

## **CHAPTER-V**

### **IMPACT OF FOREIGN DIRECT INVESTMENT ON ECONOMIC GROWTH IN INDIA**

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#### **5.1 INTRODUCTION :**

After having discussed FDI policies and trends of FDI inflows into the Indian economy since 1991 it is essential to analyse the effects of FDI on the growth of Indian economy in general and automotive sector in particular. FDI is considered as a channel of capital inflows from a foreign country into the productive capacity of the host country. Since the last two decades global economy is passing through a phase of transformation where capital inflows in the form of financial aids have dried up because of global slowdown and even erstwhile financial institutions like World Development Bank, IMF alone are not in a position to meet the requirements of developing economies. Under such circumstances when all other sources of global capital appear to be volatile, FDI has emerged as a stable and efficacious conduit to expedite growth in developing countries. Developing nations, in particular, consider FDI as the safest type of international capital flows out of all the available sources of external finance. In fact it is felt that FDI is an effective and decisive factor in influencing the contemporary process of global economic development. This is because FDI along with capital brings advanced technology and management skills, which is then adapted to suit the local needs. Apart from acting as an engine for technology transfer (or diffusion), FDI also expands domestic savings, stimulates domestic investment and international trade. Also, foreign firms have greater advantages over domestic firms in respect to export performance because of the brand names which they carry and globally practiced advertising strategies. This helps the host country increase its foreign exchange reserves thereby correcting its 'Balance of Payments' position. All these factors together contribute towards the growth of a nation. Thus considering all its merits FDI has been one of the most acclaimed factors of economic development in India.

Numbers of studies have been conducted to explore the impact of FDI on growth. Some of the studies are of the opinion that FDI inflows to developing countries like India are still too low to make a big difference. In light of these studies economists have their own inhibitions about the positive externalities brought forth by FDI and are of the view that FDI inflows are still too low to make a big difference. Kamalakanthan and Laurenceson (2005) doubted whether FDI can reasonably be considered an important driver of economic growth in India. Some other studies have also observed its meagre contribution to capital formation<sup>1</sup>. However macroeconomic studies conducted for a broad cross section of countries using aggregate FDI inflows suggest a positive role played by FDI in enhancing economic growth in a specific environment or in other words in the presence of certain factors.

The relationship between FDI inflows and economic growth has been analyzed empirically by number of studies both in India and abroad. A lot of controversy has been observed on the relationship between FDI and Economic Growth. The issue is far from settled as most of these studies provide mixed results.

One of the first studies conducted by Solow (1956) within the frame work of neo classical models found the impact of FDI on the growth rate of output was constrained by the existence of diminishing returns to physical capital. Thus it (FDI) was not able to make a significant effect on the growth rate of output in the long run.

Findlay (1978) opined that FDI increases technical progress in the host country by means of a contagion effect, which eases the adoption of advanced managerial procedures by the local firms.

De Gregorio (1992) analyzed the panel of 12 Latin American countries in the period 1950-1985. He found a positive and significant impact of FDI on economic growth. He also suggested that the productivity of FDI is higher when compared to domestic investment.

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<sup>1</sup> Chandana and Nunnenkamp, 2006, found no causal relation between FDI and growth in primary sector and only transitory effects of FDI on output in the service sector.

Carkovic and Levine (2002) examined that FDI has increased dramatically since the 1980s. Many countries have offered special tax incentives and subsidies to attract foreign capital. They insisted that economic rationale for treating foreign capital favourably is that FDI and portfolio inflows encourage technology transfers which in turn accelerate overall economic growth in recipient countries. They found that while micro economic studies generally shed pessimistic evidence on the growth effects of foreign capital, macro studies on the contrary find a positive link between FDI influence on economic growth and growth. They pointed that FDI do not exert an independent influence on economic growth, it depends on other important economic variables as well.

Salisu A. Afees (2004) examined the determinants and impacts of Foreign Direct Investment on economic growth, taking Nigeria as a case study. Among the determinants Inflation, debt burden and exchange rate significantly influence inward FDI to Nigeria. He emphasised on the significant Fiscal and Monetary policies of the government along with enhancing domestic factor productivity and infrastructural facilities to attract FDI in Nigeria. The study suggested arresting the prevailing social unrest in the economy to create a conducive environment for Foreign Direct Investment. He found that contribution of FDI to economic growth in Nigeria is low, although it was recognised as a significant factor affecting growth.

