

Research Journal

ENTREPRENEURSHIP

Vol. 5

March 2007



Dedicated to Entrepreneurial Spirit of India



Anjuman-I-Islam's
Allana Institute of Management Studies

ENTREPRENEURSHIP IN TELECOM SECTOR

Do you want to control your destiny? Do you want to be your own boss?

I believe you do, as you have chosen to study this paper. And as you do, you already have a budding entrepreneur within you. An entrepreneur, put simply, is an individual who owns and operates his own business, assuming the responsibility, risk and rewards therein. An entrepreneur in the field of technology in general and telecommunication in particular is different from others in terms of his knowledge and acumen in the field of respective technology. As telecommunication field is highly technical, domain knowledge at least to some extent becomes a pre requisite to succeed in the field. However, there are instances when a member of the team would have this expertise and the team as a whole understands how to apply technology and develop it in a useful product or service, for which customers would like to pay and get value-for-money.

Introduction and Background:

This paper examines the concept of Entrepreneurship from the perspective of telecommunication industry, specifically in the Indian Telecom scenario. The definition, drivers, aspirations, attributes, structures, cases, examples, opportunities, etc. relevant and applicable, primarily to the telecom and related sectors are discussed here.

In the mid 1990s, in line with the changes taking place all over the world, government of India realized the importance and role of telecommunication infrastructure and facilities, in the growth of Indian economy, and in turn opened up the telecommunication sector to competition. Subsequently, there was a spurt in entrepreneurial opportunities available due to dramatic technological and regulatory events that changed the way in which products and services were delivered to the customers. Entrepreneurial opportunities are available to exploit these technological and regulatory changes using innovative ways.

Entrepreneurial Environment and Attributes:

Entrepreneurship thrives in competitive and challenging markets, and competition spurs growth as shown in a 1995 report from Organization for Economic Development (OECD). The report

brings out that cellular subscriber growth rate in countries that allowed open competition were nearly 150% greater than the rate in duopoly markets, and growth rate in duopolies were, in turn, nearly three times greater than monopoly markets. Under this competitive and liberalized environment, telecom industry is growing at an unimaginable pace, thanks mainly to wireless technology. The mobile sector has grown from around 10 million subscribers in 2002 to more than 142 million by December 2006.

While Competition brings with it challenges, risks and failures, entrepreneurs are not deterred by failures. In fact it is very important to experience some failure, as it broadens your comfort zone and you realize that failure is not all that bad. You become a lot bolder in terms of taking risks.

An entrepreneur will continuously enhance his skills in all areas, will keep looking for new opportunities to provide better value to his customers and will do more than what is expected, providing help out of the way. He will continuously expand his network by providing additional help, not only through himself, but through his network as well. His relationships with the manufacturers, suppliers and customers will be flexible with a view to provide convenience, and a higher value for their money to them.

As against a normal businessman who uses opportunities, entrepreneurs not only use existing opportunities but create opportunities, through expanding in value chain, and/or generating new ideas, to get better value.

Major Initiatives and Contribution:

Mr. Sam Pitroda who played a very important role in telecom revolution in India realized that accessibility to telecom services, rather than telecom density was crucial for India, and therefore it was better to aim for a phone in every community rather one in every home. With a view to help “democratize” access to telecom services across the nation’s vast population, he introduced the concept of Public Call Office (PCO) boxes or kiosks which could be accessed by public at large on commercial basis. This concept not only provided entrepreneurial opportunities to lot of unemployed persons but also enhanced accessibility to Indian masses serving the twin purpose of welfare and service.

Realizing that information technology is a great social leveler and “politically, economically, socially, and logistically, telecommunications lies at the very heart of progress”, he went ahead with setting up the Centre for Development of Telematics, “C-DOT” for the Indian Government. C-DOT developed indigenous technology for production of telephone exchange, which could be provided in small places and could work in Indian environment. Presently, Mr. Sam Pitroda is Chairman National Knowledge Commission, India and Chairman, WorldTel based in Chicago USA and has to his credit more than 50 patents in various areas of telecom technology.

