

Telecom Industry Current Trends in India

Dr. Vellayan Srinivasan^{1,(A)}, Dr. Suresh Kumar. K^{2,(B)}, Dr. Sasikala.R^{3,(C)}

¹Associate Professor, Department of MBA, S.A. Engineering College (Autonomous), Chennai-77

^(a)srinivasanv@saec.ac.in

²Associate Professor, MBA Department, Panimalar Engineering College, Chennai-123

^(b)pecmba19@gmail.com

³Professor, Department of MBA, S.A. Engineering College (Autonomous), Chennai-77

^(c)drsasikalar@saec.ac.in

Abstract

Background: At present, Internet and Mobile broadband are essential in daily life in all nations. Tremendous development of telecom industries raised impacts on emerging data-intensive technologies such as Cloud computing, E-commerce, Artificial Intelligence, Big data and the Internet. Telecommunication

industries classified into few major types like Infrastructure, Equipment, Mobile Virtual Network Operators (MVNO), White Space Spectrum, 5G, Telephone service providers and Broadband. Global competitiveness in telecommunication leads to increasing network coverage and decreasing tariff rates to sustain market. In this study focus on telecom industry current trend in India. India is the world's second-largest telecommunications market. Indian telecom market has three major categories. They are wireless, wire line and internet services. Secondly, Current market scenario of telecom industry and its sub sectors, global market conditions of telecommunication service. Thirdly, concentrated India's leading mobile operators Jio, Airtel, BSNL, and Vodafone-

Idea, Technology transformation in telecom market, employment and investment development in Telecom sector. Finally, Government of India has taken necessary steps to develop Telecom industry. SWOT analysis of Indian Telecom Industry.

Objectives: 1. To identify the Indian telecom sectors adopt technology transformation like 5G network adoption, utilize improve customer service through collecting data, customer preference. 2. To determine the telecommunication major role in development of Nation. 3. To evaluate Indian telecom service in the growth various sector of nation.

Methods: After enduring several years of sluggish economic growth, the telecom industry, as we know it today, is shaken up as emerging tech trends and digitization reshape end-to-end business operations. The ongoing shifts simply that to succeed in the long run, telecoms need to accelerate their race to drive customer value while continuing to reduce costs and differentiate by offering ultrafast access. (<https://www.businesswire.com/news/home/20200811005414/en/Analyzing-Technology-Trends-Transforming-Telecom-2020-Quantzig>)

Results: The Indian telecom sectors adopt technology transformation like 5G network adoption, utilize improve customer service through collecting data, customer option, focused to adopt cloud computing,

Artificial Intelligence to replace human interfere. Indian telecom service market provides huge investment, employment opportunities. The Government of India has concentrated on Digital India program. It helps to connected all the sectors through the internet. Framing many rules and regulation, to prevent customer exploitation, offer various services consumer affordable prices. Regulate telecom market from Private interference. Telecommunication leads a major role for development of nation. Especially Indian telecom service helps to growth various sector of nation. Indian government focused on digital transformation with the help of telecommunication.

Conclusions: Telecommunication leads a major role for development of nation. Especially Indian telecom service helps to growth various sector of nation. Indian government focused on digital transformation with the help of telecommunication. The Indian telecom sectors adopt technology transformation like 5G network adoption, utilize improve customer service through collecting data, customer option, focused to adopt cloud computing, Artificial Intelligence to replace human interfere. Indian telecom service market provides huge investment, employment opportunities. The Government of India has concentrated on Digital India program. It helps to connected all the sectors through the internet. Framing many rules and regulation, to prevent customer exploitation, offer various services consumer affordable prices. Regulate telecom market from Private interference.

Government provides various benefits to telecom industries and tracking activities. Regulate call rates and data provided. Indian telecom sector tackle difficulties to sustain successful stage. In earlier stage to current scenario adopt strength and opportunities, analysis weakness and threats, to reach international standard facing consequences for all future users of the Internet.

