

IMPACT OF FDI ON GDP (SECTOR WISE STUDY)

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ABSTRACT

FDI inflows have received considerable attention due to its undeniable importance for developing countries in form of industrial development and source of financing. To Find The Impact Of Fdi On Gdp Sector Wise Regression Method Was Applied And Found That that mining and construction have major impact on GDP as compared to others. As the study reveals that FDI in mining and construction sectors have positive impact on GDP of nation therefore government should take initiatives to bring some inflows or FDI investment in these sectors.

INTRODUCTION:

One of the most striking developments during the last two decades is the spectacular growth of FDI in the global economic landscape. This unprecedented growth of global FDI in 1990 around the world make FDI an important and vital component of development strategy in both developed and developing nations and policies are designed in order to stimulate inward flows. In fact, FDI provides a win – win situation to the host and the home countries. Both countries are directly interested in inviting FDI, because they benefit a lot from such type of investment. The ‘home’ countries want to take the advantage of the vast markets opened by industrial growth. On the other hand the ‘host’ countries want to acquire technological and managerial skills and supplement domestic savings and foreign exchange. Moreover, the paucity of all types of resources viz. financial, capital, entrepreneurship, technological know-how, skills and practices, access to markets- abroad- in their economic development, developing nations accepted FDI as a sole visible panacea for all their scarcities. Further, the

integration of global financial markets paves ways to this explosive growth of FDI around the globe.

Conceptual Framework

FDI (Foreign Direct Investment):

Foreign direct investment (FDI) is direct investment by a company in production located in another country either by buying a company in the country or by expanding operations of an existing business in the country. Foreign direct investment is done for many reasons including to take advantage of cheaper wages in the country, special investment privileges such as tax exemptions offered by the country as an incentive to gain tariff-free access to the markets of the country or the region. As a part of the national accounts of a country FDI refers to the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, other long-term capital, and short-term capital as shown the balance of payments. It usually involves participation in management, joint venture, transfer of technology and expertise. There are two types of FDI: inward foreign direct investment and outward foreign direct investment, resulting in a net FDI inflow (positive or negative) and "stock of foreign direct investment", which is the cumulative number for a given period. Direct investment excludes investment through purchase of shares. FDI is one example of international factor movements.

Starting from a baseline of less than \$1 billion in 1990, a recent UNCTAD survey projected India as the second most important FDI destination (after China) for transnational corporations during 2010–2012. As per the data, the sectors which attracted higher inflows were services, telecommunication, construction activities and computer software and hardware. Mauritius, Singapore, the US and the UK were among the leading sources of FDI. According to Ernst and Young, foreign direct investment in India in 2010 was \$44.8 billion, and in 2011 experienced an increase of 25% to \$50.8 billion. India has seen an eight fold increase in its FDI in March 2012. The world's largest retailer WalMart has termed India's decision to allow 51% FDI in multi-brand retail as a "first important step" and said it will study the finer details of the new policy to determine the impact on its ability to do business in India. However this decision of the government is currently under suspension due to opposition from multiple political quarters.

GDP (GROSS DOMESTIC PRODUCT):

Gross domestic product (GDP) refers to the market value of all officially recognized final goods and services produced within a country in a given period. GDP per capita is often considered an indicator of a country's standard of living. GDP per capita is not a measure of personal income.

STATEWISE GDP:

Rank	City	State	2008 PPP GDP (in USD)
1	Mumbai	Maharashtra	\$209 billion
2	Delhi	National Capital Territory	\$167 billion
3	Kolkata	West Bengal	\$150 billion
4	Bangalore	Karnataka	\$83 billion[3]
5	Chennai[4]	Tamil Nadu	\$67 billion
6	Hyderabad [5] 1	Andhra Pradesh	\$60 billion
7	Ahmedabad	Gujarat	\$59 billion
8	Pune	Maharashtra	\$30 billion
9	Surat	Gujarat	\$22 billion

