

Imperative Role of FDI in Infrastructure Development and Economic Growth in India

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Abstract—The present paper aims to conceptually analyse the role of FDI in infrastructure development. Study also enlightened the trends of FDI inflow into India. FDI and infrastructure both are very important determinant of economic development for every nation. Both are also interlinked to each other and having positively strong relationship. FDI is the most important source of infrastructure financing which assists in enhancing infrastructure status in a country. On the other hand, established infrastructure of an economy is the key source of attracting more foreign investment. Well-developed infrastructure is essential for every economy as it is considered as the backbone of various sectors such as industrial production, agriculture, tourism, social development, and economic growth of a country. During 1990s, infrastructure status was in dire situation and the reason was the scarcity of government funds. Hence, privatization allowed for construction, operation, maintenance and overall development of infrastructure sector. Since 1990s, governments all over the world have been encouraging the use of FDI in various sectors of infrastructure. FDI helps in bridging financial gaps between the quantum of funds needed to sustain a level of growth and domestic availability of funds. FDI brings abundant funds as well as modern technologies, which helps in boosting the economic growth of a country. The present study highlights the contribution of FDI in various sub sectors of infrastructure such as transportation, telecommunication, civil aviation, electricity generation, education and healthcare etc. Findings of the study also indicate that FDI has a positive impact on infrastructure development and economic growth of a country. Present study is broadly based on secondary data and the paper has its significance to policy makers, academician and proposed researchers.

Keywords: Infrastructure Financing, FDI, Infrastructure Development, and Economic Growth.

1. INTRODUCTION

Well-developed infrastructure is necessary for the economic development as well as the enlargement of other sectors also such as agriculture sector, industrial, tourism, social, improving livelihood, regional development, and poverty reduction [1, 4-6, 9-13, 15-18, and 20-24]. Infrastructure projects are too large in nature, it takes long period for completion, needs regular maintenance and better operations, and all the mentioned work needs huge funds, and it is challenging job for alone government to arrange the entire funds. Hence, in 1991, governments all over the world allow

FDI to invest in infrastructure sectors. FDI brings not only huge funds as well as modern technologies, sharp skills and knowledge also which facilitates to complete the project at low cost and minimum time period [14]. FDI is considered as the most important vehicles for the transferring of modern technologies, funds and innovative ideas from one country to another for the development of host country. FDI is helping to improve the situation of different infrastructure sectors such as transportation, power, communication, irrigation, tourism, and overall it helps in smooth functioning of production activities, it not only support physical condition of a country but also helps in education, health and water and sanitation which facilitates community's development [19]. On the other hand sound infrastructure attracts more FDI in developing countries; apart from sound infrastructure market size, banking system, financial market regulation, political and economic and stability, tax incentives are the other important factors which affect the inflow of FDI and make a positive impact on economic growth [14]. Governments all over the world should to improve the guidelines for foreign investors to increase the inflow of foreign investments. The present paper reviews the literature on the link between FDI, economic growth and infrastructure. Plethoras of studies have been empirically proved the impact of FDI on economic growth and infrastructure [14]. Some studies agreed that infrastructure is the main determinant to attract the foreign investments; therefore development of infrastructure sector is essential for all developing countries.

The rest part of the paper is structured as follows: Section 2 covered the literature on the role of FDI in infrastructure and its relation with economic growth, section 3 describes the objectives of the study, section 4 presents both country wise and sector wise inflow trends of FDI in India, and section 5 presents conclusion.

2. LITERATURE REVIEW

The association between FDI, infrastructure and economic development has encouraged a huge empirical literature focusing on both developing and developed countries. A lot of studies found positive link between FDI and economic growth,

FDI and infrastructure development, and infrastructure development and economic growth. The impact of FDI on economic development has been examined by several studies and found the positive impact of FDI on economic development (see Table 1). FDI plays an important role as a financing source of infrastructure; numerous literature has been proved the role of FDI in infrastructure sector also. This segment presented some literatures on FDI, infrastructure and economic development.

Table 1: Impact of FDI on economic growth

Authors	Sample countries	Period for the study	Effects
Kokko 1994	Mexico		+ve
Saltz 1992	68 developing countries	1970-80	-ve
Blomstrom 1986	Mexico		+ve
De Gregorio 1992	12 Latin American Countries	1950-85	+ve
Fry 1993	16 developing countries	1966-88	+ve
Mody and Wang 1997	7 Chinese coastal regions	1985-89	+ve
Oloffsdotter 1998	50 developing countries	1980-90	+ve
Sjoholmn 1999a	Indonesia	1980-91	+ve
Bengoa	18 Latin American countries	1972-1997	+ve
Soto 2000	44 developing countries	1986-97	+ve
UNCTAD 2000	100 LDC	1970-95	+ve
Nair-Reichert and Weinhold 2001	24 developing countries	1971-95	+ve
Carkovic and Levine 2002, 2005	72 countries	1960-95	No effect
Wang 2002	12Asianeconomies	1987-97	+ve
Lensink and Morrissey 2001	115 countries	1975-98	+ve
Choe 2003	80 countries	1971-95	+ve
Nath 2004	10 transition countries of CEE	1990-2000	+ve
Lensink and Morrissey 2006	87 countries	1975-97	+ve
Li and Liu 2005	84 countries	1970-99	+ve

