Abstract

Foreign Direct Investments (FDI) refers to investment in a foreign country where the investor retains control over the investment. It typically takes the form of starting a subsidiary, acquiring a stake in an existing firm or starting a joint venture in a foreign country. FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Typically, the investment is over a long duration of time and the idea is to make an initial investment and then subsequently keep investing to leverage the host country’s advantages which could be in the form of access to better (and cheaper) resources, access to a consumer market or access to talent specific to the host country - which results in the enhancement of efficiency. This long-term relationship benefits both the investor as well as the host country. Hence the study is aimed to assess the relationship between the India's FDI inflows and its effect on India's economic growth, to analyze whether there is a significant increase or decrease subsequent to significant increase or decrease in India's FDI inflows contributing to country's economic development.

1 Introduction

Foreign investment was introduced in India in 1991 under Foreign Exchange Management Act (FEMA), driven by then Finance Minister Manmohan Singh. Before 1991, India disallowed Overseas Corporate Bodies (OCB) to invest in India. With the announcement of Industrial Policy in 1991, huge incentives and concessions were granted for the flow of foreign capital to India. India is a growing country which has large space for consumer as well as capital goods. India’s abundant and diversified natural resources, its sound economic policy, good market conditions and highly skilled human resources, make it a proper destination for foreign direct investments.

In 1991, India liberalized its highly regulated FDI regime, along with the virtual abolition of the industrial licensing system; controls over foreign trade and FDI were considerably relaxed. The reforms did result in increased inflows of FDI during the post reform period. In 1998 and 1999, the Indian national government announced a number of reforms designed to encourage and promote a
favourable business environment for investors. Starting from a baseline of less than $1 billion in 1990, a 2012 UNCTAD survey projected India as the second most important FDI destination (after China) for transnational corporations during 2010–2012. Foreign direct investment (FDI) in India has played an important role in the development of the Indian economy. FDI in India has in a lot of ways enabled India to achieve a certain degree of financial stability, growth and development. This money has allowed India to focus on the areas that needed a boost and economic attention, and address the various problems that continue to challenge the country. India has continually sought to attract FDI from the world’s major investors. The sectors that attracted highest inflows were services, telecommunication, construction activities, computer software and hardware and drugs and pharmaceuticals. Mauritius, Singapore, U.S. and U.K. were among the leading sources of FDI.

![Figure 1: Chart Showing the Trend of Total FDI Inflows into India](image)

**Source:** Department of Industry Policy and Promotion Factsheet.

### 2 India’s Economic Reforms

#### The Pre And The Post Liberalization Period

After India attained Independence on August 15, 1947, from the very outset, India launched upon an economic policy known as "Socialistic Pattern of Society" with central planning and tight government regulations. India's economic policy after independence was influenced by the colonial experience, which was seen by Indian leaders as exploitative, and the leader's exposure to democratic socialism led to the progress achieved by the economy of the Soviet Union. The collapse of the Soviet Union, which was India's major trading partner and the Gulf war, which caused a spike in oil prices, resulted in a major balance-of-payments crisis for India, which found it facing the prospects of defaulting on its loans. India asked for a $1.8 billion dollar bailout loan from the International Monetary Fund (IMF), which in return demanded reforms. In response, the then Prime Minister Narasimham Rao, along with his Finance Minister Dr. Manmohan Singh, initiated the economic liberalization of 1991. Until 1991, Indian government followed protectionist policies that were influenced by socialist economies. Widespread state intervention and regulations caused the Indian Economy to be largely closed to the outside world. Since 1991, India liberalized its economy and continued to move towards a free market system, emphasizing both foreign trade and investment. The reforms thus led to a gradual increase in FDI in India. Thus the growth of FDI inflows in to India...
during the post reform period has given the country the unique position in the map of MNC's strategic investment locations.

- **Present Scenario**

  As more and more multi-national corporations have come to realize that India is the place to be and India being the world’s second largest economy (in terms of population) with a total population of just over one billion, fourth largest in the world in terms of GDP ($3.3 trillion) and ranked twelfth in the world in terms of Gross National Income ($570 billion), it is potentially a very fast growing market and all the multi-national corporations realize the fact to take advantage of this ever growing economy, they need their presence in the country.

  It has been more than a decade since the reforms first began and today in the 21st Century, India has come a long way from the early days of license raj system. India has been able to make its mark in the world standing as a lucrative country for FDI by becoming more and more competitive on the world standards. All this growth has been achieved through a number of favorable factors amongst which the main factors are proactive government policy and regulations and favorable economic conditions.