Rank	City	State	2008 PPP GDP (in USD)
10	Kanpur	Uttar Pradesh	\$17 billion
11	Jaipur	Rajasthan	\$16 billion
12	Indore	Madhya Pradesh	\$14 billion
13	Lucknow	Uttar Pradesh	\$11 billion
14	Patna	Bihar	\$10.5 billion
15	Nagpur	Maharashtra	\$10.1 billion

India GDP Composition Sector Wise:

India GDP Composition Sector Wise consists of many sectors such as agriculture, industry, services, and infrastructure. The contribution of these sectors in India GDP differs with one sector contributing more than the other. India gross domestic product (GDP) means the total value of all the services and goods that are manufactured within the territory of the nation within the specified period of time. The economy of India is the twelfth biggest in comparison to that of others in the whole world, for it has the GDP of US\$ 1.09 trillion in 2007. The country has the second fastest major growing economy in the whole world with the GDP growing at the rate of 9.4% in 2006-07. The composition of Indian GDP includes many sectors like industry, infrastructure, agriculture, and services. The percentage of the share of these sectors in the composition of India GDP differs. the agriculture sector contributed around 32%, services sector contributed 41%, and the industry sector contributed 27% in 1990-1991. The agriculture sector contributed the most to India GDP after the independence of the

country. This sector contributed to India GDP around 18.6% in 2005. The contribution of the agriculture sector has gone down in India GDP in the last few years but in spite of this the sector remains the largest economic sector in India. The sector of industry accounts for 27.6% of India GDP for it employs around 17% of the total workforce in India. The industrial sector contributed 7.6% to India GDP in 2005- 2006 and the next year, this figure increased to 9.8%. This shows that the contribution of the industrial sector is increasing in India GDP. The services sector contributes the most to the India GDP for it accounted for 53.8% in 2005. After independence it was the agricultural sector that contributed the most to the India GDP but in recent years it has been the services sector, which has contributed the most. The agricultural sector contributed 20%, industry sector contributed 26%, and the services sector contributed around 54% to the India GDP in 2005- 2006.

The infrastructure sector contributed around 3.5% to the India GDP in 1996- 1997 and the next year, this figure increased to 4.6%. The contribution of the infrastructure sector to the India GDP increased after the India government opened the sector to private sector. India GDP Composition Sector Wise thus as seen comprises of many sectors. The government of India must take steps in order to boost all the sectors that contribute to the country's GDP for this will ensure that the economy of the country will grow and prosper.

Agriculture Growth Rate in India GDP had been growing earlier but in the last few years it is constantly declining. Still, the Growth Rate of Agriculture in India GDP in the share of the country's GDP remains the biggest economic sector in the country. India GDP means the total value of all the services and goods that are produced within the territory of the nation within the specified time period. The country has the GDP of around US\$1.09 trillion in 2007 and this makes the Indian economy the twelfth biggest in the whole world. The growth rate of India GDP is 9.4% in 2006- 2007. The agricultural sector has always been an important contributor to the India GDP. This is due to the fact that the country is mainly based on the agriculture sector and employs around 60% of the total workforce in India. The agricultural sector contributed around 18.6% to India GDP in 2005. Agriculture Growth Rate in India GDP in spite of its decline in the share of the country's GDP plays a very important role in the all round economic and social development of the country. The Growth Rate of the Agriculture Sector in India GDP grew after independence for the government of India

placed special emphasis on the sector in its five-year plans. Further the Green revolution took place in India and this gave a major boost to the agricultural sector for irrigation facilities, provision of agriculture subsidies and credits, and improved technology. This in turn helped to increase the Agriculture Growth Rate in India GDP.

