A Situational Analysis of the Impact of Liberalism on Policy Paradigm and Growth Stats of Telecommunication in India

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Abstract
The study examines the policy initiatives at various periods of time adopted by Government of India since 1970 with an objective to improve rural tele-density. It emerges from the study that telecom operators, Government of India and service providers have been attempting to realize the priority agenda through partnership and sharing of responsibilities to make telecommunication services easily accessible and affordable in rural India. The paper discusses the steps taken by Department of Information Technology, Telecom Regulatory Authority of India to build a supportive ecosystem for the growth of electronics and telecommunications manufacturing activities in the country. This paper develops a situational analyze on the challenges faced by the debt-ridden telecom industry and the way the industry is battling with regulatory uncertainty.

Keywords: Telecommunication in India, Impact of Liberalism, Liberalism, Consumer Protection Measures, NTP 1994, NTP 1999, TRAI, DoT, Rural Tele Density, Pro-Poor Policies, Development of Telecommunication
Introduction

The expression ‘Telecommunication’, as the transmission of signals in the form of voice, data, video or images over a distance has been broaden by the telephone industry while embracing other types of transmission facilities. The history of telecommunication began with the use of smoke signals and drums in Africa, America and in some part of Asia. It began with the invention of telephone in 1876, then expanded to radio broadcasts in the year 1800 and television in 1900. Telecommunication has also evolved with messaging and image technology and has gradually integrated internet and mobile phones.

The cellular concept was discovered in 1947 at the Bell Labs, but commercialization followed only during 1980s with analog cellular networks. In early 1990s, digital technology entered consumer mass markets rapid specialization. At the end of the 1990s, the leading European mobile vendors developed Wireless Application Protocol (WAP)\(^1\) as an open international standard for applications using wireless communication.

As voice services were coupled with Short Messaging Services (SMS), subscribers got a rudimentary idea of new mobile services. In 2001, with the introduction of Universal Mobile Telecommunications System (UMTS)\(^2\) in Europe and 3G in the United States as preceded by NTT DoCoMo’s service innovation in Japan, worldwide mobile markets witnessed multimedia cellular services. The transition from voice communications to data communications enables advanced mobile services, which have already triggered the entry of the world’s largest content providers, including Hollywood studios.

The world’s leading IT enablers such as Microsoft, Intel entered the business by introducing software applications with the pursuit of aggressive efforts to ‘mobilize’ broadband technologies.

Indian Government Approach to Telecommunication and ICT Development

Telecommunications was not perceived as prioritized sector for investment by the Government during the immediate post-independence formative years of the Indian economy. Telecommunication was not considered as one of the key infrastructures for rapid economic development as a result of which the quality, quantity and range of services provided by the Government was poor, inadequate and unequal for the users.
The structural shift in Indian economy from the production of merchandise such as agriculture and manufacture to service recognized the role of information for rapid economic and social development of the country. It also recognized the importance of world class telecommunications infrastructure which has already witnessed rapid changes in the last five years in India. This leads to far reaching developments in Information Technology (IT), consumer electronics and media industries across the globe. Liberalization created the expectation that the participation of private sector in the Indian telecom industry can provide a fillip to technology up-gradation and help bridge the gap in adoption of new technology.

‘Valetta Action Plan’ (VAP)[3], a four-year strategic plan was adopted in 1998 by World Telecommunication Development Conference (WTDC) and it involves International Telecommunications Union (ITU) to accomplish the goals (Pigato, 2001).

The path towards technology-induced development in India with a particular focus on Information and communication technology was introduced in 1984 by the Congress Government under Rajiv Gandhi. After assuming power, Rajiv Gandhi adopted policy on informatization of Indian society as an effective route to development, corresponding a massive programme of computerization of public sectors, administrative departments and the commercial undertakings. By 1985, large public sector undertaking such as railways, banking operations, and schools have computerized

After liberalization most of the telecommunication policies were framed in macro level focused on sectorial development of telecommunication in the form of licenses instead of any social induced development by employing telecommunication in various developmental programme.

