

Impact of Foreign Direct Investment on The Indian Economy

M. Tamizharasan

Ph.D. Research Scholar, Department of Econometrics, School of Economics,
Madurai Kamaraj University, Madurai, Tamil Nadu.

Paper Code : JCT-A18-MT-6

DOI : <https://doi.org/10.26703/JCT.v13i1-6>

Web Address : <http://jctindia.org/jct/april2018-v13i1-6.pdf>

Archive : <https://ideas.repec.org/a/jct/journal/v13y2018i1p44-49.html>

<http://EconPapers.repec.org/RePEc:jct:journal:v:13:y:2018:i:1:p:44-49>



Citation: Tamizharasan, M. Impact of Foreign Direct Investment on Trade in the Indian Economy. Journal of Commerce and Trade April 2018; 13 : 1; Pp. 44.49. <https://doi.org/10.26703/JCT.v13i1-6>.

Abstract

Foreign Direct Investment is an important instrument of economic development for developing countries. It provides a great drive for growth, after liberalization policy has been changed significant role in Indian economy. India is interested in increasing the FDI Inflows to earn more foreign exchange. This study investigate existence link between Foreign Direct Investment, Exports, Imports and Gross Domestic Product in the Indian economy. The objective of the study is to analyze growth and share of FDI, Gross Domestic Product, Exports and Imports and the relationship between FDI and Gross Domestic Product, Exports and Imports during the period from 1991 to 2015. The data are collected from Handbook of Statistics on Indian Economy 2016. This study analyse the index numbers, annual growth rate, averages, percentages, compound growth rate, simple linear regression and semi-log linear regression have been used.

Keywords : FDI, GDP, Exports, Imports and Indian Economy

Classification-JEL : F14, F23, F43, F47

1. INTRODUCTION

FDI is an important instrument for promoting exports and economic growth on developing countries. It should encourage upgrading technical, managerial skills, rising efficiency and productivity and competitive strength in the international market. India is attracting highest FDI. It has a major role to play for the modernization in the Indian economy. FDI Inflows is positive and significant relationship between exports, imports and economic growth in the Indian economy. India is interested in increasing the FDI Inflows to earn more foreign exchange. Mauritius has the highest FDI Inflows and it is occupying the top position in the Indian economy. FDI will promote technology transfer, human capabilities,

managerial skills, poverty reduction and infrastructure development in the Indian economy.

This study investigate existence link between Foreign Direct Investment, Exports, Imports and Gross Domestic Product in the Indian economy. The objective of the study is to analyze the growth and share of FDI, GDP, Exports and Imports and the relationship between FDI and GDP, Exports and Imports in the Indian economy. The study variables are: FDI, Gross Domestic Product, Exports and Imports during the period from 1990-91 to 2014-15 and this period divided into two sub periods namely, 1990-91 to 1999-2000 and 2000-01 to 2014-15. The data are collected from Handbook of Statistics on the Indian Economy

2016. This study analyse the data, index numbers, annual growth rate, averages, percentages, simple linear regression and semi-log linear regression model have been used.

2. REVIEW OF THE LITERATURE

In the field impact of FDI on trade in the Indian economy, only limited studies are available. Some works available in this category are: Zafar Ahmad Sultan (2013) finds that there is one co-integration relation between the variables implying that FDI and export has long run relationship. The VECM result shows that there is unidirectional causal relation from export to FDI direction and not from FDI to export direction. This implies that inflow of FDI in India is mostly not for efficiency seeking (vertical FDI). This may be coming to take advantage of growing market size determined by large population with high population and economic growth (horizontal FDI). Tarek Tawfik Yousef Alkhateeb, Zafar Ahmad Sultan and Mahmoud Mohamad Fawaz (2017) Empirical results show that there is long run co-integrating relationship between FDI, trade liberalization, GDP, export and domestic inflation. Further the result also reveals that growing domestic market and trade liberalization has positively affected the growth of FDI inflow while domestic inflation has retarded the inflow of FDI in India. Vishal Shah and Alka Parikh (2012), explained the overall effects of inflow of total FDI on exports have also been positive. FDI thus should be attracted in India because it leads to more growth of both consumer and export oriented sectors. Renu Sharma and Mandeep Kaur, (2013) explained that there is strong evidence of unidirectional causality running from FDI to imports and FDI to exports that is FDI influences imports and exports but not caused by imports and exports. Specific study on the impact of FDI on trade in India is not available much in the literature.

