Impact of Foreign Direct Investments on Economic Growth in India

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Abstract

The GDP growth rate of developing countries represents the economic strength and potential growth capacity. It helps the foreign investors to evaluate the risk percentage on their capital investment. Investors prefer to invest their capital in those countries having rising GDP growth rates with stable economic environments. Developing countries are dependent on capital investment in their economy for robust development. FDI is the most significant factor that contributes to the dynamic economic growth of the developing country. In the study, the relationship between FDI inflow and GDP growth has been tested by the correlation method and found a significant positive relationship. A simple regression method was applied to test the impact of FDI inflow on the GDP growth rate from 1970 to 2019. It found a positive effect of FDI inflow on the economic growth of the country. However, The R^2 of the model expressed an immense need for FDI inflow in the economy and improvement of other factors to attract the inflow at a substantial level. The correlation between the variables indicated that the variables complement each other positively.

Keywords: FDI, economic growth, GDP growth rate, correlation, and regression.

1. Introduction

Foreign Direct Investments bring capital to the host country. The investments bring prosperity by supporting the economic growth of the country. GDP health reflects the exact growing position of the country to the investors. After gaining independence from British rule, the Indian economic position was not good. The Indian economy was under heavy financial debt. Liberalization policy was implemented in 1991 to overcome the losses. The open gate reform brought positive development in the financial and economic growth in the country (Azhar and Marimuthu 2012).

Foreign direct investments are essential for rapid growth. It is not only restricted to foreign capital movement but also brings advanced knowledge and technology to upgrade the economy (Choi and Baek 2017). The developing countries have abundant resources; however, their appropriate utilization is difficult to be managed by domestic firms. Thus, effective utilization of these resources could be possible through the involvement of foreign companies in the economy. These foreign companies (MNCs) establish their working units in the host country to have a considerable market size for business activities, employment opportunities to the workforce, infrastructural development, procurement of raw material from the domestic market, etc.

IMF Reported (April-2021), "India's GDP growth rate in 2021 is projected at 12.55%. India is in 5th position out of 193 economies. India is among six economies that will experience a double-digit growth rate in 2021." The liberal and FDI supportive reforms helped India secure 7th position amongst 203 global growing economies by 2016. Thus, the constant healthy inflow of FDI is essential for the development of the country.

Through this study, relationship and impact analysis between FDI inflow and GDP growth rate has been conducted. Post liberalization FDI inflow in India is considerable, but economic growth faced many fluctuations. Therefore, the study would be performed to analyze the correlation and impact of FDI inflow on the economic growth of India. GDP growth rate of the country is considered as the prime indicator of economic growth of the country. For practical analysis, secondary data was collected from the authorized source.

2. Review of Literature

Author	Methodology	Sample and Country of Study	Variables	Findings
Goel et al. (2012)	Multiple and Simple Regression.	1991 to 2010; India	1) Trade, R&D, Exchange Rate, Reserves, Financial position effect on FDI. (2) FDI impact on GDP.	It found a positive impact of FDI on the economic growth of the country. FDI is an essential factor for the dynamic growth of the country.
Ray (2012)	Cointegration Analysis	F.Y 1990 to 2011 India	FDI and Economic Growth	It is concluded that FDI and GDP are directly proportional to each other. The need is to develop a favorable environment through strong economic reforms and stable economic factors.

Ranjan and Agrawal (2011).	A random effect model	1975 to 2009 Brazil, Russia Federation, India and China	Influence on FDI by macroeconomic factors.	India and China have the most potential determinants to attract FDI. Liberal policies are recommended.
Khan (2014)	Correlation and Regression analysis.	F.Y 2000 to 2014; India	FDI and FII influencing GDP. Merger and Acquisitions effect on Total FDI.	M&A was found as the most significant source of FDI in India. FDI and FII were supporting economic growth.
Arora (2013)	Correlation and A structured questionnaire	F.Y 2000 to 2011; India	GDP and economic reforms relationship with FDI inflow	Found positive relationship between the variables. Indian reforms have a significant impact on attracting FDI in

				India.
Jana et al. (2019)	A time-varying parameter & VECM	1995 to 2016; India	FDI Vs. agriculture, manufacture, and service sector.	The service sector found highly potential in the long and short run. The Manufacturing sector is flourishing in India. But the Agriculture sector needs foreign investments to support economic growth.
Raj and Pahwa (2018)	Regression Model	2002-03 to 2016-17; India	Effect of FDI inflow on Economic growth.	The study found a significant positive impact on economic growth. It recommended strong economic reforms, infrastructural improvement, and stable economic conditions.
Sharma et al. (2020)	Correlation and Regression Analysis	2001 to 2019; India	Relationship Study. The impact between FDI inflow and economic growth.	Found negative relationship and no impact of FDI inflow on economic growth.
Sultana et al. 2019	Regression Tool	2007 to 2017; India	Impact of FDI inflow on economic growth.	The study found that most of the factors are attracting FDI inflow to support economic growth. It suggested skill development and training to laborers.

