CHAPTER TEN

Conclusion

This concluding chapter draws together the threads of discussion that were set out in the eight preceding chapters. The thesis deals with the efficiency and growth of telecommunication industry in India. It has huge growth potential but this growth is to be efficiently managed. The basic need of the society is to attain development and improvement in the communication system facilitates this process of growth and well being. The third chapter attempted to gauge the relationship between globalization and information and communication technology. It highlights three important results. First of all, the progress of information technology can change the pattern of global business by influencing the communication cost. The policy makers should take into account this aspect while charting course of globalization. Second, progress in ICT index is possible even without full scale globalization. Third result is progress of IC technology is helped with a process of urbanization. Policy makers should therefore focus on globalization to take due advantage of ICT.

In the fourth chapter of this dissertation elaboration of the spectrum requirement, allocation procedure, pricing has been done and this is needed as this ‘natural resource’ is the prime requirement for this industry. The ultimate aim is to benefit the customers and therefore without taking into account consumers’ surplus, policy design may be faulty. If the market is oligopolistic, one policy suggestion can be collection of the expected future profit as the spectrum license fee and then provide subsidy with it so that consumers get more amount of services. If however there are other beneficiaries in the society who gain
out of spectrum allocation and can be taxed, government can provide some more subsidy with the taxation proceeds of these beneficiaries.

After an analysis of allocation of spectrum, we have tried to understand the demand scenario of this dynamic industry. Chapter five analysed the demand situation of the new technology in this industry. The consumer choice perspective was the central theme of the discussion. The psychological theories - technology acceptance model and theory of reasoned behavior have been used to assess consumers' adoption behavior and also to estimate potential demand. From the empirical research it has been found that with coexistence of other low cost technology the future of new technology standard is not that bright.

3G technology has started its journey in India with BSNL having launched the services in 11 cities. The path for the future is still uncertain as the scheduled auction was deferred and decision in this regard will only take place after the general election. The strength of the Indian market in this regard is the huge size of the telephony market in terms of sheer number and the high percentage of young population, who are expected to be more receptive to new technology, compared to older generation. The flip side is the low per capita income level of the country, which may not permit the companies to charge very high rates. Looking at the international experience we find that at the starting period Japan - based NTT DoCoMo, ARPU could generate less revenue from customers of 3G services than from customers of 2G I-mode services because it charged less for 3G than for 2G. In UK revenue from 3G services was not encouraging due to high license fee, infrastructural cost, and hand over between 2G and 3G. So it is certain that service providers in India also have to cross long bumpy roads.
Chapter six analysed that although BSNL and MTNL is the first mover there is no scope for them to remain complacent. They should keep in mind that as first mover they are treading into an unknown terrain. The second mover will have much more advantages regarding information on true size of the market and preference of the customers. BSNL and MTNL therefore have to be much more proactive to convert the early mover’s advantage into long term business superiority. The public sector firm is monolithic in nature and wasteful too. In the era of wired connection it has enjoyed the monopoly power but now it has to be more proactive in the era of wireless technology and fierce competition among all telecom operators.

Telecommunications is a difficult industry to understand and analyze on account of the involvement of critical natural resources like spectrum, fast changing technology and the history of initial monopoly of public firms and subsequent entry of private firms. These two issues of efficient spectrum use and technology related uncertainty have left telecom industries in almost all countries in the world under a regulatory regime. So it is not a simple mixed oligopoly but mixed oligopoly with regulation. In chapter seven our theoretical results showed that in order to make this industry maximize social welfare, several issues like optimum allocation of spectrum, efficiency improvement of the public firm, smooth transition to new technology and speedy roll out of infrastructure are to be sorted out. The rules framed in this regard may lead to legal disputes and therefore dispute management is also a serious task of the regulator.

In the process of reforming and invigorating the public firm, four points are to be kept in focus. First of all, it is to be ensured that in the over enthusiasm of liberalization and privatization, anti- incumbent measures are not imposed on the public firm. As our
theoretical set up shows, the public firm is the most important instrument in the way to maximize social welfare. So the cost borne by social obligation placed on the public firm should not be glossed over in the making of the policies. Secondly, as Economist (2012) has shown state run corporatized firms of the emerging markets of China, Russia and Latin America are occupying important slots in the global corporate world and these state-directed firms are no longer seen as a way-station on the road to liberal capitalism but as sustainable instruments of development. This potentiality of state - run firms should also be kept in consideration while framing policy decisions. Thirdly, public firm is by nature risk minimizing and slow in decision making on account of bureaucratic system of management. So they are not expected to do very well in uncertain atmosphere, as our model has shown. While designing policy, this factor should be kept in mind. Otherwise so called advantage granted to public firm may turn into a disadvantage. Fourthly, this firm has a baggage of product and cost disadvantage from their initial incarnation. This history is to be reversed with careful planning.

