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Significance of FDI and FII for the economic growth of India: Statistical analysis 2001-2015

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Abstract

FDI and FII both are associated with improved economic growth due to the influx of capital and increased tax revenues for the host country. The host countries often try to channel FDI investment into new infrastructure and other projects to boost development. Furthermore, foreign investment can result in the transfer of soft skills through training and job creation, the availability of more advanced technology for the domestic market and access to research and development resources. The local population may benefit from the employment opportunities created by new businesses. In India there is nexus between FDI and economic growth. The present paper attempts to study the significance of FDI and FII for the economic growth of India during 2001-2015. In order to achieve the objective of the paper, data have been collected from various secondary sources and the tools of correlation and regression have been applied. The study concludes that FDI affects the economic growth of India significantly whereas the role of FII for the economic growth of India is statistically insignificant. Mauritius has emerged as the most dominant source of FDI contributing 89.64 US\$ billion and accounts for 34.74% of the total FDI inflows in India and the FDI inflows in services is the highest with 43.35 US\$ billions i.e.16.80% and during the period of study.

Keywords: Foreign Direct Investment (FDI), Foreign Institutional Investors (FII), Gross Domestic Product (GDP), Correlation, Regression.

1. Introduction

Foreign direct investment is one of the examples of mergers and acquisitions, building new facilities, reinvesting profits earned from overseas operations and intra company loans. In a narrow sense, foreign direct investment refers to just building new facilities. FDI is the sum of equity capital, other long-term capital and short-term capital. Direct investment excludes the investment via purchase of shares. A foreign direct investment is a controlling ownership in a business enterprise in one country by an entity based in another country. Foreign direct investment is distinguished from portfolio foreign investment, a passive investment in the securities of another country such as public stocks and bonds, by the element of "control". In order to accelerate the growth rate of GDP, all the countries of the world are doing their best to attract greater inflows of FDI into their economies. Among BRICS countries, China is the leader in attracting highest inflow of FDI. As per World Bank during 2013-14, China attracted FDI of 347.84 \$ Billions whereas Brazil and Russia got FDI of 80.89 \$ Billions and 79.26 \$ Billions respectively. India has been able to attract FDI inflows of 23.21\$ Billions. India has much more potential than this to attract FDI inflows.

2. Objective of the Study

The objective of the paper is to study the statistical significance of FDI and FII for economic growth in India during 2001-2015.

3. Research Methodology

The study is descriptive in nature therefore to achieve the objectives of the study, the data have been collected and compiled for the period 2001-15 from secondary source like RBI bulletin, DIPP, UNCTAD FDI statistics, Economic Survey of India and Ministry of Commerce and Industry data, online data base of Indian Economy, journals, articles, newspapers, etc.

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4. Literature Review

Bedi, Kharbanda (2014) [2], analyzed various problems and challenges of foreign direct investment and concluded that poor infrastructural facilities and poor labour laws hamper the inflows of FDI in India. Himachalpathy (2010)[3] made comparative analysis of FDI in India and China and concluded that China had attracted more FDI inflows due to more conducive policies for foreign direct investment as compared to India. Sood N., (2015), analyzed the contribution of FDI for GDP growth. The study concluded that the association and dependence of GDP on FDI in India is found to be statistically significant whereas the relationship and dependence of investment by FII on total FDI in India is insignificant. Sharma R. and Khurana N., (2013) studied the sector-wise distribution of FDI inflow to know about which sector has major share of FDI, used a data from 1991-92 to 2011-2012. Babar and Khandare, (2012) [4], have done the sectoral analysis of FDI participation and the main focus of the study is on changing structure and direction of India's FDI during globalization period. The study is done through analysis of benefits of FDI for economic growth. Khazri, Djelassi (2011) [1] analysed empirically the relation between FDI and economic growth in MENA(Middle East and North Africa) countries. He found that there was negative relation between FDI and economic growth and a positive relation between FDI and GDP. Devajit (2012) focused his study to find out the impact of foreign direct investments on Indian economy and concluded that Foreign Direct Investment (FDI) as a strategic component of investment is needed by India for its sustained economic growth and development through creation of jobs, expansion of existing manufacturing industries, short and long term project in the field of healthcare, education, research and development. Singh, Shikha (2009) [6], studied various factors which played a significant role in attracting FDI into a particular state and found that foreign direct investment (FDI) policies played a major role in the economic growth of developing countries around the world and the FDI in India, after the economic reforms, have affected the growth of Indian states. Singh. And Agarwal, (2012) studied the relation of foreign investment and Indian retail business and concluded that FDI in multi brand retail