A high power National Task Force on Information Technology and Software Development was set up in 1998 in order to prepare the blue print for establishing a wide network of empowered taskforce at all governmental and non-governmental levels.

The first report of the Task Force contained information action plan in the form of 108 recommendations includes telecommunication policies and procedures, fiscal incentives and financial matters, promotion of IT in schools and rural areas, cyber laws, simplification of labour laws and procedural simplifications etc. The third report contains the long term national IT policy (IT Action Plan: Part III) have been taken up with concerned ministries.
The second report submitted by this entity pertaining to development, manufacture and export of IT hardware and set a software export target of US 50 billion by the year 2008 (IT action Plan: Part II). Task force recommendation brought to the withdrawal of the monopoly of VSNL in Internet gateways, reducing the custom duties on the software and remove restrictions on the location of software.

The shortage of proper power supply and the enormous gap between demand and supply of bandwidth pose to be the barrier to effective communication by Information communication technology. The task force recommendation asks for the defense forces to provide connectivity to civilian establishments for enhancing penetration of information and communication technology in remote location of the country.

The Tenth Five-year Plan (Government of India, 2001) identifies telecommunications as a critical part of infrastructure in an emerging knowledge-based economy. The plan strategized the development parameters, directed towards increases in GDP or per capita income and overall human development. To maintain the comparative advantage of telecommunication over other information and communication technology in India, the telecommunication policy of the Government has to prioritize the convergence of data, voice and image transmission, the use of bandwidth and high-speed internet connectivity.

National Informatics Centre (NIC) created an online databases (NICNET) at the panchayat level in order to provide updated information available for public. Atal Bihari Vajpayee, then Prime Minister of India declared in the ASSOCHAM (Associated Chambers of Commerce and Industry of India) Summit on “India in a knowledge millennium” that the knowledge-based society will seek urgent solution to the present challenges in Government (Raj, 2000). Knowledge based society aids to build a just, equitable social order free from the culture of secrecy, corruption and hierarchy. Task Force has recommended the creation of citizen charters, development of a smart card programme (Government of India, 2001).

Government of India has been increasingly stressed on the use of Information and communication technology to produce wealth for the nation and to enable development. Further, much importance has been given to harness the opportunities provided by convergence of communication technologies and to facilitate the use of mobile phone and internet to optimize the services of Electronic Governance.
Taking into account the increasing convergence between telecommunication and IT, a Communication Bill was drafted by the Government of India, followed by the Information Technology Act that was notified and brought into force on 17th October 2000. Moreover, the Information Technology for Masses Working Group has been set up with an ambitious target of establishing at least 100 million internet connections, opening up IT kiosks and cyber cafes for covering entire India.

**Impact of liberalism on Telecom Policies and Growth Stats of Telecommunication**

Prior to liberalization, the telecom scene in India was characterized by the highly bureaucratized structure of affairs under government monopoly in service provision which has an effect on restrictive portfolio of services, abysmally low tele-density and poor state of tele-infrastructure across the country. The Government of India’s enunciation of a policy of economic liberalization in 1991 provided the real impetus for reform and structural shift in Indian economy. This is reflected in the government’s acknowledgement of telecommunications as an imperative for socio-economic change, a common man’s tool for capacity building and as a factor in building international competitiveness of the country. The paradigm shift in the telecommunication (telecom) sector in India from a monopoly regime to one of open competition led to the establishment of an independent regulatory mechanism.

The genesis of duopoly regime for two operators- government and private sectors was enunciated first in the National Telecom Policy 1994. This policy provided a roadmap for telecom development in India calling for private sector to participate in the provision of basic telephone services subject to stipulated conditions in the four metros and eighteen telecom circles.