3. METHODOLOGY

This study is based on secondary data required are: FDI, Gross Domestic Product, Exports and Imports in Indian economy and

variables are measured in billions of Indian Rupee. The study period from 1990-91 to 2014-15 and this period divided into two sub periods namely, 1990-91 to 1999-2000 and 2000-01 to 2014-15. The data are collected from Handbook of Statistics on the Indian Economy 2016. This study analyse the data, index numbers, annual growth rate, averages, percentages, simple linear regression and semi-log linear regression model have been used.

4. EMPIRICAL RESULTS

a) Growth of FDI, GDP, Exports and Imports : Table 1 explain that growth of FDI, Gross Domestic Product, Exports and Imports are measured in billions of Indian Rupee during the period 1990-01 to 2014-15 and the periods divided into two sub periods 1990-91 to 1999-2000 and 200-01 to 2014-15.

In the First decade, FDI was 1.74 billion of rupees in 1990-01 and it has reached 93.38 billion of rupees in 1990-2000. The highest value of FDI was 132.20 billion of rupees in 1997-98. The FDI has decrease values and negative annual growth rate for the years 1999-99 and 2000. The highest annual growth rate of 205.38 per cent in 1992-93 and average annual growth rate was 585.19 per cent in during this period. Gross Domestic Product was 5862.12 billion of rupees in 1991 and it has reached 20121.98 billion of rupees in 2000. The highest value of GDP was 20121.98 billion of rupees in 2000. The highest annual growth rate of 17.32 per cent in 1996 and average annual growth rate was 27.03 per cent in during this period. Exports are 331.53 billion of rupees in 1991 and it has reached 1627.53 billion of rupees in 2000. The highest value of exports was 1627.53 billion of rupees in 2000. The highest annual growth rate of 35.50 per cent in 1992 and the average annual growth rate was 43.43 per cent in during this period. Imports are 500.86 billion of rupees in 1991 and it has reached 2401.12 billion of rupees in 2000. The highest value of Imports was 2401.12 billion of rupees in 2000. The highest annual growth rate of 40.03 per cent has been registered in 1993 and the average annual growth rate was

TABLE 1
Annual Growth of FDI, GDP, Exports and Imports in India

Year	FDI	AGR	GDP	AGR	Exports	AGR	Imports	AGR
1991	1.74	-	5862.12	-	331.53	-	500.86	-
1992	3.16	81.61	6738.75	14.95	449.23	35.50	514.17	2.66
1993	9.65	205.38	7745.45	14.94	547.61	21.90	720.00	40.03
1994	18.38	90.47	8913.55	15.08	711.47	29.92	838.70	16.49
1995	41.26	124.48	10455.90	17.30	843.29	18.53	1127.48	34.43
1996	71.72	73.82	12267.25	17.32	1084.82	28.64	1465.43	129.97
1997	100.15	39.64	14192.77	15.70	1211.93	11.72	1737.54	18.57
1998	132.2	32.00	15723.94	10.79	1327.03	9.50	1905.08	9.64
1999	103.58	-21.65	18033.78	14.69	1444.36	8.84	1999.14	4.94
2000	93.38	-9.85	20121.98	11.58	1627.53	12.68	2401.12	20.11
Average	57.52	585.19	12005.55	27.03	957.88	43.43	1320.95	42.16
2001	184.04	97.09	21686.52	7.78	2078.52	12.71	2645.89	10.19
2002	292.69	59.04	23483.30	8.29	2133.45	2.64	2683.00	1.40
2003	246.81	-15.68	252306.63	7.76	260079	21.91	3117.76	16.20
2004	198.30	-19.65	28379.00	12.14	3039.15	16.85	3673.01	17.81
2005	272.34	37.34	32422.09	14.25	3817.85	25.62	5335.50	45.26
2006	397.30	45.88	36933.69	13.92	4657.48	21.99	6954.12	30.34
2007	1030.37	159.34	42947.06	16.28	5828.71	25.15	8628.33	24.08
2008	1398.84	35.76	49870.90	16.12	6680.08	14.61	10356.73	20.03
2009	1914.19	36.84	46300.63	12.89	8579.60	28.44	14054.09	35.70
2010	1796.42	-6.15	64778.27	15.06	8632.82	0.62	14232.48	1.27
2011	1642.55	-8.57	77841.15	20.17	11656.65	35.03	17461.35	22.69
2012	2200.00	33.97	90097.22	15.74	14825.17	27.148	23946.47	37.14
2013	1868.69	-15.06	101132.81	12.25	16676.90	12.49	27321.46	14.09
2014	2185.95	16.98	113550.73	12.28	19310.74	15.79	28159.18	3.07
2015	2764.00	26.44	124451.28	9.60	19350.64	0.21	28164.75	0.02
Average	1226.17	100.13	59278.75	33.85	8657.90	59.36	13115.61	68.89

