Evaluation of FDI in Indian Manufacturing Sector: Recent Trends and Future Prospects

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Abstract:India is attracting significant attention as an attractive location for manufacturing industries in recent times. There have been many studies that demonstrate the rapid productivity and technological growth of Indian manufacturing industries post- industrial liberalization. We focus on the firm level strategic operational decisions with regard to (i) Scale and Operating Focus, (ii) Product and Process Technologies and (iii) Planning, Control, and Execution Systems. We find little evidence that firms have taken advantage of scale economies in India during the post-liberalized era. However, we find evidence that firms in industries such as chemicals and pharmaceuticals imported sophisticated process technologies and developed in-house R&D capabilities to adapt them to the local environment even prior to liberalization. These capabilities seem to have enabled them to undertake more technology-intensive activities and take further advantage of liberalization to improve product technologies.

***Keywords*: Manufacturing Sector, Developing economies, Technology of production, FDI.**

(1). INTRODUCTION

There is not any one way in which FDI can be defined, rather the agencies like IMF, World Bank, UNCTAD, etc. have given the various definitions of FDI using different methodologies. One general description of the same can be given as:

'*FDI refers to capital flows from abroad that invest in the production capacity of the economy and are usually preferred over other forms of external finance because they are non-debt creating, non-volatile and their returns depend on the performance of the projects financed by the investors.*' **UNCTAD (1994)**

FDI can also be considered as a device to enlarge the trade at the international level and exchange technology, in other words we can say that it is a source of the following: **Srivastav (2003)**

- Economic growth and development,
- Modernization
- Employment generation,
- Development of international trade
- Makes the business environment competitive,
- Helps to increase the productivity of the factors of production
- Makes the efficient use of resource.

After the announcement of the industrial policy, 1990 a new era of trade taken place in the Indian scenario. This introduced the policy of LPG (*Liberalization, Globalization and Privatization*) and in the light of such new policies the definition of FDI was also revised.

1.1 Different Types of FDI

a) Outward FDI: In this case a long term capital outflows in the home country by the host country. It is a kind of investment which is other than any kind of aid, portfolio investment or a repayable debt.

b) Inward FDI: The inward FDI also includes a long term capital in the form of inflow, which is other than any kind of aid, portfolio investment or a repayable debt. It is done by an entity outside the host country in the home country.

Figure 1.1: Different Types of FDI

c) Greenfield FDI: Greenfield FDI refers to the kind of investment which any Multinational Corporation use to do in the host country, in order to develop and construct new facilities. These facilities are favorable for both the recipient country and the investing country. **Balasubramanyam et al (2003)**

d) Brownfield FDI: Brownfield FDI refers to the formation of new MNC affiliate by the way of Merger and Acquisition, where any MNC or its affiliate merges with or acquire any of the existing companies of the recipient country.

e) Horizontal FDI: This refers to a multi-plant firm producing the same line of goods from plants located in different countries.

f) Vertical FDI: This type of FDI is aimed at the economies of scale for the recipient country, i.e. production, where the assemblies are involved, exports are the only way out, where the components are collected from the country of origin by the way of exports.

1.2 Scenario of Manufacturing Sector in India

Promotion of foreign direct investment has been an integral part of India's economic policy. Competition Commission of India was set up in 2003 so as to prevent practices having adverse impact on competition in markets. To mitigate regional imbalances, the Government announced North-East Industrial Policy in December 1997 for promoting industrialization in the North-Eastern region. The focus of disinvestment process of PSUs has shifted from sale of minority stakes to strategic sales. Up to December 2004, PSUs have been divested to an extent of Rs.478 billion (Ahluwalia, 1991, GoI Annual Report, 2003-04, Handbook of Industrial Policy and Statistics, and Economic Survey, 2004-05).

After recovering to a growth of 9.2 per cent in 2009-10 and 2010-11, growth of value added in industrial sector, comprising manufacturing, mining, electricity and construction sectors, slowed to 3.5 per cent in 2011-12 and to 3.1 percent in the current year.