In the initial phase of rolling out of telecom services, the entire country is divided into 21 telecom circles, excluding Delhi and Mumbai. Mahanagar Telephone Nigam Limited (MTNL) provided the basic services to Delhi and Mumbai, while 21 telecom circles are served by Department of Telecom. Only six private licenses were issued to roll out the basic cellular services in India in the early years of telecommunication distribution. Liberalization unfolded the basic and value added telecom services sector to competition. For rolling out basic and cellular telecom services, separate licenses were issued to distinct industry structure such as satellite and cable TV operators Internet Service Providers alongside distinct terms and condition regarding
varying requirement to create infrastructure. New Telecom Policy, 1994 aims at telephone on demand services as well as long distance telephony services. The policy 1994 set the target to achieve telephone coverage of all villages in India and PCOs facility for every 500 persons in urban areas by the year 1997. Along the line, introduction of value added services to be made available internationally and making the telephone services available on demand are other certain goals to be achieved by 1997. However, the implementation of the policy did not match the euphoria it created and delivered mixed results. Physical targets in relation to rural telephony were unrealized. By March 1999, only half of total targeted 600,000 villages were covered by telephones, many of which are appeared malfunctioning due to technical problems. For realization of these targets, estimated Rs. 230 billion of resource gap is found which necessitated to call for the private investment to bridge the resource gap.

The participation of private sectors in the mobile telephony market has been successful. Almost every metros across the country are awarded cellular licenses. VSAT (Very Small Aperture Terminal) services were liberalized for providing data services to closed user groups. Government licenses issued to prospective operators for opening up global personal communication by satellite (GMPCS). Licenses for 'Value Added Services', have been issued to 14 operators for providing V-SAT based data services to closed user groups. 'On line services ' such as web page hosting e-mail, electronic data interchange, fax on demand have been operational in the country for past four years.

The liberalization process has been furthered moved forward by New Telecom Policy (NTP 99), in March 1999. New telecom policy 1999 introduce innovation in telecom services and market by introducing radio paging service providers, public mobile radio trunking service providers and national long distance operators.

The entry of a third operator in certain service areas, such as calling party pays (CPP) introduced by NTP.99 regime for cellular mobile and move to a license fee regime based on revenues generated from a fixed license fee regime has not only brought changes in the cellular industry but also anticipated the growth of further cellular services. Government has allowed to provide mobile telephonic service to Government sector and simultaneously distributed licenses to private party in area operation including sharing of infrastructure.

NTP 99 provides flexibility for different service providers with respect to interconnection among service providers within a service area. The Government of India has recently announced a
change in its licensing policy, for example, for cellular mobile, which now allows technology neutrality in UAS with the condition that technology must be digital.

The private sector in telephony has witnessed an accentuated fast growth of 66 percent in 2007 as against the 17 percent of growth of telecom services in public sector. The share of private operators in total telephone connections has increased to 72.4 percent in December 2007 from 20.9 percent in 2003.

The liberalization of telecom sector ensued higher growth path with the rising ownership of telephones since 2004 at an annual rate above 40 percent except for the year 2005. The target of distributing 250 million phones by the end of 2007 in order to remove the barriers in physical access to telecommunication by the policy initiative of the Government was achieved in October 2007.

The total number of telephone connections, has reached to 290.1 million in February 2008 from 272.9 million in December 2007, while a total wireless subscriber base has increased to 250.9 million by 2008.

**Measures on Consumers’ Protection**

International telecommunication Union holds the view that regulatory regimes of the countries in future should shift the focus on public interest concerns which is best reflected in the availability of reasonably priced basic voice services over traditional public networks. Ensuring reliable and universal virtual public network for voice telephony over a crazy quilt of interconnected technologies and applications of multiple outlets that accommodates the multimedia characteristics is real concern in view of the shift in IT paradigm across the globe.

In this context, the major concern for the country’s telecommunications regulator is to adapt standards of reliability and interoperability to unrelenting technology changes. More than licensing and pricing, frequency allocation, consumer protection and dispute resolution has claimed to be prioritized in their agendas.

