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Investment Opportunity and Challenges of Broadband Sector in India

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ABSTRACT

India stands number second in world in telecommunication network based on number of telephone users (fixed as well as wireless line). Lowest call tariffs around the world due to mega telephone networks and hyper-competition among them. India is third largest internet user base around the world. As per the Telecom regulatory of India (TRAI), there are more than 340 million broadband internet user users in country. Following increasing FDI, hyper competition and ease of entry barriers would be witnessed of success and growth of the mobile sector. In dissimilarity, similar development cannot be seen in broadband Internet services, and the growth, usage of broadband services in India is slow compared other emerging countries in Asia region. This research paper outlines the success opportunity and challenges for broadband industry of India. This paper also covers major areas that are outside the telecom arena but affect the industry.

1. Introduction

Broadband Internet administrations have been marked as one of the significant impetuses for development of the economy, framework, and Internet activity of a nation. Because of the interconnected nature of a nation's data superhighway, the advancement and arrangement of data and correspondence innovations are urgent for expanding and enhancing mindfulness and gainfulness. With more current advances and enhancing information transfers framework, household business portions are getting to be a piece of little organizations, endeavours, and government markets. This is empowering close joint effort between already inexactly bound substances to give a plenty of administrations joining more groups socially and innovatively.

India is one of the main developing markets on the planet today. Created economies view India as a real objective for seaward innovative work (R&D). Organizations need to put resources into setting up R&D activities in information transfers, cars, programming advancement, business process outsourcing (BPO), and knowledge procedure outsourcing (KPO). In the most recent decade, the Indian economy has developed at a quick pace, posting a normal development rate of 7% since 1994; in 2004–2005, the development rate was 7.5%.

India is one of the first nations to profit from telecom administrations. The Telegraph Act of 1885 was a significant development ever, and since that time India's telecom industry has kept on embracing new innovations. In any case, the appropriation and multiplication of telecom administrations has constantly lingered behind other creating nations. This can be ascribed to numerous reasons, however a couple of emerge, for example, war with different countries, and strict monopolistic tenets and regulations concerning information transfers. These regulations hampered the procurement of essential telephony administrations and neglected to interface groups and also country regions to urban focuses. As indicated by DyanidhiMaran, Minister of Communications and IT for India, it is normal that before the end of 2007, there will be 250 million phone lines (settled and versatile) in India, with a tele density of 22%. India has turned into the fifth biggest phone arrange on the planet, behind China, the US, Japan, and Germany.

It was not until 1990 that the Department of Telecommunications (DOT) started obtaining new advanced supplies and had the capacity include new telephone lines. Request has constantly overpowered supply, yet this was the first beam of development in the telecom segment. The administration understood that information transfers administrations help monetary development whether a nation is produced or creating. This changed viewpoint happened as the administration embraced thoughts for changes, with the target of putting India on the world guide as a centre of business opportunities. To attain to these targets, the legislature embraced a few activities: streamlined the foreign direct investment (FDI) procedure; attempted to draw in FDI in commercial enterprises like information transfers, programming, and hardware; opened new venture parkways; made programming innovation stops; and distinguished new productive divisions. These endeavours guaranteed that India would get to be a piece of the worldwide economy.

Below table demonstrates the business structure of main ISPS in India.

ISP	2010 - Subscribers	2010 - Share (%)	2011 - Subscribers	2011 - Share (%)	2012 - Subscribers	2012 - Share (%)	2013 - Subscribers	2013 - Share (%)
Bharat Sanchar Nigam Ltd.	9671180	57.84	11630484	57.21	12442892	54.07	13158831	60.13
Mahanagar Telephone Nigam	2308706	13.81	2442157	12.01	2568736	11.16	1977627	9.04