Esther and Folorunso (2011) studied the impact of FDI flows on economic growth in Nigeria and found that FDI had a favourable impact on economic growth, although they reported that existence of the supporting factor like Human Capital is also important.

But at the same time other studies have confirmed negative relation between FDI and economic growth.

In one such study Fry (1992) examined the role of FDI in promoting growth of 16 developing countries. He used macro model, time series cross section data for the period 1966 to 1988. Sample consists of 16

Pacific Basin Countries<sup>2</sup>. He did not find any significant difference between the effect of FDI and domestic investment on the rate of economic growth for his entire sample. The coefficient of FDI after controlling for gross investment rate was not significantly different from zero in statistical terms. He found that FDI had a significant negative effect on domestic investment pointing towards crowding out effect of FDI on domestic investment. He thus found immiserizing effect of FDI on the economy of host countries, however in case of Pacific Basin Countries the FDI has crowded in domestic investment.

Similarly Emrah Bilgic (2006) in her study examined the potential causal relationship between FDI and Economic growth in Turkey for the period 1992 to 2006. She employed Johansen co integration and granger causality test to find the causality of relation between the two variables. She found that the effect of FDI on economic growth of Turkey was neither significant in the short run nor in the long run. The country had meagre FDI inflows and unstable growth performance during the period under study. The study concluded by suggesting the government to improve political and economic stability and better investment climate in order to get the direct benefits.

Some studies are available which have examined the issue of the relationship between FDI and growth in India.

In one such study, Beena, et. al. (2004) examined that there has been very little discussion about two important issues namely the experience of MNC's that have invested in India and the relationship between their performance and experience with the operating environment and the extent of spillovers in the form of transfer of technology and knowhow. They argued that India's future growth will depend on the global competitiveness of its firms and thus transfer of technology and know-how is of paramount importance. They found that though India has come a long

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<sup>2</sup> Pacific Basin Countries included Argentina, Brazil, Chile, India, Mexico, Nigeria, Pakistan, Sri Lanka, Turkey, Venezuela, Indonesia, Korea, Malaysia, Philippines and Thailand

way since 1991 in so far as quantum of FDI is concerned, but the amount is still very low. They asserted that the transfer of technology is as likely to have an impact on India's future growth as the quantum of FDI inflow. Therefore conducive investment environment need to be created to attract FDI. They emphasised that the satisfaction of the expectations of the MNCs that are already operational within India is an important precondition for growth in FDI inflows.

Sarbapriya Ray (2012) estimated the effect of FDI on economic growth in India, using the co integration approach for the period, 1990-91 to 2010-11. The empirical analysis on basis of ordinary Least Square Method suggests that there is positive relationship between foreign direct investment (FDI) and GDP and vice versa. Nevertheless he found this relationship as uni-directional from economic growth to FDI .He suggested India would do better by focusing on improving infrastructure, human resources, developing local entrepreneurship, creating a stable macroeconomic framework and conditions favourable for productive investments to augment the process of development. Then only FDI can be a noteworthy provider to economic growth.

Rangappa (2013) found that apart from a nation's foreign exchange reserves, exports, government's revenue, financial position, available supply of domestic savings, magnitude and quality of foreign investment are necessary for the well being of a country. He used secondary data to assess the determinants of Foreign Direct Investment flows and its impact on Indian economy. It is concluded that the Government should design the FDI policy in such a way that it increases the inflow of FDI which can be utilized to enhance domestic production, savings and exports through the equitable distribution among states so that they can attract FDI inflows at their own level. He also advised to open up the export oriented sectors so that higher growth of economy could be achieved through the growth of these sectors. This points out that growth in domestic sector is a precondition to attract FDI inflows.

Malhotra (2014) found that India's Foreign Direct Investment (FDI) policy has been gradually liberalised to make the market more investor friendly. The results have been encouraging. These days, our country is consistently ranked among the top three global investment destinations by all international bodies, including the World Bank, according to a United Nations (UN) report. For Indian economy which has tremendous potential, FDI has had a positive impact. FDI inflow supplements domestic capital, as well as technology and skills of existing companies. FDI also helps to establish new companies. All of these factors contribute to economic growth of the Indian Economy.

