



A Study of Relationship and Impact of Foreign Direct Investment on Economic Growth Rate of India

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ABSTRACT

One of the main pointers of the health of any economy is its Gross Domestic Product (GDP). It indicates the size of the economy. It also helps in determining and comparing the growth of economy over different periods and also with that of other economies. Investment is the major factor that contributes to the growth of GDP. Increase in level of investment leads to the multiplier impact on increasing the levels of employment and income. There is significant role of Foreign Investment in open economies. Such investment can be direct or indirect. The current study aims to know the relationship and impact of growth rate of foreign direct investment (FDI) in India on growth rate of GDP in India. The study used correlation analysis and regression analysis. It found that there existed insignificant relationship between the growth rate of FDI and economic growth rate. Also, the results of regression analysis indicated the no significant impact of growth rate of FDI on growth rate of GDP.

Keywords: FDI, GDP, Economic Growth, Indian Economy

JEL Classifications: E01, F21, F43

1. INTRODUCTION AND LITERATURE REVIEW

Gross Domestic Product (GDP) is one of the main economic indicators that gives snapshot of the economic position of a country. It is used to measure the size and growth of economy. One of the important factor which contributes to growth of GDP is the investment. According to Keynes investment plays key role in economic growth. Increase in level of investment will lead to increase in employment and income, which will lead to increase in demand in an economy. In short with increase in investment income and employment in an economy will increase multiple times depending upon propensity to consume in that economy.

Developing nations usually suffer the problem of low investment due to low income and low risk bearing capacity of the people of the country. Foreign Direct Investment (FDI) plays expected to play a significant role to boost the investment in developing

economies and put them on higher growth trajectory. Theoretically, this is justified that the increase in FDI should increase the economic growth. However, there have been studies that found the existence of positive, negative and no impact of increase in FDI and increase in GDP (Türkcan et al., 2008).

After Independence growth of Indian economy can be studied in two phases' first pre liberalization i.e. 1947 to 1990 and post liberalization i.e. post 1990. Before 1990s Indian industrial structure was financially and technologically weak. In 1990s New Economic Policy not only deregulated domestic industry but also eased up its policies concerning FDI. The number of hindrances which were previously been imposed on direct and indirect foreign investment were done away with. The processes required for getting approvals for collaboration including technical and financial were completely revised. The central bank of the country was given powers to give an automatic approval for many specified industries. This increased competitiveness among industries and also boosted the growth

rate of Indian economy. Rakhmatullayeva et al. (2020) studied the impact of FDI inflows on the economic growth of the host country, using the Kazakhstan economy as an example. The paper made an attempt to evaluate the effect of FDI through multiple regression model over the period 2000-2017. The results of the analysis showed no negative impact of FDI on economic growth. However, the authors pointed out that the existence of a positive relationship is not essential for assessing the growth of the national economy. Sokang (2018) examined the effect that the foreign direct investment had on the economic growth of Cambodia. The author used the time series data covering the period from 2006 to 2016. The data so collected was evaluated through correlation analysis and multiple regression analysis. The study found that the positive impact of FDI on the economic growth of the selected country. The study recommended the government to initiate the reforms over the home markets to draw more FDI in the country. Balasubramanyam et al. (1996) examined the role that foreign direct investment plays in the growth process in the context of developing countries characterized by differing trade policy regimes within a new growth theory framework. Further, Balasubramanyam et al. (1999) presented an analysis of the role of Foreign Direct Investment (FDI) in promoting economic growth and indicated that interactions between FDI and human capital employ an exclusively important impact upon growth performance. FDI is expected to improve economic growth of host nation (Zhang, 2001; Hermes and Lensink, 2003). FDI through transfer of Know-how and technology affects GDP (Hansen and Rand, 2006; Berthélemy and Démurger, 2000). Choe (2003) found that effects from growth to FDI are rather far more evident than from FDI to growth. Basu et al. (2003), Basu and Guariglia (2007) investigated the impact of liberalization on the dynamics of the FDI and GDP relationship. Bengoa and Sanchez-Robles (2003) explored the interplay between economic freedom, foreign direct investment (FDI) and economic growth using panel data analysis for a sample of 18 Latin American countries for 1970-1999 and they found that FDI is always significantly and positively correlated with economic growth.

