

FOREIGN DIRECT INVESTMENT AND FOREIGN TRADE: EMPIRICAL EVIDENCE FROM INDIA

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ABSTRACT

Foreign Direct Investment provides a direction through which developing countries can gain access to foreign capital for their economic development. FDI also tends to improve the productive efficiency of resource allocation by facilitating the transfer of resources across different sectors of the economy. The cause and benefit of foreign investment varies from country to country. It can persuade the factor productivity of the recipient country and also shape the balance of payments. The purpose of the paper is to estimate and analyze the impacts of FDI on exports, imports, foreign exchanges and capital formation in India for the post-liberalization period (1991-2009). With this intention, simple regression technique has been used to capture the impact of FDI on these economic indicators. FDI has been used as an independent variable and others are used as dependent variables. Growth rates are evaluated and trends are analyzed for this purpose. The study enables us to obtain a blueprint of the major impacts of FDI on Indian trade and economy. It could also provide us with a direction in which the country needs to proceed in order to become a favored FDI destination.

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INTRODUCTION

Foreign direct investment leads to flow of capital and technology from investing country to the investment destination economy. Policy makers believe that FDI will lead their country's overall development, including the foreign trade and capital formation. For a developing nation like India, FDI could play a significant role in its economic development process in general and to the foreign trade in particular by improving India's infrastructure manufacturing by modern technologies which are the keystones to the development. FDI is seen as a means of transferring knowledge and other assets both tangible and tacit, in order to organize production abroad. FDI inflows could bring important benefits to the recipient countries in the form of capital inflows, technology spillovers, and human capital formation, international trade integration, enhancement of enterprise development and good governance. FDI plays a complementary role in overall capital formation and in filling the gap between domestic savings and investment. Further, FDI may have strong relationship with other economic parameters such as exports, imports capital formulation and even the gross domestic capital formulation.

Review of literature

Foreign Direct Investment is an essential need for a country. This is because of its multifaceted features in the economy, which include fulfilling saving-investment gap, relaxing foreign exchange constraints and flowing as a bundle of capital, technology, knowledge, marketing, competitiveness, etc.(Grossman and Helpman, 1992; Walz, 1997; and Pradhan.2003). These are the main avenues by which FDI can contribute to economic growth. FDI affects economic growth by generating increasing returns in production via externalities, i.e., by productivity spillovers and exports spillovers. FDI represent the movement of capital in and out of the country with the intention of buying physical assets to start a business. The contribution of foreign direct investment to economic growth has been well documented in economic literature (Romer, 1993; De Mello. 1997; Mody and Wang, 1997; Dua and Rashid, 1998; Zhang, 1999; Demurger, 2000; Yusop Keong and Mericam 2002; Zebregs, 2002; Dias, 2003; Lensink and Hermes, 2003; and Sjöholm and Okamoto, 2005).

Hymer (1970); Vernon (1966) and Caves (1971) discussed that oligopolistic structure of markets, international integration, imports and the level of foreign direct investment are complementary. The existence of multinational would not have been possible in case of perfect

markets as all the activities will be carried out by free trade (Kindleberger, 1969). In the current global scenario, study by Bajpai and Sachs (1997) can be relied upon which shows that India can attain dynamic growth only by combining vast supply of skilled managerial and engineering labour with foreign technology. This technology can be attracted by allowing MNCs in India along with FDI. However, from the long term development point of view India has tremendous growth prospects through export led development in a broad range of sectors, both traditional and new (Bajpai and Sachs, 1998).

Borensztein, De Gregorio, and Lee (1998) find that if the level of education in the host country is high the economic growth will improve at very high pace. Because, the absorptive capacity of the given economy has become high with improvement in human resources. The author has examined the impacts of FDI on the economic growth of 69 developing countries during the period of 1970-89 in context of human capital available in the country. Matusz and Tarr (1999) survey the studies carried out before 1995 on the impact of globalization on employment in developing countries. Comparing the levels of employment before and after trade liberalization, they conclude that trade and FDI liberalization has been beneficial for labour except in the transition economies of Eastern Europe.