When we look at the Indian telecom industry we find that despite all the uncertainties and delay in policy formulations, litigations over spectrum allotment and the barrage of allegations of corruptions, the industry has achieved phenomenal growth over a span of 15 years. The early trouble with the auction system has made the government more interested in discretionary allocation, but it is good that they have switched over to auction in case of 3G. Discretionary allotment in a situation of different technologies might open the floodgates of corruption and legal wrangling which would stifle the growth of this vital sector. Unfortunately that apprehension of allegation of corruption and legal tangles proved correct. So spectrum allocation has perhaps no alternative other than auction. Auction mechanism has successfully been tried out in many countries.
Further, the argument that auction raises the cost of services in the industry can be taken care of by using part of the auction revenue to subsidize infrastructure investment in telecommunication. We have also shown that auction need not be per se efficient but with number portability, auction can prove to be a better measure for spectrum allocation. It is good that number portability has been introduced now and this has enhanced competition in the process. Now TRAI should be vigilant that the firms do not resort to tacit collusion to reduce the degree of competition in the industry. Revenue sharing is also a good option and it has helped the growth of telecom industry in India at a critical period. However solution based on linking revenue sharing with additional spectrum will have its own limit.

India’s domestic telecom market has been attracting huge investments. The 3G auctions have generated huge revenue for the government. The telecom industry’s total revenue is estimated to be around 3.6% of total GDP of the country. So it is the responsibility of not just the policy makers but the entire society to make sure that the growth of this crucial sector does not get bogged down in the quagmire of endless political controversy.

Chapter eight concluded that despite all the uncertainties and delay in policy formulations, litigations over spectrum allotment, it should be admitted that government should get credit for opening up the telecom industry for private operators, and ending the stranglehold of government monopoly and allowing the foreign investments in this sector. Without these measures the phenomenal growth of Indian telecom industry could not take place. The early trouble with the auction system has made the government more interested in discretionary allocation but as we have shown that on account of coexistence of different technologies discretionary allotment will open the floodgate of legal
wrangling for which the growth of this vital sector will be stymied. We have also shown that auction need not be efficient but with number portability auction can prove to be a better measure for spectrum allocation. So government and TRAI should create pressure on the service providers to introduce number portability. Since number portability increases competition, the firms will try to stall this process about which TRAI should be careful. If that can be ensured there is no reason why should government give short shrift to the auction mechanism. Auction mechanism is successfully tried out in many countries. The apprehension that it will raise the cost of services in the industry can be taken care of by using part of the auction revenue on subsiding infrastructure investment in telecommunication. The revenue sharing is also a good option and it has helped the growth of telecom industry in India at a critical period. However solution based on linking revenue sharing with additional spectrum will have its own limit.

The Department of Telecommunications (DoT) and the Telecom Regulatory Authority of India (TRAI) had proposed a spate of regulatory changes for the telecom sector. Some of the key proposals were (1) tightening of subscriber linked criteria for spectrum allocation (2) introduction of one-time spectrum charges for obtaining additional spectrum, (3) increase in annual spectrum usage charges (4) permitting rollout of dual technology services under an existing UASL license upon payment of requisite license fee (5) introduction of number portability. Subscriber based criteria is fraught with the problem of switching cost related inefficiency, since firms will encourage short term and passive customers. However other proposals are sensible but some auction mechanism will be needed for optimum results.
Indian domestic telecom market has been attracting huge investments. Indian telecom industry’s total revenue is for 3.6% of total GDP of the country, growth projections are really attractive for further foreign investments. With the backing of such huge investments potential problem of spectrum allocation should also be tractable.

We conclude with some policy suggestions. Spectrum management and modalities of spectrum allocation is to be streamlined. The auction process that is being followed presently is increasing the price of the service. So an alternative is to be found out. In case of determining the reservation price of auctioning, independent demand estimation should be made. This will protect the consumer interest and prevent the wasteful burden on the financial sector, in the form of Non Performing Asset (NPA).

The public sector should increase the level of competence. The advantages of legacy operator and the positive reputation effect should be utilised. The state owned firm can become the role model for the other private players with regard to transparency. Government and TRAI should ensure that they get the level playing field with other private players.