### 3 Economic Variables Used In The Study

- GDP- Gross Domestic Product
- GNP- Gross National Product
- BOP- Balance of Payment
- Total Trade- Total Exports minus Total Imports to India
- Foreign Exchange Reserves

### 4 Objectives Of The Study

- To assess the relationship between India’s Foreign Direct Investment inflows and Economic Growth of India.

### 5 Scope Of The Study

  FDI has assisted to bring in lot of developments making the Indian economy grow globally leading to increase in gross domestic product, gross national product etc., that causes a significant impact in India. This has helped the researcher to identify whether Foreign Direct inflows has an impact on the India's GDP, GNP, Total Trade, BOP and Foreign Exchange Reserves of India that stimulates the growth of Indian economy. Further research can be necessitated on the future growth of India's development in various industries based on other variables and sector specific factors contributing to the growth of developing economies like India.

### 6 Limitations Of The Study

1. The data being secondary in nature, the study suffered from the limitations of secondary data.
2. The data is restricted to only India's economic growth and investment's in terms of FDI inflows, gross domestic product, gross national product, balance of payments, total trade and reserves confined to a period of 10 years (2003-2013).

### 7 Review Of Literature

This section deals with related literature reviews appropriate to the study
Chaturvedi ILA (2011) [1], "Role of FDI in Economic Development of India: Sectoral Analysis". This paper, analyzed the FDI inflows with special reference to sector wise inflows in India. This paper also explored the sector wise distribution of FDI in order to know the dominating sector which has attracted the major share of FDI in India and to find out the correlation between FDI and Economic Development. It revealed that there is high degree of significance between FDI and economic development.

Iram Khan (2012) [2], Impact Of Foreign Direct Investment (FDI) On Indian Economy: A Sectoral Analysis. In this research paper, the impact of FDI in India in terms of GDP growth rate and FDI inflows in different sectors has been analyzed and also explored the sector wise distribution of FDI inflows in order to point out the dominating sector which has attracted the major share. The period taken for the study was from 2000-01 to 2010-11. Analysis in this research paper illustrated that there has been positive impact of FDI on overall growth of the economy. This paper emphasized on the impact of FDI on Indian economy in terms of variables like GDP, EXPORT and GDCF. The result showed that there is significant relationship of FDI on GDP, Export and GDCF in India. The tested hypothesis has highlighted that there is no impact of FDI inflows to sectors on GDP and the sectors having highest attraction of FDI inflows are Service, Telecommunication, Real Estate, Construction and Computer Hardware & Software.

Gulshan Akhta (2013) [3], found and stated in his study on Inflows of FDI in India: Pre and Post Reform Period that during pre liberalization period FDI has increased at Compounded Annual Growth Rate of 19.05% and during post liberalization period it has grown to 24.28%. This has indicated that liberalization has had a positive impact on FDI inflows in India and since 1991 FDI inflows in India has increased approximately by more than 165 times.

Shashank Goel, Phani Kumar, Sambasiva Rao (2013) [4], conducted a study on "Trends and Patterns of FDI in India and its Economic Growth" based on two equations namely- foreign direct investment model and economic growth model. The variables taken for the study were Total Trade as a percentage of GDP, Foreign Exchange Reserves as percentage of GDP, R&D expenditure as percentage of GDP, ratio of external debts to export and Exchange rate The period of study was from 1991-2010. The results of Economic Growth Model and Foreign Direct Investment Model revealed that TradeGDP, ReservesGDP, and exhibit a positive relationship with FDI while R&D,GDP and Exchange rate variables exhibit a negative relationship with FDI inflows. Hence, TradeGDP, ReservesGDP variables are the pull factors for FDI inflows to the country and R&DGDP and Exchange rate are deterrent forces for FDI inflows into the country. Thus, it is concluded that the above analysis was successful in identifying those variables which are important in attracting FDI inflows to the country. The study also reveals that FDI is a significant factor influencing the level of economic growth in India.

Based on the above - mentioned literary reviews the researcher has made an attempt to identify the economic variables contributing to the growth of Indian Economy. The previous studies show that all the components used to measure the India's foreign direct investments are made categorically based on sectoral pattern, role of foreign direct investments to Indian Economy or the trend of FDI in India various sectors. Hence an effort is been made to study the growth of FDI inflows in recent past and its contribution to economic status of India.

