Chapter No. 03:

Rural Development: Government ICT Policies And Programs.

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Introduction:

Rural poverty in India is a complex phenomenon and there obviously cannot be one dominant approach for its alleviation. Many experiments in India seem to have succeeded in alleviating poverty in smaller clusters of villages. These experiments were concerned with improvements in micro level planning, effective supply of credit to the poorest of the poor, improved management of government-run poverty alleviation programs, and the work of some Non-Governmental Organizations in building networks of self-help amongst the rural poor. Most succeeded because of grass root intervention. New policy initiatives taken from time to time have been able to provide greater resources for poverty oriented programs, education, health or family welfare.¹

The advantages of ICTs have been recognized worldwide and national policy makers have realized the potential of these to restructure organizations, promote collaboration, increase democratic participation of citizens, improve the transparency and responsiveness of governmental agencies, make health care more widely available, foster cultural creativity and enhance the social integration of individuals with different abilities and groups of different cultural background.² The policies crafted should aim at programs that promote economic and social growth in rural societies. ICT is seen as a way to promote rural development, improve the skills of youth and prepare them for the global economy and information society.
Developing countries are increasingly aware that they have a major responsibility for rural development but lack the capacity and solutions to meet the challenge. While on the one hand the agricultural yields in developing countries continue to decline, despite technological innovations, their populations continue to expand beyond food production capacities. This poses a great challenge for developing countries. Policy makers thus have to identify possible and appropriate solutions that ensure rural development.³

Rural people constitute the greater part of the population of developing countries and often lack access to basic needs such as water, food, education, health care, sanitation and security, leading to low life expectancy and high infant mortality.⁴ These conditions, considered harsh by the majority of the rural population, result in their migration into urban areas, often in search of formal employment, as the only option for survival. The urban slums populations in which they find themselves are often not secure either. Although this whole area is still controversial, some of its techniques are not controversial and developing countries should reap the benefits of technology.

The information revolution is another intervention with the potential to ensure that knowledge and information on important technologies, methods and practices are put in the right hands. The relevance of this revolution is supported by who pointed out that the least expensive input for rural development is knowledge.⁵
Knowledge and information are basic ingredients and are essential for facilitating rural development and bringing about social and economic change. The purpose of rural development is to improve the standard of living of the rural population is multi-sectoral including agriculture, industry, and social facilities. Rural communities require information inter alia on supply of inputs, new technologies, early warning systems (*drought, pests, and diseases*), credit, market prices and their competitors. The success of the Green Revolution in Asia and the Near East indicates that giving rural communities access to knowledge, technology and services will contribute to expanding and energizing agriculture.

Traditional media and new ICTs have played a major role in diffusing information to rural communities, and have much more potential. There is need to connect rural communities, research and extension networks and provides access to the much needed knowledge, technology and services. Studies on information systems serving rural communities have focused on specific sectors such as agriculture or health, instead of covering the rural community needs in a holistic manner. Rural information systems must involve rural communities and local content must be of prime importance. Traditional media have been used very successfully in developing countries, and rural radio in particular has played a major role in delivering agricultural messages. Print, video, television, films, slides, pictures, drama, dance, folklore, group discussions, meetings, exhibitions and demonstrations have also been used to speed up the flow of information. New ICTs, however, have the potential of getting vast amounts of information to rural
populations in a more timely, comprehensive and cost-effective manner, and could be used together with traditional media.⁶

Table No. 3.01: ICT Policy For Development:

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<thead>
<tr>
<th>Growth Factors</th>
<th>Types of Development</th>
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<tr>
<td></td>
<td><strong>Economic Development</strong></td>
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<tr>
<td>Knowledge Creation and Technological</td>
<td>Support of invention of new products</td>
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<td>Innovation</td>
<td>and services in targeted clusters;</td>
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<td></td>
<td>research in agriculture, tourism etc.</td>
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<td><strong>Social Development</strong></td>
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<td></td>
<td>Increase knowledge and best practices</td>
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<td>information on education, adult literacy, and modern farming practices, etc.</td>
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<td></td>
<td><strong>Educational Development</strong></td>
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<td></td>
<td>Increase pedagogical knowledge and best practices on teaching for understanding and problem solving and on</td>
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<tr>
<td>Organizational Networking and Knowledge Sharing</td>
<td>Develop participation of SMEs in light industry, tourism, entertainment, and agriculture. Support networking between urban, rural, and regional resources and markets. Expand</td>
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<td></td>
<td>Develop community knowledge sharing and collaboration; open government and education organizations to community and parent participation.</td>
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<td></td>
<td>Decentralize decision making; foster teacher professional development communities and knowledge sharing, particularly between urban and rural schools.</td>
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<td>Category</td>
<td>Initiative</td>
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<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>Deepening of Physical Capital</td>
<td>ICT infrastructure and support the deepening of private capital, targeting e.g. agriculture, tourism, light industry,</td>
</tr>
<tr>
<td>Improvement of Human Capital</td>
<td>Upgrade labor; develop technology use, application, and production skills.</td>
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<tr>
<td>Monitoring and Evaluation</td>
<td>Monitor effectiveness of government policies on key economic indicators.</td>
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</table>


Ministry of Communication and Information Technology:

E-Development of India is the engine for transition into a developed nation and an empowered society. E-Development of India through multi pronged strategy of e-infrastructure creation to facilitate and promote e-governance, promotion of Electronics & Information Technology- Information Technology Enabled Services (IT-ITEs) Industry, providing support for creation of Innovation / Research & Development (R&D), building Knowledge network and securing India's cyber space.7

Objectives of the Department of Information Technology:

- **E-Government**: Providing e-infrastructure for delivery of e-services.
- **E-Industry**: Promotion of electronics hardware manufacturing and IT-ITeS industry.
- **E-Innovation / R & D**: Providing Support for creation of Innovation Infrastructure in emerging areas of technology.
- **E-Education**: Providing support for development of e-Skills and Knowledge network.
- **E-Security**: Securing India's cyber space.

Functions of Department of Information Technology:

The following are the various functions of Department of Information Technology:

- Policy matters relating to Information Technology, Electronics and Internet.
• Initiatives for development of Hardware / Software industry including knowledge based enterprises, measures for promoting Information Technology exports and competitiveness of the industry.