Overall industrial performance, as per IIP, continued to moderate from Q1 of 2011-12 with growth turning negative in Q1 of 2012-13, before improving to 2.1 per cent in Q3 of 2012-13. Manufacturing, which is the dominant sector in industry, also witnessed deceleration in growth, as did the electricity sector. Growth turned negative in November and December, 2012(Economic Survey, 2012-13). The growth of Eight Core Industries has declined from 6.6 % in 2009-10 to 4.1 in 2014-15, which is a matter of concern ahead. Monthly growth of the industries also declined from 3.7 % in Jan 14 to 1.8 in Jan 15, which needs to be tackled in order to ensure our long run industrial sustainability (Office of Economic Advisor, 2015). India is one of the top ten manufacturing countries though its share in total manufacturing value added (MVA) is only about 1.8 per cent. The impact of the post-crisis slowdown on industrial growth has been relatively mild on developing countries including India yet the downward trend in MVA has been significant. The growth rate of world MVA had declined from 5.4 per cent in Q1 of 2011-12 to 2.2 per cent in Q2 of 2012-13. During the same period China's MVA growth rate declined from 14.3 per cent to 7.3 per cent but the deceleration rate has been sharper in the case of India as the rate of growth dipped from 7.3 per cent to 0.2 per cent.

The 12th FYP lays down broad strategies for spurring industrial growth and recommends sector specific measures. Major initiatives that can change the manufacturing landscape of the country are: National Manufacturing Policy (NMP), DMIC Project, FDI Policy initiatives, and Setting up of the e-Biz Project.

1.3 Literature Review

Analyzing foreign investment trends, **Vincent Palmadeet al (2004)** find no reason to be sceptical about the fall in FDI since 1999 and the growing share of China in FDI, which worries most of the developing countries. They say that the decline is largely a onetime adjustment following the investment boom of the nineties. They assure that FDI is now more varied as it is coming from more countries and going to more sectors. The conditions for attracting FDI varies by sectors: in labour intensive manufacturing, efficient customers and flexible labour rmarkets are the key while in the retail sector, access to land and equal enforcement of the tax rules matter the most. In the interests of the domestic investors and also to attract more investment they advise to sort out the various micro issues by different sectors.

Karpaty and Poldahl (2006) is one of the most comprehensive studies on determinants of FDI at the industry-level in case of Sweden. They find technology, skill intensity, export intensity, and dummy for differentiated product industry positively affects industry-level FDI whereas size has a significant negative impact on such flows. Bellaket. al. (2008) studies the US, six European Union countries and four Central and Eastern European countries (CEEC) over the period 1995-2003. They use a dynamic panel data model to segregate economy-wide and industry-level effects. In case of CEEC countries R&D intensity closes the gap between potential and actual FDI whereas for US-EU countries it is labour cost decrease due to increase in productivity and taxes that helps to close this gap.

Sebastian Morris (2004) opinioned that FDI in the developing country i.e. India, for all investments (other than those strictly confined to locations due to their requirements of either natural resources or the need to be very close to the markets), it is the regions with metropolitan cities, that have an advantage in 'headquartering' the country operations of MNCs in the country, and, therefore, attract the bulk of FDI. Even more than the quantum of FDI, the employment effects and the spill over effects are large for such regions. He finds that Gujarat has been particularly handicapped in not having a city unlike the southern states which have Bangalore and Hyderabad besides the other metros of Chennai.

Nunnenkamp (2006) tried to assess the scenario of industry marked FDI in India, this was done by the referring to the causality effect of the two. The study was based on the frame that from the era of liberalization (*i.e. since 1991*) there is a turnaround change in the patterns of consumption and amount of FDI in the country. This scenario was very promising and refers to a high economic growth of the country. The study envisaged that the growth effect was very high in different sectors of the economy,

especially in the manufacturing sector and service sector as well. This study concluded that these positive effects of FDI may not continue for a longer period of time if the government did not provide flexibility in the policies related to FDI.

1.4 Objectives

1. To evaluate the flow of FDI in manufacturing sector of India from 2006 to 2016,
2. To analyze the impact of FDI on other industries related to the sector of manufacturing.

1.5 Research Methodology

Present study is based on secondary data, the time frame chosen for the study is 2005 to 2015 i.e. for 10 years, the sources of data are the different reports of DIPP, SIA newsletters, reports of RBI for various years, etc.

