Chapter 1

INTRODUCTION

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Chapter 1
INTRODUCTION

1.1 Introduction
India is one of the fastest growing economies spurred by capitalist growth. Strong regulators set up by interested governments, that can work in spite of pressures from existing departments have brought change in an existing weak public order system. The telecom industry has specially benefited in the setting up of TRAI as regulator to enforce positive market driven network of regulations generating accelerated growth to the sector. It all started with the belief of governments that a liberal state could still be strong and efficient and all it needed was an enabling body with strong governance to provide the required market push and the consequent growth.

Telecom today has drawn everyone’s attention with accusations making front page of newspapers for many months. Interestingly the gadget and its working for the everyday user is just as complex as the use of the instrument he/she is using and how much use one desires to put the technology available in the instrument, also to many is the cost of use and the different plans offered by the service providers.

The latest turn in events has educated the common man on the workings of the telecom industry, the regulations governing this business and to a large extent the nuances of the bidding process for the service providers and the competition therein. So much is written today about this industry that it is tickling the individual mind to grasp the exact understanding of the 2G, 3G and 4G phenomenon.

1.2 Importance of foray into the subject
Indian economic growth and the quarter by quarter predictions by the finance minister on the GDP are well watched by scholars and policy makers today as the inflation index that affects our everyday life has been frequently going up. The persistent increase of inflation index affects growth rate of economy and penetration of technology as well in a social system. Therefore, many analysts today, help us to understand the intricacies
woven into the details of every budget. The significance is basically to understand the importance given by the government for various sectors to grow as per the current need. Since the growth of telecom sector spurred post globalisation and contributed in GDP, so this sector has attracted the attention of many researchers and policy makers.

It is many decades now since the government has realised the importance of growth in telecom sector reaching all sections of society, to prompt the overall growth in economy rather than the select urban areas. The inclusive growth has today been well pronounced to include the underprivileged section of the societies such as minorities, women, backward classes and other such thrust areas, however the largest benefit will obviously be the penetration of the ability to communicate, through the growth of telecom sector to the unexplored rural areas which constitute a large portion of the Indian population.

In the early 1990’s, the government realising that growth potential was actually hampered by the existing restrictive policies, began an era of change and initiatives were taken to allow market forces to shape their economic decisions.

India, has always adopted a gradual approach to telecom sector reform through selective privatization this is also the policy followed by many countries, this helps managing competition in different segments of the telecom market. While change is constant, the factor of international market scenario has an obvious impact on the process, the results of the implement changes are further absorbed to refine the process to achieve the results originally envisaged.

The winds of change were blowing in this direction when the Indian government announced its 3G policy which will make available 3G, HSPA and WiMAX technologies that are expected to bridge the last mile and drive mobile broadband in rural areas. The Telecom Regulatory Authority of India’s (TRAI) has already implemented its Internet telephony decision, permitting ISPs to terminate local, STD and ISD calls from computers to mobiles and landlines or vice versa, this has helped reduce both local and long distance call rates, such policy decisions of course go a long way to support the much desired increase in rural connectivity.
Of the many thrust policies of the Government of India, that aim for the upliftment of the common man with the vision of creating equal opportunity and narrowing the large existing divide between urban and rural India, substantial effort were put in projects for expanding infrastructure in the area of basic education, water and electricity. These are being treated as basic needs with no stops pulled at attaining them. The policy of communication though on the front of the thrust policies has not met success on the scale that were planned, the comparable results with developed or fast developing nations like China is not encouraging.

Though the telecom sector was opened to private participation many years ago, the expansion even if rapid is mainly in the urban areas increasing the divide. The private companies are shying away from investing in the rural areas, factoring in the return on investment which in turn hampering rural telecom connectivity.

There will surely be multiple benefits from increased rural telecom connectivity. Not just an increased business opportunity in a near saturated business, in urban domain, but job creation and resultant economic wellbeing to the rural people, there will also be multiplier effects of telecom connectivity to local business in way of information access to pricing & technology, a consequence of better IT connectivity, which is much linked to the telecom reach.

In continuation, these opportunities for growth and their contributions in national GDP and livelihood etc. have been extensively discussed. There is a need to establish statistically the relevance of communication growth and the consequential benefits through structured data analysis that will corroborate the assumptions and existing theories and propose a model that will essentially mean a healthy initial investment that will establish the extent or speed on the Return on investment (ROI). This should however be an enduring and sustainable business that can be set free, to grow in scale on the circle of other growth parameters that have been triggered by the initial nurturing of communication spread and growth all-over.

Increasingly with audits and transparencies, the much awaited rural growth will surely get the benefits of a larger populace attention and debate will bring forth what was always desired however not fully achieved, anyway not rapid enough, even though there is
significant improvement from when the country originally accepted the need for telecom growth and access to all.