The agricultural yield increased in India after independence but in the last few years it has decreased. This in its turn has declined the Growth Rate of the Agricultural Sector in India GDP. The total production of food grain was 212 million tones in 2001- 2002 and the next year it declined to 174.2 million tones. Agriculture Growth Rate in India GDP declined by 5.2% in 2002- 2003. The Growth Rate of the Agriculture Sector in India GDP grew at the rate of 1.7% each year between 2001- 2002 and 2003- 2004. This shows that Agriculture Growth Rate in India GDP has grown very slowly in the last few years. Agriculture Growth Rate in India GDP has slowed down for the production in this sector has reduced over the years. The agricultural sector has had low production due to a number of factors such as illiteracy, insufficient finance, and inadequate marketing of agricultural products. Further the reasons for the decline in Agriculture Growth Rate in India GDP are that in the sector the average size of the farms is very small which in turn has resulted in low productivity. Also the Growth Rate of the Agricultural Sector in India GDP has declined due to the fact that the sector has not adopted modern technology and agricultural practices. Agriculture Growth Rate in India GDP has also decreased due to the fact that the sector has insufficient irrigation facilities. As a result of this the farmers are dependent on rainfall, which is however very unpredictable. Agriculture Growth Rate in India GDP has declined over the years. The Indian government must take steps to boost the agricultural sector for this in its turn will lead to the growth of Agriculture Growth Rate in India GDP.

Top Ten Sectors Attracting Highest FDI Equity Inflows:

Rank	Sector	2009-10 (April- March)	2010-11 (April- March)	(2011-12 (April- Jan.)	Cumulative % Inflows (April '00 - Jan. '12)	age to total Inflows (In terms of US\$)

1	SERVICES SECTOR (financial & non-financial)	19,945 (4,176)	15,053 (3,296)	22,771 (4,836)	143,878 (31,971)	20.00%
2	TELECOMMUNICATIONS (radio paging, cellular mobile, basic telephone services)	12,270 (2,539)	7,542 (1,665)	8,984 (1,992)	57,050 (12,547)	8.00%
3	COMPUTER SOFTWARE & HARDWARE	4,127 (872)	3,551 (780)	3,312 (698)	49,626 (11,107)	7.00%
4	HOUSING & REAL ESTATE	14,027 (2,935)	5,600 (1,227)	2,750 (591)	49,025 (10,973)	7.00%
5	CONSTRUCTION ACTIVITIES (including roads & highways)	13,469 (2,852)	4,979 (1,103)	10,859 (2,230)	49,440 (10,867)	7.00%
6	DRUGS & PHARMACEUTICALS	1,006 (213)	961 (209)	14,482 (3,208)	42,745 (9,170)	6.00%
6	POWER	6,138 (1,272)	5,796 (1,272)	7,262 (1,569)	32,798 (7,215)	5.00%
7	AUTOMOBILE INDUSTRY	5,893 (1,236)	5,864 (1,299)	2,916 (635)	29,354 (6,470)	4.00%
8	METALLURGICAL INDUSTRIES	1,999 (420)	5,023 (1,098)	7,700 (1,655)	26,287 (5,909)	4.00%
10	PETROLEUM & NATURAL GAS	1,297 (266)	2,543 (556)	951 (202)	14,612 (3,339)	2.00%

SECTORS TAKEN INTO ACCOUNT FOR THIS STUDY:

- MINING
- MANUFACTURING

- FINANCE
- ELECTRICITY
- HOUSING & REAL ESTATE
- CONSTRUCTION ACTIVITIES (INCLUDING ROADS & HIGHWAYS)
- COMMUNICATION
- BUSINESS SERVICE
- HOTEL
- TRANSPORT
- TRADING

Sector-Wise FDI Inflows From April 2000 To January 2012.

.No	Sector	Amount of FDI Inflows		%age with total FDI Inflows (+)
		(In Rs crore)	(In US\$ million)	
1	SERVICES SECTOR	143878.44	31970.85	19.99
2	TELECOMMUNICATIONS	57049.95	12546.54	7.84
3	COMPUTER SOFTWARE & HARDWARE	49626.45	11106.5	6.94
4	HOUSING & REAL ESTATE (INCLUDING CINEPLEX,MULTIPLEX, INTEGRATED TOWNSHIPS & COMMERCIAL COMPLEXES ETC.)	49024.58	10972.67	6.86
5	CONSTRUCTION ACTIVITIES	49440.18	10867.24	6.79
6	HOTEL & TOURISM	14770.58	3229.48	2.02
7	TRADING	14131.09	3126.53	1.95
8	ELECTRICAL EQUIPMENTS	12902.14	2844.75	1.78
9	ELECTRONICS	5214.6	1151.07	0.72
10	TEXTILES (INCLUDING DYED,PRINTED)	5036.27	1104.54	0.69