Sanchez-Robles (2003) posited that economic growth increases with FDI inflows with adequate human capital. Economic stability and liberalized market supplement these inflows. This study was carried out in Latin America and showed a positive correlation between FDI and economic growth. The pre-requisite of long term benefits from FDI are high quality human capital sufficient infrastructure and liberalized market. Another study by Alfaro, Chanda, Kelemlı and Sayek (2004) supports the similar views that FDI can play a clear role in the economic growth of a country. The authors studied the relationship between FDI and growth in the financial developed markets covering the period 1975-95.

According to world investment report of UNCTAD (2003), "Foreign investors regard both China and India as a hub for relocation of labour intensive activities. In India, the relocation has been confined to the services, particularly information and communication technology. In China, about 2/3rd of FDI inflows flow into a diverse range of manufacturing industries." Other Indian neighbors, such as Indonesia, Malaysia, and Thailand are also relying heavily on FDI for pulling

ahead in economic growth, income levels and productivity, while also increasing their security and geopolitical influence in the world community.

FDI tends to expand the local market attracting large domestic private investment. This effect creates additional employment in the economy (Jenkins and Thomas, 2002). Developing nations gets positive impacts on employment in both direct and indirect manner due to FDI. It also produces tertiary employment by generating additional income and increase in aggregate demand. The author also discussed that several developing countries have exhibited export and employment growth due to FDI. Further, FDI has a strong relation with increased exports from host countries. FDI also tends to improve the productive efficiency of resource allocation by facilitating the transfer of resources across different sectors of the economy (Chen, 1999).

Lee and Vivarelli (2006) in their study has concluded that controlled liberalization result in high economic growth and human development otherwise financial liberalization can lead to increased poverty and high income disparity. They have also mentioned that FDI can have positive impacts on employment but such employment growth can results into regional disparities. Thus the national educational policy should try to play a crucial role to reduce such disparities and try to increase the supply of such skills which can absorb technological import.

The research paper of Nagesh Kumar (2009) examines the emerging trends and patterns in FDI inflows to India. A major objective is to evaluate the role of liberalization in shaping these patterns. This article attempts to analyze the changes in India's shares in FDI outflows from Europe, US and Japan. The study also covers current reforms in policies to remove impediments for export-oriented manufacture in general. The purpose is to attract MNCs to locate efficiency-seeking FDI in the country. These investments could help India in expanding manufacture exports by using her as an export platform. The majority of the recent approvals of FDI, however, aim to explore India's sizeable and expanding domestic market. The efficiency-seeking FDI has yet to start flowing to the country in a considerable manner. In an era of stiff competition among developing countries to attract export oriented FDIs, liberalization of policies alone may not be enough to win the race. More active negotiations and bargaining with MNEs may often be required.

Following Mundell (1957), it was long thought that FDI substitutes trade. The proposition was strongly challenged by Agmon (1979) and subsequently, a number of studies emphasized the potential complementarities between FDI and trade (Markusen, 1995 and Ethier, 1996). Bhagwati, Srinivasan and Wan (1978) were of the opinion that FDI inflows might worsen the country's terms of trade. They suggested that the effect of FDI on developing countries depends on the country's trading mode, i.e., import substitution and export promotion. Under export promotion strategy, FDI inflows lead to biased growth in exports, thus possibly worsening the country's terms of trade. Zhang (1999) and Li (2002) point out that when the multinational industries with comparative advantage may worsen the recipient's terms of trade because of the possible fall in the price of the exports. Wang (2002) also concludes that the primary cause of the deterioration of China's terms of trade is that its export growth largely depends on foreign-invested enterprises and labor-intensive products.

On the contrary, the study by Benhabib and Spiegel (1994) found negative impact of human capital on FDI inflows, which was highly supported by Kyriacou (1991), Lau, Jamison and Louat (1991) and Pritchett (2001). Lucas (1993) suggested that there is a positive relationship between FDI and level of foreign exchange reserves. Similarly, FDI can have positive impact on the level of foreign exchange reserves as well. He also mentioned that events which generate political instability do reduce the flow of FDI, but they have a short-run impact.