As opposed to the above some of the studies opined that FDI has no impact on economic growth. For instance Suresh and Ramakrishna (2013) revealed that FDI as a strategic component of investment is needed by India for achieving the economic reforms and maintaining the pace of growth and development of the economy. They found that the pace of FDI flows in India were low initially due to regulatory policy framework. Of late however the pace of inflows has picked up. They examined the reasons why FDI is seen as an important economic catalyst of Indian economic development. FDI stimulates domestic investment, increasing human capital formation and facilitates the technology transfers. They advised for a suitable FDI policy in such a way where FDI inflow can be utilized as means of enhancing domestic production, savings and much freedom to states is important, so that they can attract exports led FDI inflows at their own level. FDI can help to raise the output, productivity and export at the sectoral level of the Indian economy. However, they observed that the result of sectoral level output, productivity and export is minimal due to the low flow of FDI into India both at the macro level as well as at the sectoral level.

Deepak and Anupam (2014) in their study revealed that FDI acts as an important variable that alters the level of GDP of the host country. They found that FDI can complement local developmental efforts by boosting export competitiveness, generating employment and strengthening the skill base, enhancing technological capabilities (transfer, diffusion and

generation of technology), and increasing financial resources for development. It can also launch a country in the international trading system, and also set a competitive business environment. In view of this they suggested, that India should continue to take steps to ensure a conducive business environment to improve its attractiveness as an investment destination. However they have expressed their concern over the reports by Economist Intelligence Unit (EIU, 2007-11 on poor infrastructure, excessive bureaucracy, labour market inefficiencies, and interdepartmental wrangling prevalent in India), which they fear may keep FDI inflows well below potential.

As is seen both theoretical and empirical literature happen to offer mixed and contradictory indication about the impact of FDI on economic growth. Further, very few studies have explained the impact of FDI inflows in automotive sector on India's economic growth. It is in this context that an attempt has been made to find out the effects of FDI inflows on economic growth in India in general and on its automotive sector in particular.

The rest of the chapter is divided into the following sections, in the next section the sources of data, model specifications and the methodology adopted to analyse the impact along with description of the variables is done, section three provides the findings and in the last section conclusions are drawn.

## **5.2 DESCRIPTION OF DATA SOURCES AND MODEL SPECIFICATION :**

To examine the impact of FDI inflows on economic growth in India time series data has been used covering the period from 1991 to 2013. The secondary data for the present study is taken from World Development Indicators (WDI); WDI-CD ROM Version 2008 published by World Bank, world Investment Report published by the UNCTAD. The WDI includes variables such as GDP, per capita GDP, GNI, FDI per capita FDI, GCF as percentage of GDP, Trade of goods and services, exports and imports. Domestic capital formation, school enrolment, Gross Fixed Capital

Formation, Gross national expenditure etc. This is considered as a reliable source of data pertaining to any country of the world. The economic survey government of India and Reserve Bank of India monthly bulletins have been used for the study.

Although FDI is the main variable under consideration however along with FDI, there are other variables as well which affect the economic growth of a country. In the present study we have considered four such other variables in addition to FDI inflows. Gross Domestic Product growth rate (GDP growth rate), Foreign direct investment (FDI), Gross Capital Formation (GCF), and Trade openness (TO), Secondary school enrolment (SEC, ENRL). The Subscript 't' represents respective variables at time 't'. The term 'e' represents error or residual terms. Amongst these variables, GDP is specified as the dependent variables and The remaining five as the explanatory variables.

$$\text{GDP}_{rt} = \beta_0 + \beta_1 \text{FDI}_t + \beta_2 \text{GCF}_t + \beta_3 \text{TO}_t + \beta_4 \text{SEC, ENRL}_t + \text{FDI/GDP ratio} + e_t$$

Here,

$\text{GDP}_{rt}$  = the rate of growth of GDP.

