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Relationship Between FDI Inflows and Export: The Case of India

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Abstract
Capital flows have become a prerequisite for accelerating the pace of growth and development of a developing country, and practically all developing countries have been working hard to attract additional capital flows. Furthermore, these countries have correctly recognized the necessity of entrusting a significant role to the private sector. Capital flows to developing countries began to pick up steam in the early 1980s, and by the end of the decade, there had been a massive rise in the number of capital flows to these countries. Though the Indian government has traditionally welcomed foreign investment with certain constraints, the government's foreign investment policy has experienced significant changes since independence. The role of trade policy on economic growth has been the focus of considerable academic effort. Openness, namely, the sum of exports and imports to Gross Domestic Product (GDP), has been considered one of the main determinants of economic growth. Export expansion can increase productivity, offering greater economies of scale. Against this background, this study investigates the relationship between Foreign Direct Investment (FDI) and trade for India over the period 2000-2022. The result of regression analysis showed that there is a relationship between the examined variables.

Keywords: Foreign Direct Investment, Gross Domestic Investment, Capital Inflow, Service Sector, Mauritius

Introduction

Foreign Direct Investment (FDI) is considered a major source of non-debt financial resources for economic development. FDI flows into India have grown consistently since liberalization and are an important component of foreign capital since FDI infuses long-term sustainable capital in the economy and contributes towards technology transfer, development of strategic sectors, greater innovation, competition and employment creation amongst other benefits. Therefore, it is the intent and objective of the Government of India to attract and promote FDI to supplement domestic capital, technology and skills for accelerated economic growth and development (GOI, 2020).

According to Department for Promotion of Industry and Internal Trade (DPIIT) data, in 2014-15, the FDI inflow in India stood at a mere $45.15 billion, which increased to $60.22 billion in 2016-17 and further to the highest-ever FDI inflow of $83.57 billion during 2021-22. Total FDI inflows in India in the last 22 years (April 2000 - March 2022) are 847 billion while the total FDI inflows received in the last 8 years (April 2014 - March 2022) was $523 billion which amounts to nearly 40 per cent of total FDI inflow in the last 22 years.

Review of Literature

Various governments have reacted positively and comprehensively to globalization. Significant adjustments are made in the investment policies to make them more adaptive, acceptable and sustainable. This has prompted several researchers around the world to examine investment policies particularly FDI in both developed and developing countries. Various researchers have been able to establish a positive relationship between FDI and economic growth and development for developing economies, including Carkovic & Levine (2002), Alfaro (2003), Johnson (2006), Lyroudi et al. (2004), Sapienza (2009), Melynyl et al. (2014).

The role of trade policy on economic growth has been the focus of considerable academic effort. Openness, namely, the sum of exports and imports to Gross Domestic Product (GDP), has been considered one of the main determinants of economic growth. Export expansion can increase productivity, offering greater economies of scale. Exports are likely to alleviate foreign exchange constraints and can thereby provide greater access to international markets (Melina Dritsaki, et al, 2004).

Khan and Leng (1997) examine the interactions among inward - FDI, exports and economic growth for Singapore, Taiwan and South Korea, at the aggregate level during the period from 1965 to 1995 by using the Granger causality test. They claim that there is no evidence to support the causal relationship between FDI and Exports in Taiwan and South Korea. Moreover, a one-way causal relationship which flows from exports to inward FDI is found in Singapore. Liu, et al, (2002) investigated the causal relationship between inward FDI, trade and economic growth in China at the aggregate level from 1981 to 1997 quarterly. A two-way causal relationship between inward FDI and exports is found. Alici and Ucal (2003) investigate the causal links among inward FDI, exports and economic growth in the Turkish economy from 1987 to 2002 on quarterly bases. The linkage of FDI - led export growth is not found in Turkey. Melina Dritsaki, et al (2004), investigates the relationship between Trade, Foreign Direct Investment (FDI) and economic growth in Greece over the period 1960-2002. The co-integration analysis suggested that there is a long-run equilibrium relationship among the above variables. The results of the Granger causality test showed that there is a causal relationship between economic growth, trade and FDI. Pacheco - Lopez (2005) demonstrates the causal relationship between inward FDI and Export performance in Mexico by using the Granger causality test. The result indicates that there is bi-directional causality between inward FDI and export performance. Abdel Rahman (2007) using the causality test found that FDI does not Granger cause export growth in the Kingdom of Saudi Arabia but export growth Granger cause FDI growth. Njong (2008) examined the association between FDI and export in the case of Cameroon. Using the data for the period 1980-2003, he found a positive impact of FDI on export through an increase in supply capacity and spillover effects.