Source: Ozturk (2007)

The above literatures conducted research to examine the impact of FDI on economic growth and most of the literature found and proved the positive relation between FDI and economic growth.

3. OBJECTIVES OF THE STUDY

The main objective of the present study is to analyse the imperative role of FDI in infrastructure and economic development. Followings are the some other objectives:

To reviews the previous literature on FDI, infrastructure and economic development.

To study the inflow trends of foreign direct investments (FDI) in India.

To analyses the impact of FDI on economic growth of a country.

To assesses the significant contribution of FDI in infrastructure development.

4. FDI IN INDIA

Though India has not sound infrastructure facilities, but due to some factors such as strong regulatory systems, strict laws, skilled human capital, large market size, and many other abundant natural resources, a lot of foreign countries prefer India for invests their capital. According to World Investment Report (2010) India is the fifth largest receiver of FDI across the world and second largest country amongst all the developing economies [2]. Indian government has such guidelines for foreign investors which increases their faith to invest more funds in India. Still India has some barriers which obstruct to collect more foreign investment such as poor infrastructure, unemployment, large population, instable government, unhelpful political environment, limited and restricted foreign policy and heavy corporate taxes; these are the major barriers for attracting FDI into the country. To remove all these barriers and obstacles, a government should to modify the sector cap and include more sectors under automatic routes. Further, Indian government should to invest huge funds for the development of infrastructure sectors and make some more policies regarding to increase the faith of foreign investors. As we see in Table 2, there is a large investment made by Mauritius from 2011-2015.

Table 2: Foreign Direct Investment flow to India: Country wise

(US \$ million)					
Source Country	2010-11	2011-12	2012-13	2013-14	2014-15
Total FDI	14,939	23,473	18,286	16,054	24,748
Country wise Inflows					
Mauritius	5,616	8,142	8,059	3,695	5,878
Singapore	1,540	3,306	1,605	4,415	5,137
U.S.A	1,071	994	478	617	1,981
Cyprus	571	1,568	415	546	737
Japan	1,256	2,089	1,340	1,795	2,019
Netherlands	1,417	1,289	1,700	1,157	2,154
UK	538	2,760	1,022	111	1,891
Germany	163	368	467	650	942
UAE	188	346	173	239	327
France	486	589	547	229	347
Switzerland	133	211	268	356	292
Hongkong	209	262	66	85	325
Spain	183	251	348	181	401
China	2	73	148	121	505
Malaysia	40	18	238	113	219

South Korea	136	226	224	189	138
Luxembourg	248	89	34	539	204
Others	1,142	892	1,154	1,015	1,250

Source: www.rbi.org.in

Table 3: Foreign Direct Investment flow to India: Industry wise

(US \$ million)

Source Industry ↓	2010-11	2011-12	2012-13	2013-14	2014-15
Total FDI	14,939	23,473	18,286	16,054	24,748
Sector wise Inflows					
Manufacturing	4,793	9,337	6,528	6,381	9,613
Construction	1,599	2,634	1,319	1,276	1,640
Financial sectors	1,353	2,603	2,760	1,026	3,075
Real Estate	444	340	197	201	202
Electricity	1,338	1,395	1,653	1,284	1,284
Communication services	1,228	1,458	92	1,256	1,075
Business	569	1,590	643	521	680
Miscellaneous	509	801	552	941	586
Computer	843	736	247	934	2,154
Rest. & Hotels	218	870	3,129	361	686
Retails & Wholesale Trade	391	567	551	1,139	2,551
Mining	592	204	69	24	129
Transportation	344	410	213	311	482
Trading	156	6	140	0	228
Education	56	103	150	107	131
Others	506	419	43	293	232

Source: www.rbi.org.in

Infrastructure considered as the most important sector to assist economic development of a nation, therefore it needs large investment and government also should to make a policy to allow foreign investment without any strict formalities in these sectors such as transportation, communication, energy, irrigation, education and health. As we in Table 3, most of the sectors are covered under infrastructure head such as manufacturing, construction, transportation, education, electricity and real estate which receives foreign investments. Hence, FDI helps in infrastructure and economic development.