Providing better services, more choices to services and lower tariffs to the services have been some of the key objectives on which Indian telecommunication policies have put more emphasizes after liberalization. Entry of private sector into telecommunication has improved the Quality of services to have a reach to international standards. Consumer welfare has been a
prioritized agenda of New Telecom Policy 1999 which has eased the competition among the various telecom players for a range of services.

The Regulatory framework is an important means to ensuring consumer welfare. Customer satisfaction and monitoring of performance of operators, achieving a nearly seamless architecture unrestricted consumer’s access, adoption of tariff structure that is suitable to social requirements, ensuring affordable tariff for all users are some possible policy agenda to improve consumer welfare.

TRAI issued regulations on the QOS (Quality of Service) in July 2000 which was followed by another set of regulations on QOS in July, 2005. The parameters for basic and cellular quality of services are categorized into 1) speedy and congestion free network; 2) easy accessible customer help lines; 3) quick complaints billing; and 4) improved customer knowledge regarding services. The mobile service providers have been provided with the benchmarks for quality of services in terms of delayed access to services, call success rate, call drop rate, number of calls answered in 20 seconds, refunds to customers. New set of parameters include the service coverage area, success rate of call set up, the blocked call rate, voice quality, congestion problems and so forth.

In order to protect the interests of consumers, TRAI, during 2006-2007 ensured the customers to get the detail of tariff plan used, information on the credit limit of the monthly bill for post-paid and pre-paid services, issuance of docket number for complaining regarding the services used (TRAI, 2012). An independent agency has been appointed by TRAI in order to carry out survey that evaluates effective implementation of consumer services and conducts quality assessment of the services provided by broadband, and cellular mobile service providers. The “Telecom Consumers Protection and Redressal of Grievances Regulation 2007” was brought in order to improve consumers’ perceptions of the efficacy of telecom services and protection of the customer’s interest. In January 2007, the TRAI established a Telecommunication Consumers Education and Protection Fund in order to finance programs to impart education to telecom consumers and promote research studies on matters relating to consumer interests on telecommunication services. During the same time, TRAI introduced another regulation envisaging a mechanism for curbing unwanted telemarketing calls.

Incorporation of new licensing of services for TRAI regulators have contributed to lowering the license fee, higher data speed and creating more choice of technology. New licensing regime of 2007 facilitated sharing of infrastructure between the service providers and have accelerated the
growth of internet and broadband. The broadband policy of the Government took shape on the basis of TRAI’s recommendations issued in October 2004. On December 31, 2007, there were 3.02 million broadband subscribers, compared with only 0.18 million in March 2005.

Another pioneering steps of the government was to allot spectrum and auctioning of 3G on August 1st, 2008 corresponding to the e-auction process by a specialized agency.

The policy initiatives of the Government at different period of time and the recommendations of TRAI have brought forth distinguishable growth of the Indian telecom sector. The increasing number of operators, both in basic and mobile service segments have witnessed progress in higher quality of service, improved consumer awareness, significant lowering of tariffs, and substantial increase in inflow of foreign direct investment (FDI) and in sizable expansion of tele-density both in urban and rural areas.

**Government’s Measures towards Improving Rural Tele density**

Lack of political will, vested interests of bureaucracy, procedural delays in implementation of the recommendations have eroded many expected rural beneficiaries (Bhatia, 1998).

However the telecommunication service expansion is largely limited to urban areas. According to TRAI, 2009 tele density of urban areas stands 81.38 percent as of December 31, 2008 whereas, rural tele density follows only 12.62 percent. Out of the total mobile phone subscribers in India, the share of rural subscribers was 33.6 percent and the rural mobile tele density was 31.1 percent (TRAI, 2014).

The growth and spread of telecom services in the past few years in India has been driven by mobile services. As on 31st January 2011, the number of mobile phone subscribers in India stood at over 771 million and the mobile tele density was 64.7 percent (DoT report, 2011).

Limited reach of internet access by rural people and more than 771 million mobile phone subscribers made government think of this unique proposition to develop into mobile digital society and to reach the residents and deliver public services.