11	MINING	4042.33	937.9	0.59
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LITERATURE REVIEW:

Bruckner (2003) described the relationship between trade and telecommunication. He found positive impact of telecommunication on economic growth. He was of the view that improvement in telecommunications infrastructure and reducing costs will lead to a higher growth in trading other than non-trading sectors. He also emphasized the importance of FDI in telecommunication sector. Freund and Weinhold (2004), studied the effect of Internet as a communication tool in the promotion of international trade. He observed positive impact of inter-net in trade promotion and concluded that 10% increase in web hosts in a country leads to rise in 0.2% increase in export growth. Hirschman (1967) examined various development projects. So he recognized the importance of telecom infrastructure in trade development. Saunders et al. (1994), in his micro level studies observed that investment in telecom firms normally generate internal rate of return approximately 20%. At their macro level studies they examined the economies of Hong Kong, Singapore, Korea and Taiwan and found that these countries gave more attention to the development of telecom infrastructure and now they are in strong position in the world trade market. (Piritta Sorsa, 2003) found that Although most countries offered a large numbers of incentives to attract FDI, experience from other countries shows that such plans often have limited impact on new investment, reduce transparency of the business climate, and lead to higher taxes for other taxpayers. According to the study done by Pradeep Agrawal (2000) on economic impact of foreign direct investment in south Asia by undertaking time-series, cross-section analysis of panel data from five South Asian countries; India, Pakistan, Bangladesh, Sri Lanka and Nepal, that there exist complementarity and linkage effects between foreign and national investment. Reason behind this was the changes in the import substitution policies and high import tariffs. Chadee and Schlichting (1997) discussed some aspects of foreign direct investment in the Asia Pacific Region and concluded that FDI has made a positive contribution to all the economies in that region. Borensztein, et al. (1998) through a study of 69 developing countries confirm that the LDC s (less Developed countries) do benefit from FDI, if they have the capabilities to absorb advanced technologies. The World Bank's 2001 edition of global development finance talks about the importance of "absorptive capacities" and the success of FDI, like macroeconomic management (as captured by inflation and trade

openness), infrastructure (telephone lines and paved roads), and human capital (share of labor force with secondary education and percentage of population with access to sanitation), but financial markets are not mentioned.

Sadik and Bolbol (2001) investigated the effect of FDI through technology spillovers on overall total factor productivity. They found that FDI has not had any manifest positive spillovers on technology and productivity over and above those of other types of capital formation. On the contrary, there are some indications that the effect of FDI on total factor productivity has been lower than domestic investments in some of the countries over the period studied, indicating a possibly dominating negative crowding out effect. Buckley et. al, (2002) argued that the extent to which FDI contributes to growth depends on the economic and social conditions in the recipient country. However, FDI may have negative effect on the growth prospects of the recipient economy if they result in a substantial reverse flows in the form of remittances of profits, and dividends and/or if the multinational corporations (MNCs) obtain substantial or other concessions from the host country. The view that FDI fosters economic growth in the host country, provided that the host country is able to take advantage of its spillovers is supported by empirical findings by De Mello (1999) and Obwona (2001). Borensztein et al., 1998 go further to suggest that FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. They use a model of endogenous growth, in which the rate of technological progress is the main determinant of the long-term growth rate of income.

OBJECTIVES OF THE STUDY:

- To know the cause and effect relationship of FDI on GDP.
- To study the impact of FDI on various sectors.
- To open new vistas for further research.

Hypothesis Formation:

- Ho: There is no impact of FDI on GDP.