should be considered and the openness of FDI in India would help India to integrate into worldwide market. Singh J. (2009) [6] stated in their study that foreign direct investment (FDI) policies play a major role in the economic growth of developing countries around the world. The key factor to attract FDI inflows are conducive policies of FDI.

5. Analysis and Discussion

a) GDP and Investment by FII in India

FII refers to an investor or investment fund that is from or registered in a country outside of the one in which it is currently investing. Institutional investors include hedge funds, insurance companies, pension funds and mutual funds. FII is different from FDI. FDI targets a specific enterprise with the aim of increasing its productivity or changing its management control whereas in case of FII investment flows into secondary market with the aim to increase capital availability in general rather than capital availability to a particular enterprise. It is imperative to study the association between FII and economic growth of India.

Total FDI and Investment by FII in India (US\$ Million)

Year	Investment by FII	GDP at constant prices 2004-05
2001-02	1,505	4,93,930
2002-03	377	5,23,770
2003-04	10,918	6,18,370
2004-05	8,686	7,21,590
2005-06	9,926	8,34,220
2006-07	3,325	9,49,120
2007-08	20,328	12,38,700
2008-09	-15,017	12,24,100
2009-10	29,048	13,65,310
2010-11	24,422	17,08,460
2011-12	16,812	18,43,020
2012-13	27,582	18,35,820
2013-14	5,010	18,75,160
2014-15	40,923	20,49,500
Cumulative Total	1,88,949	

Source: RBI's Bulletin, 2015.

Association between GDP and FII

Variables	GDP(Dependent) and FII (Independent)	Result & Interpretation
Correlation Coefficient between GDP and FII	0.592	The correlation between GDP and FII is moderate and at 1% level of significance, this correlation is insignificant because the value of LOS 0.001 is less than Sig Value 0.026. It means the association between FII and economic growth in India is insignificant.
Regression Coefficient of GDP on FII	22.668	At 1% level of significance, the regression coefficient of GDP on FII is insignificant because the value of LOS 0.001 is less than Sig Value 0.026. Thus the dependence of economic growth of India on FII is insignificant.
R-Square	0.35	The value of R-square is 0.35 which means 35% changes in GDP are due to changes in FII and remaining 65% changes in GDP are due to other factors like interest rate , exchange rate, savings, inflation rate, governance etc.

*See Appendix for SPSS output file No. 1

b) Foreign Direct Investment and Economic Growth in India

FDI is an investment in a business by an investor from another country for which the foreign investor has control over the company purchased. The multi-national enterprise may make a direct investment by creating a new foreign enterprise which is called a green field investment, or by the acquisition of a foreign firm, either called an acquisition or brown field investment. All the countries in the world are

continuously striving for rapid economic growth Differences in the growth rates of the countries are explained by the differences in the endowments or levels of the factors that are often identified as stimulants (Dondeti and Mohanty, 2007). Though, FDI is seen as a vital factor in inducing growth rate, however, it will only lead to growth if its inflows are properly managed (Bezuidenhout, 2009). The degree up to which FDI can be exploited for economic development depends on conduciveness of economic

climate. In the absence of such a climate FDI may be counterproductive; it may thwart rather than promote growth (Aggarwal and Khan, 2011). The FDI inflows in India have shown an increasing trend during the post-reform period and the country-wise comparison of FDI inflow also indicated that FDI inflow into India has increased considerably in comparison to other developing economies in the recent years. Moreover the FDI inflows into India responded positively to the liberalization measures introduced in the early 1990s (Singh J., 2010) [5]. There is close nexus between the foreign direct investment and economic growth in India. Since the initiation of the economic reforms in India in 1991, the role of foreign investment in the growth process has been acknowledged by the policy makers. Greater emphasis on FDI inflow has been laid in recent years by allowing 100 per cent FDI in various economic activities. Various existing literature argued that foreign direct investment inflow positively influences economic growth through technology diffusion, human capital formation, etc. FDI is the major monetary source for economic growth in India. The wave of economic liberalization in India gathered its momentum during economic crisis of 1991 and since then FDI has steadily increased in India. Higher FDI inflow in India in recent period can be argued to be facilitated by the relatively stable GDP growth rate, which in turn acted as a major boost towards a sustainable high domestic investment.