FDI = net foreign direct investment inflows as percentage, FDI has two categories

Total FDI = (net inflows in the entire economy)

Auto FDI = (net FDI inflows in auto sector)

GCF = Gross capital formation (as a % of GDP)

SEC ENRL = Secondary school enrolment

FDI/GDI ratio = this ratio help us to understand the relation between the two

e = error term

t = time



Multiple regression analysis has been conducted in order to ascertain the effects of FDI on economic growth in India, in combination with other important growth variables. Bi-variate regression has also been done in order to capture the detailed effects of FDI inflows (total FDI and auto FDI) exclusively.

### **5.2.1. GDP GROWTH RATE**

Our dependent variable in this case is 'economic performance' for which we used GDP growth rate. GDP is the sum total of value added of all production units including all taxes and subsidies. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. GDP growth rate on the other hand measures how fast the economy is growing. It does this by comparing one quarter of the country's economic output (Gross Domestic Product) to the last. In other words, economic growth rate is a measure of the rate of change that a nation's gross domestic product (GDP) experiences from one year to another. The GDP growth rate is the most important indicator of economic health. When the economy is expanding, the GDP growth rate is positive. If it's (GDP growth rate) growing, so will business, jobs and personal income. If it's slowing down, then businesses will hold off investing in new purchases and hiring new employees and wait for the economy to improve. This, in turn, can easily further depress the economy and consumers will have lesser money to spend on purchases.

By far, the most important driver of GDP growth is personal consumption, which includes retail sales. Consumption is often proxied for large market size. Larger the size of market i.e. demand in an economy higher will be the rate of growth of GDP. Charkrabarti (2001) in her work emphasised the market-size hypothesis which states that a large market is required for efficient utilization of resources and exploitation of economies of scale. A larger size of market is often considered to attract larger inflows of FDI<sup>3</sup>. It

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<sup>3</sup> Schneider and Frey (1985), Tsai (1994) and Asiedu (2002) suggested a positive and statistically significant relation between real GDP per capita and FDI inflows

is argued that the enlargement of market size tends to stimulate the attraction of FDI to the economy. This relation of FDI and GDP will further increase the size of market<sup>4</sup>. Many studies have found that GDP and its growth rate has a significant positive impact on FDI inflows, which in its turn increases economic growth of the host country<sup>5</sup>. We are going to explore this in our model.

### **5.2.2. FOREIGN DIRECT INVESTMENT (FDI):**

Foreign Direct Investment are the net inflows of capital to acquire lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, and other long- term capital and short term capital as shown in the balance of payments. FDI is an essential stimulator for economic growth in underdeveloped countries<sup>6</sup>. Nevertheless, there could also be a negative relationship between FDI and economic growth in the long run<sup>7</sup>. Many observers and economists are of the opinion that FDI provides external assistance, capital and advanced technology to the economy and acts as an engine of growth. In this chapter we are going to test whether dependency theory holds in case of India i.e. whether economic growth of the country has been affected by FDI. FDI inflow in automotive industry of India has also been taken into account separately to understand whether inflow of FDI in automotive sector has better impact on economic growth of India as compared to overall FDI.

### **5.2.3. GROSS CAPITAL FORMATION (% OF GDP) :**

Gross capital formation (formerly known as gross domestic investment) consists of outlays on additions to the fixed assets of the economy. The contribution of the government of the country towards its economy is

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<sup>4</sup> Pärletun (2008) found that economic development encourages FDI into an economy.

<sup>5</sup> Ang (2008) & Sapna Hooda (2011) GDP has a significant positive effect on FDI inflows.

<sup>6</sup> Kowalski (2000) found that FDI is an important forecaster of economic growth.

Tsai (1994) found that FDI is a stimulator for economic growth in underdeveloped countries

<sup>7</sup> Kogid et al (2010) Akram et al (2011) al. (2011) [28] have established negative association of FDI with GDP growth by taking panel data of SAARC countries. The proxy used for FDI is the FDI per capita. Data for this was taken from State Bank Of Pakistan

taken as Gross domestic investment, at present it is indicated by Gross Capital Formation by World Development Indicators. It consists of outlays on addition to the fixed assets of the country plus net changes in the level of inventories. Fixed assets include land improvements, plant, machinery and equipment purchases, construction of roads, railways and the like, including schools, offices, hospitals, private residential dwellings and commercial and industrial buildings.