1.3 Approach to the research model

Realising the importance of telecom reach, specifically in view of the large divide between the spread of telecom in the urban and rural areas, the government has given increased importance to the rural reach of rural telecom and made provision for its support in each 5 year plan,

The research aims to explore the success of the allotted spending

a) In the actual spends vs the allocations
b) The allocations vs the actual revenue of the government from the telecom industry and
c) The reduction/increase in the divide, tracking the impact to trace the enabler element

Substantial effort in way of roping in the private companies to participate in the rural reach have been intimated, the universal service levy of 5% of the adjusted gross revenue earned by operators under various licenses is implemented to support the subsidies in place to make the initial investment into rural telecom more attractive, various schemes have been identified and implemented from the year 2003 under the universal service obligation, there has also been a persistent cry from the industry to decrease the levy %, to be more comparable with those levied in other parts of the world. The research examines

a) The relationship between the telecom growth and economic growth
b) The effectiveness of various Government policies and effect of various events in the telecom sector through event study methodology
c) The spend pattern of the rural consumers through primary data

Rural telecom can only spread with greater usage of this facility by the rural populous, the research is aimed at data arrived from a questionnaire to probe this section of user, to better understand the requirements that will promote the usage, along with an understanding of how telecommunication has furthered an overall improvement in their lives like, better education, medical help, information on technology to help with their
occupation and transact all matters relating to their day to day living and promote eventual economic prosperity.

Mapping the responses to understand the requirements for an improved service that will not only promote increased usage, but also enable incorporating need based functions that will further promote the growth within the rural areas, negating the need to migrate into saturated urban areas in search for better opportunity.

A questionnaire is also designed to probe from the service providers the limitations that restrict an acceleration of their business in rural areas. Understanding the extent of their participation to promote rural penetration, their perspective on how improvements in the existing conditions could further the cause of rural telecom growth, discussing if better regulatory control of meeting the obligations for universal services through direct investments of the percentage revenue would be an advantage over the subsidised mechanism model for the expansion of rural telephony.

1.4 Objective of the study
Of the many thrust policies of the Government of India, that aim for the uplift of the common man with the vision of creating equal opportunity and narrowing the large existing divide between urban and rural India, substantial effort is been put in projects providing basic education, water and electricity. These are being treated as basic needs with no stops pulled at attaining them.

The policy of communication though on the front of the thrust policies has not met success on the scale that is planned, the comparable results with developed or fast developing nations like China is not encouraging.

Though the sector has opened to private participation many years ago, the development even if rapid is mainly in the urban areas increasing the divide. Private companies are shying away from investing in the rural areas factoring in the return on investment.

The studies established that the shying away of telecom service providers from rural areas is mainly the return on investment, arising from the scale of usage in the more
sparsely populated areas, where the density does not justify the investment due to scale of economies.

Advancements in telecom devices and technology has contributed largely to reducing the cost of establishing infrastructure for providing the connectivity; most of the growth in telecom today is in the mobile sector, where the comparatives of cost vs spread are significantly advantageous.

While cost has been a driver for the fast spread, especially with the advent of mobile telephony, there has been significant movement from the very onset of the government realisation of the need for communication spread. Even in the fixed line era, with adoption of smaller and more robust exchanges initiated by Department of Telecommunication (DoT).

India has adopted many models of success in telecom spread from the world over to its advantage and even customised many models to suit the local need, there is however periods of lag in adopting technologies, like the acceptance of the 2G technology need, although the 3G followed in quick succession.

To capture the relevance of the flow of events it is important to map the attributes responsible for telecom growth and diffusion and arrive a model for the future, the objectives of the study are therefore follows as:

1. To establish the relationship between economic growth and telecom growth.

2. To establish the impact of various telecom policies on Tele-density growth.

3. To provide a viable and sustainable model for the service providers for rural consumers to promote mobile penetration in rural areas. In terms of the monthly mobile spend

4. To identify the factors that the rural consumers find important for selection of service providers.
5. To understand the perception of service providers that has resulted in a marginalised growth in the rural areas, which could open up substantial growth opportunities.

1.5 Scope of the study
The research covers the India strategies of companies in the telecom business mapping the growth of existing companies operating in India on various platforms of telecom business. Probing the reluctance for the rural thrust and understanding the common thread in company response for conditions to promote the same.

The investment policies of companies depend on various factors that contribute to the growth of company business like,

- Government policies in the country of operation,
- New and unexplored areas of business,
- Need and opportunity for providing new technology for cost effective implementation and thereby increasing benefits to customer and company, allowing for greater scale of business and profit margins,
- Competition existing in the sector,
- Spending / purchase power and the taste of the customers.

This study will compile data on these parameters and analyse with appropriate statistical tools to arrive a suitable model.

The research is limited to the telecom operations in the country ,with the view that the basic telephone connection is a necessity like electricity and water and does not extend to the study of other elements of information technology like the internet which fairly overlaps in being central to the uplift of the populous and contributing to narrowing the large divide between urban and rural India.