The table reveals that total FDI inflows have increased from US \$ 6130 Million in 2001-02 to US \$ 44,291 million in 2014-15. During 2006-07 India witnessed a 146% increase in

FDI inflows to nearly \$ 22,826 million from only \$ 8,961 million in the previous year. Over the last five years, there has been lopsided growth. In 2009-10 it fell by 10% and further fell by 8% in 2010-11. In 2011-12 it reached at \$ 46,556 million, again falling by 26% in 2012-13. During 2013-14, the increase was only 5% to \$36,046 million from \$34,298 million in 2012-13. From 2001 to 2015 the cumulative FDI was of \$ 3,80,215 million.

Table: GDP and FDI Inflows in India US \$ Million

Year	Total FDI	GDP at constant prices 2004-05
2001-02	6,130	4,93,930
2002-03	5,035	5,23,770
2003-04	4,322	6,18,370
2004-05	6,051	7,21,590
2005-06	8,961	8,34,220
2006-07	22,826	9,49,120
2007-08	34,843	12,38,700
2008-09	41,873	12,24,100
2009-10	37,745	13,65,310
2010-11	34,847	17,08,460
2011-12	46,556	18,43,020
2012-13	34,298	18,35,820
2013-14	36,046	18,75,160
2014-15	44,291	20,49,500
Cumulative Total	3,80,215	

Source: RBI's Bulletin, 2015.

Association between GDP and FDI

Variables	GDP(Dependent) and FDI (Independent)	Result & Interpretation
Correlation Coefficient between GDP and FDI	0.895	The correlation between GDP and FDI is very high and at 1% level of significance, this correlation is significant because the value of LOS 0.001 is more than Sig Value 0.00. It means the association between FDI and economic growth in India is significant therefore the government of India has launched 'Make in India' campaign to augment FDI in India and for this government is taking all possible steps to improve the infrastructural facilities, reforms in labour laws, better private participation in infrastructure, improvement in the ranking of ease of doing business, etc.
Regression Coefficient of GDP on FDI	30.315	At 1% level of significance, the regression coefficient of GDP on FDI is significant because the value of LOS 0.001 is more than Sig Value 0.00.
R-Square	0.801	The value of R-square is 0.801 which means 80% changes in GDP are due to changes in FDI and remaining 20% changes in GDP are due to other unexplained factors.

*See Appendix for SPSS output file No 2

c) Foreign Direct Investment in India: Country wise

The largest inflows of FDI's over the period of April 2000 to June 2015 have been received from Mauritius, its share in these inflows have being as high as 34.74%. Singapore is second with a share of 13.90%. The other major sources of foreign direct investment are from UK, Japan, Netherlands, U.S.A., Cyprus, Germany, France, Switzerland. The inflows from U.S.A are routed through Mauritius due to tax advantage. The tax advantage emanates from the double tax avoidance agreement that India has with that country USA. This agreement means that any foreign investor has the option of paying tax either in India or in Mauritius. The tax rates in Mauritius are amongst the lowest in the world. The other big investors included Singapore, the US, Britain and the Netherlands. While investors get higher returns on their money in India, those from Mauritius get even higher returns on their capital as we have a double taxation avoidance treaty.