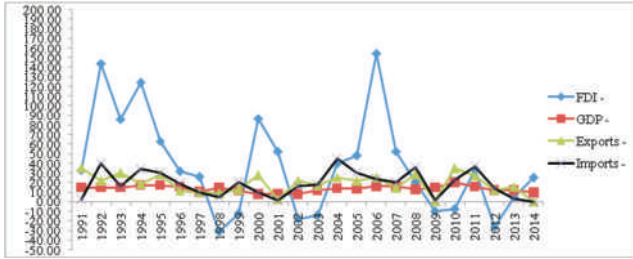
Sources; Handbook of Statistics on Indian Economy 2016.

42.16 per cent in during this period.

In the second decade, FDI was 184.04 billion of rupees in 2000-01 and it has reached 2764 billion of rupees in 2014-15. The highest value of FDI was 2764 billion of rupees in 2014-15. The FDI has decrease values and negative

annual growth rate for the years 2002-03, 2003-04, 2009-10, 2010-11 and 2012-13. The highest annual growth rate of 159.34 per cent in 2006-07 and average annual growth rate was 100.13 per cent in during this period. Gross Domestic Product was 21686.52 billion of rupees in 2000-

Fig 1
Annual Growth of FDI, Exports, Imports and GDP in India



01 and it has reached 124451.28 billion of rupees in 2014-15. The highest value of GDP was 124451.28 billion of rupees in 2014-15. The highest annual growth rate of 20.17 per cent in 2010-11 and average annual growth rate was 33.85 per cent in during this period. Exports are 2078.52 billion of rupees in 2000-01 and it has reached 19350.64 billion of rupees in 2014-15. The highest value of exports was 19350.64 billion of rupees in 2014-15. The highest annual growth rate of 35.03 per cent in 2010-11 and the average annual growth rate was 59.36 per cent in during this period. Imports are 2645.89 billion of rupees in 2000-01 and it has reached 28164.75 billion of rupees in 2014-15. The highest value of Imports was 28164.75 billion of rupees in 2014-15. The highest annual growth rate of 45.26 per cent has been registered in 2004-05 and the average annual growth rate was 68.89 per cent in during this period.

b) Share of Foreign Direct Investment, Exports and Imports in Economic Growth : The share of FDI, Exports, Imports and GDP has been worked out and the values are given in Table 2.

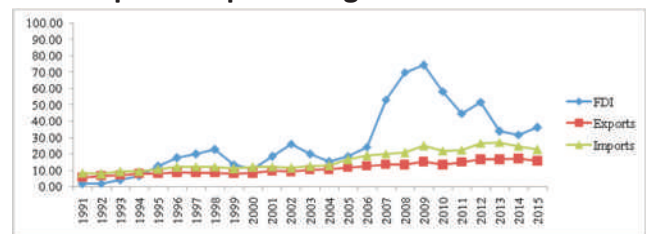
In the year 1990-91 to 2014-15, the share of India's FDI was 0.03 per cent in 1990-91 and it increased to 0.46 percent in 1999-2000. The highest share is 0.84 percent in 1997-98 and the lowest share of 0.03 per cent is recorded in 1990-91. The share of Exports was 5.66 per cent 1990-91 and it increased to 8.09 percent in 1999-2000. The highest share is 8.84 percent in 1995-96 and the lowest share of 5.66 per cent is recorded in 1990-91. The share of Imports was 8.54 per cent in 1990-91 and it increased to 11.93 percent in 1999-2000. The highest share is