The literature shows a positive relationship between gross domestic investment (GCF) and economic growth<sup>8</sup>.

#### **5.2.4. TRADE OPENNESS:**

Trade openness which is the ratio of import plus export to GDP is believed to have important development implications, an important explanatory variable in the present study to examine its impact on economic growth of India. FDI and Trade are considered as two important pillars to support the growth structure of the economy. It is believed that FDI inflows and transfer of technology through international trade lead to economic growth. Also in the long run better economic performance is registered by more outward oriented countries<sup>9</sup>. Not only trade systems need to be amended, but each country must enhance its productive capacity, observe all trade related regulations, in the trade policies of the countries functioning in the global market, overhaul infrastructure and eliminate trade barriers<sup>10</sup>(Bourdon et.al 2013). Many developing countries have embarked on programs of external economic liberalisation in recent decades in order to make their economy more investor friendly .The expected impact on economic growth of trade openness is positive. Although in spite of undertaking different measures of liberalisation during the last decades economists are still not sure about the links and

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<sup>8</sup> Baroo, 1996; Amjad and Khan, 2004; Kogid et al, 2006). They all found and positive association between gross domestic investment and economic growth

<sup>9</sup> Sach and Warner (1995) examined that theoretically, trade encourages economies of scale – and thereby productivity gains, technology diffusion and investment – as well as improving incentives for development.

<sup>10</sup> Trade policies need of improvements, such as harmonisation, broader product coverage, lower transaction costs and revised rules of origin.

causality between trade openness and economic growth. Empirical results mostly suggest that open and liberal trade policies facilitate the process of integration of the economy with the rest of the world. These studies have found that countries which liberalized their trade experienced better growth rates that were about 1.5 percentage points higher than what they could achieve before liberalization<sup>11</sup>. It has also been observed that the countries involved in exporting higher quality products which is made possible by technology imports through foreign trade grow more rapidly<sup>12</sup>. It is in this context that this variable is taken to test India's GDP growth in connection to FDI inflows.

### **5.2.5 SECONDARY SCHOOL ENROLMENT:**

This is another important variable to measure the growth of an economy. Formally organised education at the elementary, secondary and higher levels is an important aspect of human resource. In this study secondary school enrolment has been considered for human capital. Economists have long known that people (human capital) are an important part of the wealth of nations. Measured by what labour contributes to output, the productive capacity of human beings is now vastly larger than all other forms of wealth taken together. Many unanswered puzzles about our changing and growing economy can be resolved once human investment is taken into account. Like any other forms of capital that can be regenerated human capital also depreciates, becomes outdated and calls for maintenance. Secondary school education lays the foundation for lifelong learning and development of personality. In this study we have considered secondary school enrolment as one of our independent variable, it was considered important to capture how this variable affects the growth of an economy.

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<sup>11</sup> See Wacziarg and Welch (2003) found that the annual growth rates were 1.5 percentage points higher for countries with liberalized trade policies after trade liberalization over the period 1950-1998.

<sup>12</sup> Bourdon et. al. (2013) found that at the global level, whether it is a question of making aid for trade more effective or attracting FDI, greater coherence between the policies of the industrialised countries and those of the developing countries is needed. This will require coordination.

### 5.3. RESULTS:

**TABLE: 5. 1: MULTI VARIATE REGRESSION RESULTS DEPENDENT VARIABLE GDP GROWTH RATE**

<b>Independent variables</b>	<b>Total FDI</b>	<b>Trade openness</b>	<b>secondary enroll</b>	<b>GCF % of GDP</b>	<b>FDI /GDP Ratio</b>
<b>Co-efficient</b>	-0.000164658	-6.949850685	0.115638908	0.537231027	13.79837123
<b>Standard Error</b>	0.00014834	14.83779995	0.246691187	0.170675716	222.3542084
<b>t stat</b>	-1.110007041	-0.468388219	0.468759787	3.147671148	0.062055813
<b>p-value</b>	0.284474251	0.646240983	0.64598141	0.0066379	0.951337725

Source: Compiled from Appendix-1

Absolute value of t-statistics in parentheses (significant at 5%)

Based on Appendix 1. Multi regression result no.1 with GDP growth rate as dependent variable and total FDI inflows as one of the independent variable had been run. The coefficients and t-statistics of each independent x –variable are expressed in the table to demonstrate its level of significance. The coefficient of determination or R squared is included to represent how much change in the dependent variable is captured by the regression. The regression shows that R Square is 0.62 % and Adjusted R Square is 0.42 % which is normally a good fit.

