy changes and introduction of new laws to materialise the objectives enshrined in NTP 1999.

Provision for Interconnection

The provisioning for interconnection and cost based interconnection pricing is essential for encouraging new entry³. The incumbent operator has an incentive to limit competition by restricting physical interconnection or charging a price so high that new entrants cannot operate profitably merely by connecting a set of new customers to the existing network (GOI, 1996). Hence, a 'fair and reasonable' interconnection policy is essential for fostering competition in telecommunication market. Prior to NTP 1999, direct interconnection between service providers was not a policy; instead, two networks had to be connected via the incumbent operator, that is, DOT. This arrangement was combined with certain charges for interconnection that were, in several instances, above cost-based interconnection charge (Matto et al 2003).

³ Although lower interconnection cost makes new entry profitable and induce greater competition, it is a mixed blessing. When interconnection costs are low, the new entrant has less incentive to build its own network, to lay its own cables, and to establish new wireless links where existing network is already well developed since duplication is considered undesirable (GOI, 1996).

Broadcasting and Cable Services

Broadcasting and Cable Services have also been included in the definition of telecommunication service since 9th January 2004. This would help to address the problem that is arising due to convergence in technology by bringing broadcasting and cable services under the purview of TRAI. Only when all the competing telecom services are under the purview of TRAI a common service quality standard could be provided. Allowing technology that meets prescribed service quality standards can be permitted. Technology and delivery platform-neutrality need to be an integral part of new telecom policy.

Regulation on Quality of Service

Service quality, a major problem in the past, has improved significantly, but there is ground left to cover as India still lags behind many other countries in this regard, even within the developing world (Rastogi, 2006). Competition is the most effective agent of change in various aspects of provisioning and pricing of telecom services. Regulation of service quality is essential to ensure that the falling access and usage price due to competitions is not achieved at the cost of service quality. Based on the Quality of Service Regulation for Basic and Cellular Services issued in July 2000, TRAI continued to monitor the Quality of Service (QOS) of basic and cellular service providers on the basis of quarterly performance reports received from them. TRAI has also prescribed the minimum standard of quality of service to be achieved by the various service providers. This would ensure that the telecom service providers maintain a minimum quality standard while providing these services at a competitive price.

Unified Licensing Regime

A unified licence can deal with the converging technology, carriage, service, and platform. Though the transition would be difficult it is expected to bring with it economic benefits for India through a larger demand for telephony, broadband, Television, and other services if they can be delivered at right prices (Rastogi, 2006). Introduction of a unified service license regime enables the service provider to offer any or all services using technologies of their own choice. Such a regime would replace the present service wise license regime. As per TRAI's recommendation the Government has moved towards a unified licensing regime starting with the introduction of an unified access-licensing regime for basic and cellular services in October 2003. According to the provision under Unified Access License the operators are free to offer any access technology, whether landline or wireless. With this act India has emerged as one of the very few markets in the world where there is competition between two major standards of providing mobile services namely Global System for Mobile (GSM) and Code Division Multiple Access (CDMA) along with the basic landline service.

Communication Convergence Bill 2001

Keeping in view the rapid convergence of telecom, computers, television and electronics, the NTP 1999 has suggested for preparing a comprehensive statute to replace the Indian Telegraph Act 1885. Accordingly the Communication Convergence Bill 2001 was introduced in Lok Sabha. The Bill was expected to promote, facilitate and develop the carriage and content of communications in an orderly manner. However, the bill lapsed on account of the dissolution of the thirteenth Lok Sabha.

However, TRAI (2005) observes that for a quicker growth of the sector, consistent with latest emerging technologies, there is a need to adopt full unified licensing or convergence approach. In this regard, TRAI has already recommended to the Government of India to introduce a unified licensing regime for all telecom services. Such a regime, according to TRAI, would facilitate service providers to find new ways to reach customers for different services, create market for the future and new revenue streams.

