



Impact of FDI on telecommunication sector of India

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Abstract

Globally as the telecommunication industry is heading towards new heights with 5G technology and India is at the cusp of its adoption, Foreign Direct Investments (FDI) can play much significant role in boosting the sector to achieve these new heights. Keeping this potential in mind, the present study is an attempt to investigate the impact of FDI on the growth of telecommunication sector of India.

Keywords: foreign direct investments (FDI), telecommunication sector, FDI to Indian telecom sector

1. Introduction

FDI is the most sought-after non-debt resource for the economic development of a developing country. Being a key driver of economic growth, it generates employment, investment and brings technical knowhow by raising the GDP of a country. India opened up its economy in 1991 when it faced the dual problem of high rate of inflation and unmanaged balance of payments. With economic liberalization, India was able to attain GDP of 7% annually in 1990 to 2000 from 3% in 1950 to 1980. Further the share of service sector in India's GDP has been around 55% over the years. Within the service sector also, telecommunication sector has been the major contributor. The importance of telecommunication sector has been realized by the world, as the means of accelerator to economic growth and as the backbone of a country on which other sectors like banking, finance information technology, etc. ride. To reap the benefits of FDI, India has provided democratic and favorable business environment to the investors along with attractive policy regimes. Many initiatives have been taken by the government across the sector like defence, telecom, service sector, computer software and hardware etc. Government initiative of ease of doing business has brought many positive results which have shown a remarkable increase in FDI.

Indian telecom industry is the world's fastest growing industry. The industry has been the most attractive destination for foreign investors. The telecom industry of India has shown remarkable growth in telecom networks, internet subscribers, and network coverage. Reduction in tariff due to competition among the players of the industry has added to the growth of the subscriber's base.

2. Objectives of the study

1. To study the patterns and volumes of total FDI to India.
2. To find out the status of telecommunication sector of India.
3. To study the FDI inflows in telecom sector.
4. To analyze the impact of FDI on telecommunication sector of India.

3. Scope of the Study

The study covers the period from the year 2009 to 2018.

The analysis is restricted to the impact on telecommunication sector only. Other sectors are out of the scope of the study.

4. Research Methodology

To attain the objectives, secondary data has been used. It is collected from various sources like annual reports, journals, statements issued by the department of telecommunication, books and websites. Statistical tools such as percentages, correlation, kurtosis is used. Bar charts and line charts are also employed to depict the data. The impact analysis has been carried out by calculating coefficient of correlation and coefficient of determination.

5. FDI inflows to India *Patterns and Volumes*

The table below highlights the volume of FDI inflows to India for the period under study i.e. 2009 to 2018.

Table 1: FDI Inflows to India

Year	Total FDI (US \$ millions)	Total FDI (Rs. in millions)
2009-10	25834	123,120
2010-11	21383	97,320
2011-12	35121	165,146
2012-13	22423	121,907
2013-14	24299	147,518
2014-15	30931	189,107
2015-16	40001	262,322
2016-17	43478	291696
2017-18	44857	288889

Sources: Compiled from

1. Department for promotion of Industry and Internal Trade, Ministry of Commerce and Industry, New Delhi, 2007-18.
2. Department of Telecommunications, Ministry of Communications, Government of India, FDI Inflow, 2017-18.

Total FDI inflows have shown an increasing pattern over the years as clearly shown in the table above. There have been dwindling indications in between but the overall trend is increasing. From an inflow of US \$25834 in the year 2009-

10, it reached as high a figure as US \$44857 in the year 2017-18. It was only in the year 2010-11 and in the year 2012-13 when it went down as compared to the immediately preceding year. Since 2012-13, the amount of total FDI has been constantly increasing and has reached an amount of 44857 million US dollars in 2017-18.

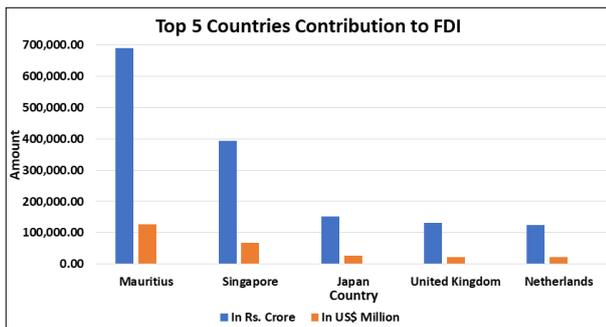
Country-wise analysis

When looking at the FDI inflows to India from the point of view of the source country, it is evident that Mauritius has been the country from where maximum FDI inflows have been recorded. It has contributed 127,578.35 US\$ millions till March, 2018. It was followed by Singapore, Japan, United Kingdom and Netherlands. The details are given as below followed by chart depiction.