The result reveals negative coefficient of FDI (-0.0001) at standard error 0.0001. The above table 5.1, shows P value of total FDI inflows is 0.28 % which is not a significant value considering the level of significance. As P value should be ' $\leq$  to  $\alpha$ ' (Alpha i.e. level of significance), Alpha is 5% (0.05) in this case. It is clear from the table that P value total FDI is 0.28 which is greater than alpha, in other words it shows that total FDI inflows don't show a favourable impact on GDP growth rate of our country.

P values of other variables for e.g. trade openness , secondary school enrolment, FDI /GDP ratio are also greater than alpha thus not significant and  $H_0$  doesn't get rejected. P-value of GCF (as % of GDP) however shows a significant value 0.006, which is less than level of significance (5%). Thus it can be said that GCF when regressed with other explanatory variables shows better impact on growth rate of GDP.

**TABLE: 5. 2: MULTI VARIATE REGRESSION RESULTS DEPENDENT VARIABLE GDP GROWTH RATE**

<b>Independent variables</b>	<b>Auto FDI</b>	<b>Trade openness</b>	<b>secondary enroll</b>	<b>GCF % of GDP</b>	<b>FDI /GDP Ratio</b>
<b>Co-efficient</b>	0.035883	6.651851	-0.30263	0.670092	-326.259
<b>Standard Error</b>	0.022475	14.70354	0.233953	0.167831	117.7095
<b>t stat</b>	1.596574	0.452398	-1.29355	3.992662	-2.77173
<b>p-value</b>	0.131209	0.657456	0.215387	0.001177	0.014249

Source: Compiled from Appendix-1

Absolute value of t-statistics in parentheses (significant at 5%)

Based on Appendix 1 second multivariate regression was conducted. In Multi variate regression, 2 with GDP growth rate as dependent variable, here an Auto FDI inflow has replaced total FDI inflows as one of the independent variables. The idea of this exercise is to examine whether FDI inflow in automotive-sector shows better impact on economic growth. This multi variate regression shows R Square is 0.64 % and Adjusted R Square is 0.53 %.

P-value of Auto FDI is 0.13 % which is not significant at 5% level of significance. As P value should be ' $\leq$  to  $\alpha$ ' (Alpha i.e. level of significance). The result shows that P value of auto FDI is greater than alpha value (5% or 0.05) in this case. In other words, it is clear that auto FDI inflows just like total FDI also do not show a significant impact on GDP growth rate of our country.

P values of other variables for e.g. secondary school enrolment and trade openness ,when regressed along with auto FDI are also more than the value of alpha i.e. level of significance. In other words, secondary school enrolment and trade openness when regressed along with auto FDI inflows have an insignificant influence on the GDP or economic growth of India. The effects of GCF as % of GDP and FDI/GDP ratio however, show significant effect on our GDP as the p-value of these two variables are less than 0.05 (level of significance). Thus in the presence of other explanatory variables, the positive co-efficient value of FDI inflows in auto sector, 0.035, at Standard error 0.022 shows better influence on GDP growth rate of India compared to total FDI inflows.

It is evident that the results of multivariate regression with FDI inflows in auto sector are better when compared to overall FDI inflows in our country



**TABLE: 5. 3: BI-VARIATE REGRESSION RESULTS INDEPENDENT**  
**VARIABLE: FOREIGN DIRECT INVESTMENT (FDI)**

<b>Independent Variables</b>	<b>Auto FDI</b>
<b>Co-efficient</b>	0.017733
<b>Standard Error</b>	0.013363
<b>t stat</b>	1.326987
<b>p-value</b>	0.200241

Source: Compiled from Appendix-1

Absolute value of t-statistics in parentheses (significant at 5%)

In order to get a micro analysis of the impact of FDI on growth rate of GDP, Bi-variate Regression with GDP growth rate as dependent and auto FDI as independent variable is run. As shown in Table 5.3, the result shows R Square 0.0084 percent. The p-value of auto FDI (0.200) which is higher than the level of significance has proved that auto FDI has an insignificant influence on GDP growth rate. The positive coefficient (0.01) which is subject to a standard error 0.01, is statistically significant at 5% level, doesn't speak very high of the impact of FDI inflows in auto sector on growth rate of the economy. Value of t- stat (1.32) is also insignificant at 5% level of significance.