Rahaman and Chakraborty (2015) evaluated if the causal relationship existed between foreign direct investment (FDI) and gross domestic product (GDP). The study focused on Bangladesh. The researchers used the technique of cointegration test to confirm the presence of long-run equilibrium relationship. It further applied Granger causality test to assure the presence of unidirectional causality that run from FDI to GDP. The results indicated that in relation to neighbouring countries, the FDI inflow was very less. The country needed developed facilities and infrastructure, skilful labour, abundance of generation of electricity, macroeconomic framework that supports investments and also required was the political stability in the nation so as to attract foreign investment. Johnson (2006) used cross section as well as panel data. It selected 90 countries and collected data over the period 1980-2002. The author found that for the select countries, the FDI inflows had a positive impact on nation's economic growth. Chowdhury and Mavrotas (2003) inspected the presence of causal relationship between the economic variables; FDI and economic growth. The study used an innovative econometric methodology to assess the path of causality between the variables under the study. The methodology used in the study was based on the Toda-Yamamoto test for causality. It selected

the time-series data covering the period from 1969 to 2000. The countries selected were all developing countries, namely Chile, Malaysia and Thailand. The findings of the study clearly recommended that the Gross Domestic Product causes Foreign Direct Investment in case of Chile. However, for other countries included in the study namely; Malaysia and Thailand, there was found to be a strong indication of presence of a bi-directional causality between the variables under the study.

2. RESEARCH OBJECTIVES AND RESEARCH METHODOLOGY

The objective of the study is to measure the relationship and the impact of foreign direct investment on growth rate of GDP of India. The study involves the analysis of the data pertaining to foreign direct investment and economic growth rate of India for the period 2001-2019. The study included the data for the variables under the study obtained from the website of World Bank (<http://api.worldbank.org/v2/en/country/IND?downloadformat=excel>). The study involved the computation of the growth rate of FDI based on the data related to FDI (net inflows) provided by World Bank. The statistical tools used for the purpose of the study are correlation and regression.

3. RESEARCH HYPOTHESIS

The hypothesis devised to appraise the significance of association between growth rate of FDI net inflows and growth rate of GDP of India and significance of impact of growth rate FDI (net inflow) on growth rate of GDP of India have been stated as:

H₁: There is significant relationship between growth rate FDI (net inflows) and growth rate of GDP of India

H₂: There is significant impact of growth rate FDI (net inflows) on growth rate of GDP of India

Table 1: Growth rate of GDP and FDI (net inflows) in India

Year	Growth rate of GDP (annual %)	Foreign direct investment, net inflows (Annual %)
2001	4.823966	43.07429
2002	3.803975	1.577068
2003	7.860381	-29.3145
2004	7.922937	47.45447
2005	7.923431	33.89337
2006	8.060733	175.5262
2007	7.660815	25.95532
2008	3.086698	72.05773
2009	7.861889	-18.0271
2010	8.497585	-23.0022
2011	5.241345	33.22191
2012	5.456359	-34.256
2013	6.386106	17.32539
2014	7.410228	22.81677
2015	7.996253	27.28098
2016	8.256306	1.020415
2017	7.043821	-10.1049
2018	6.119587	5.382962
2019	5.023873	20.15287

Source: <http://api.worldbank.org/v2/en/country/IND?downloadformat=excel>

4. DATA ANALYSIS

The following Table 1 exhibits the growth rate of GDP and FDI (net inflows) from the year 2001 to 2019.