• Promotion of Information Technology and Information Technology enabled services and Internet.

• Assistance to other departments in the promotion of E-Governance, E-Infrastructure, E-Medicine, E-Commerce, etc.

• Promotion of Information Technology education and Information Technology-based education.

• Matters relating to Cyber Laws, administration of the Information Technology Act. 2000 and other Information Technology related laws.

• Matters relating to promotion and manufacturing of Semiconductor Devices in the country.

• Interaction in Information Technology related matters with International agencies and bodies.

• Initiative on bridging the Digital Divide, Matters relating to Media Lab Asia.

• Promotion of Standardization, Testing and Quality in Information Technology and standardization of procedure for Information Technology application and Tasks.

• Electronics Export and Computer Software Promotion Council.
• National Informatics Centre (NIC)

• All matters relating to personnel under the control of the Department.

**Development Programs and Their Implementation:**

Some of the causes of extreme poverty are: inadequate infrastructure such as roads and electricity; inadequate access to government functionaries, health workers, primary school teachers, agricultural extension workers; and poor resource base for productive economic activity. Various programs and activities have been taken up in order to address these causes, including:

• Provision of basic infrastructure in rural areas, e.g., setting up new schools, health facilities, rural roads, drinking water supply, and electrification;

• Schemes aimed at promoting rural industry, increasing agricultural productivity and providing rural employment;

• Providing productive resources to individual families below the poverty line to increase family income; and

• Providing food items at subsidized prices through the public distribution system to shield the poor from price rises.

These programs are implemented through a vast network of government officials at central, state, district, and *taluka* levels. Legislators, political activists, elected representatives, and the
public are the focal points for creating demands on the administrative system. In recent NGOs are also playing a key role in providing social services. At central and state levels, policies are laid down and resources are allocated. District level officials representing the middle rung of administration are responsible for micro-planning and monitoring. Actual implementation of most programs is done by taluka level officials.

**Computerization at the Rural Level:**

The earliest recognition of the potential of computers in rural development in India came through applied research of some academics during 1975-80. A general awareness of the utility of computers was created in the bureaucracy through seminars and training programs. This was followed by a few pioneering experiments in the use of computers by district administrators. By 1988, about 15 districts in India had experimented with using personal computers. Some districts were using micro-computers to produce IRDP monthly reports. An interesting application in the health sector was developed at a primary health center training school located in a taluka. In this project a PC was used to store data on the couples in the reproductive age in the taluka. The system demonstrated how monitoring a program could be more effective once access to detailed data was available. The system also allowed supervisors to develop detailed activity plans for workers outlining which couples should be targeted in a given period. A few districts used a PC for monitoring stocks in their public distribution system. At least one NGO installed a PC in its office to map the resources of a district in Rajasthan. Workshops and
seminars were conducted around these experiences. Most of these meetings cited potential benefits but implementation difficulties were ignored.¹⁰

Most early adopters of IT were district administrators from the elite Indian Administrative Service. Many service officers were young and could act independently. However, there were hardly any applications in other important departments such as agriculture, health, or public works where the district level heads are older and are used to executing orders received from their directorates at the state level.

**Government Program for District-Level Computerization:**

During the period 1978-1985, when most of the work discussed earlier was done, a major problem in spreading the use of computers was the need for significant investment in hardware and software. By 1986-87 prices of computers had begun to decline and the availability of locally produced computers had improved. Left to their own momentum, perhaps 50-100 districts would have initiated computerization during 1985-90. When *Rajiv Gandhi* came to power in 1985, the government of India decided to force the pace of IT use at the district level. The National Informatics Centre (NIC)—a central government department was—chosen to implement a national program called District Information System of National Informatics Centre (DISNIC) to computerize all district offices for which free hardware and software was offered to states.¹¹ NIC quickly built up its manpower capability to 2000 technical staff to undertake the challenge. By 1990, each district
computer was connected to a state computer through a local dish antenna and a satellite communication network. The state computer in turn was connected to a computer in New Delhi. This network is called NICNET.\textsuperscript{12} Software application development was done centrally for about 15 standardized applications for each Information Technology and Development: Foundation and Key Issues district. It was expected that in these applications databases would be created at the district level from which data could be retrieved for central planning. Memorandum of understanding were signed by NIC with each state government under which state-level cells manned by NIC staff provided support to district level computerization. NIC was also expected to provide two computer professionals to each district to implement the software.

In a separate program called Computerized Rural Information Systems Project (CRISP), the rural development ministry and NIC collaborated to develop software for planning and monitoring of IRDP. A PC was provided to each District Rural Development Agency (DRDA) to run the software. State governments were asked to purchase equipment and provide training for their district level officials. Subsequently, the implementation of the DRDA computerization was also handed over to NIC.

What is noteworthy is that the approach taken by NIC for its district computerization program was completely centralized. The conception of the idea, spelling out of objectives, and choice of applications were all done by NIC. The focus was on developing
databases, modeling techniques for planning at the district level, and providing relevant information for central planning. The information needs were assessed by a group located in New Delhi and have been treated as standard for all the districts in India.\textsuperscript{13} The software design and specification of databases were also standardized and originated in New Delhi. The initial recruitment of personnel and their placement in districts were also done centrally. During the last four years state-level center had been set up to provide implementation support to district NIC functionaries. In the CRISP program, there were a few elements of decentralization. Purchases of hardware and training of district level functionaries were left to state initiative. No personnel were provided to district DRDAs. However, the design of the software which included the assessment of required information specifying the type of databases, and the reporting system, were all centralized.

\textbf{Laws Governing ICT:}

The present laws governing ICT have been derived from the Indian Telegraph Act 1885, Indian Wireless Telegraphy Act 1933, The Telegraph Wire Unlawful Possession Act 1950 and the Cable Television Networks (Regulation) Act 1995. In the recent past the Telecom Regulatory Authority of India Act 1997 (TRAI Act) was enacted, paving way for the constitution of the first ever telecom regulatory body in India, known as Telecom Regulatory Authority of India (TRAI). The TRAI apart from telecom has recently been entrusted with the task of regulating and drafting of policies relating to broadcasting sector.\textsuperscript{14}
The Government of India in 1998, with a view of promoting ICT industry, formed a National Task Force on Information Technology and Software Development. The Task Force was assigned the task of drafting national policy on IT and also to look into the issues relating to privacy and data protection.