Improved village connectivity has been one parameter to attain inclusive economic growth in India. Accordingly, easy and affordable access to telecommunication services in rural India has been the priority for telecom operators. Government of India and service providers have been attempting to realize the priority agenda through partnership and sharing of responsibilities. Since 1970, Government of India has been adopted various policy initiatives with an objective to
improve rural tele-density. These policy initiatives includes Creation of Universal Service Obligation Fund (USOF) and Universal Service Levy (USL), programs for Provision of Village Level Connectivity, private sector operators contribution to rural roll out of services, access deficit charges and so on.

In December 2003, Department of Telecommunications, government of India has passed the Universal Service Obligation Fund (USOF) with an aim to provide access to telecommunication services to the people in rural and remote areas at affordable and reasonable prices (DoT report, 2011).

USOF was designed to be implemented initially as two streams Stream I and II focusing on fixed and fixed wireless covering both public and private services. Later in 2006, with the amendments in Indian Telegraph Act, the provision of mobile services was included in Stream III in the framework of USOF (TRAI, 2013). Later, streams IV, V and VI were added to cover provision of broadband connectivity to villages in a phased manner, creation of general infrastructure in rural and remote areas for development of telecommunication facilities and induction of new technological developments in the telecom sector in rural and remote areas respectively. Government later made it obligatory for private operators to provide 10% of their service dispositions in rural areas in view of the fact that private operators are not interested for rural roll out of telecom services.

Under the aegis of the Universal Service Obligation (USO) program, Reliance Communications has commenced the rollout of the “World's Largest and Fastest Rural Infrastructure”. Accordingly, the Reliance Communications has commissioned 8,982 Base Terminal Stations (BTSs), which would provide telecom services in 2,34,000 villages in India that do not have any telecom connectivity at present. USOF subsidy support scheme is also being utilized for sharing wireless infrastructure in rural areas with about 19,000 towers by 2010 (“Mission Rural”, 2007).

National Telecommunication Policy (NTP), 1999, declaration has facilitated renovation of large number of both fixed service operators (FSO) and mobile telecom services (CMTS) licensees to Unified Access Service License (UASL). However, UASL regime with no explicit rural roll out programs has ensured the increasing participation of the private sectors which served indirectly the obligation for rural roll out of services (TRAI, 2013).

In 2003, TRAI came out with a framework for the imposition of Access Deficit Charges (ADC) to be paid by all operators-public as well as private to fixed service operators in order to spread
services across rural areas. This has made the fixed wireless operators to compensate for higher call charges, especially in rural areas. BSNL has been maintained to be the dominant fixed line operator in rural areas and became the major recipient of the payments of ADC. As a result, the relative cost of mobile to mobile calls became cheaper, that leads to sudden spurt in growth of mobile services, since initially Access Deficit Charges was applicable only on calls that is originated, transited or terminated in a fixed network. Further, TRAI recommended that Bharat Sanchar Nigam Ltd.’s (BSNL) rural obligations should be supported through the USOF through a Universal Service Levy (USL). Nevertheless, telecom reach in rural areas remains far from satisfactory both in terms of access to facilities and in broadband/ internet penetration. However, a review of TRAI 2008 recommendations brings out a discouraging picture of rural roll out of telecom services. National Telecom Policy (NTP) 2012 recommendation stresses on increasing rural teledensity and improved broadband connectivity in villages in India. The NTP recommendation aims to increase rural tele density to 70 percent by 2017 and 100 percent by 2020, from the current 40 percent in India. The Government of India through Universal Service Obligation Fund has prioritized North Eastern region of India to provide financial support to 56,000 villages, thus, reduce gap in connectivity in remote sites. Foreign direct investment has been increased to 100 percent during UPA Government. Alongside, UPA government issued unified licenses during 2010-2011 to operators who won spectrum in the third round of airwaves auction in order to reduce competition among public and private sectors in rolling out services and to achieve parity in pricing. The Telecom Commission earmarked an expenditure of Rs.3,000 crore for rendering connectivity to 56,000 villages those which are distinguished as telecom shadow areas under the Universal Service Obligation Fund (USOF).