5. CONCLUSION

FDI plays a significant role in the development of infrastructure sectors. Both physical and social infrastructure services helps in economic development as well as raising the living standards, poverty reduction, employment generation, agriculture development and so on; hence, it is necessary to invest more funds in infrastructure sector. FDI directly or indirectly helps in enlarging of economic development of a country. FDI provides huge funds as well as it brings technological skills & knowledge, modern technologies also which facilitates in strengthening infrastructure, generating employment opportunities, increasing productivity, and raise the efficiency of human capital. Indian government has to

improve its infrastructure status and foreign investment policy to attract more FDI.

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REFERENCES

- [1] Ali, I., & Pernia, E. M. (2003). Infrastructure and Poverty Reduction—what is the Connection? ADB Working Paper, 1655-5260.
- [2] Anitha, R. (2012). Foreign Direct Investment and economic growth in India. *International Journal of Marketing, Financial Services & Management Research*, 1(8), 108-125.
- [3] Annual report of RBI 2014-15, Available at <https://www.rbi.org.in/scripts/AnnualReportPublications.aspx?id=1029>
- [4] Antle, J.M., 1983. Infrastructure and Aggregate Agricultural Productivity: International Evidence, *Economic Development and Cultural Change*, pp. 609–619
- [5] Aschauer, D. A. (1989). Is public expenditure productive? *Journal of monetary economics*, 23(2), 177-200
- [6] Bhatia, M. S. (1999). Rural infrastructure and growth in agriculture. *Economic and political weekly*, A43-A48
- [7] Busse, M., & Groizard, J. L. (2008). Foreign direct investment, regulations and growth. *The World Economy*, 31(7), 861-886.
- [8] Chaturvedi, I. (2011). Role of FDI in Economic Development of India: Sectoral Analysis. In *International Conference on Technology and Business Management* (pp. 528-533).
- [9] Fan, S., Zhang, L., & Zhang, X. (2002). Growth, inequality, and poverty in rural China: The role of public investments (Vol. 125). *Intl Food Policy Res Inst*.
- [10] Ghosh, B., & De, P. (2005). Investigating the linkage between infrastructure and regional development in India: era of planning to globalization. *Journal of Asian Economics*, 15(6), 1023-1050
- [11] Hulten, C. R. (1996). Infrastructure capital and economic growth: How well you use it may be more important than how much you have (No. w5847). *National Bureau of Economic Research*
- [12] Mavalankar, D. V., Ramani, K. V., Patel, A., & Sankar, P. (2005). Building the Infrastructure to Reach and Care for the Poor: Trends, Obstacles and Strategies to overcome them.
- [13] Munnell, A. H., & Cook, L. M. (1990). How does public infrastructure affect regional economic performance? *New England economic review*, (Sep), 11-33.
- [14] Ozturk, I. (2007). Foreign direct investment-growth nexus: a review of the recent literature. *International Journal of Applied Econometrics and Quantitative Studies*, 4(2).
- [15] Pal, S. (2010). Public infrastructure, location of private schools and primary school attainment in an emerging economy. *Economics of Education Review*, 29(5), 783-794.
- [16] Patra, A. K., & Acharya, A. (2011). Regional disparity, infrastructure development and economic growth: An inter-state analysis. *Research and Practice in Social Sciences*, 6 (2), 17-30.
- [17] Pinstrup-Andersen, P., & Shimokawa, S. (2006). Rural infrastructure and agricultural development. *World Bank*.

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- [18] Rao, P. S., & Srinivasu, B. (2013). Infrastructure development and economic growth: Prospects and perspective. *Journal of Business Management & Social Sciences Research*, 2(1), 81-91.
- [19] Rath, C., & Sanghamitra, M. An impact of foreign direct investment (FDI) on infrastructure development for the economic growth in India: An economic survey on Indian scenario
- [20] Sahoo, P., & Dash, R. K. (2009). Infrastructure development and economic growth in India. *Journal of the Asia Pacific Economy*, 14(4), 351-365
- [21] Sahoo, P., Dash, R. K., & Nataraj, G. (2010). Infrastructure development and economic growth in China. Available at https://scholar.google.co.in/scholar?q=Infrastructure+Development+and+Economic+Growth+in+China&btnG=&hl=en&as_sdt=0%2C5
- [22] Sapkota, J. B. (2014). Access to Infrastructure and Human Development: Cross-Country Evidence.
- [23] Singh, S., Batra, G. S., & Singh, G. (2007). Role of Infrastructure Services on the Economic Development of India. *Management and Labour Studies*, 32(3), 347-359.
- [24] Sridhar, K. S., & Sridhar, V. (2007). Telecommunications infrastructure and economic growth: Evidence from developing countries. *Applied Econometrics and International Development*, 7(2).
- [25] Sriram, M. A Causal Nexus Between FDI and Economic Growth of India: An Empirical Study.