Second Bi-variate regression was also run with GDP growth rate as dependent and total FDI inflows as the independent variable. This enabled the comparison of auto FDI with that of total FDI.

**TABLE: 5. 4: BI-VARIATE REGRESSION RESULTS INDEPENDENT**  
**VARIABLE: FOREIGN DIRECT INVESTMENT (FDI)**

<b>Independent variables</b>	<b>Total FDI</b>
<b>Co-efficient</b>	0.0000038
<b>Standard Error</b>	0.00000393
<b>t stat</b>	0.97
<b>p-value</b>	0.34

Source: Compiled from Appendix-1

Absolute value of t-statistics in parentheses (significant at 5%)

As shown in Table 5.4, the result shows that R Square is 0.047, which is not a good fit. The p-value of total FDI 0.343 is much higher than level of significance 0.05, this shows that when regressed alone, total FDI shows rather subdued performance i.e. in the absence of other growth variables it has a very insignificant influence on GDP growth rate of India. The coefficient 0.000003 is subject to a standard error 0.000003; it is statistically significant at 5% level. Value of t -stat is also insignificant at 5% level of significance. One thing that needs to be emphasised here is that in day to day life many factors are going to operate along with FDI inflows so we cannot altogether rule out the influence of other factors. In light of the above Bi-variate regression it can be concluded that both auto FDI inflows and total FDI inflows have had insignificant influence on growth rate of GDP, nevertheless impact of auto FDI inflows are comparatively better than that of total FDI inflows.

## **5.4 CONCLUSION:**

FDI plays an important role in the long-term development of a country not only as a source of capital but also for enhancing competitiveness of the domestic economy through transfer of technology, strengthening infrastructure, raising productivity and generating new employment opportunities. India emerges as the fifth largest recipient of foreign direct investment across the globe and second largest among all other developing countries (World Investment Report 2010). This study covers the period when results of the reconstruction of the economy, have just started pouring in and the period when India began to be recognised as the favourite destination of FDI after China. The huge market size, availability of highly skilled human resources, sound economic policy, abundant and diversified natural resources are factors that enable India to attract FDI. Further, it was found that even though there has been increased flows of FDI into the country during the post liberalization period, the global share of FDI inflows in India is very less compared to other developing countries and emerging markets. Lack of proper infrastructure, unstable government, uncertain political environment, high corporate tax rates and limited export processing zones are considered to be the major problems for low FDI into the country. Multi-regression analysis also shows that neither total FDI inflows into Indian economy nor FDI inflows in automotive sector show a significant favourable impact on the GDP of our country. Also the pace of FDI inflows has been very low. Auto FDI inflows show better influence on GDP growth rate of India in the presence of other explanatory variables.

The results of Bi-variate regression with GDP growth rate as dependent and auto-FDI and total FDI inflows as independent variable also approves that when the effects of other growth variable are dropped, the impact of auto and total FDI inflows on economic growth is insignificant and not very impressive.

Thus based on the regression results, it can be concluded that the impact of FDI inflows in auto sector are better performers as compared to overall FDI inflows in terms of economic growth of India. It lays the ground to contemplate about the reasons which are acting as impediments in the way of FDI inflows.

The analysis of FDI and economic growth relationship suggests that FDI is unlikely to work wonders in India until the remaining regulations are relaxed and more sectors and areas are opened up to FDI. To overcome this situation, the Government should revise the sectoral cap and bring more sectors under the automatic route. Further, India should sign the agreement of Double Taxation treaties with other countries in order to increase bilateral trade. Therefore, there is an urgent need to adopt innovative policies and good corporate governance practices at par with international standards, by the Government of India, to attract more and more foreign capital in various sectors of the economy to enhance the pace of development of Indian economy. In the next chapter we are going to examine the effect of FDI inflows in India on its trade.