The major determinants for FDI are sound domestic macroeconomic and structural policies, adequate and efficient domestic savings and investment and human capital accumulation, supported by sound and strong domestic institutions. Appropriate domestic policies will help attract FDI and maximize its benefit, while at the same time removing obstacles to local business (Ögütçü, 2002); Pradhan (2008), in his empirical study identifies these macro-variables, such as current account in balance of payments, economic growth, foreign exchange rate, terms of trade, inflation rate and trade openness, which determine the FDI inflows in India. While the impact of current account in balance of payments and inflation are negative, the impact of openness, economic growth, terms of trade and real effective exchange rate are positive. All are statistically significant except current account in balance of payment and economic growth.

RESEARCH METHODOLOGY

FDI plays a multidimensional role in the overall development of host economies. It is widely discussed in the literature that, besides capital flows, FDI generates considerable benefits. India-specific studies on FDI have dealt with determinants of FDI, technology spillovers, export growth and good governance practices transferred from foreign to domestic firms (Banga, 2003; Kumar, 2002, 2003; Siddharthan, 2004). These effects have been estimated through firm-level case studies and through cross-section industry data. However, the impact of FDI on the economy is still not clear and there is little evidence on the economy-wide impact of FDI in India. However, there is great interest among academics and policy makers to critically examine the impact of FDI on the different sectors of the economy and various regions of the country.

Specific Objectives of the Study:

The specific objectives of the study are listed as:

- To study the growth pattern in FDI in India during the study period.
- To establish the relationship between FDI and Foreign Trade.
- To establish the relationship between FDI and Foreign Exchange Reserves.
- To establish the relationship between FDI and Capital Formation.

Eventually the analysis is geared towards evaluating the impact of FDI on the economic growth of the country as represented by selected indicators i.e. Exports, Imports, Foreign Exchange Reserves and Capital Formation.

Data Collection and Analysis

The present study makes use of secondary source of data collected from the publications of Government of India, Reserve Bank of India, Ministry of Industry and Commerce, World Bank, and IMF, UNCTAD, Journals and Periodicals. The reference period of this study relates from 1991 to 2009. Relevant statistical techniques such as growth rate, compound growth rate, t-test and regression analysis has been applied to establish the relationship between foreign direct investment and selected economic growth parameters. FDI is considered as an independent variable and each of the economic indicators as a dependent variable

Growth in FDI Inflows

Foreign direct investment is that investment, which is made to serve the business interests of the investor in a company, which is in a different nation distinct from the investor's country of origin. A parent business enterprise and its foreign affiliate are the two sides of the FDI relationship. Together they comprise an MNC. The parent enterprise through its foreign direct investment effort seeks to exercise substantial control over the foreign affiliate company. The trends in FDI inflows in India are presented in Table 1.

TABLE 1 FOREIGN DIRECT INVESTMENT IN INDIA

Year	FDI Inflows (Rs in Crore)	Yearly Growth (% age)
1991-92	408	---
1992-93	1094	168.14
1993-94	2018	84.46
1994-95	4312	113.68
1995-96	6916	60.39
1996-97	9654	39.59
1997-98	13548	40.34
1998-99	12343	-8.89
1999-00	10311	-16.46
2000-01	12645	22.64
2001-02	19361	53.11
2002-03	14932	-22.88

2003-04	12117	-18.85
2004-05	17138	41.44
2005-06	24613	43.62
2006-07	70630	186.96
2007-08	98664	39.69
2008-09	98860	0.20
CAGR (% age)	25	
t test	27.00*	

Source: Fact Sheet, Department of Industrial Promotion, Ministry of Finance, GOI.

FDI inflows have also shown very unusual trends. But the position regarding the actual inflows was slightly better when we consider the CAGR which worked out at 25 percent for the period 1991-92 to 2008-09. Until the end of 2009 the annual growth rate has been positive. But there has been the presence of the growth at a decreasing rate. When the absolute figures of amount are taken in consideration it is inferred that there has been a gradual rise in the FDI inflows from Rs.408 crore in 1991-92 to Rs.13548 crore in 1997-98 followed by a decline at Rs.10311 crore in 1999-00. The recovery to Rs.12645 crore to place in 2000-01 which ended up at Rs.19361 crore by the end of financial year 2002-03. Having seen a dip to Rs.12117 crore in 2003-04, the actual FDI inflows started rising and by capturing this trend the amount reached to Rs.98860 by 2008-09. The trends in FDI inflows discussed here resulted into a CAGR of 25 percent which is significant as indicated by the t-test (27.00) as well.