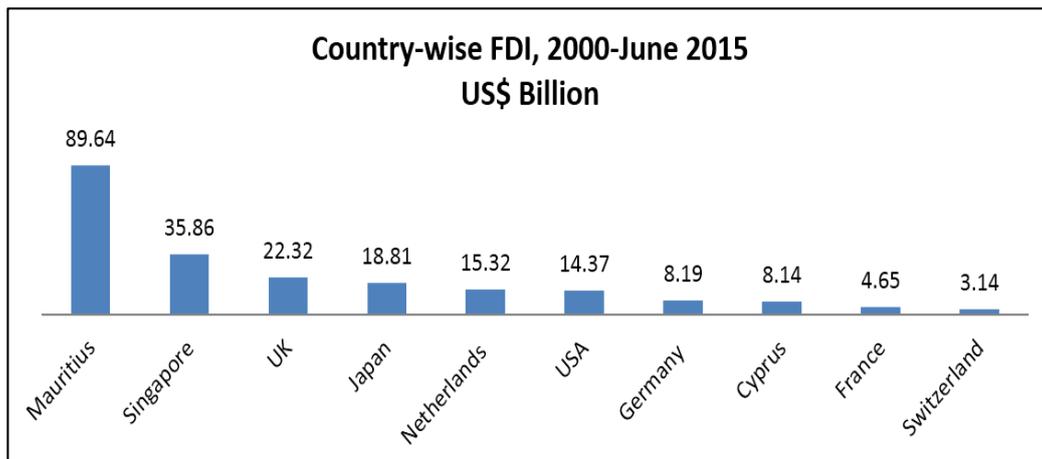
Country-wise FDI Equity Inflows from 2001-2015

Country	Amount of FDI Inflows US \$ Billion	% with total FDI
Mauritius	89.64	34.74
Singapore	35.86	13.90
UK	22.32	8.65
Japan	18.81	7.29
Netherlands	15.32	5.94
USA	14.37	5.57
Germany	8.19	3.18
Cyprus	8.14	3.15
France	4.65	1.80
Switzerland	3.14	1.22
Total FDI Equity Inflow from World	258.14	-----

Source: RBI's Bulletin, 2015 & DIPP, Govt. of India.

The table clearly reveals the fact that due to Double Taxation Avoidance Agreement (DTAA), Mauritius has emerged as the most dominant source of FDI contributing 89.64 US\$ billion in India during the period of study. Therefore, India

should enter into more of such agreements with other countries also so that the flow of FDI inflows may be accelerated.



d) Foreign Direct Investment in India: Sector-wise

India has been a major recipient of FDI Inflows in the majority of sectors. There has been an unnerving upsurge in the economic development of the country. In the post liberalization era, India is known to have attracted a large amount of Foreign Direct Investment. Foreign direct investment in India is allowed freely in most of the sectors, except a few, where specific guidelines are given for foreign direct investment beyond a limit. After liberalization its role has changed significantly. Progressive liberalization of FDI policy has strengthened investor confidence with opening up of new sectors like integrated township, tea plantation etc.

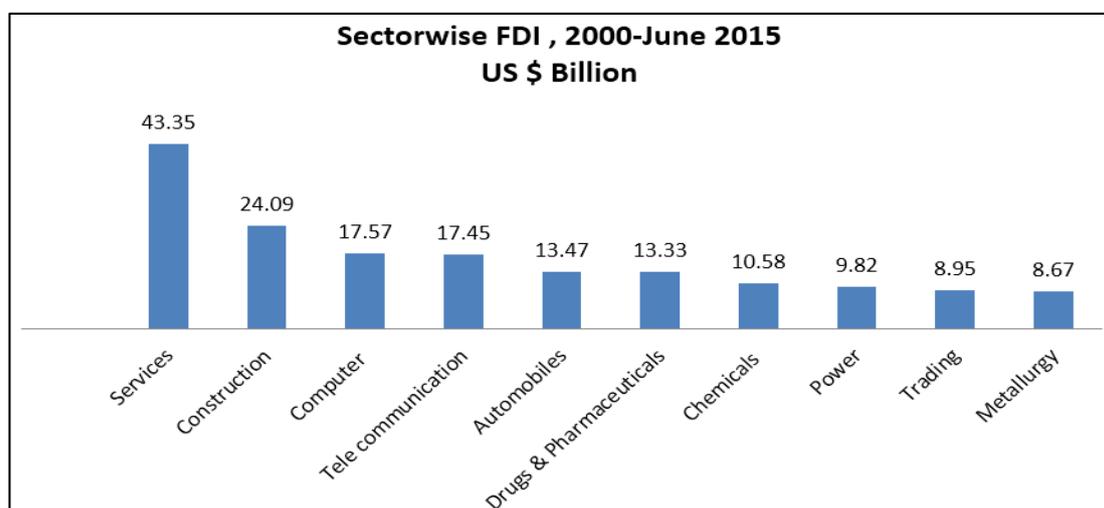
India’s capacity as a host nation in attracting FDI has been enhanced during the post reforms period. Earlier the amount of FDI was low conforming to some selected sectors, but now the inflow of FDI has grown tremendously and almost in all the sectors of the economy. Revision of FDI policy during 2005 opened the few sectors for the foreign investors to start their business (G.RajaRajeswari, K. Akilandeswari, 2015).