3. Objective and Methodology

The objective of the study is to determine the impact of foreign direct investments on the economic growth of India. Foreign direct investments are the engine of the economic growth of developing countries. Through this study, we would like to understand the exact impact of

FDI inflows on India's GDP growth rate. The study involves secondary data collected from the world bank (dataset) for the period 1975 to 2019. To examine the relationship, we have applied correlation and simple regression analysis tools using eviews software.

4. Hypothesis

The first hypothesis is developed to evaluate the relationship between FDI inflow and GDP growth by correlation method. The second hypothesis test the impact of FDI inflow on the GDP growth rate of India.

H1: There is no significant relationship between FDI inflows and the GDP growth rate of India. H2: There is no significant impact of FDI inflows on the GDP growth rate of India.

5. Data Analysis 5.1: Relationship analysis between FDI inflow and GDP

The data has been analyzed to check the significant relationship and impact between the variables. The first hypothesis is examined relationship by correlation analysis. The correlation result is as exhibits in table 1. It explains that the variables GDP growth rate and FDI inflow in India have a significant positive relationship (0.277942), which lies between -1 and +1. The p-value = 0.05, significant at 5% level of significant. Thus, we reject the null hypothesis. There is a significant relationship between the variables. It implies that the variables have a direct relationship. The improvement in FDI inflow will also improve the GDP growth rate of the country.

Table 1: First Hypothesis: Results of Correlation Analysis

Covariance Analysis: Ordinary		
Sample: 1970 2019		
Included Observations: 50		
Correlations Probability	FDI	GDP
FDI	1.000000	

GDP	0.277942	1.000000
	0.0507	-----------

5.2: Impact of FDI inflow of GDP Growth

The second hypothesis was tested by a simple linear regression method to study the impact of FDI inflow on the economic growth of the country.

$(Y = \alpha + \beta x)$

GDP Yi = a + FDI Xi -----(1)

Y = Dependent Variable: GDP growth (annual %) Base Year 2010 US Dollars on constant.

α = Y-intercept β = Independent Variable: Foreign direct investment, net inflows (% of GDP)

Table 2: Second Hypothesis: Results of Simple Regression Analysis

Dependent Variable: GDP
Method: Least Squares
Sample: 1970 2019
Included observations: 50

Variable	Coefficient	Std. Error	t-statistic	Prob.
FDI	0.87776	0.437867	2.004625	0.0507
C	4.813911	0.50007	9.626469	0.0000
R-squared	0.077252	Mean dependent var		5.465782
Adjusted R-squared	0.058028	S.D. dependent var		2.767824
S.E. of regression	2.686318	Akaike info criterion		4.853398
Sum squared resid	346.3827	Schwarz criterion		4.929879
Log likelihood	-119.3350	Hannan-Quinn criter		4.882523
F-statistic	4.018522	Durbin-Watson stat		2.157982
Prob(F-statistic)	0.050662			

The study analysis result is represented in Table 2. The summary showed that the R^2 value is 0.077252, which is equivalent to 7.7%. R^2 expresses the impact/variation of the independent variable over the dependent variable. FDI inflow has just a 7.7% impact on the country's economic growth, represented by the GDP growth rate. Adjusted R^2 = 0.0580 equivalent to 5.8%. As R^2 and adjusted R^2 low percentage, the impact level is low but significant. It means there is a need to improve the inflow of FDI in the economy to boost GDP growth rate at a higher rate. Further, Durbin-Watson statistic = 2.15, under the required range to have no autocorrelation. F-statistic = 4.018522 and its p-value is 0.05 and FDI t-statistic = 2.004625 and its p-value = 0.05, both are significant at 5% level of significance. Thus, the results indicate that the overall simple regression model has a good fit. FDI inflow is helping for the economic growth of the country. Henceforth, we reject the null hypothesis (H2). From the analysis, we find a significant impact of FDI inflows on the GDP growth rate of India.

Table 3: Descriptive Statistic

	FDI	GDP
Mean	0.742653	5.465782
Median	0.385015	5.829938
Maximum	3.620522	9.627783
Minimum	-0.02968	-5.238183
Std. Dev.	0.876430	2.767824
Skewness	1.161923	-1.375748
Kurtosis	3.749682	5.952371
Jarque-Bera	12.42143	33.93173
Probability	0.002008	0.0000000
Sum	37.13264	273.2891
Sum Sq. Dev.	37.63832	375.3816
Observations	50	50

6. Conclusion

Developing countries are concerned about their economic growth. Likewise, India is also focused on keeping its growth rate accelerating. GDP growth rate is the indicator of the economic health of the country. Foreign investors got attracted by the countries having stable political and economic environments. India is a lower-income country (World Bank Report). Foreign capital is essentially required to overcome this position. The study indicates that FDI inflow has a significant impact on the GDP growth rate. Also, they have a healthy correlation between the variables, i.e., having directly proportional to each other. Therefore, government policies need to be more supportive of foreign capital/investments. Foreign capital investments attention should be directed towards the minor or untouched sectors. It will support the overall development and employment generation.

The study is restricted to analysis only one variable, which is influencing the GDP of the country. There is a scope to study the impact of other variables to improve the economic conditions.

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