

Impact of Foreign Direct Investment on Indian Economy: An Empirical Investigation

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Abstract

India has a major recipient of Foreign Direct Investment (FDI) inflows in the majority of sectors. According to UNCTAD (2009), India has emerged as the second most attractive destination for FDI after China and ahead of the USA, Russia and Brazil. It is the policy of the Govt. of India to attract and promote productive FDI inflows which significantly contribute to the socio- economic development of the economy. FDI up to 100% is allowed under the automatic route in the sectors except that requires prior approval of government. The present paper is an attempt to study the impact of the Indian Economy.

Keywords: FDI, GDP, GDFC, Foreign Exchange Reserve.

Introduction

Among the different forms of capital flows, academics and policymakers, talk about Foreign Direct Investment (FDI) the most. This is because of several benefits of FDI and its importance in the world economy vis-a-vis other forms of capital flows. During the past decade, FDI has been considered as the dominant form of capital flow in the global economy, even for developing countries like India.

FDI plays an important role in bridging the gap between the available resources or funds. It plays an important role in the long- term development of a country not 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 in the development of nation. It is very much vital in the case of underdeveloped and developing countries.

According to UNCTAD (2009), India has emerged as the second most attractive destination for FDI after china and ahead of the US, Russia and Brazil. India has been a most important recipient of FDI in the greater part of its different sectors. India after liberalizing and globalizing the economy to the outside world in 1991, there is a massive increase in FDI inflows.

Objectives of the Study

The present study covers the following objectives:

1. To study the growth of FDI inflows of India.
2. To examine the impact of FDI on Indian economy.

Hypothesis

1. Ho: There is no significant impact of FDI on the Indian Economy in the terms GDP.
Ha: There is significant impact of FDI on the Indian Economy in the terms GDP.
2. Ho: There is no significant impact of FDI on the Indian Economy in the terms Gross Domestic Capital Formation (GDCF).
Ha: There is significant impact of FDI on the Indian Economy in the terms Gross Domestic Capital Formation (GDCF).
3. Ho: There is no significant impact of FDI on the Indian Economy in the terms of total trade.
Ha: There is significant impact of FDI on the Indian Economy in the terms of total trade.
4. Ho: There is no significant impact of FDI on the Indian Economy in the terms of Foreign Exchange Reserve.

- Ha: There is significant impact of FDI on the Indian Economy in the terms of Foreign Exchange Reserve.
5. Ho: There is no significant impact of FDI on the Indian Economy in the terms of debt.
- Ha: There is significant impact of FDI on the Indian Economy in the terms of debt.

Research Methodology

Nature of the study: The present study is empirical by nature.

Source of data: The present study is based in secondary data. The required data have been collected from various sources i. e. Handbook of Statistics on the Indian economy, RBI various issues, Economic Survey, Government of India, various issues.

Period of the study: The study takes into account the time period of 22 years ranging from 1990 to 2012.

Statistical tools applied: To have an empirical idea about the impact of FDI on the Indian Economy in the terms of different economic variables like GDP, Gross Domestic Capital Formation (GDCF), total trade, Foreign Exchange Reserve and debt, i have fitted Simple Linear Regression Modal by connected FDI with above discussed economic variable separately. To test the hypothesis, statistical values of student's t- distribution, R^2 (coefficient of determination) and Karl Pearson's Correlation are also used in present study.

Growth of FDI inflows in India

Table: 1 Growth of FDI inflows in India

Financial Years	FDI inflows in India (Rs. in Crore)
1990-91	361
1991-92	409
1992-93	1094
1993-94	2018
1994-95	4312
1995-96	6916
1996-97	9654
1997-98	13548
1998-99	12343
1999-2000	10311
2000-01	10368
2001-02	18486
2002-03	13711
2003-04	11789
2004-05	14653
2005-06	24613
2006-07	70630
2007-2008	98664
2008-2009	122919
2009-2010	123378
2010-2011	88502
2011-2012	173947

Source: RBI Bulletin, Various Issues

Table-1 shows the growth of FDI inflow in India from the year 1990-91 to 2011-2012. The table states that India has showed a large amount of FDI inflow. FDI inflow has increased from Rs. 361 crore in 1990-91 to Rs. 173947 crore in 2011-2012.