Figure 1 displays the graphical presentation of the growth rate of GDP and FDI (net flows) in India. It can be observed that the Indian economy has grown 6.65% over the period 2001-2019. The country recorded the lowest annual growth in the year 2008 during this period with growth rate of just 3.09%. The FDI (net inflows) in India have grown at the average rate of 21.69% during the period from 2001 to 2019. India recorded highest annual growth rate of

Figure 1: Growth rate of GDP and FDI (net inflows) in India

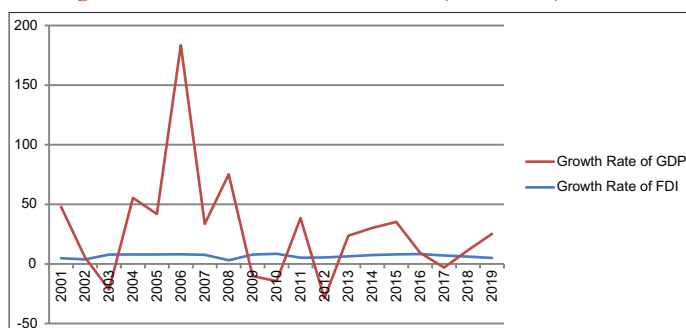


Table 2: Results of correlation analysis

		Growth rate of FDI	Growth rate of GDP
Growth rate of FDI	Pearson correlation	1	-0.043
	Sig. (2-tailed)		0.862
	N	19	19
Growth rate of GDP	Pearson correlation	-0.043	1
	Sig. (2-tailed)	0.862	
	N	19	19

Table 3: Model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.043 ^a	0.002	-0.057	47.9100949

a. Predictors: (Constant), Growth Rate of FDI

Table 4: ANOVA

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	71.045	1	71.045	0.031	0.862 ^a
	Residual	39021.412	17	2295.377		
	Total	39092.458	18			

a. Predictors: (Constant), growth rate of FDI

b. Dependent variable: Growth rate of GDP

Table 5: Coefficients

Model		Coefficients ^a				
		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	29.760	47.190		0.631	0.537
	Growth rate of FDI	-1.213	6.896	-0.043	-0.176	0.862

a. Dependent variable: Growth rate of GDP

FDI i.e. 175.5262 % in 2006 during the period under study. It can further be seen that the country recorded negative growth rate in the year 2003, 2009, 2010, 2012, 2016.

4.1. Relationship between Growth Rate FDI (Net Inflows) and Growth Rate of GDP of India

In order to determine the relationship between growth rate FDI (net inflows) and growth rate of GDP of India, the study used the correlation analysis. Table 2 shows the results revealed negative correlation between growth rate FDI (net inflows) and growth rate of GDP of India, $r = -0.043$, $P > 0.05$. The value of correlation was not found to be significant. Therefore, the results suggested that there exist no significant relationship between growth rate FDI net inflow and growth rate of GDP of India. Hence, hypothesis H_1 : There is significant relationship between growth rate FDI (net inflows) and growth rate of GDP of India is rejected. The studies including Alfaro et al. (2004), Carkovic and Levine (2002) and Durham (2004) also found no evidence supporting existence of direct relationship between FDI and economic growth.

4.2. Impact of Growth Rate FDI Inflow and Growth Rate of GDP of India

The study employed the technique of regression analysis in order to determine the impact of growth rate FDI net inflow and growth rate of GDP of India. Table 3 displays the Model Summary. It shows that the value of R^2 value is 0.002 implying that the independent variables of the model (Growth rate of FDI) explain 0.2% of variation in the dependent variable (Growth rate of GDP).

Table 4 presents the results of ANOVA that indicates whether the overall regression model is a good fit for the data. The results show that the growth rate of FDI (net inflows) does not predict statistically significant growth rate of GDP. Table 5 shows the regression coefficients.

The results showed that there is no significant impact of growth rate of FDI (net inflows) on growth rate of GDP in India. Hence, the hypothesis, H_2 : There is significant impact of growth rate FDI (net inflows) on growth rate of GDP of India, is rejected.

Conceptually the foreign direct investment may have a positive effect on growth. It is because generally foreign direct investment travels from nations having abundant capital to the countries having paucity of capital. It also provides an impetus to boost production, advancement of new technology. However, foreign direct investment may have a negative impact on growth as it may lead to disruption of competition. It may also lead to benefitting the transferring country and hampering the growth of receiving country.

