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Factors Determining Foreign Direct Investment in India

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Abstract: ***Foreign Direct Investment (FDI) is considered to be the lifeblood of economic development especially for the developing and underdeveloped countries. Multinational companies (MNCs) capitalise on foreign business opportunities by engaging in FDI, which is investment in real assets (such as land, buildings, or existing plants) in foreign countries. MNCs engage in joint ventures with foreign firms, acquire foreign firms, and form new foreign subsidiaries. It plays an important role in the long-term development of a country not only 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 (Deutsche Bundesbank, 2003). MNCs are interested in boosting revenues through FDI by attracting new sources of demand, entering into profitable markets and exploiting monopolistic advantages. Currently these corporations are increasingly establishing overseas plants or acquiring existing overseas plants to learn the technology of foreign countries.***

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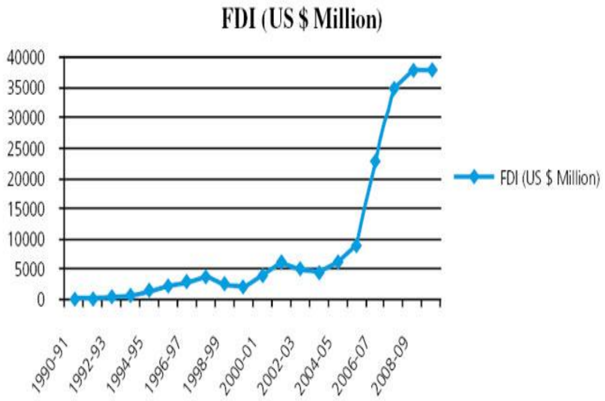
INTRODUCTION

In India, FDI is considered as a developmental tool, which can help in achieving self-reliance in various sectors of the economy. With the announcement of Industrial Policy in 1991, huge incentives and concessions were granted for the flow of foreign capital to India. India is a growing country which has large space for consumer as well as capital goods. India's abundant and diversified natural resources, its sound economic policy, good market conditions and highly skilled human resources, make it a proper destination for foreign direct investments.

Figure 1: Trends in Foreign Direct Investment Inflows in India 1990-91 to 2009-10

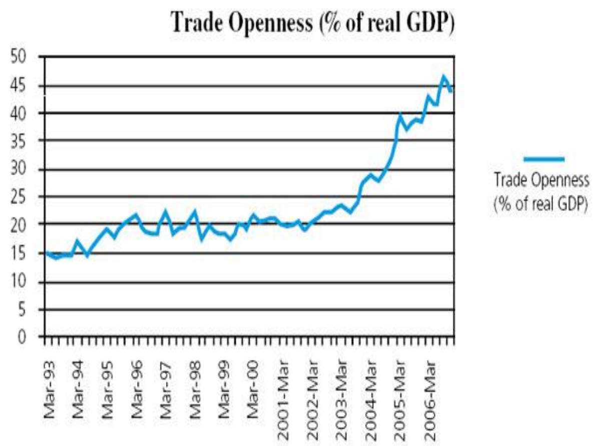


As per the recent survey done by the United National Conference on Trade and Development (UNCTAD), India will emerge as the third largest recipient of foreign direct investment (FDI) for the three-year period ending 2012 (World Investment Report 2010). As per the study, the sectors which attracted highest FDI were services, telecommunications, construction activities, and computer software and hardware. In 1991, India liberalised its highly regulated FDI regime. Along with the virtual abolition of the industrial licensing system, controls over foreign trade and FDI were considerably relaxed. The reforms did result in increased inflows of FDI during the post reform period. The volume of FDI in India is relatively low compared with that in most other developing countries.