The second phase of revolution came with the unveiling of the New Telecom Policy 1999. To address the disputes arising out of new regulatory framework, a Telecom Disputes Settlement and Appellate Tribunal (TDSAT) was setup. TRAI Act governs the functioning of TDSAT. Appeals of TDSAT rulings can be made with the Supreme Court of India.

The growth of IT industry and e-commerce, lead the government to enact the Information Technology Act 2000 (IT Act 2000). The issues relating to cyber crimes, data security, digital signatures, electronic commerce etc are covered under the IT Act 2000. The IT Act 2000 grants legal sanction to e-commerce transactions and also prohibits breach of confidentiality and privacy.

The Department of Telecommunications (DoT), under the Ministry of Communications and IT, acts as a licensing authority and also allocates telecom frequencies. All the decisions relating to clearance and setting up of a BPO unit under Other Service Provider category are taken by DoT. The policies regarding interconnection, unified licensing etc. are drafted by TRAI and are sent to DoT for final approval.
Data Protection / Data Privacy:

In India, the Information Technology Act, 2000 is the act, which governs the cyberspace. The act tries to cover the issues relating to electronic transactions, digital signatures, hacking and network service providers. The act further tries to resolve the issues relating to cyber jurisdiction and also applies to offences and contravention committed outside India by any person irrespective of his nationality.\textsuperscript{15}

The act is silent on the issues relating to access and sharing of personal information as is applicable under data privacy laws of many countries. There are no specific provisions, in the current act, which relate to data privacy of individuals. With advancement in technology, the circumstances and transactions as mentioned in the IT Act 2000, may not be able to provide protection and remedy to the companies and individuals carrying on their business activities relating to personal data. Thus it is left to the freewill of the parties to get into data privacy agreements. This primarily affects the outsourcing / BPO companies from America and Europe, where they have a law providing protection to personal data. The Government of India has shown its concern over the issue and has very recently established a committee to suggest amendments in the IT Act 2000 with a focus on data privacy and protection. The law as expected would be based on EU’s Data Protection Directive. The committee is submitted its report to the government.
The Licensing Regime:

Earlier in 2003, based on the recommendations of TRAI, DoT implemented the Unified Access Service License (UASL) at circle level. This change from service-specific licensing to unify licensing is another progressive step indicative of the evolution of the sector. Under the existing policy, operators holding UASL may provide both cellular and basic services within their specified service area without obtaining separate licenses. The license holders are given an option either to migrate to UASL or to continue with their original licenses. All the new licenses under the existing regime are categorized as UASL. Under the existing regime, the license holder can only provide unified services in its licensed circle.16

The TRAI has very recently issued draft recommendations on Unified Licensing, which are similar to international practice and are already in place in many countries including EU. The objective of the Unified Licensing Regime is to simplify the procedure of licensing in telecom sector, ensure flexibility and efficient utilization of available resources. This also includes recommendation for allowing license holder to provide service throughout the Indian Territory irrespective of its circle. The licenses shall be granted in three different categories.

- **Unified License**: All Public networks including switched networks, irrespective of media and technology, capable of
offering voice and/or non-voice (data services) including Internet telephony shall be covered under this category.

- **Class License**: All services including satellite services, which do not have both ways connectivity with Public networks, shall be covered under Class license.

- **Licensing through Authorization**: This category will cover the services for provision of passive infrastructure and bandwidth services to service provider.

**Spectrum Allocation:**

Wireless Planning and Co-ordination (WPC) wing under DoT is responsible for allocation and management of spectrum. WPC while allocating spectrum follows the National Frequency Allocation Plan 2002. The spectrum under the existing plan is allocated on first-cum-first served basis. The TRAI has recently published a consultation paper on spectrum allocation, efficient utilization and spectrum pricing. The paper is published with an aim to form consensus on decongesting networks by enhancing the spectrum availability and freeing up some portion of spectrum reserved for defense and security uses.17

**National Long Distance (NLD):**

The New Telecom Policy 1999 provides for the issuance of licenses for NLD on a non-exclusive basis. The term of such NLD license for inter-circle Long Distance operations within Indian
territories is an initial period of 20 years, which can be extended for a further period of ten years. The applicant must be an Indian company, registered under the Companies Act 1956. The total foreign equity in the applicant company must not exceed 74 per cent at any time during the entire license period. Investment in the equity of the applicant company by an NRI / OCB / International funding agencies will be counted towards its foreign equity. The applicant company is required to have a minimum paid up equity capital of Rs. 250 Crores on the date of the application and must submit the best proof thereof along with the application for license. The promoters of Applicant Company must have a combined net worth of Rs 2500 crores. The net worth of only those promoters is counted who have at least 10 per cent equity stake in the total equity of the company. The constituent's having at least 30 per cent of total equity in the applicant company must have an experience in the telecom sector. 

**International Long Distance (ILD)**

There is no restriction on number of operators for providing International Long Distance Service. The DoT requires the applicant to be an Indian company, registered under the Companies Act 1956. The license for ILD service shall be issued on non-exclusive basis, initially for a period of 20 years, with automatic extension of the license for a further period of 5 years subject to satisfactory performance in accordance with terms & conditions of the license particularly with regard to the Quality of Service (QoS) parameters. The applicant company is required to have a net worth of Rs 25 crores. The net worth shall mean as the sum total, in Indian rupees, of paid up equity capital and free
reserves. The net worth of promoters shall not be counted for determining the net worth of the company for this purpose. The FDI limit in ILD is also 74 per cent.19

**VPN Services / Closed User Groups:**

The Licensing conditions of Internet Service Providers (ISP) have been amended by the DoT, thereby allowing them to provide managed ‘Virtual Private Network’ services. The annual license fee is fixed at 8 per cent of the Gross Revenue generated under such license. The DoT will charge one time entry fee depending upon the category of the ISP. Moreover, the ISP-with VPN license shall be allowed to lay optical fiber cable or use radio links for provision of the services under their license in its Service Area. ISPs may also enter into mutually agreed commercial agreement with infrastructure service providers for sharing of infrastructure. However, the ISP’s are prohibited from reselling bandwidth directly or indirectly. The policy has been amended and implemented with an aim to provide a platform for utilization of bandwidth in a cost effective and efficient manner. Under the existing norms, the licensed telecom operators are free to provide leased lines to their customers for setting up of Closed User Groups (CUG). Customers are not required to take any permission from DoT for setting up a CUG.