EXPORTS Vs IMPORTS

Foreign trade is an important segment for any economy. The growth in exports and imports are listed in Table 2.

TABLE 2

TRENDS IN EXPORTS AND IMPORTS

Year	Exports (Rs. Crore)	Growth Rate (% age)	Imports (Rs. Crore)	Growth Rate (% age)
1991-92	44042	---	47851	---
1992-93	53688	21.9	63375	32.44
1993-94	69751	29.92	73101	15.35
1994-95	82674	18.53	89971	23.08
1995-96	106353	28.64	122678	36.35
1996-97	118817	11.72	138920	13.24
1997-98	130101	9.5	154176	10.98
1998-99	139753	7.42	178332	15.67
1999-00	159561	14.17	215237	20.69
2000-01	203751	27.69	230873	7.26
2001-02	209018	2.59	245200	6.21
2002-03	255137	22.06	297206	21.21
2003-04	293367	14.98	359108	20.83
2004-05	375340	27.94	501065	39.53
2005-06	456418	21.6	660409	31.8
2006-07	571779	25.28	840506	27.27
2007-08	655863.5	14.71	1012312	20.44
2008-09	840755.1	28.19	1374436	35.77
C.A.G.R. (% age)	13.90		15.30	
t-test	128.25*		100.85*	

Source: RBI; Data Compiled from Various Economic Surveys from 2000-01 to 2009-10.

Goods and services that are produced domestically and sold to buyers in another country are exports. Transport goods abroad out of a customs territory; to server them from the mass of

things belonging to one country with the intention of uniting them to the mass of things belonging to a foreign country. Simply, goods or any articles of trade or commerce sent out of a country to another country are called exports.

Growth in Exports

Table 2 presents the volume of exports in Rs crores, yearly growth rate, compound annual growth rate (CAGR) and the results of t test to see the significance of CAGR. As per the table, the highest annual growth rate is (29.92percent) during 1993-94 and the lowest growth rate (2.59 percent) in 2001-02. The period of five years from 2004-05 to 2008-09 appears to be the period of boom in exports as the yearly growth rate during these years were the highest (14.71 percent in 2007-08, the minimum and 28.19 percent in 2008-09, the maximum). The decade ending 2001-02 has witnessed wide fluctuations in annual growth rate in exports, i.e. 2.59 percent is lowest in 2001-02 and 29.92 percent the highest in 1993-94. The compound growth rate for the study period (1991-92 to 2008-09) of eighteen years has been worked out at 13.90 percent. The calculated t-value is statistically significant at 5% level of significance indicating that the growth during the study period has been statistically significant in the volume of exports.

Growth in Imports

Goods or services are purchased from other countries for use in one's own country. Visible imports are items such as clothing, cars and machinery; invisible imports are such things as freight payments, dividend payments and royalties. Generally, products of foreign origin brought into a country are imports. Table 2 shows the yearly imports in Rs crores, yearly growth rate, compound annual growth rate (CAGR) and the results of t-test to see the significance of CAGR. As shown in the table, the highest annual growth rate (39.53 percent) during 2004-05 and the lowest growth rate (6.21 percent) in 2001-02. Here it needs mention that annual growth rate was very low for exports as well as imports during 1998-99. The period of five years from 2004-05 to 2008-09 appears to be the period of boom in imports as the yearly growth rate during these years were continuously at higher rate (ranging from 20.44 percent in 2007-08 to 39.53 percent in 2004-05). The decade ending 2001-02 has witnessed wide fluctuations in annual growth rate in imports, i.e. 6.21 percent the lowest in 2001-02 and 36.35 percent the highest in 1995-96. The

compound growth rate for that period (1991-92 to 2008-09) of eighteen years worked out at 15.30percent which is significant at 5% level as indicated by the result of t-test.