8 Research Methodology

Nature Of The Research Design: The methodology adopted was both descriptive and analytical in nature. The major purpose of this analytical research is the description of the state of affairs, as it exists at present.
**Period Of Study:** The period of study taken to assess the relationship of FDI inflows to India's Economic Growth is 10 years, i.e. from 2003-04 to 2012-13, as from the previous studies it showed that the approximate values is based on the fact that the percentage share of FDI inflows has a significant relationship to India's Economic growth rate that is volatile in nature, even though certain studies proved that there is no significant impact. It is totally dependent on Indian Government regulations and changing policy regimes that directly impact the status of Indian Economy.

**Sources Of Data**
The study is based on secondary data. The required data was collected from various sources namely
- Handbook and Statistics of Indian Economy- RBI
- Data tables of Planning Commission, Government of India
- India's FDI Fact Sheet from Department of Investment Policy and Promotion

**Hypothesis Of The Study**
The statistical significance of these hypotheses has been tested using Karl Pearson's Correlation Coefficient with five percent level of significance. The following null hypothesis has been formulated for the study:
- There is no relationship between the India’s FDI Inflows and Gross Domestic Product at Factor Cost.
- There is no relationship between the India’s FDI Inflows and Gross National Product at Factor Cost.
- There is no relationship between the India’s FDI Inflows and Total Trade.
- There is no relationship between the India’s FDI Inflows and Balance of Payments
- There is no relationship between the India’s FDI Inflows and Foreign Exchange Reserves

**9 Tools Used For Data Analysis**

**A. Annual Growth Rate**
The annual growth rate is used to identify the positive and negative growth rate annually that is worked out using the following formula:
\[
AGR = \frac{(X_2 - X_1)}{X_1}
\]
Where \(X_1\) = first value of variable \(X\)
\(X_2\) = second value of variable \(X\)

**B. Compounded Annual Growth Rate**
\[
CAGR = \left( \frac{V(t_n)}{V(t_0)} \right)^\frac{1}{n} - 1
\]
Where \(V(t_0)\) = Start Value, \(V(t_n)\) = End Value, \(n\) = Number of Years.

**C. Correlation**
Karl Pearson’s Correlation co-efficient were calculated in order to measure the degree of relationship with two variables. i.e., whether there exists correlation between two variables or not.
\[
Correlation\ Co-efficient\ r = \frac{N\Sigma XY - \Sigma X \cdot \Sigma Y}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \cdot \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}
\]
D. t - Test For Correlation Coefficient

A t-test is used to test whether the correlation between two variables is significant.

\[ |t| = \frac{r}{\sqrt{(1-r^2)/(n-2)}} \]

The test statistic is r and the standardized test statistic follows a t-distribution with \( n - 2 \) degrees of freedom.

### 10 Analysis And Interpretation

The collected data has to be processed and analyzed in accordance with the outline to ensure that the relevant data is available for making contemplated comparisons and analysis.

#### 10.1 Analysis Of Growth Of Foreign Direct Investment Inflows In India

The annual growth rate and compounded annual growth is used to analyze the growth rate of year wise inflows attracting highest foreign direct investment for a period of five years (2003-13).

#### Table 1: The Growth Rate of FDI Inflows of India

<table>
<thead>
<tr>
<th>S.No</th>
<th>Financial Year (April-March)</th>
<th>Amount in Rs. Crores</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2003-04</td>
<td>10064</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>2004-05</td>
<td>14653</td>
<td>46%</td>
</tr>
<tr>
<td>3</td>
<td>2005-06</td>
<td>24584</td>
<td>68%</td>
</tr>
<tr>
<td>4</td>
<td>2006-07</td>
<td>56390</td>
<td>129%</td>
</tr>
<tr>
<td>5</td>
<td>2007-08</td>
<td>98642</td>
<td>75%</td>
</tr>
<tr>
<td>6</td>
<td>2008-09</td>
<td>142,829</td>
<td>45%</td>
</tr>
<tr>
<td>7</td>
<td>2009-10</td>
<td>123,120</td>
<td>-14%</td>
</tr>
<tr>
<td>8</td>
<td>2010-11</td>
<td>97,320</td>
<td>-21%</td>
</tr>
<tr>
<td>9</td>
<td>2011-12</td>
<td>165,146</td>
<td>70%</td>
</tr>
<tr>
<td>10</td>
<td>2012-13</td>
<td>121,907</td>
<td>-26%</td>
</tr>
</tbody>
</table>

Source: DIPP's FDI Factsheet, Figures for the years 2009-10, 2010-11, 2011-12 & 2012-13 are provisional subject to reconciliation with RBI.