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Ltd.								
Bharti Airtel Ltd.	1350033	8.07	1446715	7.12	1383036	6.01	1413929	6.46
Reliance Communications Infrastructure Limited	1317550	7.88	2427278	11.94	3580768	15.56	2596164	11.86
Sify Technologies Ltd.	162808	0.97	NA	NA	NA	NA	NA	NA
Hathway Cable and Datacom Pvt. Ltd.*	323896	1.94	355574	1.75	365447	1.59	368435	1.68
Tata Communications Internet Services Limited	274224	1.64	164198	0.81	150644	0.65	115545	0.53
Data Infosys Ltd.	104615	0.63	NA	NA	NA	NA	NA	NA
YOU Telecom India Pvt. Ltd.	284926	1.7	287011	1.41	678815	2.95	361252	1.65
Asianet Satellite Communications Ltd.	NA	NA	109561	0.54	NA	NA	NA	NA
Tikona Digital Networks Pvt. Ltd.	104653	0.63	226555	1.11	292270	1.27	269196	1.23
Beam Telecom Pvt. Ltd.	NA	NA	129750	0.64	222279	0.97	294211	1.34
Tata Teleservices (Maharashtra) Ltd.	NA	NA	NA	0	111020	0.48	NA	NA
Quadrant Televentures Ltd. (HFCL Infotel Ltd.)	NA	NA	NA	0	NA	0	119367	0.55
Total of Top 10 ISPs	15902591	95.11	19219283	94.53	21795907	94.72	20674557	94.47
Others	818209	4.89	1111517	5.47	1214736	5.28	1210800	5.53
GRAND TOTAL	**16720800**	**100**	**20330800**	**100**	**23010643**	**100**	**21885357**	**100**

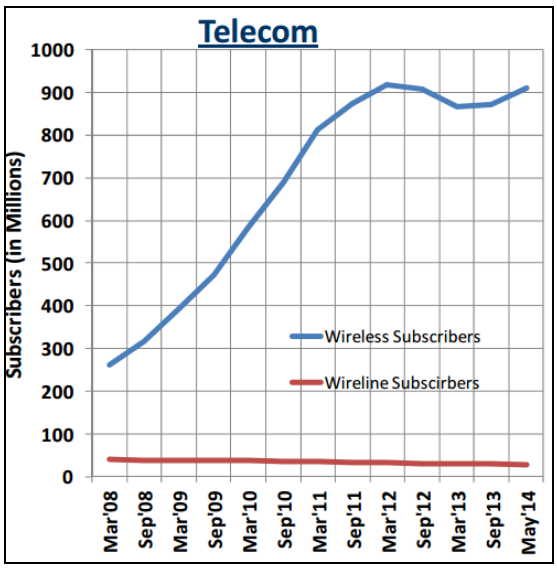
It has been contended and demonstrated via scientists that dissemination of Internet administration has a significant effect on the development of an economy and related social orders. In India, Internet administrations have not experienced high development rates when contrasted with the expansion of altered and portable administrations. In light of a late TRAI press discharge, complete Internet associations in India arrived at 6.8 million, and aggregate broadband associations arrived at 1.3 million. All the while, as indicated by the seventeenth Survey Write about Internet advancement in China, distributed in January 2006, absolute Internet associations in China arrived at 111 million. Separating it regarding access strategies, pretty nearly 29.1 million utilization rented lines, 51 million utilization dial-up, and 63 million utilization broadband. Considering the way that India and China are the quickest developing economies, and adversaries in the IT and IT-related parts, China is ahead as far as expansion of Internet administrations and has been fruitful in systems administration social orders.

1.1 Objective

The research objective of the paper is to study the opportunity and challenges faced by internet broadband players in India.

2. Vital speculation and development opportunities

To keep up development in versatile administrations and its connected divisions, administrators, governments, and ambitious people need to ponder putting resources into key markets. With the vicinity of various versatile service providers in urban markets, development will achieve a balancing out point. As indicated by a late report, late development in versatile administrations was driven mostly by CDMA administrators while GSM administration was level. The report additionally watched that current normal income produced by broadband administrations is scarcely enough to maintain remote service provider.



Subscribers in India and Growth in Telecom

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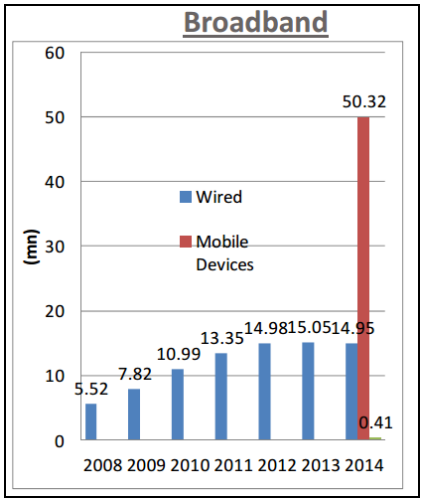


Subscribers in India and Growth in Broadband

Source: The Indian Telecom Services Performance Indicator Reports, TRAI dated 7th July 2014