Keywords: telecommunication, India, M-commerce, Telecom sector in India, Jio, Airtel, BSNL, Vodafone-Idea

1. Introduction

The telecommunication industry in India is rapidly growing and witnessing many developments. It has gone through several transformations that has led to severe competition in the industry (Borah, N. 2014). The country offers robust growth opportunities driven by strong growth fundamentals, increasing urbanization, rising income levels and favorable demographics (G.R., 2013). The rapid strides in the telecom sector have been facilitated by liberal policies of the Government that provides easy market access for telecom equipment and a fair regulatory framework for offering telecom services to the Indian consumers at affordable prices. Presently, all the telecom services have been opened for private participation (Amutha, 2012). Telecom sector is recognized as an important tool for the socioeconomic development of a nation and plays a vital role in the growth of various sectors of economy, and with the Indian government's vision of a Digital India, the country has embarked on a focused journey to bring digital transformation in the lives of all its citizens. (Panda, 2018) India will be having 700 million internet users by 2020. The liberal and reformist policies of India have enabled easy market access. Telecom sector has become among the top five employment opportunity generator in the country. Telecommunication industry is booming with 275 million smart-phone subscribers and has outpaced the USA. (<https://www.eigenre.com/homepage/industry-reports/telecommunication-industry-in-india->)

2. Objectives

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3. Methods

Table1:TelecomMarket Share India2020

Operators	SubscribersinMillions	MarketShare(Mar'20) %
JIO	387.5	33.6
Airtel	327.8	28.4
Vodafone-Idea	319.1	27.6
BSNL	119.7	10.4
Total	1154.1	100.0

Source:<https://candytech.in/wp-content/uploads/2019/12/Telecom-Market-Share-India-2020.jpg> According to our India Telecoms Report, the publisher forecasts that mobile subscriptions and fixed broadband subscribers will continue to fuel the telecom sector growth in the 2019-25 period. More than 600m people became Internet users over the last six years and another 600m more Internet users are expected to come online over the next six years by 2025. (<https://www.businesswire.com/news/home/20200512005476/en/India-Telecoms-Industry->)

Technologies Transforming Telecom Sector

After enduring several years of sluggish economic growth, the telecom industry, as we know it today, is shaken up as emerging tech trends and digitization reshape end-to-end business operations. The ongoing shifts simply that to succeed in the long run, telecoms need to accelerate their race to drive customer value while continuing to reduce costs and differentiate by offering ultrafast access. (<https://www.businesswire.com/news/home/20200811005414/en/Analyzing-Technology-Trends-Transforming-Telecom-2020-Quantzig>)

- a. These 'free' and 'unlimited' offerings have pushed most Indians to use the Internet and get online today. According to a report by the Internet and Mobile Association of India (IAMAI), as of September 2019 India had 451 million monthly active internet users. Only China has more. (<https://www.communicationstoday.co.in/how-telecom-industry-of-india-changed-in-2019/>)
- b. **5G Networks** – The telecom carriers are working on providing the 5G networks to spark an enormous wave of faster internet. While the technology has not yet been fully defined, carriers are proceeding with the lab and field trials in their race to stay competitive (Jadoun, M., et al, 2020). As 5G comes into the picture, how can telecommunications companies capitalize on this new infrastructure to attract and retain consumers? Our 2020 industry outlook explores the opportunities of 5G and other trends that could have a big impact on the telecom industry in the year ahead (<https://www2.deloitte.com/>)

c. Artificial Intelligence

From virtual assistants and chatbots to knowledge engineering, smart machines, and autonomous vehicles, AI has the potential to replicate human cognitive capabilities. It will help telecom service providers offer a transformational customer experience while they manage, optimize, and monetize their infrastructure using different business models. Use cases include network optimization, predictive maintenance, virtual assistants, RPA, and many more. (<https://www.alepo.com/telecom-2020-growth-drivers-and-trends/>)

d. Big Data

Telecom industries can use the collected data to generate crucial business insights and understand customer usage patterns. Ultimately the data can be utilized to improve customer service, evaluate new products as well as monitor and optimize the network. Big data helps companies build stronger businesses and use it to their competitive advantage. (<https://www.ilink-systems.com/blog/7-top-digital-transformation-trends-shaping-the-telecom-industry-in-2020/>)

e. Internet of Things

The Internet of Things has changed the part of telecom specialist organizations to empower better correspondence among individuals and gadgets. The appropriation of IoT enables the telecom business to screen base stations and server farms distantly. This guarantees insignificant vacation for the organization, improves business strategies, and creates more income. Telecom ventures are recreating inventive techniques and applications to adapt IoT answers for advantage from these rising innovations and improve their business measures. Organizations can likewise execute plans of action like SaaS, PaaS, and BaaS to use IoT successfully and choose which application is gainful for their association.