TABLE 2
Growth of FDI, Exports and Imports as percentage to GDP in India

Year	FDI	Exports	Imports
1991	0.03	5.66	8.54
1992	0.05	6.67	7.63
1993	0.12	7.07	9.30
1994	0.21	7.98	9.41
1995	0.39	8.07	10.78
1996	0.58	8.84	11.95
1997	0.71	8.54	12.24
1998	0.84	8.44	12.12
1999	0.57	8.01	11.09
2000	0.46	8.09	11.93
2001	0.85	9.58	12.20
2002	1.25	9.08	11.43
2003	0.98	10.28	12.32
2004	0.70	10.71	12.94
2005	0.84	11.78	16.46
2006	1.05	12.61	18.83
2007	2.40	13.57	20.09
2008	2.80	13.39	20.77
2009	3.40	15.24	24.96
2010	2.77	13.33	21.97
2011	2.11	14.97	22.43
2012	2.44	16.45	26.58
2013	1.85	16.49	27.02
2014	1.93	17.01	24.80
2015	2.22	15.55	22.63
Average	27.51	11.10	16.02

Sources : Author's Own source.

Fig 2
Results of Growth of FDI, Exports and Imports as percentage to GDP in India



12.24 percent in 1996-97 and the lowest share of 7.63 per cent is recorded in 1991-92. The average share for this period is 0.40 per cent in FDI, 7.74 per cent in Exports and 10.50 per cent in Imports and it forms approximately 0.4 per cent FDI, 7.7 per cent in Exports and 10 per cent in Imports to Gross Domestic Product in the Indian economy. This means that FDI, Exports and Imports are increasing year by year and

TABLE 3
Results of Trend Analysis of FDI in India

Year	Variables	Model	a	b	SE to b	t	R2	Adj.R2	CGR
1990-91 to 1999-2000	FDI	Simple Linear	-29164.096	14.644	2.292	6.390	0.836	0.816	-
		Semi Long Linear	-952.060	0.479	0.069	6.981	0.859	0.841	49.03
2001-01 to 2014-15		Simple Linear	-381212.996	190.458	17.388	10.954	0.902	0.895	-
		Semi Long Linear	-422.167	0.214	0.023	9.204	0.867	0.857	21.90

Sources : Author's Own.

TABLE 4
Relationship between FDI, Exports and Imports in the Indian Economy

Year	Variables	Model	a	b	SE to b	t	R2	Adj.R2
1990-91 to 1999-2000	FDI → GDP	Simple Linear	6778.836	90.865	15.715	5.782	0.807	0.783
	FDI → Exports	Simple Linear	467.541	8.524	1.234	6.907	0.856	0.838
	FDI → Imports	Simple Linear	576.580	12.941	1.841	7.028	0.861	0.843
2001-01 to 2014-15	FDI → GDP	Simple Linear	15612.614	35.454	3.910	9.067	0.863	0.853
	FDI → Exports	Simple Linear	836.631	6.379	0.769	8.292	0.841	0.829
	FDI → Imports	Simple Linear	761.047	10.076	1.121	8.989	0.861	0.851

Sources : Author's Own.

Imports is highest contribute to GDP in the Indian economy. India's Exports and Imports is highest contribute to the GDP in the Indian economy. The results find that Exports and Imports has impact on economic growth in the Indian economy

In the year 2001 to 2015, the share of India's FDI was 0.85 per cent in 2000-01 and it increased to 2.22 per cent in 2014-15. The highest share is 3.40 per cent in 2008-09 and the lowest share of 0.70 per cent is recorded in 2003-04. The share of Exports was 9.58 per cent 2000-01 and it increased to 15.55 per cent in 2014-15. The highest share is 17.01 per cent in 2013-14 and the lowest share of 9.08 per cent is recorded in 2001-02. The share of Imports was 12.20 per cent in 2000-01 and it increased to 22.63 per cent in 2014-15. The highest share is 27.02 per cent in 2012-13 and the lowest share of 11.43 per cent is recorded in 2001-02. The average share for this period is 1.84 per cent in FDI, 13.34 per cent in Exports and 19.69 per cent in Imports and it forms approximately 1.8 per cent FDI, 13 per cent in Exports and 19 per cent in Imports to Gross Domestic Product in the Indian economy. This means that FDI, Exports and Imports are increasing year by year and Imports is highest contribute to GDP in the Indian economy. The results find that Exports

and Imports has impact on economic growth in the Indian economy.

c) Trend Analysis of Foreign Direct Investment in the Indian Economy : The results of trend analysis for the FDI in Indian economy are given in table 3. The FDI has increased annually by Rs. 14.644 billion of Rupees in 1990-91 to 1999-2000. This value is statistically significant at one per cent level. The value of adjusted R 2 is 0.82 and it implies that the FDI have registered a linear trend in this period. The semi-log linear regression model has statistically significant at one per cent level and it has linear trend in this period. The FDI has increased at the compound growth rate of 49.03 per cent per year.