2.1 India's Internet opportunity

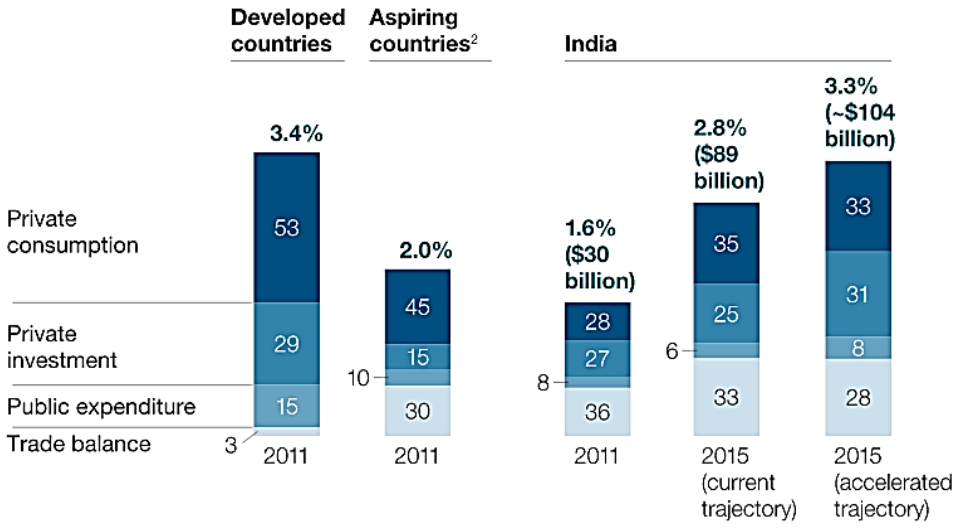
Still, in India, private technology consumption makes a significantly smaller contribution to GDP than it does in most countries. If India's information- and communications-technology expenditures were comparable to those of the developed world, the Internet's contribution to GDP, including the impact on industries up- or downstream from the Internet industry itself, could triple.

As robust as this potential may be, India faces challenges to get ready for an aggressive ramping up of Internet adoption. Compared with 57 other countries—developed and developing alike, assessed on a broad range of macroeconomic and technical metrics—India ranks in the bottom quartile across a range of preconditions for Internet adoption: Internet penetration as a percentage of total population, median monthly cost of broadband Internet service, quality of Internet infrastructure, and the like.

To establish the preconditions for transforming the Internet into a much more dynamic engine of growth for India, a variety of stakeholders will need to collaborate on five key initiatives:

- Extend Internet infrastructure beyond the tier-one cities, to semi urban and rural parts of India.
- Make Internet access and usage less expensive.
- Encourage large-scale digital literacy to promote user engagement.
- Introduce Internet-based applications in all parts of the economy, including non-traditional areas, such as agriculture, education, energy, health care, and public utilities.
- Create a favourable environment for Internet businesses, both to encourage start-ups and to scale existing companies.

This list of initiatives is by no means exhaustive. To make them succeed, three groups of stakeholders will need to collaborate: policy makers, to set the course and the legal framework; private enterprise, to improve the Internet's infrastructure; and entrepreneurs, to deliver products and services for the next 350 million Indian Internet users.



(Source: mckinsey)

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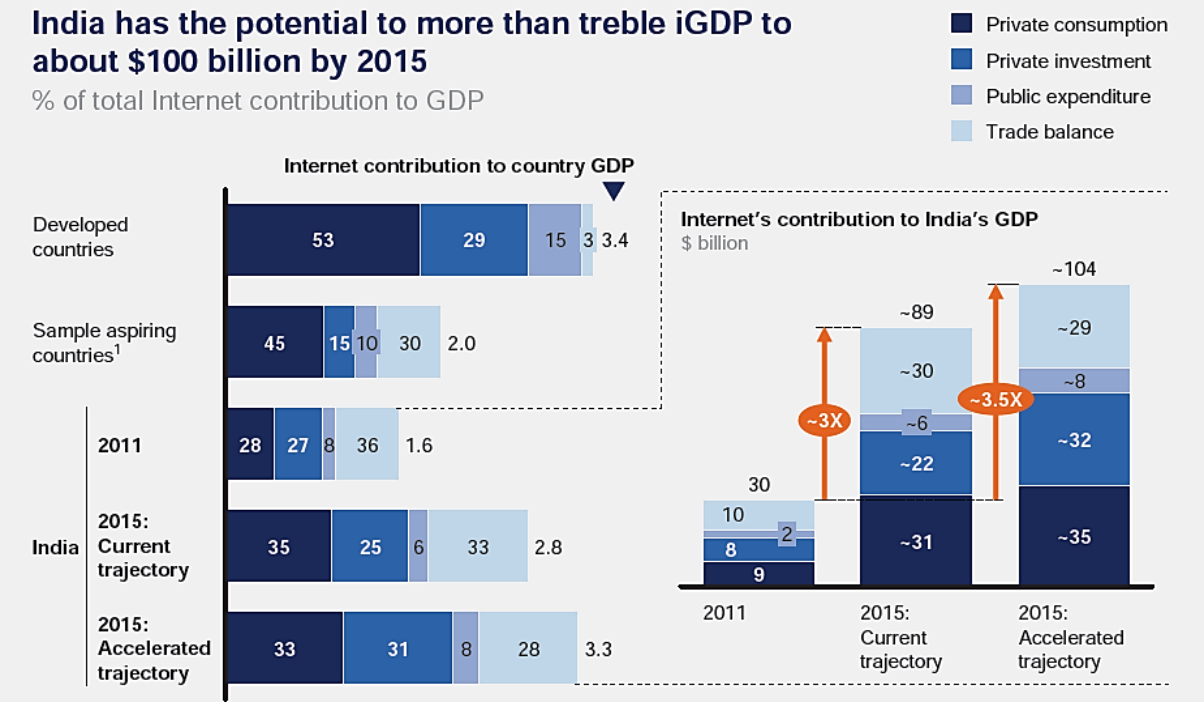
2.2 Opportunities and Potential Areas