FOREIGN EXCHANGE RESERVES

Deposits of a foreign currency held by a central bank, holding the currencies of other countries as assets allow governments to keep their currencies stable and reduce the effect of economic shocks. Total of a country's gold holdings and convertible foreign currencies held in its banks, plus special drawing rights (SDR) and exchange reserve balance with the International Monetary Fund (IMF) are foreign exchange reserves. The use of foreign exchange reserves became popular after the decline of the gold standard. The trends in foreign exchange reserves and capital formation are shown in table 3.

TABLE 3 TRENDS IN FOREX AND CAPITAL FORMATION

Years	FOREX (Rs. Crore)	Growth Rate (%age)	GDCF (Rs. Crore)	Growth Rate (%age)	NDCF (Rs. Crore)	Growth Rate (%age)
1991-92	23850	----	144466	-----	82495	-----
1992-93	30744	28.91	173498	20.10	101369	22.88
1993-94	60420	96.53	194724	12.23	113842	12.30
1994-95	79781	32.04	259355	33.19	165533	45.41
1995-96	74384	-6.76	311782	20.21	200656	21.22
1996-97	94932	27.62	330806	6.10	202415	0.88
1997-98	115905	22.09	385808	16.63	242059	19.59
1998-99	138005	19.07	408109	5.78	245907	1.59

1999-00	165913	20.22	506244	24.05	324823	32.09
2000-01	197204	18.86	511788	1.10	309970	-4.57
2001-02	264036	33.89	520656	1.73	292359	-5.68
2002-03	361470	36.90	618035	18.70	367528	25.71
2003-04	490129	35.59	759325	22.86	479277	30.41
2004-05	619116	26.32	1011212	33.17	682171	42.33
2005-06	676387	9.25	1272630	25.85	892318	30.81
2006-07	868222	28.36	1521805	19.58	1084768	21.57
2007-08	1237965	42.59	1845513	21.27	1336064	23.17
2008-09	1283865	3.71	2275608	23.30	1303204	-2.46
CAGR (%age)	27.90		0.163		0.175	
t test	72.69*		177.87*		125.24	

Source: RBI; Data Compiled from Various Economic Surveys from 2000-01 to 2009-10.

Growth in Foreign Exchange Reserves

Table 3 presents the yearly total Foreign Exchange Reserves in Rs crores, yearly growth rate, compound annual growth rate (CAGR) and the results of t-test to see the significance of CAGR. As revealed by the table, the highest annual growth rate is (96.53 percent) during 1993-94 and the lowest growth rate (-6.76 percent) in 1995-96. The period of seven years from 1993-94 to 1999-00 appears to be the period of boom in Foreign Exchange Reserves as the yearly growth rate during these years were the highest (-6.76 percent in 1995-96, the minimum and 96.53

percent in 1993-94, the maximum). The decade ending 2001-02 has witnessed wide fluctuations in annual growth rate in Forex, i.e. -6.76 percent is lowest in 1995-96 and 96.53 percent the highest in 1993-94. The CAGR for that period (1991-92 to 2008-09) of eighteen years worked out at 27.90 percent which is significant at 5% level as revealed by the result of t-test.

Capital Formation

Generally, the higher the capital formation of an economy, the faster an economy can grow its aggregate income. Increasing an economy's capital stock also increases its capacity for production, which means an economy can produce more. Producing more goods and services can lead to an increase in national income levels. Gross Domestic Capital Formation is that part of a country's current output and imports which is not consumed or exported during the accounting period but set aside as addition to its stock of capital goods. It is composed of gross addition to fixed assets and changes in stocks. . Net Domestic Capital Formation refers to net additions of capital stock such as equipment, buildings and other intermediate goods.

Growth in Gross Domestic Capital Formation

The highest annual growth rate is 33.19 percent during 1994-95. In the same year FDI inflows are also very high 113.68 percent growth in comparison to previous year. The lowest growth rate is 1.10 percent in 2000-01. The period of seven years from 2002-03 to 2008-09 appears to be the period of boom in Gross Domestic Capital Formation as the yearly growth rate during these years were the highest (18.70 percent in 2002-03, the minimum and 33.17 percent in 2004-05, the maximum). The CAGR for that period (1991-92 to 2008-09) of eighteen years worked out at 0.163 percent.