According to Shikha Singh (2019), the Indian economy is one of the world's top emerging markets. Five years ago it was considered part of the fragile five, but no longer. Since 2014, it has emerged as the top foreign destination in the world with a significant rise in FDI. With the introduction of a New Economic Policy in 1991, India began the process of soliciting foreign investment, and during the 2000s, India reached unprecedented new heights in terms of FDI. Programs such as Make in India are aimed at transforming the economy and transforming India into a global manufacturing hub. Sai Rani and Sourav Kumar Ghosh (2020) indicated varying trends of FDI inflows in India in recent years which is in line with the world economy but is generally on the rising side. The study also reveals that Mauritius has been the top investing nation in India and among all the sectors, the service sector attracts the maximum FDI from various nations throughout the study.

Significance of the Study

Many researchers have indicated that in an open economy, technology and trade, especially through exports and imports promote economic growth

However, growth also has effects on trade. The observations on the FDI - growth nexus and Trade - growth nexus lead us to examine the third side of triangular relations; the FDI - Trade nexus. Export expansion can increase productivity, offering greater economies of scale. Exports are likely to alleviate foreign exchange constraints and can thereby provide greater access to international markets. Many early studies of the links between exports and growth confirm a statistical relationship between export growth and output growth. Similarly, the empirical evidence on the causal relationships between FDI investment and trade is equally contradictory, with results ranging from unidirectional causality, bidirectional causality, or even no causality between FDI and trade.

The Objective of the Study

The main objectives of this study are:

1. To study the trends of FDI inflows in India.
2. To identify the country-wise, sector-wise and state-wise flow of FDI into India.
3. To ascertain the relationship between FDI inflow and trade in India.

Research Methodology

This research is based on secondary sources. It has been collected from the sources such as the Department for Promotion of Industry and Internal Trade, Annual Reports of the Reserve Bank of India, UNCTAD, numerous journals, newspapers, and websites, among others.

Period of the Study

The main scope of this study is to evaluate the trends of FDI inflows into India and to study the country-wise flow of FDI and its sector-wise distribution in India. Therefore, the data have been collected for the period 2000-01 to 2020-22.

Limitations of the Study

The major limitations of this study are: (i) it is entirely based on the Indian economy only. (ii) this study is limited to only the last twenty-two financial years. So, the findings of this study reflect this period only.

Data Analysis

Trends in FDI Inflows

As previously stated India's reported stock of FDI expanded significantly when the economy was opened up. Today, India is a part of the top 100 clubs on Ease of Doing Business (EoDB). According to DPPIT data, Gross FDI inflows have risen in absolute figures from $4,029 million in 2000-01 to $83,572 million in 2021-22. FDI equity has increased as well, from $2,339 million in 2000-01 to $58,773 million in 2021-22.

FDI inflows into India increased by 52 per cent from 2000-01 to 2001-02 but then dropped over the next two years, from 2002-03 to 2003-04. Investment in India boom continued in 2004-05 and 2005-06, with a growth of 40 per cent in 2004-05 and 48 per cent in 2005-06. With a 155 per cent increase in FDI inflows in 2006-07, it was a remarkable year.

FDI inflows suffered a modest setback during the financial crisis year of 2009-10, with inflows falling by about 10 per cent from the previous year. FDI into India increased by 34 per cent in the next fiscal year, 2011-12. Gross FDI inflows, on the other hand, have been declining since 2016-17, with a negative growth rate in 2018-19. Finally, total inward FDI into India reached a record high of US$ 83.57 billion in 2020-21. Total FDI, which includes equity, capital, and re-invested earnings, increased 2 per cent from the previous fiscal year to US$15.99 billion. Between 2000-01 and 2021-22, total FDI intake into India rose at a compound annual growth rate (CAGR) of 15.53 per cent. This growth in FDI inflow can be attributed to several government-led facilitative policies and reforms aimed at making India a favoured global investment destination.

Table 1 showed that the change in reporting procedure, which included additional categories such as reinvested earnings from existing businesses, contributed significantly to the reported higher total inflows: 32.04 per cent from 2000-01 to 2004-05 and 20.59 per cent from 2015-16 to 2021-22. However, the fact of a substantial increase in inflows after 2005-06 cannot be denied, as reported equity inflows, which fluctuated between 2002-03 and 2003-04, managed to climb slowly at first before drastically increasing after 2005-06. FDI equity inflows were nearly three times higher in the ten years 2010-11 to 2019-20 than in the prior ten years 2000-01 to 2009-10.