5. CONCLUSION

Gross Domestic Product is a main indicator of the size of the economy. The growth rate of GDP helps in determining and comparing the growth of economy over different periods and also with other economies. Investment is a boon for any economy. It is the major contributor of the growth of any country. Increase in level of investment leads to multiplier impact in increasing the levels of employment and income. One of the important source of investment especially for developing economies is investment from other countries. Foreign investment can be made directly or indirectly. Present study attempted to find out the relationship and impact of growth rate of foreign direct investment in India on growth rate of GDP in India. It found that there existed insignificant relationship between the growth rate of FDI and economic growth rate. Also, the results of regression analysis indicated the insignificant impact of growth rate of FDI on growth rate of GDP.

REFERENCES

- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., Sayek, S. (2004), FDI and economic growth: The role of local financial markets. *Journal of International Economics*, 64(1), 89-112.
- Balasubramanyam, V.N., Salisu, M., Sapsford, D. (1996), Foreign direct investment and growth in EP and is countries. *The Economic Journal*, 106(434), 92-105.
- Balasubramanyam, V.N., Salisu, M., Sapsford, D. (1999), Foreign direct investment as an engine of growth. *The Journal of International Trade and Economic Development*, 8(1), 27-40.
- Basu, P., Chakraborty, C., Reagle, D. (2003), Liberalization, FDI, and growth in developing countries: A panel cointegration approach. *Economic Inquiry*, 41(3), 510-516.
- Basu, P., Guariglia, A. (2007), Foreign direct investment, inequality and growth. *Journal of Macroeconomics*, 29, 824-839.
- Bengoa, M., Sanchez-Robles, B. (2003), Foreign direct investment, economic freedom and growth: New evidence from Latin America. *European Journal of Political Economy*, 19, 529-545.
- Berthélemy, J.C., Démurger, S. (2000), Foreign direct investment and economic growth: Theory and application to China. *Review of Development Economics*, 4(2), 140-155.
- Carkovic, M., Levine, R. (2002), Does Foreign Direct Investment Accelerate Economic Growth? Available from: https://www.piie.com/publications/chapters_preview/3810/08iie3810.pdf.
- Choe, J.I. (2003), Do foreign direct investment and gross domestic investment promote economic growth? *Review of Development Economics*, 7(1), 44-57.
- Chowdhury, A., Mavrotas, G. (2003), FDI and Growth: What Causes What? Paper presented at the WIDER Conference on Sharing Global Prosperity, WIDER. Helsinki: World Bank Group.
- De Mello, L.R. (1999), Foreign direct investment-led growth: Evidence from time series and panel data. *Oxford Economic Paper*, 51, 133-151.
- Durham, J.B. (2004), Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European Economic Review*, 48, 285-306.
- Hansen, H., Rand, J. (2006), On the Causal Links Between FDI and Growth in Developing Countries. Copenhagen: University of Copenhagen and Development Economics Research Group.
- Hermes, N., Lensink, R. (2003), Foreign direct investment, financial development and economic growth. *Journal of Development Studies*, 40(1), 142-163.
- Johnson, A. (2006), The Effects of FDI Inflows on Host Country Economic Growth, No. 58, Working Paper Series in Economics and Institutions of Innovation. Tamil Nadu: Royal Institute of Technology, CESIS-Centre of Excellence for Science and Innovation Studies.
- Rahaman, A., Chakraborty, S. (2015), Effects of foreign direct investment on GDP: Empirical evidence from developing country. *Advances in Economics and Business*, 3(12), 587-592.
- Rakhmatullayeva, D., Kuliyeu, I., Beisenbaiyev, Z., Tabeyev, T. (2020), Assessment of the influence of FDI on the economic growth of the host country: Evidence from Kazakhstan. *E3S Web of Conferences*, 159, 06007.
- Sokang, K. (2018), The impact of foreign direct investment on the economic growth in Cambodia: Empirical evidence. *International Journal of Innovation and Economic Development*, 4(5), 31-38.
- Türkcan, B., Duman, A., Yetkiner, I.H. (2008), How Does FDI and Economic Growth Affect Each Other? The OECD Case, Proceedings of the Conference on Emerging Economic Issues in a Globalizing World. Turkey: Izmir University of Economics. p21-40.
- Zhang, K.H. (2001), Does foreign direct investment promote economic growth? Evidence from East Asia and Latin America. *Contemporary Economic Policy*, 19(2), 175-185.