Impact of Sectoral FDI Inflows on Economic Growth of India

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Abstract

Some emerging economies have grown at a higher rate benefiting from Foreign Direct investment (FDI). The purpose of this paper is to analyze the impact of FDI on India's economic growth. FDI is often seen as a major element in the host country's industrial development and growth and its increasing role in international production has raised interest in its effects on the host economies. Besides providing capital inflow, the FDI offers foreign technology, managerial skills and improvement in the international competitiveness of domestic firms. A regression analysis is carried out to determine if the foreign ownership has any effect on the productivity. The second aim is to determine and analyze India's policies regarding FDI so that spillover effects might be materialized. However, the main focus is to analyse the sectoral inflows of FDI, along with comments on public policies regarding FDI and spillover effects. Several recommendations are suggested to maximise the potential benefits from FDI.

INTRODUCTION

In a liberalising and globalising world economy, a growing number of countries have received significant capital flows, mainly in form of FDI. Many policy makers and academics contend that FDI can have important positive effects on a host country's development effort. In addition to the direct capital financing. FDI can be a source of valuable technology and know-how while fostering linkages with local firms, which can help jumpstart an economy. Based on these arguments, industrialized and developing countries have offered incentives to encourage foreign direct investments in their economies. There are empirical evidences for FDI generating positive spillovers for host countries especially in certain regions of the world.

A distinctive feature of the world economy in recent decades has been the growth of FDI, or investment by multinational firms in foreign countries in order to control assets and manage production activities in those countries. Hence, multinational corporations, in the context of a liberalising world economy, played an essential role in the globalisation process. Boosted by the rapid pace of the economic progress, profitable investment regime, flexible procedural policies along with the relaxations introduced in various sectors, has

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proven to be a horde for the international key players in finding new investment opportunities in India. Rising trend of the foreign direct investment is also signalling towards the pivotal role playing by the foreign direct investment in the growth of the economy. The facts are also standing high as in the year 2007-08, foreign direct investment in India crossed US$25 billion, which was more than US$15.7 billion in 2006-07.

The objective of the paper is to examine the benefits of FDI inflows across sectors by examining their respective impacts on economic growth of India. The study is confined to FDI inflows in select sectors. A relationship between economic growth as a dependent factor and FDI in select sectors as independent variables, taken individually has been established. Keeping in view the special merits of FDI, an effort has been made to understand the attractiveness offered to foreign firms in practice. India has grown due to its human capital, size of the market, rate of growth of the market, and political stability. This study might help lesser developed countries specially in South Asia and Africa who want to follow BRIC in terms of growth, size, to understand policies to attract FDI. At enterprise level, it would help TNCs to understand the markets and formulating policies for entry and growth strategies in these markets.

LITERATURE REVIEW

FDI flows have transformed international trade in the last two decades and created new giants and a new world order (Blonigen, 2005). A study of the existing literature suggests that FDI has contributed to the growth of the emerging economies and their pattern has changed significantly over time. The FDI trend in the last decade indicates a shift of flows from developed countries to developing economies, which is impacting development in significant way. In the developing world, East Asian economies were the pioneers in realizing the potential of FDI in developing their economies. These countries developed strategies to attract FDI to meet their growth objectives (Zhang, 2001; Lall, 1993). The success of Asian Tigers, namely Singapore, South Korea, Taiwan, Hongkong in the last two decades has created a role model for India and other emerging economies.

For more than 15 years, emerging countries are vying with each other for a larger share of global FDI pie. During 1991-96, over 100 countries made a total of 599 changes to liberalize FDI regulations; in 1997 alone, 76 countries made 151 liberalization changes (United Nations, 2005). A large number of such countries are in Asia which continue to adopt new rules and regulations to make their investment environment friendy (Sethi et al, 2003). These changes pertained to opening up of new areas to FDI and lowering corporate taxes.

However, these two conditions namely development of human capital and financial sector are two catalysts for FDI to promote economic growth though they can be fundamentally different. Using data from 69 countries over 1970–1989, Wang and Wong found that FDI promotes productivity growth only when the host country reaches a threshold level of human capital and FDI promotes capital growth only when a certain level of financial development is achieved.