Table 1 Reported FDI Inflows into India and their Main Components (As per International Best Practices) (Amount US $ in millions)

Financial Year (April -March)	Main Components					% age growth over the previous year
	Equity Inflows (FIPB /SIA, Automatic & Acquisition Routes)	Equity capital of unincorporated bodies	Reinvested earnings+	Other capital	Total FDI Inflows	
2000-01	2,339	61	1,350	279	4,029	-
2001-02	3,904	191	1,645	390	6,130	52.15
2002-03	2,574	190	1,833	438	5,035	-17.86
2003-04	2,197	32	1,460	633	4,322	-14.16
2004-05	3,250	528	1,904	369	6,051	40.00
2005-06	5,540	435	2,760	226	8,961	48.09
2006-07	15,585	896	5,828	517	22,826	154.73
2007-08	24,573	2,291	7,679	300	34,843	52.65
2008-09	31,364	702	9,030	777	41,873	20.18
2009-10	25,606	1,540	8,669	1,931	37,745	-9.86
2010-11	21,376	874	11,939	658	34,847	-7.68
2011-12	34,833	1,022	8,206	2,495	46,556	33.60
2012-13	21,825	1,059	9,880	1,534	34,298	-26.33
2013-14	24,299	975	8,978	1,794	36,046	5.10
2014-15	30,933	978	9,988	3,249	45,148	25.25
2015-16	40,001	1,111	10,413	4,034	55,559	23.06
2016-17	43,478	1,223	12,343	3,176	60,974	9.75
2017-18	44,857	664	12,542	2,911	60,974	0.00
2018-19	44,366	689	13,672	3,274	62,001	1.68
2019-20	49,977	1,757	14,175	8,482	74,390	19.98
2020-21(P)	59,636	1,452	16,935	3,950	81,973	10.19
2021-22(P)	58,773	1,052	18,647	5,100	83,572	1.95
Memorandum Items						
2000-01 to 2004-05	14,264	1,002	8,192	2,109	25,567	10.7
2005-06 to 2009-10	102,668	5,864	33,966	3,751	146,249	43.26
2011-12 to 2014-15	133,266	4,908	48,991	9,730	196,895	6.68
2015-16 to 2019-20	222,679	5,444	63,145	21,877	313,145	7.56
2000-01 to 2021-2022	591,286	19,722	189,876	46,517	848,153	15.53

Source: Based on DIPP, "Fact Sheet on Foreign Direct Investment (FDI)", March 2022. Retrieved from https://dpiit.gov.in/sites/default/files/FDI_Factsheet_March_2022_23May2022.pdf

The significant shift in the immediate source country for FDI into India is another crucial component of the inflows (Table 2). While Mauritius' importance in routing foreign capital to India has long been recognized, the country's position as a source country has grown in recent years. The country contributed 28 per cent of total reported inflows between April 2000 and March 2022. Surprisingly, Singapore came in second, ahead of the UAE, Cyprus, and the Cayman Islands, to join the top ten home nations for FDI into India.

Table 2 Share of Top 10 Countries Investing in India

Sl. No	Country	Cumulative Inflow (In terms of US $) (April 2000 - March 2022)	% to Total Inflows	Rank
1.	Mauritius	157,742	26.8	I
2.	Singapore	130,967	22.3	II
3.	U.S.A	54,151	9.2	III
4.	Netherlands	41,261	7.0	IV
5.	Japan	36,942	6.3	V
6.	U.K	31,902	5.4	VI
7.	Cayman Islands	14,153	2.4	VII
8.	Germany	13,591	2.3	VIII
9.	U.A.E	12,225	2.1	IX
10.	Cyprus	11,367	1.9	X

Source: Based on DIPP, "Fact Sheet on Foreign Direct Investment (FDI)", March 2022[https://dpiit.gov.in/sites/default/files/FDI_Factsheet_March_2022_23May2022.pdf]

A country must determine which of its sector receives the most FDI. Whether it's investing in modern and advanced technology-intensive sectors or assisting in the development of productive capabilities thereby crowding out domestic investments. Since 1991, the composition of FDI inflows has shifted dramatically. FDI has gradually shifted away from manufacturing and toward services. In addition, different industries have been opened to FDI at different times. Table 3 shows the rankings, names, and shares of FDI inflows for the top ten sectors, as reported by DPIIT data. The top three sectors that attracted the most investment inflows from 2000 to 2022 were the service industry (financial and non-financial), computer software and hardware, and telecommunications.