FDI INFLOWS IN INDIA

Recognising the importance of FDI in the accelerated economic growth of the country, Government of India initiated a number of economic reforms in 1991. As a result of the various policy initiatives taken, India has been rapidly changing from a restrictive regime to a liberal one, and FDI is encouraged in almost all the economic activities under the Automatic Route. FDI is freely allowed in all sectors including the services sector, except a few sectors where the existing and notified sectoral policy does not permit FDI beyond a ceiling. To make the investment in India attractive, investment and return on them are freely repatriable, except where the approval is specific to specific conditions such as lock-in period on original investment, dividend cap, foreign exchange neutrality etc as per the notified sectoral policy (Govt. of India, 2003). After the economic reforms are implemented in the post 1990s, the inflows of FDI to India have increased tremendously since 2000 (Fig-1 and Table-1). The opening up of the Indian economy in the international trade front and more liberal FDI policies has been one of the factors which led to huge FDI inflows in India (Fig-2). However, India's FDI inflows have fallen sharply this financial year as a stumbling global recovery from global crisis hit investor appetite. Again, the macroeconomic instability in terms of fiscal deficit, current account deficit and high inflation rate also contribute to fall in FDI inflows. As Economic Survey 2010-11 has reported, inflation is a dominant concern and India needs policies to help reverse a fall in FDI inflows.

Figure 2: Trade Openness in India 1990-91 to 2006-07



In India, Reserve Bank of India (RBI) publishes foreign investment data on a monthly basis in the RBI Bulletin, which provides component-wise details of direct investment and portfolio investment. Direct investment comprises of inflows through (i) Government (SIA/FIPB) route, (ii) RBI automatic route, (iii) NRI and (iv) Acquisition of shares. Portfolio investment covers: (i) GDRs/ADRs (ii) FIIs and (iii) offshore funds and others.

OBJECTIVES OF THE STUDY

The present study tries to empirically examine the major factors which have determined the inflow of FDI in India in the post reform period.

DETERMINANTS OF FDI:

LITERATURE REVIEW OF THEORY AND EMPIRICAL EVIDENCE

A country which has a stable macroeconomic condition with high and sustained growth rates will receive more FDI inflows than a more volatile economy. The variables that measure the economic stability and growth are GDP growth rate, interest rates, inflation rates etc. Investors prefer to invest in more stable economies that reflect a lesser degree of uncertainty and risk. Therefore, it is expected that GDP growth rate, industrial production, and interest rates would influence FDI flows positively and the inflation rate would influence positively or negatively. Market size plays an important role in attracting foreign direct investment from abroad. Market size is measured by GDP. Market size tend to influence the inflows, as an increased customer base signifies more opportunities of being successful and also the fact that with the rampant development the purchasing power of the people has also been greatly influenced moving to many levels higher in comparison to what it was before the economic growth.

Trade openness is also considered to be one of the key determinants of FDI as represented in the past literature; much of FDI is export oriented and may also require the import of complementary, intermediate and capital goods. Thus trade openness is generally expected to be a positive and significant determinant of FDI. Trade openness is the sum of exports and imports of goods and services measured as a share of gross domestic product. The amount of domestic investments also influences the levels of FDI inflows into various sectors. Real interest rate and inflation affects the inflow of foreign investments especially direct investment. Real interest rate and inflation mainly measure the economic stability of an economy.

Table 1: Foreign Investment Inflows in India -1990-91 to 2009-10

Year	FDI (US $ million)	Annual percentage change	Portfolio Investment (US $ million)	Annual percentage change	Total Foreign Investment (US $ million)
1990-91	97	-	6	-	103
1991-92	129	33.0	4	-33.3333	133
1992-93	315	144.2	244	6000	559
1993-94	586	86.0	3567	1361.885	4153
1994-95	1314	124.2	3824	7.204934	5138
1995-96	2144	63.2	2748	-28.1381	4892
1996-97	2821	31.6	3312	20.52402	6133
1997-98	3557	26.1	1828	-44.8068	5385
1998-99	2462	-30.8	-61	-103.337	2401
1999-00	2155	-12.5	3026	-5060.66	5181
2000-01	4029	87.0	2760	-8.79048	6789
2001-02	6130	52.1	2021	-26.7754	8151
2002-03	5035	-17.9	979	-51.5586	6014
2003-04	4322	-14.2	11377	1062.104	15699
2004-05	6051	40.0	9315	-18.1243	15366
2005-06	8961	48.1	12492	34.10628	21453
2006-07	22826	154.7	7003	-43.9401	29829
2007-08	34835	52.6	27271	289.4188	62106
2008-09	37838	8.6	-13855	-150.805	23983
2009-10 (P)	37763	-0.2	32376	-333.677	70139