The table shows that the foreign direct investment inflows have been fluctuating year on year with constant increase from 2003-04 to a rapid increase in 2006-07 and after that been declining till 2010-11. In 2011-12 the inflows have again tremendously increased showing a growth rate of 70% compared to all other years from 2008-09 to 2012-13 due to more liberalized policy regimes announced by the Government of India and the apex body in various sectors for the foreign investors to take a step forward to invest and expand their business operations targeting the untapped market in India, after reviving immediately from the global economic crisis. In all other years the growth of FDI inflows are fluctuating with -14% in the year 2009-10, -21% in the year 2010-11 and -26% in the year 2012-13 and the compounded annual growth rate is found to be at 65%. It is inferred that India has received more inflows in the year 2006-07 and 2011-12 relative to all other years and has a steady foreign direct investment inflows in the country.

#### 10.2 Analysis Of Relationship Between India's FDI And Economic Growth

The correlation coefficient may take on any value between plus and minus one.

**Correlation Coefficient Interpretation**
Hypothesis testing for Correlation

The most frequently used test to examine whether the given two variables are correlated is the t-test.

- If |t| > critical value - reject $H_0$.
- If |t| ≤ critical value - fail to reject $H_0$.

10.3: Relationship Between Foreign Direct Investment Inflows And Economic Variables

Hypothesis ($H_0$):

- There is no relationship between the India’s FDI Inflows and Gross Domestic Product at Factor Cost.
- There is no relationship between the India’s FDI Inflows and Gross National Product at Factor Cost.
- There is no relationship between the India’s FDI Inflows and Total trade.
- There is no relationship between the India’s FDI Inflows and Balance of Payments.
- There is no relationship between the India’s FDI Inflows and Foreign Exchange Reserves.

Table 2: The values of India's FDI inflows and GDP, GNP, Total Trade, BOP, Reserves

(Amount Rupees in crores)

<table>
<thead>
<tr>
<th>S.No</th>
<th>Financial Year</th>
<th>FDI (X)</th>
<th>GDP (fc) (Y1)</th>
<th>GNP (fc) (Y2)</th>
<th>Total Trade (Y3)</th>
<th>BOP (Y4)</th>
<th>Reserves (Y5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2003-04</td>
<td>1.01</td>
<td>2.78</td>
<td>2.76</td>
<td>2.93</td>
<td>14.40</td>
<td>4.90</td>
</tr>
<tr>
<td>2</td>
<td>2004-05</td>
<td>1.47</td>
<td>2.97</td>
<td>2.95</td>
<td>3.75</td>
<td>11.59</td>
<td>6.19</td>
</tr>
<tr>
<td>3</td>
<td>2005-06</td>
<td>2.46</td>
<td>3.25</td>
<td>3.23</td>
<td>4.56</td>
<td>6.59</td>
<td>6.76</td>
</tr>
<tr>
<td>4</td>
<td>2006-07</td>
<td>5.64</td>
<td>3.56</td>
<td>3.53</td>
<td>5.72</td>
<td>16.36</td>
<td>8.68</td>
</tr>
<tr>
<td>5</td>
<td>2007-08</td>
<td>9.86</td>
<td>3.90</td>
<td>3.88</td>
<td>6.56</td>
<td>36.97</td>
<td>12.38</td>
</tr>
<tr>
<td>6</td>
<td>2008-09</td>
<td>14.28</td>
<td>4.16</td>
<td>4.13</td>
<td>8.41</td>
<td>-9.71</td>
<td>12.84</td>
</tr>
<tr>
<td>7</td>
<td>2009-10</td>
<td>12.31</td>
<td>4.52</td>
<td>4.49</td>
<td>8.46</td>
<td>6.42</td>
<td>12.60</td>
</tr>
<tr>
<td>8</td>
<td>2010-11</td>
<td>9.73</td>
<td>4.94</td>
<td>4.88</td>
<td>11.43</td>
<td>5.95</td>
<td>13.61</td>
</tr>
<tr>
<td>9</td>
<td>2011-12</td>
<td>16.51</td>
<td>5.24</td>
<td>5.20</td>
<td>14.66</td>
<td>-6.85</td>
<td>15.06</td>
</tr>
<tr>
<td>10</td>
<td>2012-13</td>
<td>12.19</td>
<td>5.51</td>
<td>5.45</td>
<td>16.35</td>
<td>2.07</td>
<td>15.88</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>85.47</td>
<td>40.82</td>
<td>40.50</td>
<td>82.83</td>
<td>83.79</td>
<td>108.91</td>
</tr>
</tbody>
</table>