Lipsey (2002) reviewed the micro literature and concluded that there is evidence of positive effects though his macro empirical research find no consistent relation between the size of inward FDI stocks or flows relative to GDP and growth. He further suggests that there is need for more research to focus on the different circumstances that obstruct or promote spillovers of FDI.

FDI flows into the *manufacturing sector* have been rapidly rising, fuelled by large greenfield projects in industries such as automotives, electronics, steel, and petrochemicals. Low-cost countries in South-East Asia are becoming attractive locations for the manufacturing activities of TNCs. For instance, In India, increased inflows are taking place in the steel and petrochemical industries in particular. Meanwhile, FDI in China's manufacturing sector has been shifting towards more advanced technologies. For example, foreign TNCs invested $1 billion in China's integrated circuit industry in 2005, and Airbus plans to build an A320 assembly line in China.

The *services* sector in the region continues to receive increasing FDI flows: in 2005, these were driven by large deals in financial services, particularly in China, and in other services such as telecommunications. Foreign banks and financial institutions also invested heavily. The top three targets of cross-border M&As were finance, transport, storage

and communications, and business services (largely real estate), accounting for 32%, 15%, and 11%, respectively, of the total sales of all the deals in 2005 The services sector remains the main target of cross-border M&As in developing Asia, but TNCs have been increasingly using M&As as a mode of entry or a means of increasing market share in the manufacturing sector, particularly in consumer goods industries such as food, beverages, and tobacco.

There are gaps on the literature on FDI from Indian perspective. There are a few studies by Anantaram 2004, that explore and analyze determinants of FDI from micro state levels and the results cannot be generalized. Wei, 2004 also attempts to compare China and India but the study is China focused. There are only a few studies on FDI in India from Kumar (1989) and Venktachalam (2000) as compared to a myriad studies on China, East Asia, and ASEAN countries.

The Government encouraged greater foreign investment to supplement domestic resources in order to achieve the target of 8% economic growth over the next five years. As the 4th largest economy in the world, the second largest GDP among the developing countries based on purchasing power parity, India was and is an attractive investment destination. Strengths that have attracted foreign investors to India are democratic framework; stable, compatible and transparent legal and accounting system; the primacy of rule of law; independent judiciary; a free press and a strong tradition of entrepreneurship. English is the principal language of business and commerce.

Since 1991, Foreign Direct Investment is allowed freely in almost all sectors including services in India. In some sectors the existing and notified sector policy permits FDI within a ceiling. Besides, virtually all items/activities can be brought in through the automatic route under powers delegated to the RBI. For the remaining activities, Government approvals are accorded on the recommendations of the Foreign Investment Promotion Board (FIPB). The automatic route is available not just to new ventures but to existing companies as well. Foreign technology agreements have also been actively promoted by the Government to attract the desired investment through the automatic route.

METHODOLOGY

The purpose of the study is to examine benefits of FDI inflows across sectors by examining the effect of foreign direct investment on economic growth of India. The study is confined to FDI inflows in select sectors, which are the top sectors attracting most of the FDI during the period 2003-08. Data has been sourced from websites of RBI and DIPP. The data so collected has been analyzed using statistical tools of regression and correlation coefficient models to establish relationship between economic growth as a dependent factor and FDI in select sectors as independent variables, taken individually. Literature review of developing countries, especially Asian economies has served as a learning model for what has India done and what should it do to attract FDI?

Following are the selected sectors for the chosen study:

Electrical Equipments
Services
Telecommunication
Power, Petroleum, and Natural Gas
Housing and Real Estate
Transportation
Construction
Petroleum and Natural Gas

RESULTS AND DISCUSSIONS

The average FDI inflows per year during the 9th Plan (1997-2002) were $ 3.2 billion and during the 10th Plan (2002-07), it increased manifold to stand at $ 16.33 billion the annual average being $ 6.16 billion. The top five sectors attracting FDI in fiscal 2007-08 included Services, Housing and Real Estate, Construction activities, Computer Software and Hardware, and Telecommunications. The infrastructure (construction) sector that offers massive potential to attract FDI witnessed marked increase in FDI inflows during this five-year period.