**Other Service Providers (OSP’s):**

The category of OSP’s is an outcome of National Telecom Policy 1999. Call Centres are registered under OSP category. Companies registered in India are allowed to setup and operate
Call Centres on non-exclusive basis. The permission for setting up a call center has to be obtained from the DoT and is valid for period of 20 years. 100 per cent FDI is permitted in Call centers. Under the existing policy-

- Interconnection of Call Centres of the same group of company is permissible for redundancy, back up and load balancing subject to the prior written approval from the DoT.

- In the International Call centers, no PSTN connectivity is permitted at the Indian end. Both inbound and outbound calls are permitted from the International call centers.

- Internet and IPLC connectivity is permitted on the same LAN at the Indian end of the International Call Center with the condition that no voice/data traffic shall be permitted from ISP to other destinations via IPLC of the call center.

**Taxation of IT and Telecom:**

In the post liberalization era successive Governments have modeled their tax policies with an obvious intent to attract investments in the information technology and telecommunications sectors. Consequently, tax holidays and other benefits has been a regular feature in successive budgets.
Information Technology:

Section 10 A of the Income Tax Act, 1961 as amended annually, exempted profits and gains derived by an undertaking from the export of computer software till the assessment year commencing on April 1, 2010. However, in respect of the assessment year starting from April 1, 2003, this exemption has given way to a maximum allowable deduction of 90 per cent on the profits derived from software exports. Computer software as referred in section 10 A means - Any computer program recorded on any disc, tape, perforated media or other information storage device; or Any customized electronic data or any product or service of similar nature as may be notified by the Board of Direct Taxes.

Companies seeking to benefit from this provision must receive the proceeds from such exports in convertible foreign exchange within a period of six months from the end of the previous year in which the software was exported. Further, it is pertinent to submit here that profits from software exports will enjoy the tax benefits even if the sale proceeds are credited to an account maintained with any bank outside India with the approval of the Reserve Bank of India.

Units set up in Special Economic Zones (‘SEZ’) get additional benefits with respect to their tax liability. SEZs include free trade zones, software technology parks and electronic hardware technology parks. The Income Tax Act provides for a ten-year tax
holiday to software exporting companies located in SEZs; provided
the production starts on or after the assessment year beginning on
April 1, 2003. The ten year period described aforesaid is broken up
into three different phases of five, two and three years. In the
initial five years the tax liability on profits accountable to exports is
nil. This five-year period starts from the second year of production.
The tax liability for profits with respect to the two consecutive
years immediately following the aforesaid period of five years is
fixed at fifty percent of the total export profits. As regards the last
three years of the said ten years period the deduction allowed is an
amount not exceeding fifty percent of the profit that is debited to
the profit and loss account. However, the amount that is debited to
the Profit & Loss Account must be credited to a reserve account to
be utilized for the purposes of the business of the assesses software
exporting company.

Section 10B the Income Tax Act contains beneficial
provisions as regards taxation of 100 per cent Export Oriented
Units (EOUs). EOUs engaged in production of software, are
eligible for tax deduction for a period of 10 consecutive years up to
the assessment year 2009-10. The tax benefits described above is
available irrespective of any change in the management of the
company. Sections 80 HH, 80 HHA, 80 – I, 80 – IA and 80 – IB
also provide incentives to companies in the IT sector. However, a
company cannot avail the benefits provided under section 10 A if it
is enjoying tax sops under Sections 80 HH, 80 HHA, 80 – I, 80 –
IA and 80 – IB.20
**Indirect Taxes:**

The information technology sector is also subject to the dynamics of the indirect tax structure. Indirect Taxes include Sales Tax, Customs, Excise and Service Tax. The rates of indirect tax influence the financial planning, procurement of inputs, choice of location and marketing activities. Sales tax is charged on inter-state sale of notified goods. Sales Tax being a state subject, the rates vary from state to state. In the absence of particular provisions or any judicial directive, computer software was till very recent exempt from Sales tax. However, subsequent to a ruling of the Supreme Court of India, ‘over the counter software’ or ‘off the shelf’ is now treated as goods and therefore subject to sales tax. ‘Customized software’ or ‘Canned software’ continues to be exempt, as in terms of the aforesaid ruling such software are not goods. Software is exempt from Customs Duty. Customs Duty is levied on various inputs used in the information technology industry. There has been a steady slide in the rates of livable Customs duties for goods used in the IT industry. Recent steps taken towards creating a favorable environment for business activities in the IT sector include:

- Reduction in the peak rate of customs duty to 20 per cent,
- Scrapping of Special Additional Duty (SAD) of 4 per cent.
- Customs duty on computers and peripherals reduced to 10 per cent.
- Zero duty on - storage devices, integrated circuits, microprocessors, data display tubes and deflection components of colour monitors
In addition to the above, the Customs duty on project imports with investment of at least Rs. 5 crore in plants and machinery has been reduced from 25 per cent to 10 per cent while Customs duty on Information Technology Agreement bound items has been reduced as per commitments. Laptops brought as part of baggage are now exempt from customs duty. The rates of Excise duty have followed the southward slide of other direct and indirect taxes with respect to the information technology related sector. Now the following are exempt from excise duty:

- Nil Excise duty on - Microprocessors, hard disc drives, floppy disc drives and CD ROM drives
- Pre-loaded software on the following are also exempt from excise duty - PCs, audio CDs, recorded VCDs and DVDs, cellular phones, radio trucking terminals, portable receivers for calling, alerting or paging;

- Excise duty on computers has been reduced from 16 per cent to 8 per cent.

Information technology related services are subject to service tax. The budget increased the rates of service tax from 8 per cent to 10 per cent. In addition there is a cess of 2 per cent on the service tax payable

**Telecom Industry:**

Deduction is allowed section 80IA to the extent of 100 cent for the full term of 10 years. The telecom sector enjoyed certain
benefits under Section 80 IA for services commenced before March 31, 2004. This has now been extended till March 31, 2005. Customs duty on mobile switching centers for CDMA has been reduced to nil in the budget presented for the year 2004. This has brought CDMA and cellular operators to a level playing field as regards the custom duty on telecom infrastructure. Further, the rates of customs duty for the import of copper and fiber for the manufacture of cables have witnessed a steady slide in the last few years. Specified infrastructure equipment for basic / cellular / internet, V-SAT, radio paging and public mobile radio trucked services and parts of such equipments exempted from basic customs duty. Customs duty on cell-phones has been reduced from 10 per cent to 5 per cent.