RESEARCH METHODOLOGY:

The Study is Causal in nature .It includes 11sectors of India of India such as Mining, Manufacturing, Construction ,finance, electricity, communication, business service, hotel, transport, trading, real estate etc) and (2006-2011) is the time frame of our study. For data analysis we have applied linear regression analysis test. This study is based on secondary data. The required data have been collected from various sources i.e. World Investment Reports, Asian Development Bank’s Reports, various Bulletins of Reserve Bank of India, publications from Ministry of Commerce, Govt. of India, Economic and Social Survey of Asia and the Pacific, United Nations, Asian Development Outlook, Country Reports on Economic Policy and Trade Practice- Bureau of Economic and Business Affairs, U.S. Department of State and from websites of World Bank, IMF, WTO, RBI, UNCTAD, EXIM Bank etc.. It is a time series data and the relevant data have been collected for the period 1991 to 2008.

Interpretation Table For All The 11 Sectors

S.no:	Sectors	Beta value	T (value)	F (value)	Significant value	R2	Effect in %
1	Mining	.955	5.583	31.285	.011	.912	91.2%
2	manufacturing	.677	1.594	2.541	.209	.459	45.9%
3	Construction	.943	4.853	23.551	.017	.887	88.7%
4	finance	-.178	-.314	.099	.774	.032	3.2%
5	electricity	.862	2.947	8.682	.060	.743	74.3%
6	comm	.544	1.122	1.260	.343	.296	29.6%
7	b.service	-.699	-1.692	2.861	.189	.488	48.8%
8	hotel	.342	.630	0.397	.574	.117	11.7%

9	Transport	-.134	-.235	0.055	.830	.018	1.8%
10	Trading	.148	.259	0.067	.812	.022	2.2%
11	Real estate	.148	.259	0.067	.812	.022	2.2%

Interpretation Table

S.no	Sectors	Model summary table	Annova table	Coefficient table
1	Mining	From this table fdi has 91.2% effect on gdp	Model was tested through ($f = 31.285$) which is significant at .011 by this value we can say that model is goodfit.	The result of regression from this table indicates that fdi has no cause and effect relationship with gdp and have beta value of .955 tested through t test having t value of 5.583 which is significant at .011 level of significance. i.e null hypothesis rejected.
2	Manufacturing	From this table fdi has 45.9% effect on gdp	Model was tested through ($f = 2.541$) which is significant at .209 value by this value we can say that model is badfit.	The result of regression from this table indicates that fdi has no cause and effect relationship with gdp and have beta value of .677 tested through t test having t value of 1.594 which is significant at .209 level of significance. Null hypothesis is accepted.

3	Construction	From this table fdi has 88.7% effect on gdp	Model was tested through $f=23.551$ which is significant at .017 value by this value we can say that model is goodfit.	The result of regression from this table indicates that fdi has no cause and effect relationship with gdp and have beta value of .943 tested through t test having t value of 4.853 which is significant at .017 level of significance. Null hypothesis is rejected.
4	Finance	From this table fdi has 3.2% effect on gdp	Model was tested through($f=.099$) which is significant at .774 value by this value we can say that model is bad f it.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of -.178 tested through t test having t value of -.314 which is significant at .774 level of significance. Null hypothesis is accepted

5	Electricity	From this table fdi has 74.3% effect on gdp	Model was tested through ($f=8.682$) which is significant at .060 value by this value we can say that model is badfit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of .862 tested through t test having t value of 2.947 which is significant at .060 level of significance. null hypothesis is accepted
6	Communication	From this table fdi has 29.6% effect on gdp	Model was tested through($f=1.260$) which is significant at.343 value by this value we can say that model is bad fit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of .544 tested through t test having t value of 1.122 which is significant at. .343 level of significance. Null hypothesis is accepted
7	Business Service	From this table fdi has 48.8% effect on gdp	Model was tested through($f = 2.861$) which is significant at value by this.189 value we can say that model is badfit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of -.699 tested through t test having t value of-1.692 which is significant at .189