[illegible]

There are many past studies which have emphasized the role of GDP growth, wage rate, trade rate, real interest rates, inflation, and stock of FDI, domestic investment in attracting FDI into a country. Burak Camurdan and Ismail Cevis (2009) develop an empirical framework to estimate the economic determinants of FDI inflows by employing a panel data set of 17 developing countries and transition economies for the period of 1989-2006. Seven independent variables are taken for this research namely, the previous period FDI, GDP growth, wage, trade rate, the real interest rates, inflation rate, and domestic investment. The results conclude that the previous period FDI is important as an economic determinant. Besides, it is also understood that the main determinants of FDI inflows are the inflation rate, the interest rate, the growth rate and the trade (openness) rate.

Hosein Elboiashi et al (2009) investigate the causal relationships between foreign direct investment (FDI), domestic investment (DI) and economic growth (GDP) in Egyptian, Moroccan and Tunisian economies. This paper applies a cointegration time series techniques; vector error correction (VEC) model over the sample period for the period from1970 to 2006. They find a unidirectional causality between FDI and GDP in Egypt and Morocco, and bi-directional causality between FDI and GDP in Tunisia. Domestic investment has played a great role for driving FDI into these countries more than GDP. The study also shows that FDI is more effective than DI for promoting growth.

Table 2: FDI, Real GDP, Imports and Exports, Interest rate and inflation

Period	FDI (US $ Mn)	Real GDP ($ Mn)	Imports (US $ Mn)	Exports (US $ Mn)	Interest Rates on Central Government Security of 1 year maturity	Whole Sale Price Index (Base=1993-94)
Mar-93	137	73000	5290	5419	12.51	100
Jun-93	123	75000	5394	5114	12.57	102.3
Sep-93	140	74000	5392	5217	12.59	103.4
Dec-93	131	75000	5607	5320	12.61	106.8
Mar-94	192	78000	6907	6554	12.63	107.2
Jun-94	170	80000	5799	5612	12.67	107.9
Sep-94	303	81000	7022	5991	12.65	108.1
Dec-94	309	80000	7437	6701	12.61	108.5
Mar-95	561	85000	8422	8050	12.2	108.8
Jun-95	471	86000	7992	7144	12.19	109.6
Sep-95	449	85000	9233	7471	12.15	110.3
Dec-95	664	87000	9973	8076	12.1	111.2
Mar-96	549	92000	10576	9235	12.8	114.4
Jun-96	595	91000	9140	8211	13.1	117.9
Sep-96	538	91000	8998	7940	13.4	119.3
Dec-96	831	93000	9522	8042	13.75	121.6
Mar-97	878	94000	11777	9335	13.69	122.9
Jun-97	1164	95000	9509	8146	13.66	124.5
Sep-97	795	95000	9868	8617	13.64	126.2
Dec-97	782	97000	10622	8197	13.45	127.2
Mar-98	821	100000	12412	10438	13.1	128.7
Jun-98	904	100000	9894	7471	12.98	129.1
Sep-98	543	102000	11888	8159	12.79	130.6
Dec-98	365	103000	10269	8638	12.82	132.8
Mar-99	668	108000	10763	8941	12.4	135.4
Jun-99	452	109000	10490	8178	12.18	137.9
Sep-99	648	110000	12618	9461	11.97	139.2
Dec-99	400	111000	12105	9180	11.86	140.7
Mar-2000	667	113000	14749	9945	11.84	141.8
Jun-2000	1085	113000	12781	10370	11.91	143.6
Sep-2000	940	114000	13132	11060	11.82	144.2
Dec-2000	893	115000	13119	10999	11.77	145.3
2001-Mar	1113	118000	11765	11676	10.95	148.4
1-Jun	1204	118000	12808	10362	10.99	150.3
1-Sep	1768	119000	13411	10811	11.04	153.4
1-Dec	1387	122000	12624	10633	10.95	155.7
2002-Mar	1766	123000	13131	12236	10.58	157.1
2-Jun	1666	123000	13759	11947	10.22	158.8
2-Sep	1070	125000	14824	13224	10.09	160.7
2-Dec	1125	127000	15914	12999	9.56	161.3
2003-Mar	1175	133000	16745	14557	9.11	162.5
3-Jun	856	135000	17197	13058	8.58	164.9
3-Sep	1198	135000	17210	14373	8.14	165.2
3-Dec	1094	137000	20527	17070	7.34	166.8
2004-Mar	1174	146000	22604	19374	6.97	169.1
4-Jun	1488	147000	23509	17470	6.21	170.6
4-Sep	1756	147000	25235	18490	5.98	173.4
4-Dec	1353	148000	27439	20528	5.71	175.8
2005-Mar	1390	155000	34588	26568	6.01	179.2
5-Jun	2058	156000	34405	23530	6.05	180.2
5-Sep	1846	156000	36424	24500	6.11	185.3
5-Dec	2312	158000	35961	25048	6.25	187.3
2006-Mar	2685	169000	42829	29305	6.84	189.4
6-Jun	3405	169000	40836	29056	6.97	193.7
6-Sep	4398	170000	47168	32032	7.2	194.2
6-Dec	9848	173000	45521	30225	7.34	195.6

