

# Impact of Foreign Direct Investment on the Indian Telecom sector: An empirical analysis

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## ABSTRACT

Over the past decade, India has been viewed as a hot destination by foreign investors. The Government's focus on strategic reforms along with removal of infrastructural and regulatory barriers has lured FDI into the country. India being the second largest telecommunications market in the world, opens up wider avenues for investment. This paper tries to examine the trends in the FDI inflows into the country and specifically in the telecom sector, its impact on the economic growth and the reasons for the same, over the past decade. The study revealed that a strong and statistically significant correlation exists between FDI and GDP of India.

Keywords: FDI, GDP, TRAI

## INTRODUCTION

Prior to the liberalisation of the 1990's, the telecom sector in India was under a public monopoly. Since the 1990's, Indian telecom industry has undergone a massive expansion and growth. As a result, India today ranks second in terms of number of telecommunication subscriptions, internet subscribers and app downloads globally. According to London based telecom trade body GSMA, the telecom sector is currently contributing 6.5% (US\$ 140 billion) to India's GDP and employing over 4 million people. It is expected that by 2020, the sector will contribute 8.2% to the GDP and provide 800000 more job opportunities. This sector has contributed largely to the socio-economic development of the country by narrowing down the rural-urban digital divide to a great extent.

The sector is gaining mass momentum at a lightning speed. The number of smartphone users crossed 300 million in 2016 making it the largest smartphone market in the world. The total number of Subscriber Identity Module(SIM) connections is expected to reach 1.4 billion by 2020. Telecom penetration, also known as tele-density, which is the number of telephone connections for every 100 individuals has grown exponentially from 18.23% in FY 07 to 91.17% in FY 20.

The rapid growth of this sector and its huge investment potential makes this sector an attractive avenue for Foreign Direct Investment (FDI). Foreign Direct Investment is an investment in the form of a controlling ownership in a business in one country by an entity based in another country. After following a restrictive FDI policy, India has considerably liberalised its FDI policies since 1991. The latest FDI policy of the Indian Government has increased FDI cap of 100% in telecom sector from the earlier 74%. Of this, 49% is allowed through the 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. Innovations which are happening by the hour are drawing the interest of more and more FDI participants into this sector.

India is currently the world's second largest telecom market, with a strong subscriber base of 1.2 billion.

## Telecom Parameters Growth- An Overview

Year	2014	2019
Mobile Subscribers(in millions) <b>30% Growth</b>	907.42	1173.75
Internet Subscriber(in millions) <b>165% Growth</b>	251.59	665.31
Broadband Subscribers(in millions) <b>530% Growth</b>	99.2	625.42
Tele-density(%) <b>20% Growth</b>	75.23 %	90.52 %
Rural Tele-density(%) <b>31% Growth</b>	44.01%	57.59%
Data Consumption(in GB per subscriber per month) <b>1120% Growth</b>	Less than 0.80 GB	9.77 GB

## Present Scenario of the Indian telecom sector

The industry has been suffering from heavy and burdensome losses for the past few years and this is one of the prominent reasons that attract foreign entities to the sector. These huge losses can primarily be attributed to the disruptive entry of Reliance Jio into the Indian market on November 2016. Jio has been offering voice calls and data services at extremely low rates which has led to a ruthless price war in the industry. This has changed the face of the telecom sector altogether and has forced many companies to change their key strategies in order to survive. This scenario has caught the attention of many leading international players. Cheap oil prices since 2014 and sluggish growth in developed economies has also made India more attractive to foreign investors. According to the Ease of Doing Business Ranking 2019 by World Bank, India ranks 63<sup>rd</sup> among 190 countries. While its global counterparts are nearing saturation, Indian telecom sector continues to find innovative ideas for a sustainable future.

## Literature Review

Many researchers have tried to investigate the relationship between FDI and its key determinants such as economic growth, exchange rates, exports etc. But very few have examined the impact of FDI on the telecommunication sector.

Changkyu Choi (2009) tried to study the impact of internet on economic growth while taking into consideration investment ratio, government consumption ratio and inflation as control variables. It was observed that Internet plays a significant role in the economic growth of a nation.

Johnson Andreas (2004) tried to discuss the potential of FDI inflows to affect host economic growth. Performing both cross-section and panel data analysis on a dataset covering 90 countries during the period 1980 to 2002, the study shows indications that FDI inflows enhance economic growth in developing economies but not in developed economies.

Sapsford & Balasubramanyam (2007) attempted to compare the levels of FDI in India and China and found that FDI in India is one tenth of that of China and that India may not require increased FDI, given its factor endowments and the composition of its economy.