Table 1 illustrates that FDI has increased over the five year period of 2003 to 2008. In 2006-07, FDIs have registered a spectacular increase on account of a robust growth in GDP of 8.5% in the previous year 2005-06. This has led to an increased GDP growth of 9.6% in 2006-07.

Table 1		(in mn)	
Years	**Total FDI inflows**	**% change in FDI**	**GDP growth (%) rates**
2003-04	4,322	-14%	8.5
2004-05	6051	40%	7.5
2005-06	8961	28%	8.5
2006-07	22,079	153%	9.6
2007-08	29,893	35%	8.7

The sectors which have attracted the highest FDI over a period of five years (2003 -08) have been selected to find out their respective impacts on the economic growth of India.

Table 2	FDI INFLOW SECTOR WISE % share			(in mn) Correlation of of each sector in FDI % change
Sectors to GDP growth rate	**2003**	**2008**	**% change in FDI**	
Electrical equipments	532	1510	183.8346	-0.07
Services	269	6615	2359.108	0.66
Telecommunications	116	1261	987.069	0.12
Construction	47	1743	3608.511	0.44
Power, Petroleum and Natural Gas	113	2394	2018.584	-0.1
Housing and Real Estate	0	2179		0.33
Transportation	308	404*	31.16883	-0.19

April 2008 Figure

Electrical Equipments include computer software and hardware. Services include financial and non financial services only. It is quite evident from Table 2 that FDI's have increased over the five year time period. Construction has posted the maximum increase in FDI inflows which is about 3608.51%, followed by services (2359.108) and then power, petroleum and natural gas (2018.584). But looking at the quantum of FDI in services, it is quite clear that services have enjoyed the highest FDI. This has been on account of gradual liberalization of financial and non financial services such as banking and insurance.

Table 1 and Table 2 explain the correlation between % shares of each sector in FDI to GDP growth rate. Services have recorded the highest coefficient correlation of 0.66. This reflects that FDI inflows in services (received the highest share of FDI since 2006: a jump from 6% in 2005 to 21% in 2006 (Annexure 2) has a high positive correlation with economic growth. It has hiked only marginally in 2007-08 but that could be accounted to onset of recession. A positive correlation coefficient is defined as the same directional change in variables under the scanner and a negative one is vice versa. A glance through the contribution of the three sectors viz. agriculture, manufacturing, and services to GDP impresses that services have been contributing about 54 - 57% to the GDP.

This captures the buoyancy of sectors such as banking, financial, and non financial services in the economy. The US$ 28 billion Indian financial sector has grown at around 15% and has displayed stability for the last several years, even when other markets in the Asian region were facing a crisis. Favourable government policies for enhancing limits of foreign investments to 49% among other key initiatives have encouraged larger banks to mobilise sufficient capital to finance asset expansion and fund investments in technology. Construction, which refers to roads and highways, has a relatively small pie of the FDI inflows. Nevertheless the correlation coefficient of 0.44 shows the potential of this sector. The correlation could have been higher had there been no decline in 2005-06. The trend is of an increasing nature with FDI inflows almost 11.4% in 2007 from 2004. The government has permitted 100% foreign equity (up to US$ 306 million) in construction and maintenance of roads, highways, tunnels etc. In order to share project risks, the government, through the National Highways Authority of India (NHAI), can acquire equity stakes up to 40% in build-operate-transfer (BOT) projects. With the government building the **Golden Quadrilateral** (the largest express highway consisting of building 5,846 kilometres of four/six lane express highways connecting Delhi, Mumbai, Kolkata and Chennai), ports at Pipavav, Kochi and Kandla, FDI is finding this sector quite lucrative.