Table 1.1: Evaluation of FDI in Manufacturing Sector for 2006 to 2015

Table 1: SECTOR-WISE FDI INFLOWS IN MANUFACTURING													
S. No.	**SECTOR**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**	Share (%)
1	Electrical Equipment (incl S/W &Elec)	1023	2035.8	1949.4	2083.1	2335.92	2588.7	2841.8	3094.36	3347.15	3599.95	27176.78	30.6
2	Transportation Industry	218.6	402.3	298.3	293.79	290.82	287.85	284.88	281.91	278.94	275.97	4168.07	9.9
3	Fuels (Power & Oil Refinery)	62.6	259.6	113.1	109.11	80.59	52.07	23.54	-4.98	-33.50	-62.02	1951.91	7.7
4	Chemicals (other than Fertilizers)	147.9	400	76.1	230.58	248.87	267.16	285.45	303.74	322.03	340.32	3059.15	4.8
5	Drugs and Pharmaceuticals	116.3	216.1	72	192.5	207.56	222.62	237.68	252.74	267.80	282.85	2613.25	4
6	Cement and Gypsum Products	452.1	209.7	38.3	192.37	208.87	225.36	241.86	258.36	274.85	291.35	2564.22	3.8
7	Metallurgical Industries	142.3	175.7	102.5	186.36	207.46	228.57	249.68	270.79	291.89	313.00	2463.45	3
8	Food-Processing Industries	40.7	54	54.9	50.44	44.71	38.98	33.26	27.53	21.80	16.07	790.79	2.5
9	Miscellaneous Mechanical & Engineering	50.4	51	62.4	52.96	54.96	56.97	58.97	60.97	62.97	64.98	738.88	1.4
10	Textiles (including Dyed, Printed)	79	117.5	40.1	94.25	105.59	116.93	128.26	139.60	150.94	162.27	1241.84	1.4
11	Fermentation Industries	171.6	4.3	43.9	68.28	76.12	83.96	91.8	99.64	107.48	115.32	890.60	1.1
12	Rubber Goods	34.2	18.4	4.1	25.46	6.4	7.3	28.32	18.64	18.47	18.31	288.50	0.7
13	Machine Tools	23	34.6	7.2	32.89	35.99	39.08	42.17	45.26	48.36	51.45	444.60	0.6
14	Industrial Machinery	33.8	25.9	16.6	24.85	26.35	27.86	29.36	30.87	32.37	33.88	345.24	0.6

15	Agricultural Machinery	61.6	56.3	0	38.3	43.03	47.77	52.5	57.23	61.97	66.70	499.90	0.6
16	Paper and Pulp (including Paper Products)	27.4	5	2.1	-5.08	-9.78	14.48	-19.18	-15.54	-19.33	-23.12	-9.46	0.5
17	Commercial, Office & Household Equipment	35.6	6.2	41.7	30.88	34.54	38.2	41.85	45.51	49.17	52.82	395.57	0.5
18	Glass	0.8	1.5	0.5	-8.3	-13.03	17.75	-22.48	-16.98	-20.59	-24.20	-18.03	0.4
19	Ceramics	6.2	44.5	13.5	29.9	33.85	37.8	41.75	45.70	49.65	53.60	387.35	0.4
20	Soaps, Cosmetics and Toilet Preparations	87.3	1.6	5.7	28.58	32.28	35.98	39.68	43.38	47.08	50.77	373.25	0.4
21	Medical and Surgical Appliances	1.7	2	11.9	0.68	-1.73	-4.14	-6.55	-8.96	-11.37	-13.78	44.05	0.4
22	Earth-Moving Machinery	50.9	1	0	13.92	15.13	16.33	17.54	18.74	19.95	21.15	188.66	0.3
23	Fertilizers	4.2	5	0.3	6.66	6.44	6.22	6	5.78	5.57	5.35	103.02	0.2
24	Vegetable Oils and Vanaspati	13.7	4.4	14.3	13.93	15.93	17.93	19.93	21.93	23.93	25.92	179.00	0.2
25	Leather and Leather Products	1	7.8	0.8	2.53	2.33	2.14	1.94	1.74	1.55	1.35	37.78	0.1
26	Sugar	3	15.7	0.8	7.81	8.81	9.8	10.8	11.80	12.80	13.80	102.12	0.1
27	Scientific Instruments	0.1	0.1	0	-2.01	-2.76	-3.51	-4.26	-5.00	-5.75	-6.50	-24.50	0
28	Photographic Raw Film and Paper	6	2.7	0.1	2.9	3.27	3.63	4	4.37	4.73	5.10	38.00	0
29	Industrial Instruments	0	0.4	0	-0.46	-0.83	-1.2	-1.58	-1.95	-2.33	-2.70	-1.25	0
30	Glue and Gelatine	0	0	0	-0.22	-0.44	-0.66	-0.89	-1.11	-1.33	-1.55	0.01	0
31	Boilers and Steam-Generating Plants	0.5	3.3	0	1.44	1.65	1.87	2.08	2.30	2.51	2.72	18.37	0
32	Dye-Stuffs	0	0	0	-0.04	-0.13	-0.22	-0.31	-0.40	-0.49	-0.58	-0.36	0
33	Timber Products	0.4	0	0	0.12	0.13	0.15	0.16	0.17	0.19	0.20	1.62	0
34	Prime Movers (other than Electrical)	0	0	0.3	0.17	0.19	0.22	0.25	0.27	0.30	0.33	2.13	0
35	Defence Industries	0.1	0	0	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.38	0