Table 3 Share of Top 10 Sectors Attracting Highest FDI Inflows

Sl. No	Sector	Cumulative Inflow (In terms of US $) (April 2000 - March 2022)	% to Total Inflows	Rank
1.	Services Sector (financial & non-financial)	94,195	16.0	I
2.	Computer Software & Hardware	85,517	14.5	II
3.	Telecommunications	38,331	6.5	III
4.	Trading	34,741	5.9	IV
5.	Automobile Industry	32,842	5.6	V
6.	Construction Activities (Infrastructure)	27,969	4.8	VI
7.	Construction Development (Townships, housing, built-up infrastructure and construction development projects)	26,209	4.5	VII
8.	Chemicals (other than fertilizers)	19,452	3.3	VIII
9.	Drugs & Pharmaceuticals	19,405	3.3	IX
10.	Metallurgical Industries	17,015	2.9	X

Source: Based on DIPP, "Fact Sheet on Foreign Direct Investment (FDI)", March 2022[https://dpiit.gov.in/sites/default/files/FDI_Factsheet_March_2022_23May2022.pdf]

Table 4 shows the share of the top 10 states attracting the highest FDI inflows in India. The top six states, viz., Maharashtra, Karnataka, Gujarat, New Delhi, Tamil Nadu and Haryana accounted for over 91 per cent of the FDI equity flows to India between 2019 and 2022. The top two states, i.e., Maharashtra and Delhi accounted for over 51 per cent of FDI flows during this period. Maharashtra alone accounted for over 27.5 per cent of FDI flows to India during the same period.

Table 4 Share of Top 10 States Attracting Highest FDI Inflows

Sl. No	Sector	Cumulative Inflow (In terms of US $) (October 2019 - March 2022)	% to Total Inflows	Rank
1.	Maharashtra	39,165	27.5	I
2.	Karnataka	34,031	23.9	II
3.	Gujarat	27,187	19.1	III
4.	Delhi	17,659	12.4	IV
5.	Tamil Nadu	6,333	4.5	V
6.	Haryana	5,222	3.7	VI
7.	Telangana	3,442	2.4	VII
8.	Jharkhand	2,651	1.9	VIII
9.	Rajasthan	1,168	0.8	IX
10.	West Bengal	1,034	0.7	X

Source: Based on DIPP, “Fact Sheet on Foreign Direct Investment (FDI)”, March 2022[https://dpiit.gov.in/sites/default/files/FDI_Factsheet_March_2022_23May2022.pdf]

Relationship between FDI and Trade

Table 5 FDI inflow and Export in India

(Amount US $ in millions)

Year	Gross FDI Inflow	Export
2000-01	4,029	44560
2001-02	6,130	43827
2002-03	5,035	52719
2003-04	4,322	63843
2004-05	6,051	83536
2005-06	8,961	103090
2006-07	22,826	126414
2007-08	34,843	162904
2008-09	41,873	185295
2009-10	37,745	178751
2010-11	34,847	251136
2011-12	46,556	305964
2012-13	34,298	300401
2013-14	36,046	314416
2014-15	45,148	310352
2015-16	55,559	262291

2016-17	60,974	275852
2017-18	60,974	303526
2018-19	62,001	330078
2019-20	74,390	313361
2020-21(P)	81,973	291808
2021-22(P)	83,572	422004

Source: Various Issues of Handbook of Statistics on Indian Economy, RBI Annual Publication

To examine the causal relationship between FDI and export growth in India, the present study has applied linear regression test analysis. The result of the linear regression test analysis has been shown in Table 6.

Table 6 Regression Statistics

Multiple R	0.891125972
R Square	0.794105497
Adjusted R Square	0.783810772
Standard Error	11975.0319
Observations	22

ANOVA

	df	SS	MS	F	Significance F
Regression	1	11061570857	11061570857	77.13712487	2.6762E-08
Residual	20	2868027782	143401389.1		
Total	21	13929598639			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-4818.02015	5559.074943	-0.866694585	0.396388501	-16414.04725	6778.007	-16414	6778.007
Export	0.201888193	0.022986836	8.782774327	2.6762E-08	0.153938494	0.249838	0.153938	0.249838

The value of multiple R is 0.891125972, which indicates a fairly strong linear relationship between FDI inflow and trade in India.

Conclusion

India remains a prominent international investment destination due to its inherent advantages - a huge market with a relatively younger population, democratic setup, investor-friendly reforms, increased pace of urbanization, steady rise in rural consumption levels, and a sustained increase in disposable per capita incomes. The paper tries to examine the relationship between FDI inflows and trade in India. The study finds that there is a fairly strong linear relationship between FDI inflow and trade in India.

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