**Role of Telecom Sector in Development Process:**

Telecommunications has been recognized the world-over as an important tool for socio-economic development for a nation. It is one of the prime support services needed for rapid growth and modernization of various sectors of the economy. It has become especially important in recent years because of enormous growth of information technology and its significant potential for the impact on the rest of the economy. The Telecom Sector, which has the multiplier effect on the economy, has a vital role to play in economy by way of contributing to the increased efficiency. The studies suggested that income of business entities and households increases by the use of telecom services. Thus it contributes to the growth in GDP. The Government of India recognizes that provision of world class telecommunications infrastructure and
information is key to rapid economic and social development of the Country.

**Present Status of the Telecom Sector:**

Indian Telecom market is one of the fastest growing markets in the world. With its 787.29 million Telephone connection as on 31st December 2010, it is the second largest network in the world after China. It is second largest wireless network in the world. Over 18 million connections are being added every month. The target of 600 million telephones by the end of 11th five year plan has been achieved in February'10 itself. Wireless telephones are increasing at faster rate. The share of wireless telephones as on 31st December 2010 is 95.54 per cent of the total phones. The share of private sector in total telephone is 84.60 per cent. Overall tele-density has reached 66.17 per cent. Urban tele-density is about 148 per cent, whereas rural tele-density is at 31.22 per cent which is also steadily increasing. Broadband connections increased to 10.74 million by November, 2010.22

**Growth of Telecom Sector:**

The opening of the sector has not only led to rapid growth but also helped a great deal towards maximization of consumer benefits as tariff have been falling across the board as a result of unrestricted competition. Telecom sector has witnessed a continuous rising trend in the total number of telephone subscribers. From a meager 22.8 million telephone subscribers in 1999, it has grown to 621.28 million at the end of March, 2010. The
total number of telephones stands at 787.29 million as on 31st December 2010 showing addition of 166.01 million during the period from March to December 2010. Wireless telephone connections have contributed to this growth as the number of wireless connections rose from 35.61 million in 2004 to 584.32 million in March, 2010 and 752.20 million as on 31st December 2010. The wire line started to decline from 40.92 million in 2004 to 36.96 million in March, 2010 and 35.09 million in December, 2010, albeit it is stagnating now.

Table No. 3.02:

Growth of telephones during 2003-04 to 2009-10

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<tbody>
<tr>
<td>Wire line</td>
<td>40.92</td>
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<td>40.77</td>
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<td>165.09</td>
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<td>76.53</td>
<td>98.37</td>
<td>142.09</td>
<td>205.87</td>
<td>300.49</td>
<td>429.73</td>
<td>621.28</td>
</tr>
<tr>
<td>Annual Growth</td>
<td>40%</td>
<td>29%</td>
<td>44%</td>
<td>45%</td>
<td>46%</td>
<td>43%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Source_ Annual Report 2010-2011 – DoT- Ministry of Communications & Information Technology Government of India.

On the contrary, the share of fixed wire-line has steadily declined. The year also witnessed two more telecom companies crossing the 100 million mark in terms of wireless connections. Bharti Airtel was the first Indian Operator to achieve the landmark in 2009. It was followed by Vodafone and Reliance Communication in 2010. Wireless phones have increased as they are preferred because of
their convenience and affordability. As a result telephones today have come within the reach of a common man.

**Shifting Focus on Rural Telephones:**

With introduction of mobile services in rural areas, the rural subscribers are also increasing. The measure undertaken by USOF to increase rural connectivity. The rural Telephone connections have gone up from 12.3 million in March 2004 to 200.77 million in March, 2010 and further to 259.83 million in December, 2010. Their share in the total telephones has constantly increased from 16.03% in 2004 to 33 per cent as on 31st December 2010. The mobile connections have also contributed substantially to total rural telephone connections. During 2010-11, the growth rate of rural telephone is 29.41 per cent as against the growth of 25.43 per cent of urban telephones. The private sector has also contributed to the growth of rural telephones as it provided about 85 per cent of rural telephones as on 31st December 2010. The following table shows the relative performance of telecom sector during the year 2003-04 to 2009-10.
<table>
<thead>
<tr>
<th>Sr.</th>
<th>Description</th>
<th>Mar-04</th>
<th>Mar-05</th>
<th>Mar-06</th>
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<th>Mar-08</th>
<th>Mar-09</th>
<th>Mar-10</th>
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<tr>
<td>1</td>
<td>Fixed Phones (In Lakh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Public</td>
<td>397.67</td>
<td>398.74</td>
<td>392.44</td>
<td>374.61</td>
<td>352.28</td>
<td>379.65</td>
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<tr>
<td></td>
<td>Private</td>
<td>11.53</td>
<td>15.50</td>
<td>9.82</td>
<td>33.13</td>
<td>41.85</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>409.20</td>
<td>414.24</td>
<td>402.26</td>
<td>407.74</td>
<td>394.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Wireless Phones (GSM+CDMA) (In Lakh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>67.17</td>
<td>122.14</td>
<td>218.39</td>
<td>339.30</td>
<td>443.21</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Private</td>
<td>289.04</td>
<td>447.35</td>
<td>800.27</td>
<td>1311.64</td>
<td>2167.58</td>
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<td></td>
<td>Total</td>
<td>356.21</td>
<td>569.49</td>
<td>1018.66</td>
<td>1650.94</td>
<td>2610.79</td>
<td>3917.60</td>
<td>5843.23</td>
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<td>3</td>
<td>Total Telephone</td>
<td>765.41</td>
<td>983.73</td>
<td>1420.92</td>
<td>2058.68</td>
<td>3004.92</td>
<td>4297.25</td>
<td>6212.80</td>
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<td>4</td>
<td>Teledensity</td>
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<td>12.74</td>
<td>18.22</td>
<td>26.22</td>
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<tr>
<td>5</td>
<td>Switching Capacity (In Lakh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>959.76</td>
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<td>530778</td>
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<td>532282</td>
<td>549294</td>
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<td>7</td>
<td>PCOs (In Lakh)</td>
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<td>Public</td>
<td>17.59</td>
<td>21.51</td>
<td>23.86</td>
<td>23.65</td>
<td>22.91</td>
<td>20.89</td>
<td>18.58</td>
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<td>8</td>
<td>OFC Route Kms.</td>
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<td>Public</td>
<td>445822</td>
<td>471999</td>
<td>490437</td>
<td>519155</td>
<td>564166</td>
<td>609223</td>
<td>658548</td>
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<tr>
<td>9</td>
<td>Tax lines (In Lakh)</td>
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<td></td>
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<td>Public</td>
<td>53.42</td>
<td>61.39</td>
<td>69.53</td>
<td>82.20</td>
<td>86.85</td>
<td>88.33</td>
<td>99.32</td>
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<tr>
<td>10</td>
<td>Rural Phones (Fixed + CDMA) (in Lakh)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>122.72</td>
<td>135.69</td>
<td>147.68</td>
<td>470.99</td>
<td>765.00</td>
<td>1235.13</td>
<td>2007.73</td>
</tr>
</tbody>
</table>