A study by Ana Marr (1997), reviews the recent evidence on the scale of FDI to low-income countries over the period 1970- 96 and major factors determining foreign companies' decisions to invest in a particular country. The paper concludes that large market size, low labor costs and high returns in natural resources are amongst the major determinants in the decision to invest in these countries. China, as a major emerging market, has attracted significant flows of FDI, to become the second largest receipt. Shaukat Ali and Wei Guo (2005) briefly examine the literature on FDI and focuses on likely determinants of FDI in China. They analyze responses from 22 firms operating in China on what they see as the important motivations for them to undertake FDI. Results show that market size (in terms of GDP) is a major factor for FDI especially for the United States firms. For local, export-orientated, Asian firms, low labor costs are the main factor.

Table-3: Trade Openness

Period	Imports (US $ Mn)	Exports (US $ Mn)	Trade Openness (% of real GDP)
Mar-93	5289.73	5418.91	14.67
Jun-93	5394.45	5113.55	14.01
Sep-93	5391.68	5216.57	14.34
Dec-93	5607.05	5319.92	14.57
Mar-94	6907.17	6553.71	17.26
Jun-94	5799.22	5611.59	14.26
Sep-94	7021.66	5991.3	16.07
Dec-94	7437.45	6701.47	17.67
Mar-95	8422.17	8049.92	19.38
Jun-95	7991.63	7143.78	17.6
Sep-95	9233.41	7471.06	19.65
Dec-95	9973.2	8075.85	20.75
Mar-96	10576.26	9234.61	21.53
Jun-96	9139.86	8210.64	19.07
Sep-96	8997.84	7939.62	18.61
Dec-96	9522.27	8041.75	18.89
Mar-97	11777.11	9335.14	22.46
Jun-97	9509.14	8145.94	18.58
Sep-97	9867.79	8617.42	19.46
Dec-97	10621.68	8196.54	19.4
Mar-98	12411.73	10437.65	22.85
Jun-98	9893.65	7471.14	17.36
Sep-98	11887.83	8158.64	19.65
Dec-98	10269.17	8638.38	18.36
Mar-99	10763.03	8941.06	18.24
Jun-99	10490.02	8177.84	17.13
Sep-99	12617.52	9461.34	20.07
Dec-99	12105	9179.57	19.18
Mar-2000	14748.75	9944.6	21.85
Jun-00	12781.09	10369.71	20.49
Sep-00	13132.32	11059.64	21.22
Dec-00	13119.1	10999.15	20.97
2001-Mar	11764.68	11675.83	19.86
1-Jun	12808.13	10361.77	19.64
1-Sep	13411.17	10811.38	20.36
1-Dec	12623.99	10633.26	19.06
2002-Mar	13130.5	12235.85	20.62
2-Jun	13759.02	11946.66	20.9
2-Sep	14823.68	13223.81	22.44
2-Dec	15914.26	12998.59	22.77
2003-Mar	16745.25	14556.76	23.54
3-Jun	17196.64	13058.23	22.41
3-Sep	17210.33	14373.45	23.4
3-Dec	20527.2	17070.09	27.44
2004-Mar	22603.52	19374.23	28.75
4-Jun	23509.16	17469.75	27.88
4-Sep	25234.8	18490.25	29.74
4-Dec	27439.16	20528.16	32.41
2005-Mar	34588.26	26568.05	39.46
5-Jun	34405.2	23530.21	37.14
5-Sep	36424.11	24499.77	39.05
5-Dec	35961.08	25047.95	38.61
2006-Mar	42828.89	29304.95	42.68
6-Jun	40836.43	29056.24	41.36
6-Sep	47168.18	32031.61	46.59
6-Dec	45520.99	30224.67	43.78