- 3G and Broadband Wireless Access and applications
- Triple Play Services
- India's projected 330 million to 370 million Internet users will form the second-largest Internet population in the world by 2015
- Next Generation network and services
- Cell phones, 2G & 3G : Fastest growing Cell phone market
- FTTH (FiberToThe Home) -Passive Optical Networks
- Value added services in Mobile segment
- Transition from Ipv4 to Ipv6 in Indian Network
- Voice on IP protocol (VOIP) and Internet Telephony
- Security Equipment for IP networks (Internet, NLD ILD)
- India has the potential to more than treble iGDP to about $100 billion by 2015



(Source: mckinsey)

3.

4. Challenges: The roadblocks on Broadband Highway

For maintained monetary development, training, wellbeing, and personal satisfaction are critical.

India's key preference is the accessibility of talented, canny, financially savvy labor, and a huge English-speaking group. The Indian programming industry is a fantastic illustration. A percentage of the key measurements of India's ICT labor are the accompanying:

- The IT and ITES-BPO industry utilizes more than 800,000 experts in organizations identified with programming fares, programming local, programming hostage in client associations, and ITES-BPO.
- The general average age of the product expert is around 27.5 years.
- Eighty-one percent of all product experts have graduate or higher degrees: 13% are M.TECH, MBA, CA, ICWAS, 67% are B.tech, BE or MCA, 20% are certificate holders or graduates.

Anyway these experts can be discovered just in zones where business opportunities will be ample, foundation is decently created, and business opportunities are rich urban areas, for example, Mumbai, Bangalore, Delhi, Noida, Calcutta, and Pune.

The United Nations Development Program's worldwide Human Development Report for 2005 positions India 127th out of 177 nations as far as the composite Human Development Index (HDI) for 2003.

As indicated by Census 2001 results, India enlisted an education rate of 64.84%. For a nation with a populace of more than a billion, this is not an awful pointer, yet the nation falls behind China's writing proficiency rate of 95.1%. Besides, just 9-13% of aggregate nation consumptions have been dedicated to training. This can be ascribed to the way that the social segment falls inside each one state's portfolio and not under the focal government. As indicated by consequences of the 60th round of NSSO study (January-June 2004), around 72% of families are in provincial India, and they represented about 75% of the aggregate populace. In country ranges, around 66% of typically utilized guys and 84% of normally utilized females are occupied with the rural division.

Engaging towns with broadband administrations can have falling impacts. Broadband will guarantee that the horticultural group will have speedier access to data for issues identified with

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products. Broadband can help agriculturists to learn more current innovations and cultivating philosophies, which would help expand profit. Broadband can encourage enhanced correspondences with government organizations, purchasers, and merchants. To guarantee that these prerequisites are accomplished, the agrarian group needs to be instructed to exploit broadband.

Supply side challenges

In many Indian states, socio-economic and supply side challenges limit the adoption curve for broadband services.

- Lack of desired infrastructure
- Right of Way (RoW)
- Complex regulatory environment
- Low last mile connectivity
- Unavailability of affordable devices
- Lack of content
- Lack of public access points
- Unavailability of useful application

Demand side challenges

- Limited digital literacy and awareness
- Limitedaffordability

5. Suggestions

It is essential to have a comprehensive perspective of both supply and demand sides to guarantee the achievement of broadband industry in India. Right now the Indian business is not develop for both the sides and it include expansive expenses and with full-of challenges. Methodologies to address rollout chances and encourage broadband organization are examined below:

Supply-side methodologies

All the players in the broadband quality affix needs to concentrate on supply side methodologies to give fast broadband association with all people and undertakings with ideal client experience.