The system here is to rearrange IoT cycles and information and quicken its selection in insignificant vertical segments like medical services, vitality, and associated brilliant urban areas.

f. Robotic Process Automation (RPA)

The media transmission industry has one of the most elevated reception rates for RPA innovation. It offers elevated levels of versatility and dexterity as it assumes control over the redundant and rule-based assignments or cycles, for example, reacting to client inquiries, report age, value following, and so on. It empowers organizations with the correct instruments to effectively oversee back-office work, for example, keeping up information uprightness and security, representative compensations, promoting, and publicizing, and equipment and programming costs.

This offers time to representatives to take a shot at more essential errands, create further client connections, increment operational efficiencies, and investigate delays in the administrative conveyance to the client.

g. Cloud Computing

Most telecom suppliers depend on an enormous processing framework to convey a differing set of utilizations, oversee information, and bill administrations. Moving to the cloud diminishes inside processing asset needs just as inward expenses while expanding income streams.

The compensation per use administration model encourages telecoms to present new administrations, lessen the expense of the administration, and work all the more viably according to the market requests. By receiving cloud innovation, telecom enterprises can switch significant business capacities to the cloud and advantage from its proficiency.

Jobs in Telecom Sector (<http://www.careerizma.com/industries/telecom/>)

The Indian telecom sector will be in a position to provide four million jobs by 2019, thanks to penetration of services into rural areas, smart phone demand, and increasing Internet usage, according to IBEF, quoting Ramstad India.

Recruiters will be seeking engineers, technicians, installation/maintenance service professionals, besides sales, marketing, and human resources professionals.

Those aspiring to become telecom engineers require engineering degrees in telecommunications or electronics. Career prospects are improving in this flourishing sector.

Investment and Major Development ([/www.ibef.org/industry/telecommunications.aspx](http://www.ibef.org/industry/telecommunications.aspx))

With daily increasing subscriber base, there have been a lot of investment and development in the sector. FDI inflow into the telecom sector during April 2000 – March 2020 totalled US\$ 37.27 billion according to the data released by Department for Promotion of Industry and Internal Trade (DPIIT).

Some of the developments in the recent past are:

- India had over 500 million active internet users (accessed Internet in the last one month) as of May 2020.
- In June 2020, Jio Platforms Ltd. sold 22.38 per cent stake worth Rs 1.04 trillion (US\$ 14.75 billion) to ten global investors in a span of eight weeks under separate deals, involving Facebook, Silver Lake, Vista, General Atlantic, Mubadala, Abu Dhabi Investment Authority (ADIA), TPG Capital and L. Catterton. This is the largest continuous fundraise by any company in the world.
- In April 2020, Vodafone Group PLC infused Rs 1,530 crores (US\$ 217.05 million) in Vodafone Idea as accelerated payment to help the company manage its operations.
- As of January 2020, more than 542 banks were permitted to provide mobile banking services in India.
- In December 2019, Airtel disclosed its plans to invest US\$ 2.86 billion in its business as part of company's annual target.
- As per a report by Ericsson, India has the world's highest data usage per smartphone at an average of 9.8 GB per month.
- As of August 2019, Jio's IoT platform was ready to be commercially available from January 2020.
- In August 2019, Reliance commercially launched Jio Giga Fiber as a wired broadband service.
- During Q1 2018, India became the world's fastest-growing market for mobile applications. The country remained as the world's fastest growing market for Google Play downloads in Q2 and Q3 of 2018.
- Bharti Airtel had plans to launch 6,000 new sites and 2,000 kms of optical fiber in Gujarat in 2018-19.
- Vodafone India and Idea Cellular merged into 'Vodafone Idea' to become India's largest telecom company in September 2018.

Steps Taken by the Government (Drishti, 2019)

- A new **National Digital Communications Policy- 2018 (NDCP-2018)** was unveiled in Oct 2018, to replace National Telecom Policy-2012, to cater to the modern needs of the digital communications sector of India. The policy aims to attract USD 100 billion worth

of investments and generate 4 million jobs in the sector by 2022.

- Telecom Commission was re-designated as the "**Digital Communications Commission**".
- In 2017, Department of Telecom (DoT) came up with a gazette notification, advising the state governments to give quicker ROW permission and charge very little amount to service providers. Though, only some states responded.
- The government has provided benefits to telecom sector by withdrawing some duties.
- The government has fast-tracked reforms in the telecom sector and continues to be proactive in providing room for growth for telecom companies.
- The Department of Information Technology intends to **set up over 1 million internet-enabled common service centres across India** as per the **National e-Governance Plan**.
- FDI cap in the telecom sector has been increased to 100% from 74%. Out of 100%, 49% will be done through automatic route and the rest will be done through the FIPB approval route.
- FDI of up to 100% is permitted for infrastructure providers offering dark fibre, electronic mail and voice mail.
- The Government of India has introduced Digital India programme under which all the sectors such as healthcare, retail, etc. will be connected through the internet.