The Foreign Direct Investment inflows to different sectors during the period 2001-2015 are shown in the below table:

Sector-Wise FDI Inflow in India during 2001-2015

Sr. No.	Category	Amount of FDI inflows (US\$ Billion)	% with total FDI inflows
1	Services	43.35	16.80
2	Construction	24.09	9.34
3	Computer	17.57	6.81
4	Tele communication	17.45	6.76
5	Automobiles	13.47	5.22
6	Drugs & Pharmaceuticals	13.33	5.17
7	Chemicals	10.58	4.1
8	Power	9.82	3.81
9	Trading	8.95	3.47
10	Metallurgy	8.67	3.36
	Total All Sectors In India	258.14	----

Source: RBI’s Bulletin, 2015.



The above table clearly reveals that maximum FDI has taken place in the service sector including financial and non-financial services, telecommunication, information technology, hotel and tourism etc. The country has experienced a high jump in the inflows of FDI in service sector because of the tremendous growth potential that it possesses. This sector has ranked among the top ten sectors attracting FDI. The FDI inflows in services are the highest with 43.35 US\$ billions i.e. 16.80% during 2000-June 2015. Construction is the second largest sector attracting 9.34% of the total FDI inflows. Computer software and hardware sector in India is now one of the fastest growing sectors and is attracting 6.81% of the total FDI inflows.

6. Conclusion

The upshot of the above is that since the initiation of economic reforms in India the flow of FDI in India has accelerated. During the period of the study there has been increase in GDP of India with the increase in the investment by FII but this association is found to be statistically insignificant. It indicates that apart from investment by FII, many more factors like inflation rate, savings, price stability, interest rate etc. contribute to the economic growth of India. However, FDI is preferred over FII investments since it is considered to be the most beneficial form of foreign investment for the economy as a whole. There is positive and high correlation between FDI and economic growth of India and this association is found to be statistically significant. India has taken various steps to augment FDI inflows and recent launch of 'Make in India' campaign is one of the significant examples to prove this point. During the period of study, Mauritius has emerged as the most dominant source of FDI in India and the reason attributed to this fact is double taxation avoidance agreement (DTAA) with this country. Thus, like DTAA India should have more lucrative pacts with many more countries to augment FDI inflows for the acceleration of the economic growth. Furthermore, the growth of Indian economy is attributable to the dynamism shown by service sector and the FDI inflow in services is the highest. Considering the importance of service sector, the Government of India has provided several incentives in wide variety of service sectors.

SPSS Output File:1

Correlations				
		GDP	FII	R-Square
GDP	Pearson Correlation	1	0.592	0.350
	Sig. (2-tailed)		0.026	
	N	14	14	
FII	Pearson Correlation	0.592	1	
	Sig. (2-tailed)	0.026		
	N	14	14	

Predictors: (Constant), FII

Model	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	936696.173	170719.083	.000
FII	22.668	8.919	0.026

SPSS Output File:2

Correlations				
		GDP	FDI	R-Square
GDP	Pearson Correlation	1	0.895	0.801
	Sig. (2-tailed)		0.000	
	N	14	14	
FDI	Pearson Correlation	0.895	1	
	Sig. (2-tailed)	0.000		
	N	14	14	

Predictors: (Constant), FDI

Model	Unstandardized Coefficients		Sig.
	B	Std. Error	
(Constant)	446541.292	132423.323	.006
FDI	30.315	4.357	0.000

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