Teli R (2014) tried to critically analyse the FDI inflows in India from 1991 to 2012 and also tried to give projections for the future years. It was stated that the Government of India should attract more FDI through favourable policies and avoid uncertainties.

## Statement of the problem

Since the era of liberalisation, the telecom sector in India has been witnessing fast-tracked growth. While the leading global telecom players are nearing saturation in their markets, India still has a large untapped market for a sustainable business. Conducive Govt policies and initiatives like Make in India, Digital India, Skill India etc are accelerating the growth of this sector. All these factors are making India a hot destination for Foreign Direct Investors. FDI is considered as a main driving force for the growth and technological development of an economy. The present study is an attempt to analyse the trends in the FDI inflows into the country in general and specifically in the telecom sector, its impression on the economic growth and also analyse the reasons for the increased flow of FDI into the country.

## Objectives of the study

- To determine the impact of FDI on the Indian economy in terms of growth in GDP
- To analyse the trend of FDI in the Indian telecom sector from financial years 2010-11 to 2019-20
- To examine the reasons for the growth of FDI in the telecom sector in India

## Methodology

The study is both analytical and descriptive and is based on secondary data. The secondary time series yearly data have been collected from the Telecom Regulatory Authority of India (TRAI), Department of Telecommunication (DoT), Department of Promotion of Industry and Internal Trade (DPIIT), RBI, media reports and press releases. The study covers 10 financial years i.e. from 2010-11 to 2019-20.

In order to find the relationship between FDI and Gross Domestic Product (GDP), Karl Pearson's Simple Correlation Coefficient has been used. Linear Regression has been applied to know the impact of FDI on GDP.

## Analysis of Data

Correlation analysis has been used to find out the relationship between GDP and FDI. Linear Regression has been used to find out the cause and effect relationship between GDP and FDI.

Table 1

Trend of GDP and FDI into India (in INR Cr)

Year	GDP at 2011-12 Prices	FDI Equity Flows
2010-11	83,01,235	97,320
2011-12	87,36,331	1,65,146
2012-13	92,13,017	1,21,907
2013-14	98,01,370	1,47,518
2014-15	1,05,27,674	1,81,682
2015-16	1,13,69,493	2,62,322
2016-17	1,23,08,193	2,91,696
2017-18	1,31,75,160	2,88,889
2018-19	1,39,81,426	3,09,867
2019-20	1,45,65,951	3,53,558

Source: RBI Bulletin

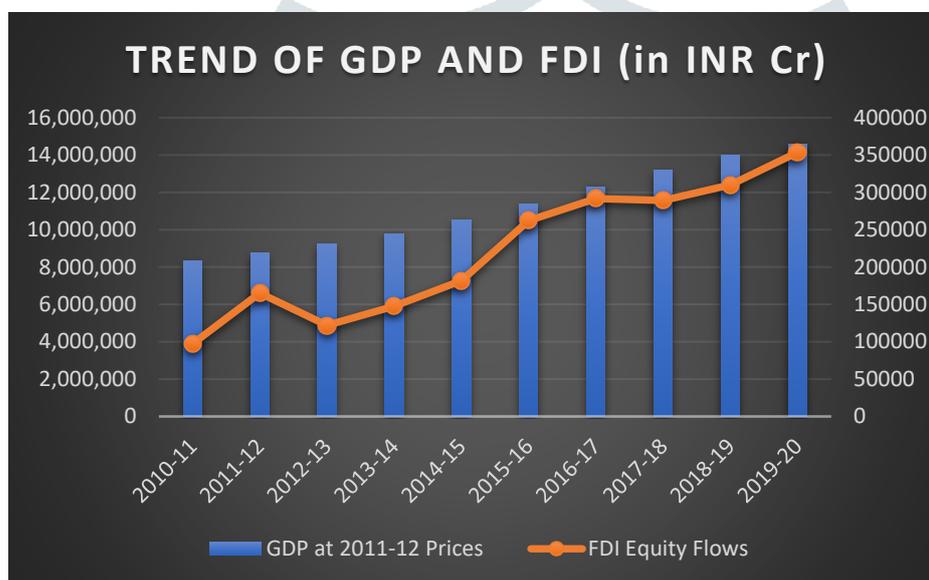


Figure 1

Figure showing trend of GDP and FDI in India

It can be seen from the above table that the GDP growth has been steady during the study period. It can also be noted that after the global recession, FDI inflows have spiked considerably owing to big ticket deals including RIL- BP and Posco. But the Euro Zone crisis and revision in tax laws affected inflows in 2012-13. Realising the importance of FDI in Indian economic development, the Government implemented measures such as relaxation of FDI norms and improving the ease of doing business. This has improved the FDI inflows into the country till date. The Modi Government's star initiatives such as 'Make In India' has driven foreign investment into the country and is expected to turn India into a global manufacturing hub.