Source: Department of Telecommunication – Annual Reports.
Telecom Regulatory Authority of India (TRAI):

The Telecom Regulatory Authority of India (TRAI) has always endeavored to encourage greater competition in the telecom sector together with better quality and affordable prices in order to meet the objectives of New Telecom Policy, 1999. A number of regulations and Directions were issued by TRAI during 2010-11 which inter-alia included the Telecommunication Mobile Number Portability Regulation 2010, Spectrum Management and Licensing Framework, efficient Utilization of Numbering Resources. National Broadband Plan and Telecom Commercial Communications Customer Preference Regulations, 2010. These directions and regulation will help to develop the telecom sector. In order to protect the interest of the consumers, TRAI has taken steps regarding audit of metering and billing system for bringing uniformity and transparency, prescribing standard relating to accuracy of measurement and reliability of billing etc. The service providers have to furnish the Audit report to TRAI every year, with corrective action taken on inadequacies by the service providers. Besides, TRAI has undertaken activities towards consumer education. TRAI has also taken steps to ensure the quality of service provided by the service providers by way of monitoring the performance of Basic and Cellular Mobile Telephone Service on quarterly basis and also point of interconnection (POI) congestion through monthly reports. The above measures are expected to facilitate orderly growth of telecom sector by promoting healthy competition and enhancing investment efficiency besides protecting interests of consumers.
Manufacturing Of Telecom Equipment:

India has fast emerged as a manufacturing hub as multinational companies look for long term alternatives. As a result of Government policy, progress has been achieved in the manufacturing of telecom equipment in the country. There is a significant telecom equipment-manufacturing base in the country and there has been steady growth of the manufacturing sector during the past few years. In the last 5 years, the country’s contribution in mobile devices has increased from 0 percent to 6 percent of the global device production. Rising demand for a wide range of telecom equipment, particularly in the area of mobile telecommunication, has provided excellent opportunities to domestic and foreign investors in the manufacturing sector. The last two years saw many renowned telecom companies setting up their manufacturing base in India. Nokia and Nokia Siemens Networks have set up their manufacturing plant in Chennai. Ericsson has set up GSM radio Base Station Manufacturing facility in Jaipur. Motorola, Foxconn (OEM) has set up large manufacturing plants in Chennai. Elcoteq has set up handset manufacturing facilities in Bangalore. LG Electronics has set up plant of manufacturing GSM mobile phones near Pune. Ericsson has launched their R&D Centre in Chennai. Flextronics has set up an SEZ in Chennai. A large number of companies like Alcatel, Cisco have shown interest in setting up their R&D centers in India. With upcoming broadband revolution, the demand for wire-line products, transmission equipment, wireless equipment, fiber and devices will multiply, providing large scale opportunities for Indian and multinational companies. The rapid development of semiconductor ecosystem and the electronic ecosystem in India is
connected with the growth of telecom sector in India, as both domestic and foreign companies are expanding their operations across the whole value chain in the country. Production of Telecom Equipments including export and import during 2009-10 are as under:\textsuperscript{23}

- Telecom Equipment Production: Rs. 510,000 million.
- India's Export of telecom items: Rs. 135,000 million.
- India's Import of Telecom items: Rs. 450,250 million.
- India’s export of Telecom Consultancy: Rs 72.70 million.

**ICT: The Role Of Governance In Rural Development And Poverty Reduction:**

ICT can play an important role in many aspects of rural development. It can also help to better govern various aspects of rural development. The working definition emphasizes that Governance involves interaction between the formal institutions and those in civil society. Governance refers to a process whereby elements in society wield power, authority and influence and enact policies and decisions concerning public life and social upliftment.\textsuperscript{24} The concept of good government implies accountability, transparency, participation, openness and the rule of law. According to World Bank, good governance is epitomized by predictable, open and enlightened policy-making, a bureaucracy imbued with professional ethos acting in furtherance of the public good, the rule of law, transparent processes, and a strong civil society participating in public affairs. Poor governance is characterized by arbitrary policy making, unaccountable bureaucracies, unenforced or unjust legal systems, the abuse of
executive power, a civil society unengaged in public life, and widespread corruption. ICT can strengthen the role of each governance pillar in rural development and poverty reduction. It can facilitate speedy, transparent, accountable, efficient and effective interaction between the public, citizens, business and other agencies. This not only promotes better administration and better business environment, but also saves time and money in transactions costs of government operations.