Growth in Net Domestic Capital Formation

The growth in Net Domestic Capital Formation has shown wide fluctuation throughout the given period of two decades. The fluctuation has become quite sharp in the decade of 2001-10 with a negative rate -5.68 percent in 2001-02 to a high positive growth rate 42.33 percent in 2004-05. The year 1994-95 has shown the highest annual growth rate of 45.41 percent in net domestic capital formation. The period of six years from 2002-03 to 2007-08 appears to be the period of

boom in Net Domestic Capital Formation as the yearly growth rate during these years were the highest (21.57 percent in 2006-07, the minimum and 42.33 percent in 2004-05, the maximum). The CAGR for that period (1991-92 to 2008-09) of eighteen years worked out at 0.175 percent.

CORRELATION BETWEEN FDI AND ECONOMIC INDICATORS

This section of the study presents the results of inter-correlation analysis with respect to the relationship between FDI inflows in India and individuals economic indicators and the economic indicators inter-se. For the impact of examine the impact of FDI on economy growth is presented by different economic indicators or a vice versa, it is imperative to see their standard of relationship with each other to the values of correlation coefficient. Table 4 presents the results of multiple correlations (Pearson's) and their significance at the 0.01 level.

TABLE 4 CORRELATION BETWEEN FDI AND ECONOMIC INDICATORS

Variables		FDI	Exports	Imports	FOREX	GDCF	NDCF
FDI	P Cor	1					
	Sig.	0					
Export	P Cor	.953**					
	Sig.	0					
Import	P Cor	.963**	.997**				
	Sig.	0	0				
FOREX	P Cor	.928**	.992**	.982**			
	Sig.	0	0	0			
GDCF	P Cor	.941**	.997**	.994**	.990**		
	Sig.	0	0	0	0		
NDCF	P Cor	.945**	.998**	.996**	.988**	.999**	1
	Sig.	0	0	0	0	0	0

** Correlation is significant at the 0.01 level (2-tailed). P Cor- Pearson's Correlation

Foreign Direct Investment is significantly correlated for the selected economic indicators. The value of r is high at .963 (between FDI and imports). Almost similar results can be seen with respect to the correlation of exports with other variables. In this case the value of significant correlation at .998 (between exports and NDCF). The inter correlation of imports with other variables are almost in consort with what has been obtained the case of exports. It is interesting to note that the r value for exports correlated with the other economic indicators are higher than the r values for imports correlated with the other economic indicators. In the case of Forex, it seems that it bears very high and significant correlations with the other selected variables. The significant correlation between Forex and GDCF is .977. There is a statistically significant correlation between GDCF and NDCF.

Impact of FDI on Economic Growth

FDI is considered as an independent variable and each of the economic indicators as a dependent variable. The regression results are presented and discussed separately for each set of relationship. The statistical tables for each set of variables are presented in three parts: part 1- Model Summary; part 2- ANOVA; and part 3- Coefficients. The model summary, among other things is the value of R^2 which indicates the extent to which the regression line fits the points. Value of R^2 can range from 0.000 to 1.000 and the higher value of R^2 will indicate that the variation in the value of particular economic indicator is explained by FDI in a larger measure. The model summary also gives adjusted R^2 , which we have ignored in the analysis because it is used in multiple regressions while we have performed a simple, two variable linear regression analyses. The results so obtained are given in table 5.

TABLE 5 REGRESSION RESULTS

variables	Constant	R2	B	F- Value
Exports	28142.16	0.909	0.953	160.09
Imports	33721.43	0.928	0.963	206.97
Foreign Exchange Reserves	106182	0.862	0.928	99.53
Gross Domestic Capital Formulation	306541	0.886	0.941	124.2

Net Domestic Capital Formulation	177848	0.893	0.945	133
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As per the model summary the value of coefficient of determination, represented by symbol R2 is 0.909, which imply that the change in FDI account for 90.3 percent of the systematic variations in exports along with other factors during the period 1991-2009.

$$\text{Exports} = 28142.155 + 1.396\text{FDI}$$

Thus study has proved the positive effect of FDI on the volume of exports for the study period.