The extant policy for most of the infrastructure sectors permits FDI up to 100% on the automatic route. From $ 1902 million in fiscal 2001-02 the foreign investment in India's infrastructure sector increased to $ 2179 million in 2006-07. But fiscal 2007-08 witnessed significant increase in the FDI inflows in the infrastructure. From 2000-01 to December 2007, total FDI in India's infrastructure sector stood at $ 10575 million. The correlation coefficient of housing and real estate is 0.33, which again signifies the rising FDI inflows resulting in increased GDP. Housing was opened to FDI only in 2005. Thereafter, this sector has become another major investment area with significant potential as FDI has grown 57% within three years (2005-08). Non Resident Indians, persons of Indian origin and overseas corporate bodies (OCBs) are allowed to invest up to 100% on a repatriable basis in many housing and real estate projects. 100% cent FDI is permitted for the development of integrated townships, including housing, commercial buildings, hotels, resorts, etc. Prior government approval is required for investment in such projects. Web sales are a major booster for FDI inflows.

India is one of the most deregulated telecom markets in the world. Private participation is permitted in all segments of the services – international long distance, domestic long distance, basic, cellular, internet, radio-paging, and a number of value-added services. Presently 49% equity participation is permitted in telecom services and 74% in Internet services under the automatic route. Maximum foreign equity participation for Internet Service Providers (ISPs) is 100%. Private investors, both domestic and foreign, have already invested over US$ 2,449 million in different segments of the industry. To effectively regulate the sector, facilitate growth and development, promote transparency and ensure fair competition, the government has set up the Telecom Regulatory Authority of India (TRAI) as an independent regulatory

body and the Telecom Dispute Settlement Appellate Tribunal as a dispute settlement body. Yet the correlation coefficient turns out to be a mere 0.12. This is because of low telephone density of approximately 5%, estimated to grow from 7% in 2005 to 15% by 2010. Entry fee and annual fee charged by the government are pretty high which make this sector capital intensive. A large contribution towards this growth will emanate from semi-urban and rural markets where the telephone density is far below the average. The years when GDP has declined coincides with FDI inflows increasing in this sector. Yet, positive correlation figure as the pie has remained in the range of 2 – 2.68%, with increased share in 2005 and 2007.

Transportation, power, and electrical equipments are measuring negative but low correlations. However, GDP is between 8.5-9%, which could have been due to powerful surge in other mentioned sectors such as services, construction, housing etc. Transportation's share in total FDI has also undergone a decline (Annexure 2). Apart from Metro in Delhi, proposed in Hyderabad and Mumbai, not much has been visible on this front.

Electricals, including computer software and hardware has garnered the highest % share in FDI in all the years except 2007-08. Interestingly, time when GDP has declined coincides with FDI inflows dip in electricals except 2006-07. 2006-07 experienced greatest surge in GDP of about 1.1%, which explains the adverse but low figure. The Indian government has allowed foreign direct investment up to 100%, through the automatic route in the electrical equipments industry. Further the government of India has established Electronic Hardware Technology Parks in many cities of the country. The total amount of FDI inflows to Electrical Equipments industry was US$ 2,488 million from 1991 to 2002. The increase in the flow of foreign direct investment to electrical equipments industry in India has helped in the development, growth, and expansion of the industry. This has led to the improvement in the quality of the products from the industry. Power, petroleum and natural gas sector are government run and therefore FDI finds it lesser attractive on account of interference, delayed decisions, heavy investments etc. FDI upto 100% is allowed under automatic approval route in respect of projects related to electricity generation, transmission and distribution, other than atomic reactor power plants. There are no limit on the project cost and quantum of FDI.

These findings are definitely a pointer towards the positive role played by FDI in enhancing the GDP in an economy but they are not very sharp indications. Electricals definitely portray a strong relationship with GDP growth. Others sector's impact can be explained otherwise too. FDI has triggered technology spillovers, assisted in human capital formation, contributed to international trade integration and particularly exports, helped create a more competitive business environment, enhanced enterprise development, increased total factor productivity and, improved the efficiency of resource use. Progressive global integration of the Indian economy has resulted in successful assimilation of many domestic industries in global production chains. Telecommunications, software and electronics, services are important examples. Entry of foreign investment has helped these industries in achieving technological up gradation and higher value addition.