Table: 2 Economic Indicators in India during (1990-91 to 2011-12)

(Rs. In Crore)

Financial Years	GDP at Factor Cost (at constant price)	Gross Domestic Capital Formation (GDCF)	Total trade	Foreign Exchange Reserve	Debt
1990-91	1347889	146018	75751	11416	241235
1991-92	13677171	151563	91893	23850	252910
1992-93	1440503	187768	117063	30744	280746
1993-94	1522343	189737	142852	60420	290418
1994-95	1619694	242514	172645	79780	311685
1995-96	1737740	319603	229031	74384	320728
1996-97	1876319	313055	257737	94932	335827
1997-98	1957031	385445	284277	115905	369682
1998-99	2087827	424046	318085	138005	411297
1999-2000	2246276	542682	374798	165913	428550
2000-01	2342774	525078	434444	197204	472625
2001-02	2472052	602456	454218	264036	482328
2002-03	2570690	633277	552343	361470	498804
2003-04	2777813	742717	652475	490129	495459
2004-05	2971464	1052232	876405	619116	586305
2005-06	3253073	1266073	1116827	676387	620522
2006-07	3564364	1540583	1412285	868222	751402
2007-2008	3896636	1896799	1668176	1237965	897290
2008-2009	4158676	2000103	2215191	1283865	1142125
2009-2010	4507637	2332380	2209270	1259665	1178638
2010-2011	4885954	2749189	2826389	1361013	1366292
2011-2012	5202514	3181423	3805254	1506139	1767702

Source: Handbook of Statistics on Indian Economy & Economic Survey of India.

Table-2 depicts various economic indicators since 1990-91 to 2011-12 in India. GDP India's GDFC, Total trade, foreign exchange reserve and debt has grown significantly since 1990-91 to 2011-12 as depicted in table- 2.

Impact of FDI on Indian Economy: Analysis and Interpretations

Hypothesis-1

In order to test the Hypothesis-1, Simple Linear Regression Model between FDI and GDP has been fitted where FDI has been taken as independent variable and GDP as dependent variable. Table-3 shows that independent variable is significant at any level of significance with T value of 10.187 and on the other hand constant i.e. dependent variable is significant at any level of significance with T value of 14.494. The 'B' value is 21.496 which indicates that the elasticity between FDI and GDP is 21.496%. It resulted that 1% increase in FDI leads to 21.496% increase in GDP. The R² coefficient of determination is highly significant and explains 83.8% of variations in the determination of change in GDP. The Karl Pearson's Correlation Coefficient between FDI and GDP. Therefore, H₀ is rejected and H_a is accepted as there is significant impact of FDI on GDP on India.

Table-3 Impact of FDI on GDP

Modal	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (constant)	1.905	131431.532		14.494	.000
FDI	21.496	2.110	.916	10.187	.000

Dependent variable: GDP

$R^2 = .838$ Karl Pearson's Correlation Coefficient (r) = .916

Hypothesis-2

In order to test the Hypothesis-2, Simple Linear Regression Modal between FDI and Gross Domestic Capital Formation (GDCF) has been fitted where FDI has been taken as independent variable and GDCF as a dependent variable. Table-4 shows that independent variable is significant at any level of significance with T value of 13.073 and on the other hand constant i.e. dependent variable is significant at 0.01% level of significance with T value of 4.030. The 'B' value is 17.071 which indicate that the elasticity between FDI and GDCF is 17.071%. increase in GDCF. The R^2 (coefficient of determination) is highly significant and explain 89.5% of variations in the determination of change in GDCF. The Karl Pearson's Correlation Coefficient between FDI and GDCF is 0.946 and it is significant. Therefore, H_0 is rejected and H_a is accepted as there is significant impact of FDI on GDCF on India.