Table 2: Top 5 Countries Contribution to FDI (April 2000 to March 2018)

S.No.	Name of the Country	Amount of FDI Inflows	
		In Rs. Crore	In US\$ Million
1	Mauritius	688,442.39	127,578.35
2	Singapore	393,584.29	66,770.70
3	Japan	152,630.16	27,285.78
4	United Kingdom	131,214.92	23,482.06
5	Netherlands	124,036.94	22,417.45

Source: DIPP



Source: Based on above table

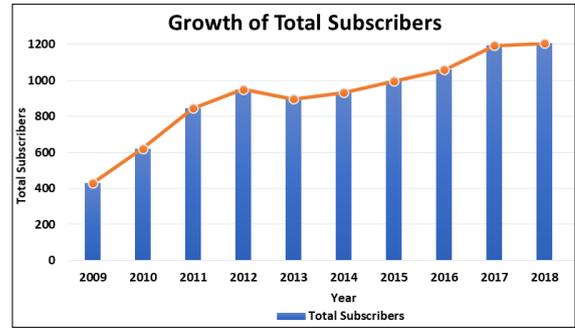
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5. Status of Telecom industry

Telecom has emerged as a powerful tool for economic growth of developing countries. Indian telecom sector has been identified as the powerful growth engine for economic development of Indian economy. Globally, India has a fastest growing telecom market. It has a subscriber base of 1.18 billion on September, 2019. It has also achieved second position in the number of networks and internet users. India has the highest data usage per smartphone on an average of 9.8 GB per month, which is expected to be 18 GB per month in 2024. The smartphone users base will reach 1.1 billion and mobile broadband subscribers will touch 1.25 billion in 2024.

As a part of digital India policy, considerable importance has been given to the internet services. This led to reaching the internet subscription at 636.37 million by March 2019. India became global leader of monthly data consumption by using 46.23 million terabytes in 2018.

The chart below depicts the growing number of subscribers to various telecommunication usages over the period from 2009 to 2018.

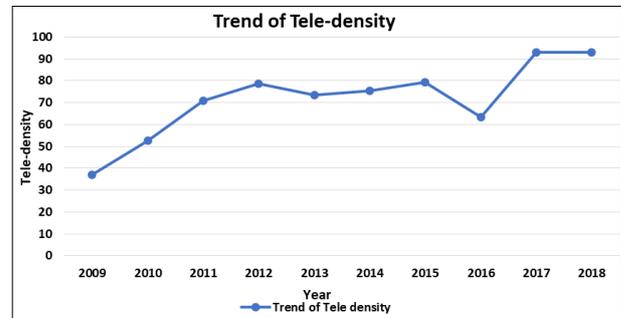


Source: TRAI, Annual reports (various issues)

Chart 2: Growth of Subscribers

The trend as shown above is ever increasing, though the rate of increase or growth has varied from high to low and then again ascending to high during intermittent periods.

‘Tele-density’ which represents the number of telephones per hundred population serves as an important factor showing telecom penetration. In 2018, India had an impressive tele density of 92.84. The following chart shows the growth of tele-density over the years from 2009 to 2018.



Source: TRAI, Annual reports (various issues)

Chart 3: Tele- Density Trend

The graph of tele-density is also an increasing one with an exception in 2016 when it dipped little bit followed by a sharp rise in subsequent years. Starting with a very low figure in 2009, it has shown an impressive growth over the period under study.

6. FDI in telecommunications sector

1. FDI policy in telecom sector

FDI inflows permissions to telecommunication sector in India have been encouraging and liberal over the years. Starting from permission of a negligible percentage earlier, currently (i.e. in 2018), the FDI limit or cap to telecom sector is full 100%. Details are shown in the table below.

Table 3: FDI in Telecom Sector

Sector	FDI cap (In %)	Activities
Telecom	100	Basic, cellular, value-added services, global mobile personal communications by satellite internet service providers with gateways, radio paging and end to end bandwidth.

Source: Department of Industrial Policy and Promotion, Govt. of India.