The FDI has increased annually by Rs. 190.45 billion of Rupees in 2000-01 to 2014-15. This value is statistically significant at one per cent level. The value of adjusted R 2 is 0.89 and it implies that the FDI have registered a linear trend in this period. The semi-log linear regression model has statistically significant at one per cent level and it has linear trend in this period. The FDI has increased at the compound growth rate of 21.90 per cent per year. The results explain that the FDI have linear trend has statistically significant and the compound growth rate is decrease in the study period.

d) Relationship between FDI, GDP, Exports and Imports in the Indian Economy : Table 4 shows that relationship between FDI, GDP, Exports and Imports in economic growth in the Indian economy. The relationship between FDI, GDP, Exports and Imports has been studied through simple linear regression model by taking GDP, Exports and Imports as dependent variable and FDI as independent variable for the period 1990-91 to 1999-2000 and 2000-01 to 2014-15. The relationship between FDI and GDP decrease by Rs.90.865 to Rs.35.454 and this value is statistically significant at one per cent level. The value of adjusted R 2 is 0.78 and it implies that 78 per cent variations in GDP are explained by the variations in FDI in this period. The relationship between FDI and Exports decrease by Rs.8.524 to Rs. 6.379 and this value is statistically significant at one per cent level. The value of adjusted R 2 is 0.83 and it implies that 83 per cent variations in Exports are explained by the variations in FDI in this period. The relationship between FDI and Imports are decrease by Rs. 12.941 to Rs. 10.076 and this value is statistically significant at one per cent level. The value of adjusted R 2 is 0.84 and it implies that 84 per cent variations in Imports are explained by the variations in FDI in this period.

5. CONCLUSION

This study investigated the impact of Foreign Direct Investment on GDP, Exports and

Imports in terms of billion of Rupees during the period from 1990-91 to 2014-15. This study shows that the overall growth of the FDI is increasing. The share of FDI, Exports and Imports as percentages to GDP are increasing year by year and Imports is highly contribute to GDP in the Indian economy. The results find that Exports and Imports have impact on economic growth in the Indian economy. FDI has very low impact on Gross Domestic Product in the Indian economy. The FDI has increased annually by Rs. 14.644 to Rs. 190.450 billions of Rupees in 1990-91 to 2014-15. The results explain that the FDI have linear trend but it is statistically significant at one per cent level.

The FDI has increased at the compound growth rate of 17.35 per cent per year. The relationship between FDI and GDP, FDI and Exports, FDI and Imports has decreased and this value is statistically significant at one per cent level. The results explain that positive linkage between FDI, GDP, Exports and Imports in the Indian economy. The government should encourage technology transfer on imports, to promote Greenfield manufacturing producton exports in the Indian economy. Moreover, the FDI also helps to trade growth and it will improve the socio economic development, national income and economic growth in the Indian economy.

References

1. Zafar Ahmad Sultan, (2013), "A Causal Relationship between FDI Inflows and Export: The Case of India," *Journal of Economics and Sustainable Development*, Vol.4, No.2, pp.1-9.
2. Tarek Tawfik Yousef Alkhateeb, Zafar Ahmad Sultan and Mahmoud Mohamad Fawaz, (2017), "Trade Liberalisation and Inflow of Foreign Direct Investment (FDI) in India," *International Journal of Applied Business and Economic Research*, Volume. 15, Number. 21, pp.85-93.
3. Kishor Sharma, (2000), "Export Growth in India: Has FDI Played A Role?" *Center Discussion Paper No. 816*, pp.1-21.
4. Renu Sharma and Mandeep Kaur, (2013), "Causal Links between Foreign Direct Investments and Trade: A Comparative Study of India and China," *Eurasian Journal of Business and Economics*, Vol. 6 (11), pp.75-91.
5. Vishal Shah and Alka Parikh, (2012), "Trends, Changing Composition and Impact of Foreign Direct Investment in India," *International Journal of Economic Research*, pp.134-144.
6. Chalapati Rao, K.S. Murthy, M.R. and Ranganathan, K.V.K. (1999), "Foreign Direct Investments in the Post-Liberalisation Period: An Overview," *Journal of Indian School of Political Economy*, Vol. XL, No. 4, pp.423-452.