**Ensuing Growth Stats of Telecommunication in Rural India**

The government initiatives at different period of time are set in motion, aimed at developing sound telecom infrastructure in the rural areas. The initial objective of Department of Telecommunication (DoT) policy was to provide a village public telephone (VPT) in each of 607,491 villages. The village public telephones (VPT) was introduced in March 31st, 1995 has been increased in numbers from 0.68 per 100 during 1999-2000 to 8.35 in December 2007. The
Annual Report 2007-08 of Department of Telecommunications specified that the operation and maintenance of 527,000 VPTs in the country would be borne by USO Fund.

As per Government record, as on March 2009, around 123.51 million fixed and WLL connections and 57167 VPTs have been provided in rural areas as on March 2009. Roughly 85% of the villages in India have been covered by the VPTs. More than 3 lakh PCOs are provided base in the rural areas to render community access to telecommunication. Moreover, mobile public call office (PCO) service under Mobile Gramin Sanchar Sewak Scheme (GSS) has been brought out to make telecom service at the doorstep of villagers. There was significant growth in the number of STD/ISD PCOs, increased from 57,119 in March 1994 to 272,989 in March 1999. Many ex-servicemen, unemployed youth and people belonging to economically disadvantaged group of the society receive an employment opportunity to eke out living after getting license to run a PCO, STD or ISD.

Sanchar Dhabas (Internet Kiosks) were also set up in 3500 block headquarters out of the total 6337 blocks across the country to provide internet services. The structure and composition of telecom growth has also undergone a qualitative change with the share of wireless phones going up to 85.6 percent in December 2007 as compared to its share of 14.9 percent in March 2002. The USOF subsidy support scheme is also being employed for sharing wireless infrastructure in rural areas with around 19,000 towers by 2010 (DoT, 2012).

In April 2013, India ended with 867.02 million mobile connections, which included 345.85 million rural connections that comprises 40.59 percent rural tele density as per TRAI monthly estimate report. GSM mobile operators added 16.6 lakh new rural subscribers to take the overall base in such areas to 27.43 crore. Vodafone increased its rural subscriber base to 8.39 crore at the end of October, 2013 after adding maximum of 7.7 lakh new users. Bharti Airtel, which has maximum rural subscribers, added 6 lakh new users during the month and its base stood at 8.74 crore. Idea Cellular added 3.7 lakh to its registered base of 6.95 crore and Aircel added 60,000 new users to its subscriber base of 2.33 crore by the year 2013. Uninor, however, lost 1.4 lakh rural subscribers during the month, which led its base shrinking to 1.01 crore at the end of October, 2013. The total rural subscribers as on September 2013 is recorded to be 35.66 crore that includes 35.03 crore of wireless and 63.1 lakh of wireline users. The total rural teledensity stood at 41.70 percent as on September 2013. The total rural subscribers as on September 2013
stood at 35.66 crore of which 35.03 crore are wireless and 63.1 lakh are wireline users (COAI report, 2013).

**Current Government initiative towards Telecommunication for Rural Development**

India's debt-ridden telecom industry has been battling with regulatory uncertainty for over a year. Of late, Department of Information Technology has stressed on building a supportive ecosystem for the growth of electronics and telecommunications manufacturing activities in the country. In the inaugural session of annual India Telecom summit, Prime Minister Manmohan Singh articulated the startling estimation of India’s import of electronic products which will worth about $300 billion by 2020, which will be more than the value of oil imports (TRAI, 2011).

Government formulated preferential Market Access policy to improve domestic sourcing and to develop local manufacturing ecosystem. The policy put a mandate on government departments to procure equipment locally.