2. FDI Inflows to Telecom Sector

The table below lists out the FDI inflows to Indian telecom sector during the period from 2009-10 to 2017-18. The last

Column calculates the FDI to telecom sector as percentage of total FDI to India. The table also list out cumulative

figures related to yearly FDI inflows to telecom sector.

Table 4: FDI Inflows to Telecom Sector

Year ^[1]	Total FDI (US \$ millions) ^[2]	Total FDI (Rs. in millions) ^[3]	FDI in telecom (US\$ millions) ^[4]	Cumulative FDI to Telecom (US\$ millions) ^[5]	FDI in Telecom as % of Total FDI [6 = 4 as % of 2]
2009-10	25834	123,120	2539.26	8890.42	9.83
2010-11	21383	97320	1664.50	10554.92	7.78
2011-12	35121	165,146	1997.24	12552.16	5.69
2012-13	22423	121,907	303.87	12856.03	1.36
2013-14	24299	147,518	1306.95	14162.98	5.38
2014-15	30931	189,107	2894.94	17057.92	9.36
2015-16	40001	262,322	1324.40	18382.32	3.31
2016-17	43478	291,696	5563.69	23946.01	12.80
2017-18 (Apr-Sep)	44857	288889	6083.80	30029.81	13.56
Grand Total	288327	1687025	23678.7	148433	-

Source: Department of Telecommunications, Ministry of Communications, Government of India, FDI Inflow, 2019

The table above reveals that inflow of FDI to telecommunication sector as a percentage of total FDI has been increasing over the years under study with a record percentage of 12.80 and 13.56 in the year 2016-17 and 2017-18 respectively. In 2012-13 there was an all-time low percentage of 1.36 percent of the total FDI towards the telecommunication sector. In intermittent periods, there have been oscillating trends, but a high percentage in the last years shows that gradually greater importance has been assigned by the investors to the telecommunication sector. When analyzed in terms of the absolute values, the inferences are the same. In the year 2012-13, there was a very low volume of FDI to telecom sector amounting to US \$303.87 million though it gained pace and started increasing so much so that in 2016-17 it jumped to 5563.69 million US dollars from 1324.40 million US dollars in 2015-16. In 2017-18, there was a remarkably high volume of inflows of FDI of 6083.80 million US dollars, though there have been wavering volumes in intermittent periods.

8. Impact Analysis

To find out the impact of total FDI on telecommunication sector of India, correlations coefficient (R) and coefficient of determination (R²) have been calculated with respect to total FDI series and the FDI inflows to telecom sector series. The values have been tabulated as below:

Table 5: Computation of Correlation Coefficient and Coefficient of Determination

Karl Pearson coefficient of correlation (Between Total FDI inflows and FDI inflows in telecom in India) (R)	Coefficient of Determination (R ²)
0.754	0.568

The followings are the inferences on the basis of the above table.

Inferences

1. The Karl Pearson coefficient of correlation (R) between total FDI and FDI in telecom indicates a positive, strong and a high degree of correlation, which is, 0.754 (almost close 1). The positive sign indicates that if total FDI increases, FDI in telecom also increases and vice-versa. Proximity of the value to 1 indicates a very high

- Relationship between the variables. It is worth mentioning here that value of R=1 indicates perfect correlation and R=0 indicates no correlation.
2. Coefficient of determination (R²), which is a relative measure of correlation and more scientific one also indicates a strong relationship between the two variables. Its value equal to 0.568 is quite high and impressive. It indicates that 56.8% of changes in FDI to telecom figures are explained by or due to changes in total FDI to India.
 3. Also, the coefficient of correlation between the two variables in question is significant at 0.05 level (2-tailed).

On the basis of the above observations and findings, it can be concluded that in India, total FDI has made a substantial impact on FDI in telecom sector and that too in a positive direction i.e. when the total FDI increased, FDI in telecom also increased and vice-versa.

9. Conclusion

The above analysis derives home the conclusion that FDI in India is instrumental in contributing substantially to the expansion of Indian telecommunication sector. The sizeable amount of FDI in the telecom sector also shows the confidence of the world’s investors on Indian economy, government policies, reforms and other initiatives being taken particularly in the telecon sector. The development of the sector will be instrumental in preparing India to adopt 5G technology by 2020. Incorporating net neutrality, providing cloud services, internet telephone, M2M (Machine to Machine) and IOT (Internet of Things) technologies, are some of the areas where the sector is actively working on. Measures undertaken for doing ease of business will effectively add to the growth and expansion of telecom industry of India.

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