- Encourage open private association model to draw in higher private interests in framework development and business operations and productivity
- Increase subsidizing and institutional backing
    - Provide appropriations, including duty concessions, assessment occasions
    - Make accessible long haul financed advances
    - Optimum utilization of Universal Service Obligation store and other exceptional trusts keeping successful harmony between the tolls on administrators and the normal advantages
    - Government value or obligation subsidizing Create a decent domain, advancing reasonable rivalry and productive utilization of assets
- Continue to extend 3G scope and profundity, and advance substantial scale business LTE
- Facilitate application administration development consolidate to develop broadband in different commercial enterprises
- Focus on extending broadband system on instruction, wellbeing, vocation, crisis, and other job territories of use
- Enhance development of hearty system and data security frameworks and entirely hold fast to global digital wrongdoing laws and regulations
- Explore new model of collaboration for broadband foundation imparting joined by decently characterized strategy around it
- Promote productive use of range assets through range imparting, exchanging and pooling
- Provide clear guide of national radio recurrence range designation including the advanced profit and make accessible satisfactory measure of range
- Encourage utilization of distributed computing model and green advances to enhance vitality proficiency and to give administration and administrations on interest to the subjects

Demand-side methodologies

Right now the purchasers don't see the profits of broadband administrations and brilliant gadgets in their family/personal and business life and consequently they are hesitant to subscribe for such arrangements. The interest side incitement systems are progressively critical for creating nations to expand mindfulness, training among the populace and making the broadband appealing and reasonable for the masses. A few activities have been now taken by the Government to enhance the appropriation of web in rustic and semi-urban markets, for example, dispatch of Aakash tablet, e-Mamta (following the soundness of mother and youngster), e-Dhara (computerization of area records in Gujarat), e-documenting expense forms, to give some examples.

- Promote utilization of data, grow new benefits, new showcases
    - Encourage essential and optional schools to incorporate PC and web related subjects furthermore to teach elderly individuals
- Make the broadband association reasonable for the regular man relying upon the rate prerequisite
- Accelerate open part acquirement of administrations through online stage e.g. online access to RTO administrations, identification, property and wage charge installments, conception/passing/marriage declarations, benefits reserves, and so on.
- Encourage SMEs and substantial undertakings to direct business utilizing broadband and plan of action advancement
- Accelerate the improvement and industrialization of reasonable savvy gadgets - portable terminals, Internet TV, tablet PCs and different manifestations of Internet finished items that are applicable for provincial and urban groups

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- Promote the advancement of nearby and local advanced substance and imaginative highlight rich applications to extend broadband in different commercial enterprises and fields
- Open broadband system offices and give simple entry at government orgs and open organizations, for example, civil building, streets, tracks, airplane terminals, trams
- Strengthen the aptitude advancement endeavors for preparing and sustaining specialized experts and other ability
- Improve development of licenses

6. Conclusion

India will be a gigantic market with huge assets and human power. Changes, new strategies, the presentation of rivalry, privatization, raising FDI cutoff points, and development in IT and IT-related administrations have helped India make an imprint for itself in the worldwide business sector. With the created markets getting to be immersed, India can draw in universal administration and gear suppliers. The key is that the producers have a gigantic low-end business to which they can cook. The information transfers business is a standout amongst the most unpredictable and hazardous organizations, and going into early markets is trying for both open and also private speculators.

I have bolstered the idea of an open private association model. Government offices have put resources into creating markets, and have enhanced foundation and openness. However the majority of this has been carried out in urban ranges, and different markets have been disregarded. I contend that the improvement of foundation alone won't take care of the issue. Rather, improvement of learning based substance is needed so as to drive the acknowledgement of broadband administrations. However even with such advancement, there are difficulties that fall outside the information transfers part: control disappointment, absence of Internet administrations (whether dial-up, broadband, or link), and dissimilarity in the middle of interest and supply. Moreover, individuals need to settle on keen decisions when obtaining lavish things, for example, Pcs and related peripherals. At the same time individuals will just purchase on the off chance that they think about yet need access to nearby substance. This emphasizes our conviction that making mindfulness is vital for social and in addition general financial development, and to attain to that the accessibility of force and different essentials is critical.

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