Table 2: SWOT analysis of Indian Telecom sector (Bhandari, R., 2013)

<p>Strength</p> <ol style="list-style-type: none"> 1. High growth rate 2. Low call rate and data usage rate 3. Unlimited value added service like free SMS, cricket update, news update, daily horoscope etc. 4. High return of investment (ROI) 5. Brand value 	<p>Weakness</p> <ol style="list-style-type: none"> 1. Poor infrastructure, network coverage, low broadcast frequencies 2. Late adopters of new technology 3. Poor customer service 4. Difficult to enter because of huge financial requirements (eg. 3G licensing)
<p>Opportunity</p> <ol style="list-style-type: none"> 1. Increasing market potential with high revenue 2. Decrease in the cost of broadcast signals due to technological advances 3. Skilled and competitive labor force 4. Low cost labor 	<p>Threats</p> <ol style="list-style-type: none"> 1. Threat of entry of new competitors, FDI 2. Strict government rules and regulations (eg. License renewal) 3. Declining average revenue per user (ARPU) 4. Telecommunication policies by TRAI 5. Internet phone call

Source: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2327734

4. Results

The Indian telecom sectors adopt technology transformation like 5G network adoption, utilize improve

customer service through collecting data, customer option, focused to adopt cloud computing, Artificial Intelligence to replace human interfere. Indian telecom service market provides huge investment, employment opportunities. The Government of India has concentrated on Digital India program. It helps to connected all the sectors through the internet. Framing many rules and regulation, to prevent customer exploitation, offer various services consumer affordable prices. Regulate telecom market from Private interference. Telecommunication leads a major role for development of nation. Especially Indian telecom service helps to growth various sector of nation. Indian government focused on digital transformation with the help of telecommunication.

5. Discussion

Telecommunication leads a major role for development of nation. Especially Indian telecom service helps to growth various sector of nation. Indian government focused on digital transformation with the help of telecommunication. The Indian telecom sectors adopt technology transformation like 5G network adoption, utilize improve customer service through collecting data, customer option, focused to adopt cloud computing, Artificial Intelligence to replace human interfere. Indian telecom service market provides huge investment, employment opportunities. The Government of India has concentrated on Digital India program. It helps to connected all the sectors through the internet. Framing many rules and regulation, to prevent customer exploitation, offer various services consumer affordable prices. Regulate telecom market from Private interference. Government provides various benefits to telecom industries and tracking activities. Regulate call rates and data provided. Indian telecom sector tackle difficulties to sustain successful stage. In earlier stage to current scenario adopt strength and opportunities, analysis weakness and threats, to reach international standard facing consequences for all future users of the Internet.

References

- [1]. Anitha, P. (2020, January 29). Information Technology in Indian Banking Sector Some Recent Developments.
- [2]. Analyzing the Technology Trends Transforming Telecom in 2020: Quantzig. (2020, August 11). Retrieved from <https://www.businesswire.com/news/home/20200811005414/en/Analyzing-Technology-Trends-Transforming-Telecom-2020-Quantzig>
- [3]. Bhandari, R. (2013, September 19). Telecom Industry in India. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2327734
- [4]. Brand India. (n.d.). Retrieved from <https://www.ibef.org/archives/industry/indian-telecommunications-industry-analysis-reports/indian-telecommunications-industry-analysis-february-2020>
- [5]. Drishti (2019, December 05). Telecom Sector: Issues and Challenges. Retrieved from <https://www.drishtias.com/to-the-points/paper3/telecom-sector-issues-and-challenges>
- [6]. Get in touch Kevin Westcott Principal | US Telecom. (2020, May 13). 2020 Telecommunications Industry Outlook. Retrieved from <https://www2.deloitte.com/us/en/pages/technology-media-and-telecommunications/articles/telecommunications-industry-outlook.html>
- [7]. Global Telecom Services Market Size & Share Report, 2020-2027. (n.d.). Retrieved from <https://www.grandviewresearch.com/industry-analysis/global-telecom-services-market>