Table-4 Impact of FDI on Gross Domestic Capital Formation (GDCF)

Modal	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (constant)	327761.943	81333.324		4.030	.001
FDI	17.071	1.306	.946	13.073	.000

Dependent variable: GDCF

$R^2 = .895$ Karl Pearson's Correlation Coefficient (r) = .946

Hypothesis-3

In order to test the Hypothesis-3, Simple Linear Regression Modal between FDI and total trade has been fitted where FDI has been taken as independent variable and total trade as dependent variable. Table-5 shows that independent variable is significant at any level of significance with T value of 14.380 and on the other hand constant i.e. dependent variable is significant at 33% level of significance with T value of 2.295. The 'B' value is 19.297 which indicate that the elasticity between FDI and total trade is 19.297%. it resulted that 1% increase in FDI leads to 19.297% increase in total trade. The R^2 (coefficient of determination) is highly significant and explain 91.2% of variations in the determination of change in total trade. The Karl Pearson's Correlation Coefficient between FDI and total trade is 0.955 and it is highly significant. Therefore, H_0 is rejected and H_a is accepted as there is significant impact of FDI on total trade in India.

Table-5 Impact of FDI on Total trade

Modal	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (constant)	191829.467	83583.954		2.295	.033
FDI	19.297	1.342	.955	14.380	.000

Dependent variable: total trade

$R^2 = .912$ Karl Pearson's Correlation Coefficient (r) = .955

Hypothesis-4

In order to test the Hypothesis-3, Simple Linear Regression Modal between FDI and Foreign Exchange Reserve has been fitted where FDI has been taken as independent variable and Foreign Exchange Reserve as dependent variable. Table-6 shows that independent variable is significant at any level of significance with T value of 12.066 and on the other hand constant i.e. dependent variable is significant at 14% level of significance with T value of 2.699. The 'B' value is 9.587 which indicate that the elasticity between FDI and Foreign Exchange Reserve is 9.587%. it resulted

that 1% increase in FDI leads to 9.587% increase in Foreign Exchange Reserve. The R^2 (coefficient of determination) is highly significant and explain 87.9% of variations in the determination of change in Foreign Exchange Reserve. The Karl Pearson's Correlation Coefficient between FDI and Foreign Exchange Reserve is 0.938 and it is highly significant. Therefore, H_0 is rejected and H_a is accepted as there is significant impact of FDI on Foreign Exchange Reserve in India.

Table-6 Impact of FDI on Foreign Exchange Reserve

Modal	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (constant)	1333551.378	49487.008		2.699	.014
FDI	9.587	.795	.938	12.066	.000

Dependent variable: Foreign Exchange Reserve
 $R^2=.879$ Karl Pearson's Correlation Coefficient (r)= .938

Hypothesis-5

In order to test the Hypothesis-1, Simple Linear Regression Modal between FDI and debt has been fitted where FDI has been taken as independent variable and GDP as dependent variable. Table-7 shows that independent variable is significant at any level of significance with T value of 14.791 and on the other hand constant i.e. dependent variable is significant at any level of significance with T value of 9.805. The 'B' value is 7.756 which indicate that the elasticity between FDI and debt is 9.587%. it resulted that 1% increase in FDI leads to 7.756% increase in debt. The R^2 (coefficient of determination) is highly significant and explain 91.6% of variations in the determination of change in debt. The Karl Pearson's Correlation Coefficient between FDI and debt is 0.957 and it is highly significant. Therefore, H_0 is rejected and H_a is accepted as there is significant impact of FDI on debt on India.

Table-7 Impact of FDI on Debt

Modal	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (constant)	320226	32659.065		9.805	.000
FDI	7.756	.524	.957	14.791	.000

Dependent variable: debt
 $R^2=.916$ Karl Pearson's Correlation Coefficient (r)= .957

From the above analysis, we can conclude that there is a significant impact of FDI on Indian economy in terms of GDP, GDPC, total trade, Foreign exchange reserve and debt for the study period 1990-91 to 2011-12.

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