36	Miscellaneous Industries	396.9	1659.3	1532	1290.51	1414.6	153782	1661.47	1712.22	21134.28	2786.12	188726.20	23.8
	Total	3293.1	5821.7	4502.9	508924	553.32	5977.4	6421.48	6800.67	26544.08	8517.27	586366.62	100

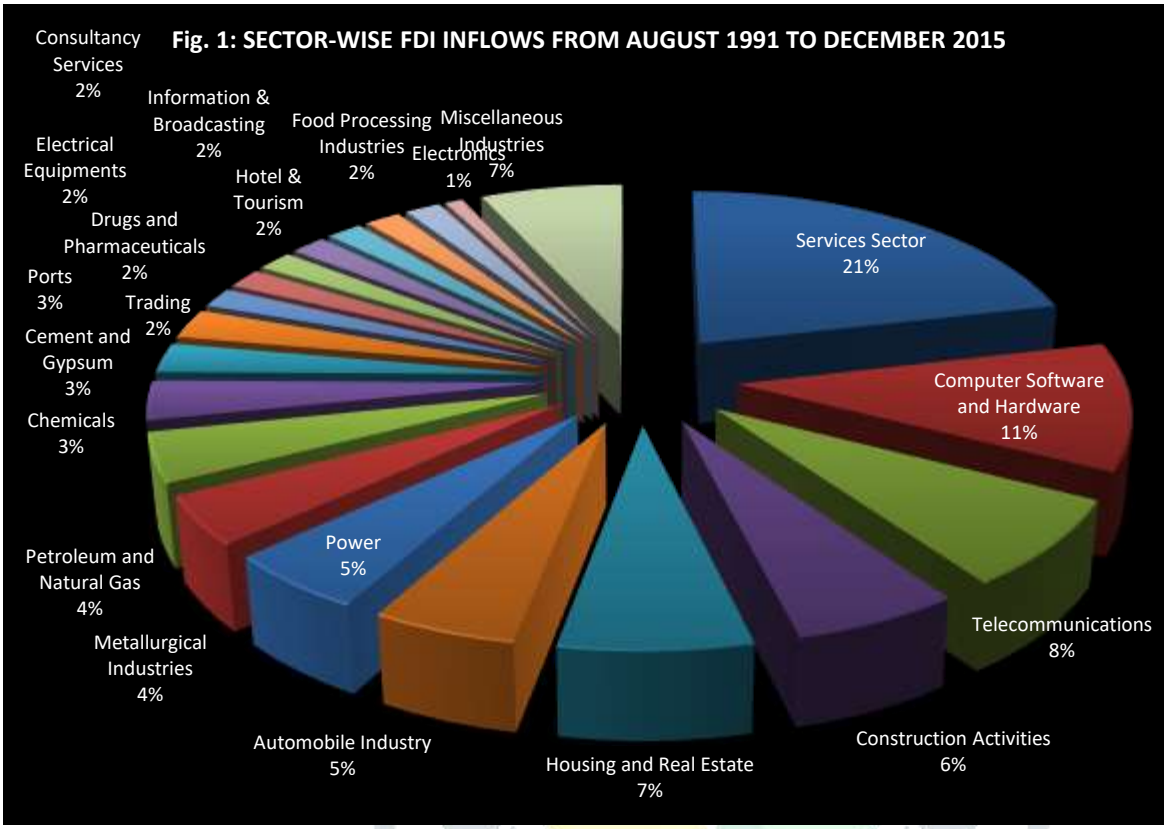

Figure 1.2

1.5 Data Analysis

Results of the simple linear Quadratic function:

$$Y = a + bt + ct^2$$

Where, a= intercept, b and c= coefficients t= time

Trends in Manufacturing (2006 to 2015)