Source: FDI factsheet and RBI Bulletin

M. Kirthika, Dr. S. Nirmala: A Study on the Effect of India's Foreign Direct Investment Inflows and its Economic Growth

Paper ID: IJIFR/V2/E2/017
It is observed that there is a very high degree of positive correlation between FDI and GDP, FDI and GNP, FDI and Total Trade and FDI and Foreign Exchange Reserves, where the changes in increase or decrease of FDI inflows in India effect a similar change to the above mentioned economic variables. It is inferred that the hypothesis is not accepted and shows that Foreign Direct Investment have a positive influence on GDP, GNP, Total Trade and Foreign Exchange Reserves of India's Economic Development. It is also observed that there is a moderate degree of negative correlation between FDI and Balance of Payments (BOP). It clearly shows that any increase in foreign direct investment inflows significantly decrease the balance of payments and any decrease in foreign direct investment inflows significantly increases the balance of payments showing a trade deficit leading to decline in India's growth rate. It is inferred that the hypothesis is not accepted and it shows that Foreign Direct Investment have a negative influence on the Balance of Payments on India's external and internal debt activities contributing to the country's economic development.

11 Findings And Discussions

The findings to assess the relationship of foreign direct investment and economic growth show the following:

- It is found that there is a very high degree of relationship between the India's foreign direct investment inflows and gross domestic product that shows a correlation co-efficient of +0.87. It means that the trend of Indian Economy moves similar to the trend of FDI inflows.

- It is found that there is a very high degree of relationship between the India's foreign direct investment inflows and gross national product that shows a correlation co-efficient of +0.87. It means that the trend of Indian Economy moves similar to the trend of FDI inflows.

- It is found that there is a very high degree of relationship between the India's foreign direct inflows and total trade with a correlation coefficient of +0.81. It means that any increase or decrease in total trade influences the same level of increase or decrease in FDI inflows to India.

- It is found that there is a moderate degree of negative relationship between the India's foreign direct investment inflows and overall balance of payments with a correlation co-efficient of -0.46. It means that any increase in FDI inflows lead to decrease in overall balance of payments and decrease in FDI inflows lead to increase in overall balance of payments.
It is found that there is a very high degree of positive relationship between the India's foreign direct investment inflows and foreign exchange reserves with a correlation coefficient of +0.94. It means that any increase or decrease in foreign exchange reserves influences the level of increase or decrease if FDI inflows to India.

From the above results it is found that Foreign Direct Investment inflows plays a pivotal role in the flow of Gross Domestic Product, Gross National Product, Total Trade, Overall Balance of Payments and Foreign Exchange Reserves. Despite the troubles in the world economy, India is continued to attract substantial amount of FDI inflows. India due to its flexible investment regimes and policies prove to be the source for the foreign investors in grabbing the investment opportunities in India. The GDP of India in all these years has found to be in the range of 4% - 7% contributing its share globally. It also shows that FDI is the significant factor influencing the level of economic growth in India that helps in increasing the trade in the international market that contributes to the growth of total trade and balance of payments in spite of the depreciation of Indian rupee value that causes the movement in foreign exchange reserves. Hence it provides a sound base for economic growth and development by enhancing the financial position of the country.

12 Conclusion

Foreign Direct Investment is considered to be the life blood and an important vehicle of economic development as far as the developing nations are concerned. The important effect of FDI is its contribution to growth of the economy and this study has aimed to measure the relationship between India's macro- economic variables and FDI inflows to India. It is found that India is the most sought after destinations for the foreign investors in expansion of their business operations. These inflows have contributed to the growth and decline of Indian Economy as well as have attracted investments in various sectors. This study can also be used for further analysis to assess the growth of sector specific inflows in FDI with special reference to growth of India's economic development.

REFERENCES


BOOKS


JOURNALS

[2] Anjali Prasad, Joint Secretary to the government of India, Consolidated FDI Policy, Circular 2013, Department of Industrial Policy and Promotion; Government of India, pp: 13, 39, 72-75

WEBSITES


Manual on Investing in India-Foreign Direct Investment- Policy and Procedures, Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, http://dipp.nic.in