UPA Government has launched a Mobile Seva initiative in 2013 to enable all state and central government departments and agencies to offer their services closer home to all the citizens through mobile based delivery channels. As on date, around 833 departments of Central and State Government are reportedly using Mobile Seva to utilize the benefit of optimized SMS services for interdepartmental co-ordination, and more than 55.25 crore SMS notifications including various services have been sent to citizens. Mobile Seva enables the integration of the mobile platform with the common e Governance infrastructure consisting of State Data Centers (SDCs), State Wide Area Networks (SWANs), State and National Service Delivery Gateways (SSDGs/NSDG). Mobile Seva enables a government department to integrate both web and mobile based services seamlessly and enable citizens to directly interact with Government Departments through SMS (DoT, 2006).

DeitY, Department of Electronics and Information Technology developed Mobile Applications Store (m-App Store) as part of Mobile Seva and currently hosts over 240 live mobile applications, which can be downloaded and installed free of cost on a mobile phone by any
person. About 254 public services are made available through SMS on 166 and 9223166166 via mobile apps.

Government has rationalized taxes on mobile phones and considers mobile phones and tablets as goods of special importance under Central Sales Tax (CST) Act of 1956. This leads to reduce cost of the gadgets by 7-8 percent and restrain state governments to levy tax on the goods or products of special importance to 5% in place of 12.5% under CST Act, 1956. Selected states of India including Maharashtra, Gujarat, Tamil Nadu, Chattisgarh, Madhya Pradesh are recommended to practice this rule (Ministry of Finance, 2013).

The telecom Secretary MF Farooqui stated that only 2G airwaves in 1800 MHz, 900 MHz, and 45MHz bands units in respective states of Delhi, Mumbai and Kolkata will be available for auction. However, government was indecisive about auctioning of the 2300 MHz band to carry high speed data to support 3G services.

The UPA Prime Minister Monmohan Singh stressed on the need to bridge the rural-urban divide in the area of electronics and telecommunications during 2013-14. Accordingly, a program to provide financial aid from the Universal Service Obligation Fund would offer mobile communication services in as many as 56,000 uncovered villages of the country.

In Phagi village in Rajasthan, as per the decision of the Ministry of Communication and Information Technology, about 1,000 below the poverty line (BPL) households have been received free cell phone and free BSNL sponsored mobile connection as a part of a corporate social responsibility initiative (“Mobile phones to”, 2014).

DoT has opted for distributing handset on a conditional basis when at least one member of every rural household complete 100 days of work under the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) in 2012 is to be provided with a mobile phone (“Net-enabled mobile”, 2013). The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) scheme proposes to provide net-enabled mobile phones to 2.5 crore people with a recharge of Rs.30 per month will be provided for free for two years. This will entitle the users 30 Mbps net or data usage, 30 minutes of talk time, and 30 SMSes per month.

The Government introduced another scheme in 2013 called HarHaath Mein Mobile (a mobile in every hand) ushered in Bharat mobile scheme to cover six million families living below the poverty line with a mobile phone worth Rs. 200 with local talktime. In all probability, 50 percent of the expenditure would be borne by the bidder to provide the service and the rest from
the USO fund (Lakshmi, 2013). Although most of the Government scheme on to freebies such as laptops and television sets is periodical in nature which come to exist during election with the pursuit of increasing vote arithmetic of the political party, unconnected beneficiaries get access to the welfare programmes of the government. The Government of India’s decision to distribute millions of phones to the poor under the Bharat Mobile Scheme for free has created favorable market for local indigenous cell phone manufacturer to promote “Made in India” products as well as entice some of the players to set up manufacturing units in India. Telecommmerchants with their manufacturing units in India are also eligible to participate in the bidding process for the Indian government’s plan to distribute free mobile phones.

Department of Telecom has emphasized on to yield many new Indian brands and to get legitimized among increasingly vast mobile phone user base. Currently Nokia & Samsung have manufacturing units in India and many cell phone brands are imported. In 2013, two domestic handset firms Karbonn and Lava International launched their smartphones, while another domestic company, Maxx Mobiles introduced low cost feature phone targeted at the rural market. Maxx Mobiles GPRS enabled feature phone with utility function of a dual SIM slot, expandable memory up to 16 GB, camera, and a LED torch is priced at Rs. 1,932, which is specifically targeted for the rural customers (“Maxx Mobile”, 2013).