METHODOLOGY AND DATA

The period taken for the present study is the post liberalisation period from 1993 to 2006. India adopted many economic reforms in 1991 to open up the economy. The FDI started flowing into the country

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with the significant proportions. The reason for taking period only up to 2006 is that the period from 2007 to 2010 was characterised by global financial crisis which may have an impact on FDI. So, including the period from 2007 to 2010 may give us spurious empirical results and may act as an outlier for the whole data set. Multiple regression analysis has been used to find the determinants of FDI in India. In the regression, dependent variable is taken as the quarterly data on FDI in India from the period of 1993 to 2006. The independent variables considered in the model are quarterly data on inflation, interest rate (Interest Rates on Central Government Security of one year maturity), real GDP, previous period FDI, previous period GDP and trade openness. Table 2 reports the data on FDI, export, import, real GDP, interest rate and inflation. We have used quarterly data of Wholesale Price Index (WPI) for measuring inflation.

Trade Openness refers to the degrees to which countries or economies permit or have trade with other countries or economies. It is calculated as export plus import as percentage of GDP. This data has been reported in Table 3.

RESULTS AND DISCUSSION

As explained in the table output, the dependent variable in the regression is FDI and the independent variables are real GDP, previous period FDI, previous period GDP, Trade Openness, Interest Rates, and WPI. The results show that FDI is explained close to 86% by the independent variables included in this study. The Durbin Watson value is close to 2 which imply that there exist no autocorrelation into the data.

Table 4: Estimated OLS Results

Variables	Coefficients	Std.Error:	t-Statistics:	Sig
Constant	2749.452	1941.219	1.416	.163
Real GDP	0.074	0.043	1.738	.089*
Trade Openness	-39.319	31.685	-1.241	.221
Interest Rates	38.494	80.066	0.481	.633
WPI (Inflation)	-98.844	33.679	-2.935	.005**
Previous Period FDI	2.016	0.224	9.018	.000**
Previous Period GDP	0.022	0.039	0.570	.571

**,* are significant at the 5% and 10% significance levels respectively based on the student's t-values.

The results given in the table 4 shows that inflation, real GDP and previous period FDI are important factors in attracting the FDI inflows in India during the post reform period. Previous period FDI and level of inflation in the economy or price stability have significantly contributed in explaining the inflow of FDI. While previous period FDI is positively influences the FDI, inflation in the economy negatively affects the FDI inflows. However, real GDP has positive influence on FDI and is statistically significant at 10 percent significance level. However, trade openness, interest rates and economic growth in the previous period are not important factors in explaining FDI inflows in India.

CONCLUSION

FDI plays an important role in economic growth of an economy. Literature on factors determining FDI inflows into an economy shows that many factors influences inflows such as market size, inflation, trade openness, interest rate, wage rate, business environment, etc. The present study examined the factors determining FDI inflows in India during post reform period. The results of our analysis show that FDI is related positively with real GDP and previous period FDI inflow but inversely related with inflation. It showed that the macroeconomic instability in terms of inflation has been an important factor which influenced the inflow of FDI in India in the post reform period.

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