The study will limit itself to villages that already have electricity (96%),and will not envelope the cost of penetration, arising from captive power generation.
The research will briefly study the cost advantages of internet telephony and the technology available, the study will be restricted due to the already low per call pricing in India making internet telephony more suitable to those with larger incomes and having access to computers. It also endeavours to compare policies and business opportunities for the sector in other countries that are developing or are developed and have successful comparative penetration of telecom.

1.6 The rural thrust of the study – its significance
Of the total population of India 30% reside in the urban areas rural area accounts for 70% of the total population the percentage distribution of tele-density by the latest count has already the 100% mark for the urban areas and is still at around 37.02%\(^1\) for the rural areas, therefore there is immense potential for growth in the rural areas.

The saturation in urban areas would mean that voice telephony will not have much room for growth. The growth of business in communications for the urban areas in the present scenario will therefore largely be based and become viable on the use of e-commerce and the consumption of entertainment, new technologies would be required to sustain the market growth rate. While this will be a direction for thrust and growth there is a huge potential for basic voice connections in the rural areas and growth of the industry can be sustained with larger participation in these marginally explored areas.

Consequently operators will have to have interest in rural telecommunication advancement which is the first step in furthering growth for education, health and management of agriculture resources leading to an accelerated development of these areas, increasing the consumption of telecommunication and making it viable. Stagnation of the reach will be cancelling out the mutual benefit.

1.7 Importance of the study
Telecommunication reach has been a policy of most governments world over, the subject has the thus been extensively researched and written on. While it is generally agreed in the published material that the cost of connection is the single largest contributor for the

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\(^1\)Source: ERU (Economic Resource Unit), DoT (as on 30th November – 2011) Out of 37.02%, 32.15%-private operators & 4.87%PSUs
penetration of telecommunication in developing countries, the efforts in some countries that have developed successful models has also been documented.

The much touted model “Grameen” of Bangladesh has already been attempted in rural India, the value low recharge model from Philippines is also largely adopted & successful in urban India, the African model of low cost handsets is already prevailing in the country, the success of these models to accelerate penetration growth in rural India is marginal.

Many programmes implemented in India have made very little difference to the rural penetration of telecommunications, Efforts are on by businesses since 2007 to make drastic changes in their business models like outsourcing network management & the trend is healthy since operators are willing to cede responsibility for networks much earlier to their development, more & more operators are now embracing this method.

The regulatory authority has also now called for network sharing, which could reduce massively the Capex investment on tower build (Passive investment) & estimated to save 20-30% of network operation cost, this is however seen as a threat to suppliers of network managed services.

The current licence held by operators does not permit sharing of active components of a network which include feeder cables, backhaul between antenna sites, radio links & transmission equipment.

The research studies the possibility of a scalable impact of the latest Indian initiatives on the telecommunication penetration.

1.8 Conclusions
The growth of business in communication in the present scenario based on the current urban model will largely be viable depending on the use of e-commerce and the consumption of entertainment in the rural areas. This will consequently mean that for the private operators to have interests in rural telecommunication advancement in these areas is necessary and without the reach of telecommunication the sufficient advancement at the desired rate is not possible. Cancelling out the benefits mutually.
The study

1. Establishes that telecommunication the first step in furthering the growth of voice data and video and high speed internet, necessary tools for e-governance & other online services for education, health, transactions and for management of agriculture resources and development, which has not been adequately supported in spite of the continuous effort under various plans.

2. Provides evidence that acceptance of universal standards of technology use where applicable is necessary for accelerated results

3. Concludes a need based study that arrives the spending potential & utility model to allow businesses to adapt a method to make telecommunication an every person utility.

1.9 Structure of the Thesis (Chaptrization)

After the brief introduction of the topic, mentioning of objectives and scope of the research in this Chapter (Chapter I), the thesis continues to build the conceptual background of the telecom sector in which it describes all important concepts related to the telecom sector, in Chapter II. This includes the evolution of telecom sector in India, the technological background, the governess structure of telecom in India, the much talked about USO fund and its imprecations.

The Chapter III describes the Literature of the thesis, which discusses different scholarly articles published in different journals, related to the topic under consideration. The chapter ends with finding of gaps in the current literature.

Chapter IV outlines a detailed methodology used in the research. The chapter begins with the aims and objectives of the research, translated into research hypothesis, followed by a research design of the study. A detailed description of the sample is stated followed by a description of the tools. The description of procedure of data collection ensues, followed by a review of the sampling techniques. The Chapter also gives the operational definitions of the variables. The chapter concludes with the techniques of analysis used in the study.
Chapter V describes the detailed analysis done in the research this includes primary and secondary data analysis, descriptive and causal analysis for all three stages of the research undertaken. The detailed outputs appear in the Appendix.

Chapter VI is the discussions and conclusions chapter. The chapter gives the logical reasoning of the outcome of analysis done. It goes on to explain certain outcomes of the analysis chapter.

The Chapter VII contains the conclusions, implications, and suggestions for further research.