New Delhi has decided the disbursal flow of Rs. 10,000-crore fund to promote local telecom manufacturing, of which a whopping Rs. 9,000 crore will be channeled to Indian telecom product companies (TRAI, 2011).

The Government of India proposes another mega scheme to woo the poor in order to bridge the digital divide in the country. According to the scheme, Centre would spend Rs. 7,860 crore to distribute 2.5 crore mobile phones and 90 lakh tablets free of cost to targeted beneficiaries over the next four years starting 2014-15. Bharat Sanchar Nigam Ltd has implemented the programme on behalf of the Government. The administrative and distribution charges for each mobile phone that worth Rs. 320 with talk time for 75 minutes, a package of 75 SMSes and 500 MB data usage per month. Tablet beneficiary will get device and data connectivity for a maximum period of 2 years for Rs. 900.

Another scheme which disbursed the amount of Rs. 4,850 crore under Universal Service Obligation Fund (USOF) propose to benefit women member of the family. Universal Service Obligation Fund reinforces the obligation of government to make the access to
telecommunication services universal to people in rural and remote areas at affordable and reasonable prices. Thus, in the first initial year, twenty five lakh people will be provided with the handsets, while another 50 lakh more beneficiaries will be added in the next year. According to the proposal, the scheme would enable people in rural areas to access information related to education, healthcare to agriculture, financial services, employment and skill development. The operators will take responsibility to provide the connectivity, the devices with accessories, as well as warranty for three years.

The customized embedded opening screens of the mobile phones will give details of the scheme and the allocated number will act as a level of authentication to provide access to health records, land records and payment transfers, according to the presentation.

India has 260 million unique mobile users across its cities and villages. The total number of handsets counted in 2012 was just 221.6 million units. The numbers of unique mobile users in villages are found to be nearly 104 million that indicates 40% mobile penetration in rural India. Out of 38 million Internet users in rural India, only 12% could access the Internet on their mobile phones as of June 2012 (IAMAI, 2013).

**Conclusion**

Liberalization of Indian economy during 1990s, had brought the realization that access to telecommunication is of utmost important for the achievement of country’s socio-economic goals and effective communication for the citizen. New telecom policy facilitated India’s vision of becoming an information technology state. NTP enabled Indian telecom companies to become truly global players by creating modern and effective telecommunication infrastructure for the convergence of IT, Media, Telecom and Consumer Electronic applications and by achieving efficiency in spectrum management.

Through the expression of universal service obligation, providing access to basic telecom services at affordable and reasonable prices to all uncovered areas including rural areas was introduced. Another emerging prioritized pursuit for telecommunication of the Government to make India become a major manufacturing base with key expertise of telecom equipment has been realized of late.

Increasing mobile phone penetration, especially in the non-urban areas, increasing competition, heavy investments in 3G, and increasing consumer attrition have made Network operators turn to
value added service (VAS) to secure their businesses. With increasing disposable incomes, increasing familiarity with technology, greater awareness of VAS, the willingness of the consumers of mobile subscribersto spend on value added services has increased.

It is observed that Government has taken initiative regarding the roll-out of required network and device infrastructure on an extensive basis. However, in order to foster innovation and attain the scale for utility mobile value added services (MVAS), both government and the industry has come together to create a win-win situation for the industry and the consumers.

Endnotes:
[1] Wireless Application protocol (WAP) is a technical standard for accessing information over mobile wireless network. It leads mobile service providers the opportunity to offer interactive data services such as mobile email, mobile news, music downloads and so on.
[3] VAP is six-point action plans which attempted to bridge the digital divide. The main elements of VAP are access to new technologies, sector reform, rural development gender issues, universal service and access.

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