The ‘Gyan-doot’ Community Network:

The ‘Gyan-doot’ community network aimed at creating a cost effective, replicable, economically self-reliant model for taking benefits of Information Technology to the rural population, is an intranet network using Wireless in Local Loop (WLL) technology to set up in 5 blocks with 21 kiosks, each catering to about 15-20 villages. The success is largely due to targeting the information interest of the people: rates of agriculture produce, land record rights, computer training, caste certificates, online public grievance redressal, health services, e-mail, rural e-auction, matrimonial alliances, information on government programmes, information for children, online employment exchange, availability of applications for jobs, local weather report, e-news papers etc.. The most commonly used services were grievance redressal (41%), market rates (25%), land-records (20%). Interestingly, one out every six users of the network was illiterate with no knowledge of reading or writing. It is a disappointment that only 13 cent of users is women.
Ministry of Rural Development:

In October 1974, the Department of Rural Development came into existence as a part of Ministry of Food and Agriculture. On 18th August 1979, the Department of Rural Development was elevated to the status of a new Ministry of Rural Reconstruction. That Ministry was renamed as Ministry of Rural Development on 23rd January 1982. In January 1985, the Ministry of Rural Development was again converted into a Department under the Ministry of Agriculture and Rural Development which was later rechristened as Ministry of Agriculture in September 1985. On July 5, 1991 the Department was upgraded as Ministry of Rural Development. Another Department viz. Department of Wasteland Development was created under this Ministry on 2nd July 1992. In March 1995, the Ministry was renamed as the Ministry of Rural Areas and Employment with three departments namely Department of Rural Employment and Poverty Alleviation, Rural Development and Wasteland Development.

In 1999 Ministry of Rural Areas and Employment was renamed as Ministry of Rural Development. This Ministry has been acting as a catalyst effecting the change in rural areas through the implementation of wide spectrum of programmes which are aimed at poverty alleviation, employment generation, infrastructure development and social security. Over the years, with the experience gained, in the implementation of the programmes and in response to the felt needs of the poor, several programmes have been modified and new programmes have been
introduced. This Ministry's main objective is to alleviate rural poverty and ensure improved quality of life for the rural population especially those below the poverty line. These objectives are achieved through formulation, development and implementation of programmes relating to various spheres of rural life and activities, from income generation to environmental replenishment.

Rural Development Programmes:

In order to ensure that the fruits of economic reform are shared by all sections of societies five elements of social and economic infrastructure, critical to the quality of life in rural areas, were identified. These are health, education, drinking water, housing and roads. To impart greater momentum to the efforts in these sectors the Government had launched the Pradhan Mantri Gramdoya Yojana (PMGY) and the ministry of rural development was entrusted with the responsibility of implementing drinking water, housing and rural roads component of PMGY. During the Ninth Plan period, several anti-poverty Programmes have been restructured to enhance the efficiency of the programmes for providing increased benefits to the rural poor. Self-employment programmes have been revamped by merging the Integrated Rural Development Programme (IRDP), the Development of Women and Children in Rural Areas (DWCRA), the Supply of Improved Tool-Kits to Rural Artisans (SITRA), the Training of Rural Youth for Self Employment (TRYSEM), the Ganga Kalyan Yojana (GKY) and the Million Wells Scheme (MWS) into a holistic self-employment scheme called Swarnjayanti Gram Swarozgar Yojana (SGSY).26
Keeping in view the needs and aspirations of the local people, Panchayati Raj Institutions (PRI) have been involved in the programme implementation and these institutions constitute the core of decentralized development of planning and its implementations. The Ministry is also vigorously pursuing with the State Governments for expeditious devolution of requisite administrative and financial powers to PRI's as envisaged under 73rd amendment act of the Constitution of India. On 25th December 2002, under Drinking Water Sector, a new initiative 'Swajal Dhara' empowering the Panchayats to formulate, implement, operate and maintain Drinking Water Projects has been launched. In order to further involve PRIs in the development process, a new initiative 'Hariyali' has been launched by the government on 27th January, 2003. Hariyali has been launched to strengthen and involve Panchayati Raj Institutions in the implementation of Watershed Development Programmes.

**Empowerment of Rural Women:**

The empowerment of rural women is crucial for the development of rural India. Bringing women into the mainstream of development is a major concern for the Government of India. Therefore, the programmes for poverty alleviation have a women's component to ensure flow of adequate funds to this section. The Constitutional (73rd) Amendment, Act 1992 provides for reservation of selective posts for women. The Constitution has placed enormous responsibility on the Panchayats to formulate and execute various programmes of economic development and social justice, and a number of Centrally Sponsored Schemes are
being implemented through Panchayats. Thus, women Members and Chairpersons of Panchayats, who are basically new entrants in Panchayats, have to acquire the required skill and be given appropriate orientation to assume their rightful roles as leaders and decision makers. To impart training for elected representatives of PRIs is primarily the responsibility of the State Governments / Union Territory Administrations. Ministry of Rural Development also extends some financial assistance to the States / UTs with a view to improve the quality of training programmes and to catalyze capacity building initiatives for the PRI elected members and functionaries. This Ministry of Rural Development is a nodal Ministry for two international organizations viz., the Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) and the Afro-Asian Rural Development Organization (AARDO).

**Computerization of Land Records (CLR):**

The scheme of Computerization of Land Records (CLR) was started in 1988-89. This is a 100 per cent grant-in-aid scheme executed by the State Government. The main objective of CLR scheme is that landowners should get computerized copies of *Records of Rights* (RORs) at a reasonable price. The ultimate objective of the scheme is ‘on-line management’ of land records in the country. Under the scheme 100 per cent financial assistance is provided to States for completion of data entry work setting up computer centers at the tehsil or taluk or block and sub-divisional levels and monitoring cell at the State level. Funds are also provided under the scheme for imparting training on computer awareness and applications software to revenue officials for regular
up-dation of records of rights and smooth operation of computer centers. The main objectives are:  

- Providing computerized copies of the Record of Rights (RoR) to the Land owners at nominal rates on demand.
- Ensuring speed, accuracy, transparency and dispute resolution.
- Information empowerment of land owners and freeing them from the clutches of colonial systems - paradigm shift from tax based approach to management of land administration.
- Providing fast and efficient retrieval of information for decision making.
- Achieving low cost and easily reproducible basic land record data for reliable and durable preservation.
- Value addition and modernization in Land Administration.

The Indian Telecom sector has proved to be a success story in India. The sector has witnessed a commendable growth over the years. With an overall subscriber base of 787.29 million and a tele-density of 66.17 per cent, at the end of December, 2010 the sector continues to grow from strength to strength. With the urban tele-density reaching approx 150 per cent, the market has been showing signs of maturity. Rural India is the key target market likely to drive the next round of growth, particularly for voice based services. It is envisaged that rural tele-density of 40 per cent would be reached by end of 2014. 3G and BWA are expected to reinvigorate the maturing urban markets and help in bringing balanced growth of economy. The aggressive growth observed by mobile services is yet to be replicated in case of broadband service, where the subscriber base currently stands at about 11 million. The successfully concluded auction of the BWA and 3G spectrum will
enhance the wireless broadband penetration across the country and help connect the remotest locations across India. The government has a vision to provide telephone connection and broadband facilities on demand across the country and at an affordable price and it strives to achieve the same.

