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RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND ITS DETERMINANTS IN INDIA

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Abstract

Foreign direct investment (FDI) is one of the major sources for economic development in under developed or developing countries. Emerging economies seek for foreign investment as it generate funds required for their development.

Government of India introduced privatization, globalization and liberalization in 1991. Since then, the inflows of foreign direct investment have increased significantly. India is one of the most attractive destinations for foreign investors today

This research paper explores the relationship between foreign direct investment and its determinants namely, Trade Openness, Exchange rate, External debt and Gross capital formation from 2008-2018. Regression analysis was used to find the causal relationship between these determinants and foreign direct investment. It was found that all the taken determinants are significant in determining foreign direct investment inflows in India.

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1. Introduction

FDI is that investment in which source country practices direct control of ownership of business in another country i.e. the host country. According to OECD criteria, an investment in which the investor has direct ownership of atleast 10% voting rights is regarded as FDI. If the investment is fruitful the source country many times reinvest in the host country thus establishing a long term relationship between the two [1]. FDI expands the foreign exchange reserves of the host country thereby balancing the trade deficit of that country.

In India, FDI tends to generate factor productivity more significantly than domestic investment would [2]. FDI overcomes the constraint of domestic savings by introducing superior technology, thereby increasing efficiency, in the host country [3].

Developing countries like India are in dire need of foreign direct investment to boost their economic growth by acquiring new technology; entrepreneurship and managerial skills.There are two routes via which FDI inflows in India, automatic route and government route. Under the government route an initial approval of the government is required which is scrutinized by the foreign investment promotion board (FIPB), department of economic affairs and ministry of finance. Under automatic route any approval from the government or RBI is not required [4].

It is very crucial for host countries to understand the determinants of FDI to get a proper overview of the factors which impact its inflow [5]. FDI determinants are based on the policy framework; economic conditions and business ease of the host country [6] These determinants vary from country to country [7]

The determinants taken under the study are:

Trade Openness: Trade Openness can be measured by dividing the sum of exports and imports by the GDP rate of that year. It is considered to be an important variable of FDI.

Gross Capital Formation: Gross capital formation is a measure of total domestic investments made by households, entrepreneur in a financial year. In transition economies the relationship between GCF and FDI is not defined.

Exchange Rate: When a currency depreciates the demand for that currency increases in the foreign exchange market. Exchange rate is a significant determinant for FDI. The relationship between FDI and exchange rate of a country is highly volatile.

External Debt: Developing economies need FDI to supplement economic growth by technological advancements but if the country is highly indebted then the funds generated in FDI would be used to pay off debts.

The present paper explores the relationship between FDI and its determinants in India. The determinants studied in the present paper are exchange rate, external debt, gross capital formation and Trade openness. The objectives of the study are, a)to study the trends and pattern of FDI inflows in India for the time period of 2008-2018, b)to examine the relationship between FDI and Gross capital formation, trade openness, exchange rate and external debt and c) to give a descriptive statistics of the selected variables. The study focuses on the determinants of FDI and its relationship because host countries must have proper information regarding the impact of these determinants on FDI inflow.

To evaluate the above said objectives the study first details the trends of key determinants affecting FDI in India. The next chapter tries to assess and quantify the effect of these determinants on FDI during the time period of 2008-18. Finally the study concludes and puts forward policy implications for various sectors on how they can reap the maximum benefits out of the FDI inflows..

2. Research Method

The current paper is based on quantitative analysis of time series secondary data of 10 years for the period 2007-08 to 2017-18. The data is collected from the sources like World Bank and RBI websites. Multiple regression analysis is used for the data keeping FDI as the dependent variable, to find the relationship among dependent and independent variables i.e trade openness, gross capital formation , external debt and exchange rate. Coefficient of variation was used to

find the volatile variable. Compound annual growth rate was found out for FDI. Descriptive analysis is also used to find the summary data of the variables.

The hypothesis listed for the objectives in the study are:

H1: There is no significant relationship between FDI and gross capital formation

H2: There is no significant relationship between FDI and Trade openness

H3: There is no significant relationship between FDI and exchange rate

H4: There is no significant relationship between FDI and external debt.

3. Results and Analysis

Multiple linear regression analysis

To verify the relationship between FDI and determinants multiple regression is used. Dependent variable is FDI and independent variables are external debt, trade openness, gross capital formation and exchange rate.