Regression Statistics					
Multiple R	0.176035464				
R Square	0.030988484				
Adjusted R Square	-0.184347408				
Standard Error	62.92998395				
Observations	12				
ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	1139.801307	569.9006533	0.14390766	0.867921

Residual	9	35641.64592	3960.18288		
Total	11	36781.44723			
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	41.75744321	47.43467637	0.794283608	0.447467121	-69.6281
X Variable 1	0.00291724	0.006569319	0.055079329	0.957278595	-0.0145
X Variable 2	-3.4125863	1.41047E-07	-0.145488162	0.887531741	-3.4E-07

Table 1.2:

$$Y=41.76 + 0.00291724\ t + (-3.4125863)\ t^2$$

As per the analysis, it is clear that in case of manufacturing sector, FDI shows a mixed pattern of increasing and decreasing over the period. This is evident by the above analysis. It had been fluctuating, the slope co-efficient is statistically not significant, but the growth coefficient is statistically significant. It can be said that over the period the FDI had been declining at a weak, *but* increasing rate. This underscored the need for further probing in relation to various other parameters determining FDI inflow.

If we look at the different other allied industries of manufacturing, which are collectively called as 'Manufacturing Sector', we will see that The FDI in Automobile Industry has experienced huge growth in the past few years. The options have increased with quality products from foreign car manufacturers. For the purpose of above analysis, data relating to 2015 was used. Hence, the results could be viewed as an indicator of post-liberalization experience of the country. Such a wide fluctuation should be taken serious note of. This necessitates review of government policies towards FDI, as otherwise in the years to come, inflow of FDI would go down. This has to be viewed seriously, because, in the context of several other countries like China and South East Asian countries are formulating favourable policies so that more and more of FDI can be invited in the sector of manufacturing. Before the year 2000, automobile industry comes under the umbrella, but since the year 2000 it became a separate industry and started receiving independent investments, like for the first eight years, i.e. 2000 to 2008 the industry received around US$ 3.2 bn of investment from different sources which was exactly 4% of the total FDI in the country. Japan (27.59%), Italy (14.66%) and USA (13.88%) are the prominent investors in this sector.

As a matter of fact, the metro cities of Mumbai and New Delhi were the highest gainers in case of FDI in manufacturing sector and received 37% and 28% of the pie. This is also a well known fact that manufacturing sector of India is having highest number of ventures as far as FDI is concerned.

1.6 Conclusion

The policies related to FDI in India are liberalized in nature, this is done on purpose by the respective agencies so that the market of the home country becomes more investment friendly. In the present scenario India is placed in the top three countries which are receiving the highest amount of FDI from the global players. Some of the eminent agencies can be named as World Bank, etc. The same has also been stated in the reports of United Nations and DIPP. FDI in India to various sectors can attain sustained economic growth and development through expansion of existing manufacturing industries and creation of new industries. The inflow of FDI in service sectors and construction and development sector gained much interest of investors whereas in other sectors it has been quite poor. All of these definitely lead to economic growth of the Indian Economy.

When India's need is to expand the manufacturing base, the freedom of entry and operation to foreign investors without accompanying performance requirements led to inflows that did not add substantially to its capacities. The cases of pharmaceuticals, electronics and automobiles underline the fact that the FDI policy, instead of following a hands-off approach, need to dovetail other policies, especially the trade policy, to deliver the desired outcomes. On the other hand, the expected efficiency gains were not

translated into large net trade balances. Indian subsidiaries of foreign companies in most manufacturing activities run a huge negative trade balance. To this if other forms of foreign exchange outgo like dividends, royalty payments etc., and which have acquired prominence over the recent past are added, foreign companies would be net losers of foreign exchange of a large magnitude. The acquisitions can only accelerate that burden.

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