Another successful entrepreneur who played an important role right since the beginning of telecom revolution is the chairman of the Bharti group of Industries, Mr. Sunil Bharti Mittal. He is an entrepreneur to the core, who had a vision when the future of wireless telecommunication in India was hazy. Bharti’s entry into telecom business happened in mid 1980s, much before the competition phase, when the government allowed manufacture of push button telephones to be used with new digital exchanges, through setting up a manufacturing facility for push button telephones. Bharti group was first private telecommunication service provider in basic telephone services in Madhya Pradesh and today Bharti is a powerful player in telecom industry with a nationwide presence in GSM cellular, basic telephone, and long distance carrier services.

Government Initiatives:

Since the introduction of concept of PCO to increase the accessibility of telecommunication services, government has provided enough support to this scheme, as a result number of PCOs have been increasing continuously. In Mumbai, incumbent service provider Mahanagar Telephone Nigam Limited (MTNL) has provided one PCO for every 100 people of mumbai. Further, these small units are growing in size and services through providing number of telephones and additional services like Fax, email, printing, and internet surfing, from the same premises, and calling these communication centers.

Similar concept of increasing accessibility through community phones, and in turn providing entrepreneurial opportunities has been tried in other countries as well. In Bangladesh to address the problem of very low telecom penetration, Grameen bank, a micro-finance institution,

through Grameen Telecom and Grameen Phone Ltd. provided loans for creating micro-enterprises that can both generate individual income and provide whole villages with connectivity.

Expansion of telecommunication services has provided opportunities towards marketing the services through agent, distributors, and franchises, who sell various basic, mobile, and value added services at a commission. MTNL, the incumbent service provider in Mumbai and Delhi, which was earlier selling all its products through in-house facilities, now has appointed a chain of marketing associates, distributors, and franchises to sell its products. Entrepreneurs taking part in this scheme can use innovative ideas to sell the products and services and expand their business.

Another initiative is Project Akshaya, the IT project, providing entrepreneurial opportunities, taken up by the Kerala State. It is a bold plan to provide e-literacy to common people and to ‘bridge the digital divide’ by enabling ordinary citizens to access relevant information in the local language over the internet. It reflects government’s concern to strike a balance between promoting entrepreneurship and offering welfare services to citizens. E-commerce activity will generate income for the entrepreneur and stimulate much needed industrial growth and employment in the district.

The developing world has witnessed large number of Information Communication Technology for Development (ICT4D) experiments across a number of countries. While these experiments often seem to fail, the countries which have been partially successful have to be looked upon as a role model by the infants (lesser developed countries) in implementing ICT4D initiatives.

Role of Institutional support to entrepreneurship:

Development of qualities and attributes of entrepreneurship amongst the employees in corporate unit and institutions can bring in large benefits to these, through the spirits of innovation, risk taking, and accountability. There are various examples of organizations encouraging such qualities in the form of Intrapreneurship, dispersed entrepreneurship and corporate venturing. Dispersed entrepreneurship refers to building a structure and a culture across the organization to support entrepreneurship and innovation and to stimulate employees to take ownership of the business. Organizations that are able to find

common ground between the aims and aspiration of the individual and the organization, have the greatest chance of both surviving and prospering. Corporate venturing refers to building innovative capacity by developing close relationship with employees willing to initiate creation of new ventures.

France Telecom had introduced a development initiative, specifically intended to stimulate the creation of new ventures from within. As a result of this, ventures related to the activities of France Telecom, spin out of the host organization, and surround it with a source of innovative technologies that can then be exploited. British Telecom had also launched the Brightstar program designed to foster innovative enterprises. Siemens in an interesting innovation introduced a senior staff development scheme, via a rich dynamic and highly stimulating Pan European development program.

Corporate enterprises have learned that large costly alliances are important, but it is often small partnership and investments with companies that follow their technological hunches, that lead to the largest leaps. Strategic partnership positions a company to meet the competition, while strong technology partnerships make sure the tools are there to get the job done. AT&T, despite its mammoth size and existing technology and skill base, had bet its future on its ability to pick winners from the entrepreneurial grab bag: 3DO Corp. for multimedia-to-the-home; GO Corp. and EO Inc. for pen-based computing and personal Digital Assistants (PDAs); General Magic for PDA connectivity; The Sierra Network for long-distance video gaming; Compression Labs for video compression technology; and Optical Networks International for CATV equipment. The list goes on and on.