Policy for Universal Service Obligation

Based on the realisation that access to telecommunication services is the key to development and growth, and the expectation that Information and Communication technologies would offer new and exciting opportunities to those who have access to them, the Universal Service Obligation Policy was formulated by the Government of India. As per the guideline provided in NTP 1999, the Universal Service support policy came into effect from April 2002 and the Universal Service Obligation Fund (USOF) was established in June 2002. The Indian Telegraph (Amendment) Act, 2002 was passed in order to give a statutory status to the USOF. The fund is to be utilised for meeting the Universal Service Obligation covering public access through public or community telephones and provision of individual household telephones in identified net-high cost rural/remote areas. The rural telephony services provided under the aegis of USOF involve payments from the fund for both capital costs and maintenance and operational costs, through an open and transparent bidding system (GOI, 2005). The main feature of this fund is that the credit to the fund shall be through parliamentary approval and the balance to the credit of the fund will not lapse with the end of the financial year. The USOF has come to be statutorily recognised after the Amendment to the Indian Telegraph Act in December 2003.

The license conditions require the providers to pay a portion of license fee, equal to five per cent of the Adjusted Gross Revenue to be used for the creation of a USOF. The support from USOF will be provided to meet net cost (i.e. cost minus revenue) of providing the universal service. This would ensure provisioning of public access telephones or community telephones meant for public use and individual household telephones in net high cost rural/remote areas.

The resource for implementation of USO is being raised through a Universal Service Levy (USL) which is presently fixed at five per cent of the Adjusted Gross Revenue (AGR) of all telecom service providers except the pure value added service providers like the Internet, Voice Mail and E-Mail service providers.

For the purpose of administration of USOF a separate attached office of DOT has been set up headed by an officer in the rank of secretary. The following power and functions of the USOF administrator have been prescribed by the Indian Telegraph (Amendment) rules 2004 that have implications for the implementation of USO.

1. Formulate bidding procedures including its terms and conditions
2. Evaluate the bids called for the USO.
3. Enter into agreement with the universal service providers.
4. Settle the claim of universal service provider after due verification, and make disbursements accordingly from the fund.

Broadband Policy

The Government of India announced the Broadband Policy in October 2004 wherein broadband has been identified as an ‘always on’ data connection supporting interactive services including internet access with minimum download speed of 256 kbps per subscriber (GOI, 2005). By the end of the year 2010, the policy aims at targeting 20 million broadband subscribers and 40 million Internet subscribers.

2.4 Chapter summary

This chapter presents an overview of the evolution of telecommunication policy in India since independence with a special focus on new policy initiatives during the post-reform years. Further the origin and development of various institutions involved in the provisioning and pricing of telecommunication services in India along with their functions and responsibilities are explored. In addition, the timing and sequencing of various policy reforms during the post-reform years are also highlighted. It is evident from this chapter that the telecom sector in India has undergone remarkable policy reforms since 1990s. The description in this chapter provides with policy background for detailed analysis of provisioning and pricing of telecom services during post reform years in the subsequent chapter of this thesis.

Appendix

Table A2.1: Mobile service areas in India

Circle A	
Andhara Pradesh	
Gujarat	+ (Dadra & Nagarhaveli)
Karnataka	
Maharashtra	- {Mumbai+New Mumbai (Mumbai) + Kalyan}
Tamil Nadu	{Chennai+MEPZ)+Minjur++Mahabalipuram} + Goa
Circle B	
Haryana	-(Faridabad & Gurgaon)
Kerela	+ Lakshadweep
Rajasthan	
Punjab	
Madhya Pradesh	+ Chatisgarh
UP(E)/UP(W)	- (Ghaziabad and Noida)
West Bengal	- Kolkata + Sikkim
Circle C	
Andaman and Nicobar	
Assam	
Bihar	+ Jharkhand
Himachal Pradesh	
Jammu & Kashmir	
North East	Arunachal+Tripura+Meghalaya+Mizoram+Nagaland+Manipur
Orissa	
Metros (M)	
Delhi	Includes Faridabad, Gurgaon, Ghaziabad and Noida
Mumbai	New mumbai + Kalyan
Kolkata	
Chennai	Includes Minjur, Maraimalai Nagar Export Promotion Zone (MEPZ) & Mahabalipuram

Source: DOT (2002)