				level of significance.null hypothesis is accepted
8	hotel	From this table fdi has 11.7% effect on gdp	Model was tested through ($f = .397$) which is significant at $.574$ value by this value we can say that model is badfit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of $.342$ tested through t test having t value of $.630$ which is significant at $.574$ level of significance. Null hypothesis is accepted
9	transport	From this table fdi has 1.8% effect on gdp	Model was tested through ($f = 0.055$) which is significant at $.830$ value by this value we can say that model is bad fit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of $-.134$ tested through t test having t value of $-.235$ which is significant at $.830$ level of significance. Null hypothesis is accepted
10	trading	From this table fdi has 2.2% effect on gdp	Model was tested a($f = 0.067$) which is significant at $.812$ value by this value we can say that model is bad fit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of $.148$ tested through t test having t value of $.259$ which is significant at $.812$ level of significance. Null. hypothesis is

				accepted
11	Real estate	From this table fdi has 2.2% effect on gdp	Model was tested through ($f = 0.067$) which is significant at .812 value by this value we can say that model is bad fit.	The result of regression from this table indicates that fdi has cause and effect relationship with gdp and have beta value of .148 tested through t test having t value of .259 which is significant at .812 level of significance. Null Hypothesis is accepted.

CONCLUSION:

FDI inflows have received considerable attention due to its undeniable importance for developing countries in form of industrial development and source of financing. The study that mining and construction have major impact on GDP as compared to others. As the study reveals that FDI in mining and construction sectors have positive impact on GDP of nation therefore government should take initiatives to bring some inflows or FDI investment in these sectors.

References:

- Bruckner (2003). 28-30 October. ITU'ESCAP/WTO Joint Seminar on Telecommunication and Trade Issues. Bangkok.
- Freund LC, Weinhold (2004). "The Effect of the Internet on Int. Trade". J. Int. Econ. 62: 171-189
- Hirsch-man A (1967). "Development Projects Observed". Washington DC: Brookings Institutions.
- Saunders J, Warford J, Wellenius B (1994). "Telecommunication and Economic Development". Baltimore. (MD: John Hopkins University Press.
- Agrawal P.(2000) Economic impact of foreign direct investment in south Asia Indira Gandhi Institute of Development Research, Gen. A.K. Bombay; India(<http://www.slageconr.net/slsnet/9thicsls/fullpapers/fullp092.pdf>)

- Kohpaiboon K. Foreign Trade Regime and FDI-Growth Nexus : A Case Study of Thailand, Ph D Scholar, Division of Economics, Research School of Pacific and Asian Studies, Australian National University. (<http://www.slageconr.net/slsnet/9thicsls/fullpapers/fullp092.pdf>)
- Chadee and Schlichting(1997); “Foreign Direct Investment in the Asia-Pacific Region: Overview of Recent Trends and Patterns”; Asia Pacific Journal of Marketing and Logistics; Vol.9, No.3, p.3-15. (http://www.eurojournals.com/EJSR_57_2_08.pdf)
- Borensztein, Greorio, De and Lee(1998); “How Does Foreign Direct Investment Affect Growth?”; Journal of International Economics; Vol.45, No.1, p.115-135. (http://www.eurojournals.com/EJSR_57_2_08.pdf)
- Report 2004: The Shift Towards Services. York and Geneva: UN. 16. UNCTAD, 2002, World Investment Report 2002. Transnational Corporations and Export Competitiveness. York and Geneva: UN. World Bank, 2001, World Development Report.
- Sadik, Ali, and Bolbol, Ali. 2001, Capital Flows, FDI, and Technology Spillovers: Evidence from Arab Countries. World Development. 29 (12): 2111-2125.
- Buckley, P. J., J. Clegg, and C. Wang 2002. “The impact of inward FDI on the performance of Chinese manufacturing firms, Journal of International Business Studies”, 33(4), 637–655.
- Bengoa, M. and Blanca Sanchez-Robles 2003, "Foreign direct investment, economic freedom and growth: new evidence from Latin America, European Journal of Political Economy”, Vol. 19 (2003) 529–545
- DeMello, L.R., Jr. 1999. Foreign direct investment-led growth: Evidence from time series and panel data. Oxford Economic Papers, 51(1), 133–151.
- Obwona, M., 2001. Determinants of FDI and their impact on economic growth in Uganda. African Development Review 13, 46– 81.