- [8]. Guest. (2019, January 11). Top 3 Trends For Telecom Sector Which Can Change Everything In2019.Retrievedfrom<https://trak.in/tags/business/2019/01/11/top-3-trends-for-telecom-sector-which-can-change-everything-in-2019/>
- [9]. IndiaTelecommunicationMarket-byMedium,byTypeandbyRegion.(n.d.).Retrievedfrom<https://www.maximizemarketresearch.com/market-report/india-telecommunication-market/45156/>
- [10]. IndianTelecomIndustry-TelecomSector,FDI,Opportunities.(n.d.).Retrievedfrom<https://www.investindia.gov.in/sector/telecom#:~:text=The Indian Mobile industry is,TelephoneserviceprovidersandBroadband.>
- [11]. IndianTelecomServicesMarketResearchReport2015-2020.(n.d.).Retrievedfrom<https://www.infoholicresearch.com/report/indian-telecom-services-market-trends-forecast-2015-2020/>
- [12]. Jadoun,M.,Says,V.J.,John,V.,Says,R.,Roy,Says,S,...Rawal,H.(2020,February28).Top 5challenges&trendsintelecommunicationindustryin2020.Retrievedfrom<https://www.racknap.com/blog/top-5-challenges-trends-telecommunication-industry/>
- [13]. Jadoun,M.,Says,V.J.,John,V.,Says,R.,Roy,Says,S,...Rawal,H.(2020,February28).Top 5challenges&trendsintelecommunicationindustryin2020.Retrievedfrom<https://www.racknap.com/blog/top-5-challenges-trends-telecommunication-industry/>
- [14]. Kalyan, D. N., & Pedirappagari, V. R. (2019, October 28). Employee Performance Appraisal inTelecom Industry, India. Retrieved fromhttps://papers.ssrn.com/sol3/papers.cfm?abstract_id=3471721
- [15]. Name*. (2020, May 30). TelecommunicationindustryinIndiagrowinginexcessof20%annually. Retrieved from https://www.eigenre.com/homepage/industry-reports/telecommunication-industry-in-india-growing-in-excess-of-20-annually/?gclid=Cj0KCQjwnqH7BRDdARIsACTSAdupNTjpZ6ZVV4M62lWEi9JS7ZYpbuoA3a5PJOXpGRu9LxTk48jhPKQaAr4zEALw_wcB
- [16]. Telecom2020:GrowthDriversandTrends.(2020,July29).Retrievedfrom<https://www.alepo.com/telecom-2020-growth-drivers-and-trends/>
- [17]. TelecomindustryinIndiaandabroad.(2015,November04).Retrievedfrom<http://www.careerizma.com/industries/telecom/>
- [18]. ILink Systems, ILink Systems / About AuthorMore posts by iLink Systems, & Systems, M. P.(2020, July 07). Blog - 7 Top Digital Transformation Trends Shaping The Telecom Industry In2020.Retrievedfrom<https://www.ilink-systems.com/blog/7-top-digital-transformation-trends-shaping-the-telecom-industry-in-2020/>
- [19]. 26, D. (2019, December 27). How Telecom Industry Of India Changed In 2019. Retrieved from<https://www.communicationstoday.co.in/how-telecom-industry-of-india-changed-in-2019/>

a. Webreference

- [20]. ArticleDetail.(n.d.).Retrievedfrom<http://www.journalijar.com/article/26427/artificial-intelligence-in-indian-banking-sector:-challenges-and-opportunities/>

- [21]. <https://www.grandviewresearch.com/industry-analysis/global-telecom-services-market>.
- [22]. https://www.researchgate.net/publication/270508738_The_Changing_Indian_Telecommunication_Industry.
- [23]. <http://www.iosrjournals.org/iosr-jbm/papers/Vol17-issue10/Version-2/D0171023542.pdf>
- [24]. https://www.researchgate.net/publication/338739466_PEST_Analysis_of_Present_Indian_Telecom_Sector
- [25]. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3514518
- [26]. <http://www.jetir.org/papers/JETIRBP06099.pdf>
- [27]. <https://adalyajournal.com/gallery/50-dec-2445.pdf>
- [28]. <https://search.proquest.com/openview/35f665634bd1587d2c9539cd6d193572/1?pq-origsite=gscholar&cbl=2030322>
- [29]. https://www.researchgate.net/profile/C_Vijai/publication/340367501_The_Future_of_Robotic_Process_Automation_RPA_in_the_Banking_Sector_for_Better_Customer_Experience/links/5ea94088a6fdcc7050978d5a/The-Future-of-Robotic-Process-Automation-RPA-in-the-Banking-Sector-for-Better-Customer-Experience.pdf