The value of coefficient of determination, represented by symbol R2 is 0.928, which imply that the change in FDI account for 92.8 percent of the systematic variations in imports along with other factors during the period 1991-2009.

$$\text{Imports} = 33721.429 + 2.295\text{FDI}$$

These results are also supported by F statistics (ANOVA table), which confirm statistical significance of R2. This implies that FDI inflows have a very positive influence on the imports during the given period of 1991-2009.

The change in FDI results in similar change of 86.2 percent of the systematic variations in Forex along with other factors during the period 1991-2009.

$$\text{Forex} = 106182 + 10.738\text{FDI}$$

These results are also supported by F statistics (ANOVA table), which confirm statistically significant value. It means that if FDI is increased by one unit the FOREX will be increased by 10.738 units.

The present study regarding influence of FDI on Gross Domestic Capital Formation has confirmed the expectations of economic experts that FDI increases GDGF.

$$\text{Gross Domestic Capital Formation} = 306541 + 16.566\text{FDI}$$

As per the model summary the value of coefficient of determination, represented by symbol R^2 is 0.886, which imply that the change in FDI account for 88.6 percent of the systematic variations in Gross Domestic Capital Formation along with other factors during the period 1991-2009. These results are also supported by F statistics (ANOVA table), which statistically confirm the significance of R^2 .

FDI is supposed to have a positive impact on Net Domestic Capital Formation. The slope of regression line is 12.151 describes that if FDI increased by one unit the Net Domestic Capital Formation will be increased by 12.151 units.

$$\text{Net Domestic Capital Formation} = 177848 + 12.151\text{FDI}$$

The value of the constant 177848 shows that if FDI were zero the Net Domestic Capital Formation would be Rs. 177848 crores. The value of t statistics (3.989) and the significance level of given in the table of coefficients reveal that FDI and Net Domestic Capital Formation have a significant relationship with each other. The value of coefficient of determination is 0.893, which imply that the change in FDI account for 89.3 percent of the systematic variations in Net Domestic Capital Formation along with other factors during the period 1991-2009. These results are also supported by F statistics.

RESULTS AND DISCUSSION

The descriptive study shows that the change in FDI has accounted for 90.3 percent of the systematic variations in exports and 92.8 percent in imports. The analysis also lends credence to the rejection of the null hypotheses: “there is no significant relationship between FDI and exports” and “there is no significant relationship between FDI and imports”, implying that there is a significant relationship of FDI with exports and imports. Further, the change in FDI accounted for 86.2 percent of the systematic variations in Foreign Exchange Reserves and our null hypothesis: “there is no significant relationship between FDI and Forex” is rejected. It concludes from this result that there is a significant relationship between FDI and foreign exchange balance in the country.

The change in FDI accounted for 89.3 percent of the systematic variations in Net Domestic Capital Formation along with other factors. Also, our null hypothesis: “there is no significant relationship between FDI and Net Domestic Capital Formation”, is rejected, which implies that there is a significant relationship between FDI and Net Domestic Capital Formation.

CONCLUSION

FDI has contributed in the process of growth in the world economy in general and the developing world in particular. FDI plays an important role in the transmission of capital and technology across home and host countries. Benefits from FDI inflows are expected to be positive, although not automatic. From the study it is clear that FDI has positive impact on exports, imports and has greatly contributed to foreign exchange reserves. In developing countries like India there has been a felt need for building up the foreign exchange reserves to meet our trade deficits. FDI can prompt knowledge transfer and capital accumulation to support the manufacturing for exports. This study establishes the relationship between the FDI inflows and exports, imports foreign exchange reserves and capital formation in the Indian economy. A greater inflow of foreign capital has lead to growth in the exports of goods and services and also growth of the foreign exchange reserves over the period of study. These results have great policy implications giving a direction to the policymakers that further liberalization attempts can be made. A facilitating policy regime with minimum interventions may be ideal to maximize the benefits of FDI inflows.

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