IMPACT OF SOCIO-ECONOMIC DETERMINANTS ON FOREIGN DIRECT INVESTMENT

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ABSTRACT

Foreign direct investment plays a crucial role in the economic growth of developing countries. It has become more important than trade to enhance international economic transactions. The non-debt creating capital inflow of foreign investors facilitates increasing productivity, enhancing technology, strengthening infrastructure and creating employment opportunities. So every economy seeks to attract FDI through the creation of a liberal atmosphere to foreign investment and the provision of facilities and inducements to the foreign investors. Various Socio-economic determinants are influencing FDI in an economy.

KEYWORDS: Economic Growth, FDI

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INTRODUCTION

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REVIEW OF LITERATURE

Singh Shikha (2019)¹ emphasized that Indian economy since 2014 has emerged as of the one top foreign destination in the world with a significant increase in foreign direct investment. Due to proactive policy formulation by GOI especially from 2014 onwards, leads to high productivity and promoting sustainable and inclusive development. To raise foreign Capital, GOI has to look for global scale, infrastructure bottlenecks along with stringent labour laws.

Deivamani. S, et al. (2018)² analyzed sources of Foreign Direct Investment inflows, the determinants of Foreign Direct Investment in India. As per the study, service sector, construction and development sector inflow of FDI got sustainable economic growth and development through increasing employment in India. So to make the Indian economy a developed economy, Government must proceed to elicit FDI inflows in India.

Phiyal Kumar Ram and Sunuwar Seema (2018)³ analyzed the impact of FDI on economic development in developing nations like Nepal, is broadly related to growth in employment opportunities. The analyses deduce that FDI of industry, agriculture and tourism sectors have a very significant and positive influence on GDP during the period 2007 to 2016.

Hintasova Bobenic Aneta, et al. (2018)⁴ identified the determinants of FDI inflows into the visegrad nations. Using the country-level data from 1989-2016 has used correlation and regression analyses identify the positive effect on FDI inflows of the level of wages and share of the educated labour force while, corporate Income Tax, expenditures on research and development and trade openness have a negative impact on FDI inflow.

Mishra.A and Aggarwal Amba (2017)⁵ analysed the influence of FDI in five emerging countries of the world which have formed an organization called BRICS. This study tries to reveal the influence of FDI on employment and economic development in the BRICS countries. The data used for the period (2000-2015). Correlation analysis has been run to investigate the types of relationship between foreign direct investment and the unemployment growth and the economic growth in these countries. The study concludes that only Brazil and China, FDI has a positive impact on the growth rate while rest BRICS nations don't show any significant impact on growth. The influence of FDI in employment generation is not significant in all BRICS nation.

DATA DESCRIPTION

The study was carried out by secondary data. The data for FDI and socio-economic variables have been gathered from various published sources viz. RBI bulletins, World Investment Report (UNCTAD), World Bank Report, Handbook of Statistics on Indian Economy (RBI), Commerce and Industrial Development Department of India, etc. from 1991-2018. In addition to these various journals, magazines, articles and books have also been consulted.

OBJECTIVES

- To analyze the determinants of the inflow of foreign direct investment in India.
- To study the impact of socio-economic factors on FDI in India using a log-log regression model.

METHODOLOGY

The regression analysis has been carried out in two ways. Initially, the bivariate regression of all determinants is carried out in the estimable model and then multiple log-log regression model is applied. However, after a detailed analysis of the various combination of the descriptive variables, the present study includes the following macroeconomic indicators: Gross domestic product (GDP), Gross domestic savings (GDS), Per capita income (PCY), Trade Openness (TO), Financial Position (FP), an Exchange rate (ER), Foreign Exchange Reserves (FER), Gross Expenditure on Research and Development (GERD), Employment Rate (EMP), Cost of labour (C-wage), Corporate tax rate (C_TAX), Market capitalization (MARCAP), and Life expectancy (LE). These said social and economic indicators can be considered as the major determinants of FDI inflows in India. Thus, these macroeconomic indicators can be put in the following equation:

$$\ln \text{FDI}_t = \beta_0 + \beta_1 \ln \text{GDP}_t + \beta_2 \ln \text{GDS}_t + \beta_3 \ln \text{PCY}_t + \beta_4 \ln \text{TO} + \beta_5 \ln \text{FP}_t + \beta_6 \ln \text{ER}_t + \beta_7 \ln \text{EMP}_t + \beta_8 \ln \text{LE}_t + \beta_9 \ln \text{GERD}_t + \beta_{10} \ln \text{C_TAX}_t + \beta_{11} \ln \text{C_WAGE}_t + \beta_{12} \ln \text{MARCAP}_t + \beta_{13} \ln \text{FER}_t + u$$

Where,

β_0 is constant

$\beta_1, \beta_2, \beta_3, \dots, \beta_{13}$ are coefficient of FDI determinants

$\ln FDI_t$ = FDI inflow in Current year in India

$\ln GDP$ = Gross Domestic Product

$\ln GDS$ = Gross domestic savings

$\ln PCY$ = Per capita income

$\ln TO$ (Trade Openness) = Ratio of export plus imports to Gross domestic product

$\ln FP$ = Ratio of external debt to GDP

$\ln ER$ = Exchange Rate

$\ln EMP$ = Employment Rate

$\ln LE$ = Life Expectancy

$\ln GERD$ = Gross expenditure on research and development

$\ln C_TAX$ = Corporate tax rate

$\ln C_WAGE$ = Rate of change in the consumer price index for industrial workers

$\ln MARCAP$ = Market capitalization on BSE

$\ln FER$ = Foreign Exchange Reserves

u = Error Term

RESULTS AND DISCUSSIONS

To study the significance of each determinant in the absence of others a bivariate log-log regression model has used for each determinant that is discussed above, with the FDI inflow in India. It depicts the nature and extent of association that exists between two determinants when other determinants are remaining constant. Both FDI and factors affecting FDI are expressed in logarithmic form. The model takes the following form:

$$\ln FDI_t = \beta_0 + \beta_1 \ln(X_n) + u$$

Where,

FDI_t = Current year inflow of FDI

β_0 = Constant

β_1 = Coefficient

X_n = Determinant

u = Error term

$n = 1, 2, 3, \dots, \& 14$

The outcomes of bivariate log-log regression models are shown in the following table.