CONCLUSION

India ranked second in the world in terms of financial attractiveness, people and skills availability and business environment as revealed in AT Kearney's 2007 Global Services Location Index. Country's financial stability in the current environment of financial turbulence and a possible unwinding of macro imbalances sends clear message to the prospective foreign investors about India's position as an expanding investment destination. The strong macro economic fundamentals, growing size of the economy and improving investment climate has attracted global corporation to invest in India. A major outcome of the economic reforms process aimed at opening up the economy and embracing globalization has led to tremendous increase in Foreign Direct Investment inflows into India.

More flow of the foreign direct investment has been seen in the skill intensive and high value added service industries, especially those which are related to the financial services and information technology. Furthermore, India has come out as the international service industry. providing more unassailable low cost opportunities, the prevalence of high technology and language skills and the high supportive government

policies.

Trade liberalisation, introduction of greater competition and liberal foreign investment policies have succeeded in transforming several segments of Indian manufacturing into globally competitive entities. Yet, there exists a strong case for revisiting the issue of caps as well as that of policies in various sectors, which are:

1. Restructuring Foreign Investment Promotion Board.
2. Formation of the Indian Investment Commission for functioning as one stop haven for investor and bureaucracy.
3. Raising the FDI limit in many sectors like media, telecom, coal mining, insurance, real estate, aviation, banking etc.
4. Foreign direct investment in retail can not only organize a significant part of the largely unorganized domestic retailing, but can also invite established global retail brands into the Indian market, thereby creating greater outlets for sourcing and marketing Indian products. Organised retail formats will also help in upgrading the quality of products, establishing efficient supply chains from farm to market and generating greater employment.
5. Agriculture requires strong boosters and FDI can provide a bridge.
6. Education and health care have been negligibly affected in the slowdowns so recession free areas can be further opened up for FDI to fuel growth.
7. In petroleum and gas, ONGC is the sole producer of crude. Steps towards privatisation have been undertaken in the form of distribution. There is a whole gamut of opportunities waiting to be exploited in this particular segment. With global warming ticking the nerves of governments, FDI can be planned in non conventional sources such as solar, wind, and nuclear energy.

This paper has been confined to study GDP growth of an economy which is fuelled by FDI inflows. FDI inflows have been explored for few select sectors only and the time period considered is 2003-07. Even though these sectors are the highest FDI attracting sectors, nevertheless for better understanding of FDI's impact on economic growth, it would be appropriate to consider a larger number of sectors and that too over a longer period of time. The study can be made more intensive by analyzing some other factors such as export growth, sector growth etc using other statistical methods. Moreover, substantial impact on economic growth can be explored by studying some other parameters too. This paper provides a platform for further related research, which shall be kept in mind.

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ANNEXURE1

FDI Inflows in selected sectors from 2003-2008 (in mn)

Years	Electrical equip ments	Services	Telecom	Const-ruction	Power and gas	Housing and Real Estate	Transport action
2003-04	532	269	116	47	113	0	308
2004-05	721	444	125	152	166	0	179
2005-06	1451	543	624	151	104	38	222
2006-07	2714	4664	478	985	246	467	466
2007-08	1510	6615	1261	1743	2394	2179	404

SOURCE DIPP

ANNEXURE 2

Sector Wise % share in Total FDI from 2003-08

Years	Electrical Equipments	Services	Telecom	Const-	Power	Housing	Transport-ation
2003-04	12	6.2	2.68	1.08	2.6	0	7.1
2004-05	11.9	7.3	2.06	2.5	2.7	0	2.9
2005-06	16.1	6.05	6.9	1.6	1.1	0.42	2.4
2006-07	12	21.1	2.1	4.4	1.1	2.1	2.1
2007-08	5	22.1	4.2	5.8	8	7.2	1.3

SOURCE DIPP