Some motivating examples of entrepreneurial achievers:

The case of MIT Professor Irwin Jacobs, who left academia to apply Code Division Multiple Access (CDMA), a wireless coding scheme developed in the military to commercial cellular systems, and led Qualcomm, is worth mentioning. Initially, his efforts were shunned by the cellular community - particularly large vendors pursuing other technology i.e. Time Division Multiple Access (TDMA) Technology - but Qualcomm has now been vindicated by the market place. CDMA technology is now approved as a standard by the telecommunications industry association and today

many carriers appear committed to CDMA than TDMA.

Anousheh Ansari, who had been in news worldwide as the first female space tourist, and who reportedly paid \$20 million, for a ride to the international space station, is a cofounder, CEO and Chairman of the board for Telecom Technologies, Inc. founded in 1993. The company experienced rapid growth and profitability before being acquired by Sonus Networks in November 2000 for a minimum 10.8 million shares of stock worth \$441 million at that time. The company with 200 employees, and based in Texas, concentrated on developing soft switching technology and focused on multi vendor soft switch services and media gateway interoperability.

Tulip IT service Ltd. Promoted by Lt. Col. H.S. Bedi, VSM, headquartered in New Delhi, employs over 1000 professionals, and provides world class service to a large number of clients across country. Tulip is a leading provider of end-to-end data connectivity services. Tulip has seen tremendous growth through diversification and consolidation in network integration and connectivity services. It came into focus through its offering of wireless based last mile connectivity in 550 cities in India. Tulip has recorded a turnover of Rs. 509 crore for the financial year ending 31st March 2006, up 49% over last year and a net profit of Rs. 48.80 crore, up 265% over last year.

Tejas Networks founded by Sanjay Nayak, CEO, Dr. Kumar N. Sivarajan, CTO and Arnob Roy, VP Engineering, developed next generation optical networking products that support both voice as well as new data services for the global markets. The company leveraged the strengths of its R&D team in India to gain competitive advantage. They identified a gap in these networking products and by providing products to fill the gap gained market in India and other countries. Tejas Networks is a privately funded company, backed by highly renowned investors including Dr. Gururaj Deshpande, Chairman and cofounder Tejas Network along with other foreign investors.

Entrepreneurs may get other benefits and recognition as did telecom entrepreneur Rajeev Chandrashekhar, former CEO of BPL Mobile, who made it to Rajya Sabha from Karnataka as an independent.

Funding opportunities for entrepreneurial ventures:

There are enough venture capitalists who provide funding to entrepreneurs to develop new technology, create innovative applications of old technology, bridge the gap between technology and market place, and even to purchase facilities as long as they are not merely transfer of ownerships.

To get funding you don't need to be an experienced technology entrepreneur, but you should at least have management team with a background in your chosen field. The team should also have a track record of successful business management, although it need not be an entrepreneurial venture.

The firms exploiting technological and regulatory changes have to ensure that after pursuing their technological visions in relative obscurity, they have to emerge with tangible advances. These should be able to attract the attention of the big players: either carriers and service providers looking to deploy or vendors or venture capitalists willing to invest.

While an abundance of start ups is beneficial to the industry as it stimulates creativity, there is always a downside. Due to over liquidity coming at many start ups, many bad ideas are being funded, in part because investment firms are in a rush to put money to work.

Serial Entrepreneurs:

While many entrepreneurs hang on to their original enterprises, telecommunication entrepreneurs have proved more fluid. The telecom industry is where the serial entrepreneur thrives. Many of the industry's top executive have started vendor or carrier businesses in the wake of deregulation and have not hesitated to sell these businesses when the right buyer came along. Then they move on to a new thing, to do it once again. While wealth generation is a motive for many of them, it is the psychological rewards of having an impact which drives them. Serial entrepreneurs, who have founded and run multiple start up companies are an unusual lot, who after building enough wealth to be comfortable for the rest of their lives, go out and risk it again. They have a knack for seeing profit and an eye on the next big thing.

These Entrepreneurs love the chaos, uncertainty and adrenaline of working for challenging

ventures, and love the opportunity to build and win against big companies. These entrepreneurs see entrepreneurship as a career choice and they will be happy, moving on from the first opportunity to the next and so forth. If one chooses entrepreneurship as a career, one will definitely be successful.