Table 1: Dependent Variable: Ln FDI Log-Log Model

S. No.	Determinants of FDI	Constant	Coefficient	SE of Coefficient	R ² (R square)	p-value
1.	Ln GDP	-19.84	2.12	.145	0.891	.000
2.	Ln GDS	-13.57	1.83	.121	0.898	.000
3.	Ln PCY	-7.638	2.52	.185	0.878	.000
4.	Ln TO	-5.743	4.21	.336	0.858	.000
5.	Ln FER	-6.494	1.35	.068	.937	.000
6.	Ln ER	-12.061	5.57	.589	.775	.000
7.	Ln GERD	-8.583	1.73	.233	.697	.000
8.	Ln EMP	131.08	-30.55	3.625	.732	.000
9.	Ln FP	30.001	-6.77	1.359	.489	.000
10.	Ln C-TAX	-1.265	2.93	3.842	.022	.451
11.	Ln C_WAGE	16.407	-1.29	.738	.109	.087
12.	Ln LE	-120.72	31.21	1.805	.920	.000
13.	Ln MARCAP	-2.58	1.17	.089	.871	.000

- Above table shows that the first determinant i.e. GDP in India is the main important factor in attracting FDI inflows. FDI's elasticity with respect to change in gross domestic product is 2.12 % in the same direction.
- Gross domestic savings that lead to capital formation in the economy is an important factor to attract FDI in an economy. The estimated coefficient reveals that 1% changes in gross domestic saving would lead to a 1.83 % change in the inflow of FDI.
- Rising per capita income is also a significant determinant of FDI, as increase in income leads to more demand and growth of the market. Hundredth change in per capita income is resulted to cause about 2.52 % change in FDI inflow in India.
- Trade openness of the economy which is represented by trade to GDP ratio was also found to be an important determinant at 1% level with a positive sign. 1% change in trade openness is resulted in 4.21 % variation in FDI inflow in India, in the same direction.
- Foreign Exchange reserves with the highest R² that is 0.93 % as compared to that of other determinants possess the positive sign. 1% growth in foreign exchange reserves leads to a 1.35 % increase in FDI.
- Since 1991 Indian economy has undergone major changes and that changes are revealed in the Indian Industry too. The rate of change in FDI inflow due to 1% change in the exchange rate is calculated at 5.57 %.
- The Gross expenditure on research and development representing the expenditure on human capital formation reveals a negative sign and also found statistically significant. Due to one percent change in FDI inflow, the cost of GERD change is computed at 1.73 %.
- Employment to population ratio one percent change would lead to a 30.5 % change in FDI in the opposite direction.
- The estimated coefficient that 1% changes in financial position would lead to a change in FDI inflow by about 6.77 % in the opposite direction.

- The rate of corporate tax collected has a positive sign and also found significant.
- The cost of labour proxies by the rate of change in the CPI for industrial workers has a negative and significant relationship with FDI inflows in India. Computed co-efficient shows that 1% change in the movements of wage leads to by 1.29 %change the FDI inflow in an opposite direction.
- High life expectancy shows better human resources of an economy. 1% increase in life expectancy is estimated to cause a 31.2 percent increase in FDI.
- The market capitalization of Bombay stock exchange, a proxy for capital market strength, is positively associated with FDI inflow in India and reveals significant relation at the five percent level.

Multiple Regression Analysis

In this paper, a multiple log-log regression model has used to capture the influence of all variables.			
Dependent Variable: Ln FDI			
b. Predictors in the Model: (Constant), Ln FER			
R-squared	0.979803		
F-statistic	44.78089		
Prob (F-statistic)	0.000000		
Variable	Coefficient	Standard error	t-statistics
C	553.5050	186.0551	2.974952
LN_C_TAX	2.445441	3.225868	0.758072
LN_C_WAGE	0.183963	0.479677	0.383514
LN_EMP	-21.69753	17.90790	-1.211617
LN_FP	-2.781601	1.161064	-2.395735
LN_GERD	0.013171	0.248389	0.053024
LN_TO	2.883642	1.359145	2.121659
LN_ER	9.221631	2.992296	3.081792
LNFER	1.833699	0.876801	2.091351
LNGDP	-41.82276	23.66442	-1.767326
LNGDS	1.001306	1.995617	0.501752
LNLE	-66.84209	66.03387	-1.012240
LNMARCAP	-0.753976	0.431742	-1.746356
LNPCY	48.00565	23.62315	2.032144

R square of log-log multiple regression is 0.9798 and Trade openness (TO), foreign exchange reserves (FER), financial position (FP) and exchange rate (ER) show significant relation with FDI, while other variables are showing insignificant relation.

CONCLUSIONS

The above analysis reveals that Trade openness, foreign exchange Reserves, FIN. Position and Exchange rate are the major determinants of FDI inflows to the country. These macroeconomic variables have an intense stimulus on the inflows of FDI in India. The results of the log-log multiple regression model reveal that Trade openness, foreign exchange Reserves, and exchange rate variables display a positive relationship with FDI while FIN. Position variables exhibit a negative relationship with FDI inflows. Thus, it is concluded that the above analysis is successful in identifying those variables which are important in attracting FDI inflows in India.

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