Table 2

Correlation between GDP and FDI			
		GDP	FDI
GDP	Pearson Correlation	1	.964**
	Sig. (2-tailed)		.000
	N	10	10
FDI	Pearson Correlation	.964**	1
	Sig. (2-tailed)	.000	
	N	10	10

\*\*. Correlation is significant at the 0.01 level (2-tailed).

From the above table, it can be observed that there is a positive correlation between GDP and FDI (0.964). The correlation is high and statistically significant. It means that there is a direct relationship between both the variables.

To find the cause and effect relationship between GDP and FDI, the study uses simple linear regression analysis. Here, GDP is taken as the independent variable and FDI is taken as the dependent variable.

Table 3  
Simple Regression between GDP and FDI

Model	R	R Square	Adjusted R Square
1	.964 <sup>a</sup>	.929	.920

a. Predictors: (Constant), FDI

From the above table, it can be found out that the R Square value for the model is high (0.929) which means that 93% of variation in GDP is determined by FDI flows. The regression analysis show a significant influence between the two variables as a significant value of  $p=0.015$  which is less than 0.05 which means that the model is a good fit.

#### SHARE OF TELECOM SECTOR IN FDI

Year	FDI in Telecom Sector (INR Cr)	Percentage to Total Inflows
2010-11	7,542	7.75%
2011-12	9,012	5.46%
2012-13	1,654	1.36%
2013-14	7,987	5.41%
2014-15	17,372	9.56%
2015-16	8,637	3.29%
2016-17	37,435	12.83%
2017-18	39,748	13.76%
2018-19	18,337	5.92%
2019-20	30,940	8.75%

From the above table, it can be found that the investment in telecom sector as a percentage of the total inflows is not stable in the country. The highest percent was received in the year 2017-18 and the lowest during the year 2012-13. This variation in FDI inflows can be attributed to several global political and economic factors.

#### Some Important Observations:

##### Opportunities for FDI in Indian Telecom Sector

- *Increasing importance of digital payments:* With a focus on moving towards cash less economy, the Govt has been encouraging and initiating new interfaces such as Aadhaar Pay, UPI, BHIM App, etc. There is a huge opportunity for the telecom sector to leverage these solutions.
- *Growing young population:* A tech savvy and data hungry young population is dragged along the flow through social media applications like Facebook and Instagram and also through OTT Video streaming platforms such as Netflix, Amazon Prime and Hotstar.
- *Conducive regulatory environment and policy support* in the form of reduction in license fee, relaxed FDI norms etc.
- *Expanding 3G and 4G coverage:* All the major telecom operators in the country are launching and expanding their full 3G and 4G services in many key circles at an impressive pace.
- *Changing consumption pattern of subscribers:* India has the world's highest data usage per smartphone at an average of 9.8 GB per month which is predicted to double to 18 GB by 2024. Indian consumers and businesses have fully embraced e-commerce platforms such as Flipkart and Amazon and also innovative fintech applications such as e-wallets and m-wallets.
- *Large untapped market and robust domestic demand:* Despite being one of the largest markets, there are thousand of rural villages that are still untapped and the demand is ever increasing. This opens a door of opportunity for the Indian telecom sector.
- *Shift to new-gen services:* Telecom corporates are gradually transforming their traditional business models to adapt to the new-gen services such as Internet of Things (IoT), Virtual Reality (VR), Augmented Reality (AR), Machine Learning etc.

## FINDINGS AND CONCLUSIONS

The present study was intended to determine the impact of FDI on the Indian economy in terms of growth in GDP and to analyse the trend of FDI inflows into the telecom sector from 2010-11 to 2019-20. Correlation analysis between FDI and GDP indicate a strong and statistically significant correlation between both the variables.

In addition, the probing of the linear regression results indicates that the reasons for change in GDP can be attributed to a large extent to the FDI inflows into the country. It was found that the GDP as well as the aggregate FDI equity inflows to the country during the period were steady and also showing an increasing trend. With regard to the FDI in telecom sector, the inflows have been erratic and volatile. This can be attributed to the changing scenario of the Indian telecom sector since Jio's entry into the scene and also to global and political factors.

This study is not free from certain limitations because it has considered only a period of 10 years. Hence, there is immense scope for further research.

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