**Role and Importance of BSNL in Rural Development:**

Telecom density in India has reached 54 per cent. These statistics are elusive because majority of urban population have more than one phone. The most important theory of telephony is that telecom usage depends on the general eco system of that area which does not undergo major change by itself unless change happens in the eco system side by side. In rural areas where most people are struggling to find a square meal a day, telephone naturally is lowest of their needs. Of course, Telecom penetration acts as a catalyst for rural growth; but then it has to grow hand in hand with development of overall infrastructure, good roads, clean water, education, shelter, healthcare and sanitary facilities and opportunity to earn basic income; lifting the living standard and literacy of people. Considering the above, the general plan of rural telecom development shall be to provide networks and connectivity to every Post office, panchayat / Village offices, Cooperatives, Rural banks, Schools and other educational institutions, Hospitals and Libraries, Community centres and franchisee owned telecom Kiosks. Optical Fiber backbone and wide access wireless network and converged user end devices, end links, access networks and systems are required to be implemented in rural areas which could be used for Security and UID network also.28
Realizing that telecom is an important factor for the country’s economic growth, BSNL is improving its network and offering a range of services. BSNL started in October 2000, with the vision of becoming the largest telecom service provider in Asia, **Bharat Sanchar Nigam Limited** is the world’s seventh largest telecommunications company. It provides a comprehensive range of services in India, which include wire line connections, CDMA (code division multiple access) mobile, GSM (global system for mobile communications) lines, Internet, broadband, MPLS-VPN (multi protocol label switching-virtual private network), VSAT (very small aperture terminal) and VoIP (voice over Internet protocol). Within this short span of time, it has also become one of the largest public sector companies in India.

BSNL has established a high-quality telecom network in the country and is now focusing on improving and expanding it by introducing services with information and communication technology applications in villages. The company’s unique selling proposition of connecting India is illustrated by its huge reach across the country. It has 361.30 lakh working fixed telephone connections, with plans to add 111.50 lakh connections in 2009. The company has 362.09 lakh cellular mobile connections. With this, the number of BSNL’s working connections has reached a whopping 723.39 lakhs as against the total installed capacity of 860.56 lakhs. The company also has 20.32 lakh working broadband connections as against the installed capacity of 34.68 lakhs, and 35.62 lakh Internet connections as against the installed capacity of 38.28 lakhs. It plans to add 15 lakh broadband and five lakh Internet connections in 2008-09.29
BSNL is the only service provider that is making a focused effort to bridge the rural-urban digital divide with its wide network that is providing services to every nook and corner of the country except Delhi and Mumbai. No other telecom operator in the country can beat its reach. As many as 5.19 lakh village public telephones out of the total 20.51 lakh public telephones in the country are BSNL’s. Whether it is the Siachen glacier or the north-eastern region, BSNL serves its customers with a wide bouquet of telecom services. Its massive reach can be understood by the fact that the company offers wide-ranging and transparent tariff schemes designed to suit different categories of customers. About 24 per cent of mobile phone users subscribe to BSNL’s CellOne. This means that every fourth mobile user in the country has a BSNL connection. In basic services, BSNL is miles ahead of its rivals, with 36.1 million subscribers. This constitutes 85 per cent share of the subscriber base and a 92 per cent share in revenue.

BSNL has set up a world-class multi-gigabit, multi-protocol, convergent IP infrastructure that provides services such as voice, data and video through the same backbone and broadband access network. The company has vast experience in planning, installation, integration and maintenance of switching and transmission networks. BSNL earned a revenue of Rs.38,053.40 crore in the fiscal year 2007-08, and its profit after tax was a huge Rs.3,009.39 crore. Though stiff competition in the market caused a decline in its income and profit, the company, did not resort to any predatory or hidden-tariff techniques. The company’s success story is reflected in its massive growth in the cellular sector; it has grown by about 88 per cent despite want of capacity. Capacity utilization in this sector has been an incredible 113 per cent. BSNL’s GSM
cellular service has a presence in over 600 district headquarters in the country.

**Status of Indian Telecom Sector:**

The telecom services have been recognized world-over as an important tool for socio-economic development for a nation. It is one of the prime support services needed for rapid growth and modernization of various sectors of the economy. Indian telecommunication sector has undergone a major process of transformation through significant policy reforms, particularly beginning with the announcement of NTP 1994 and was subsequently re-emphasized and carried forward under NTP 1999. Driven by various policy initiatives, the Indian telecom sector witnessed a complete transformation in the last decade. It has achieved a phenomenal growth during the last few years and is poised to take a big leap in the future also.

The Indian Telecommunications network with 621 million connections (as on March 2010) is the third largest in the world. The sector is growing at a speed of 45% during the recent years. This rapid growth is possible due to various proactive and positive decisions of the Government and contribution of both by the public and the private sectors. The rapid strides in the telecom sector have been facilitated by liberal policies of the Government that provides easy market access for telecom equipment and a fair regulatory framework for offering telecom services to the Indian consumers at affordable prices. Presently, all the telecom services have been opened for private participation. The Government has
taken following main initiatives for the growth of the Telecom Sector:

**Table No. 3.04:**

**Indian Telecommunications at a glance (March 2010)**

<table>
<thead>
<tr>
<th>Rank in world in network size</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tele-density (per hundred populations)</td>
<td>52.74</td>
</tr>
</tbody>
</table>

**Telephone connection (In millions)**

<p>| | |</p>
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<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Fixed</td>
<td>36.95</td>
</tr>
<tr>
<td>Mobile</td>
<td>548.32</td>
</tr>
<tr>
<td>Total</td>
<td>621.28</td>
</tr>
</tbody>
</table>

| Village Public Telephones inhabited (Out of 5,93,601 uncovered villages) | 5,69,385 |
| Foreign Direct Investment (in million) (from April 2000 till March 2010) | 4070 |

**Licenses issued**

<p>| | |</p>
<table>
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<tbody>
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<td>UAS</td>
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<td>International Long Distance</td>
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