$Y= \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\varepsilon$

Where Y= Foreign direct investment

X_1= *Exchange Rate*

X_2= *Gross Capital formation*

X_3= *Trade openness*

X_4= *External Debt*

In this model foreign direct investment is the dependent variable and gross capital formation, exchange rate, trade openness and external debt is independent variables,

Table 1: summary Output

Regression Statistics	
Multiple R	0.917678

R Square	0.842132
Adjusted R Square	0.715838
Standard Error	0.371524
Observations	10

ANOVA

	Df	Sum of squares	Mean Square	F	Significance F.
Regression	4	3.68154	0.920385	6.668011	0.03075
Residual	5	0.69015	0.13803		
Total	9	4.37169			

	Coefficients	Standard Error	T stat	P-value
Intercept	30.22867	6.369057	4.746177	0.005122
ExchangerateperUSD	-0.30315	0.065681	-4.6156	0.005758
Gross Capital formation (% of GDP)	-0.37269	0.103462	-3.60215	0.015508
Trade Openness(%)	-0.08297	0.030811	-2.69295	0.043146
EXTDEBTUSD	0.285594	0.110483	2.584963	0.049136

Dependent variable: FDI

In the above table, the p value of gross capital formation (p= 0.015508) is less than the significance level of 5%. Hence we reject the null hypothesis H1 and conclude that there exists a negative relationship between gross capital formation and FDI in India. Kendrick (1993) in his paper concluded that capital formation does not lead to increase in foreign investment.

The p value of trade openness is less that the significance of 5% (p=0.04316). Hence we can reject the null hypothesis H2 and conclude that there exist a negative relationship between trade openness and FDI in India.

The p value of exchange rate (p=0.005758) and FDI is less than the significance level of 5%. Hence we can reject the null hypothesis H3 and conclude that there exist a negative relationship between Exchange rate and FDI.

The p value of external debt (p=0.049136) is less than the significance level of 5%. Therefore we can reject the null hypothesis H4 and conclude that there exist a positive relationship between external debt and FDI in India.

Multiple regression equation

Foreign direct investment= 30.22867 - 0.8297 (TO) - 0.30315 (EXRATE) + 0.285594 (EXDEBT) - 0.37269(GCF)

If there is 1 percent increase in trade openness and exchange rate, FDI will fall by 82.9 percent and 30.3 percent respectively. Similarly, if external debt increases by 1 percent, FDI increases by 28.5 percent and if gross capital formation increases by 1 percent, FDI falls by 37.26 percent. It can be concluded that Trade Openness is the most Influential determinant of FDI inflow.

Descriptive Statistics

FDI is taken as a percentage of GDP.

Table 2: Summary Statistics

	Maximum	Minimum	Mean	Standard deviation	Coefficient of variation
FDI	3.66	1.31	2.011	0.6969	34.654
EXTDEBT	23.877	17.992	20.9331	0.7442	3.555
EXRATE	67.195	43.505	55.383	8.9202	16.106
TO	55.79	40.35	48.728	6.0967	12.513
GCF	40.682	30.347	35.8569	4.1115	11.46

Coefficient of variation was calculated to get the level of volatility among the variables. Coefficient of variation is found out by dividing standard deviation by mean of the particular

variable and multiplying it by 100. Coefficient of variation is highest for FDI that is 34.654, this means that FDI is the most volatile and inconsistent variable.

4. Conclusion

Foreign direct investment is crucial for developing countries like India to generate foreign exchange reserves. Determinants of foreign direct investments might vary according to the countries. The present study tried to find the relationship between FDI and its determinants in India. Regression analysis was done on the time series data of 10 years, keeping FDI as the dependent variable. Trade openness, gross domestic capital formation and exchange rate show negative relation with FDI, whereas external debt shows a positive one. The relationship between FDI and gross domestic capital formation and external debt is not pre defined and vary from country to country.

The reason for trade openness having negative relation with FDI unlike the assumed positive, is the absence of export oriented FDI in India. India is suggested to have export oriented FDI to accelerate growth [8]. The central motive of export oriented FDI is that developing countries should gain from the international trade by specializing in industries that have a comparative advantage [9]. .If India focuses more on the export oriented trade and minimise its import it can gain from the trade openness. Hence India is suggested to have a export oriented trade by focusing on expansion of the industries with comparative advantage.

Exchange rate have an uncertain relationship with FDI inflows because foreign investors can either profit or lose from the appreciation of currency of the host country. The reason for negative relationship between exchange rate and FDI in the present study is that Indian rupee is continuingly depreciating against dollar since the past decade. Sometimes the continuous depreciation of domestic currency depresses the intensity of foreign investment because it leads to an increased production cost as most of the foreign investors import at a large number [10]. Indian government is suggested to initiate policies that would lead to a more stable exchange rate.

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