Opportunities in Telecom Sector:

In telecommunication and related areas, due to privatization, liberalization, and competition, huge opportunities are present. Immense developments are taking place in the field of new technologies which include broad band, Wi-Max, 3G, VOIP, NGN and others. These technologies make it possible to develop advanced telecom applications at a much lower cost than it was possible. Many websites provide you with options to chat, talk, exchange files and do video chatting without any costs. Their business models provide for generation of revenue and profits through other supplementary sources. Broad band CorDECT technology can provide 256 Kbps connectivity to villages at a total equipment price of around Rs.7,000/-. Developing business models to extend telecom revolution to rural sectors provide another great opportunity.

All applications designed for computer and internet will be possible on mobile phones, which will not only provide immense entrepreneurial opportunities but will also have a major influence on social, political, and economic life. Increase in feature rich mobile telephones provide opportunities for various value added services, including content provisions. Provision of various information and entertainment, e.g. astrology, news, stock market prices, cricket scores, voting results, interactive gaming etc., provide opportunities for entrepreneurs, who can provide creative useful content. Audio Video content like movie clips, music, and educational material provide further opportunities.

With the growth in Business Process Outsourcing (BPO), Call Centers, Application Service Providers, media applications and others, telecommunication traffic in voice, data, video and mobile segment is poised to grow. Another development which is taking place in the telecom field is convergence of various devices (mobile, camera, Television, computer etc. in one device), services (communication, broadcasting, gaming) and technologies (GSM, CDMA, Fixed) and these developments will provide ample opportunities for small start ups to play a role in the growth of

telecommunication services so that service operators can concentrate on their core strength.

Technologies under development will provide for any time, anywhere communication. What it means is that with a single ID for a person, he will be accessible at all places and at all times. The same ID will transfer the call to different devices in different manner depending on his location and availability e.g. by dialing the same phone number the ring will go to his office number when he is in office, to his mobile when he is moving out, to his residence number when he is at his residence and alert on his computer when he is working on his laptop.

With the growth in e-commerce and related products, secured transactions and digital security issues including secure transmission of information and files will provide further opportunities.

Impact of development in telecom sector on entrepreneurship:

All these changes and developments in IT and telecommunication areas have not only provided various opportunities for entrepreneurs in the field of telecom, but these have also changed the characteristics of entrepreneurship as a whole. With the advent of voice over internet protocol (VOIP) and next generation networks (NGN) technologies 'Death of Distance' at least in the field of communication will be a reality. Communication whether to the next door or to the other end of the world will cost the same in terms of money as well as time.

Internet provides opportunities for the entrepreneur to offer Internet related products, with new form of advertising, communications and information medium. It also provides a new opportunity for the sale and delivery of non internet related products. Globalization in true sense is possible only with telecommunication advances.

Due to internet and communications technologies, information dissemination is much better and the world is moving towards becoming a near perfect market. There are many portals which provide you with comparative rates of products available in market through various sources. At the same time, an entrepreneur can market its product without investing heavily in infrastructure through the use of internet. Auto generated contextual advertisements provide you with kind of advertisements which you would like to see.

Conclusion:

Growth envisaged, pace expected, and opportunities available in the field of Telecommunications are abundant. Indian entrepreneurs have to make use of them. As you are reading this, I believe you have the interest and passion to take the plunge. Risks are there and rewards are huge. Go ahead and do it.

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GLOSSARY:

- 3G : Third generation wireless technology to offer faster data transfer rates on mobile phones, enabling many video based applications.
- BPO : The act of giving a third party the responsibility of running a process that would otherwise be part of an internal system.
- CDMA: Technology to provide mobile communication, wherein instrument need to be programmed. Dominantly used in United States. In India used by MTNL/BSNL, Tata, and Reliance.
- GSM : Technology to provide mobile communication through SIM card which can be used with many instruments. Predominantly used in Europe. In India used by MTNL/BSNL, Hutch, and Bharti.
- Last Mile: Distance between customer premises and nearest telephone exchange through which connectivity can be provided.
- IPTV : System to provide television and interactive video on demand services through telephone wires using internet protocol.
- VOIP : A technology for providing voice communication using packet based internet protocol at very economical rates.
- Wi-Fi : Technology to provide high speed wireless internet connectivity in small area.
- Wi-Max: Technology to provide high speed wireless internet connectivity over large areas (citywide network).
- NGN : Next Generation Network. Technology to provide transmission, supporting multiple technologies and protocols.

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