

THE TRENDS AND DETERMINANTS OF FDI INFLOW TO INDIA FROM SOME SELECTED ASIAN COUNTRIES

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ABSTRACT:

The Present study analyzes the trends and determinants of foreign direct investment (FDI) inflows from some select Asian countries. For the purpose of investigation, the macroeconomic variables used are the interest rate differential, gross saving, GDP growth rate, and business freedom. The time period span of the study is from 2005 to 2018. The Fixed effect and Random effect technique are used to find the relationship among the macroeconomic variables. Using Housman test (1978) we choose between fixed effect and random effect models in our study. The Houseman test results show that the fixed effect model is appropriate. In the present study, the results obtained from fixed-effect model confirms that there is a significant positive relationship between foreign direct investment (FDI) inflows with real Interest rate differential (RIRD) and Nominal Effective exchange rate (NEER). But the relationship between FDI inflows and gross domestic product (GDP) growth rate of the source countries is significantly negative. The results can be a possible guide to the government policymakers to make better policies to attract more foreign direct investment (FDI) inflows to India.

Keywords: Foreign direct investment (FDI), Foreign Portfolio Investment (FPI), Nominal effective exchange rate (NEER), Business Freedom Index (BFI), Gross Domestic Product (GDP) and Real Interest rate differential (RIRD).

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INTRODUCTION:

Foreign direct investment (FDI) is a vital ingredient in achieving sustained economic growth of any country, including India. During the early stage of development, all most every developing country needs the assistance of international finance as a supplement to its own meager saving. Mostly two types of foreign capital exist one is Foreign Direct Investment and another is Foreign Portfolio Investment. Foreign direct investment (FDI) refers to the purchase of assets in the rest of the world or to establish a new firm with new capital investment in another country, which allows control over those assets. Foreign portfolio investment (FPI) refers to the purchase of a share, dividend of foreign companies, In foreign portfolio Investment Investors are not allowed to control those assets. Unless the benchmark of more than 49% FDI is closed. The foreign direct investment comes to India mainly through two routes, one is the Automatic route and another is the Government route. In an automatic route, the investor does not require any prior approval either from the Reserve bank of India or from the government of India. On the other hand, FDI through the government route requires approval.

Existing studies of FDI inflow in India help us to understand the factor that is important to attract more and more foreign investment. But in this study, we want to examine the determinants of FDI from the prospective of both the source countries and the host nation. The following six Asian countries (Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam) and one African country (Mauritius) are considered for the purpose. It is because of the fact that casual empirics suggests that these seven countries associated for more than 50% of FDI inflows to India.

The Asian financial crisis 1996-1997 and the global financial crisis 2008-2009 has renewed interest in the importance of studying the determinant of FDI. In the recent past, the macroeconomic scenario displayed greater uncertainties regarding investment flows across the world. The great slowdown of the Indian economy in the current financial period is also motivated us to study FDI in the Indian context. Thus the present study differs from the existing literature on one crucial aspect. The study takes in to account both the source countries and host nation's macroeconomic variables as possible determinants of FDI inflows.

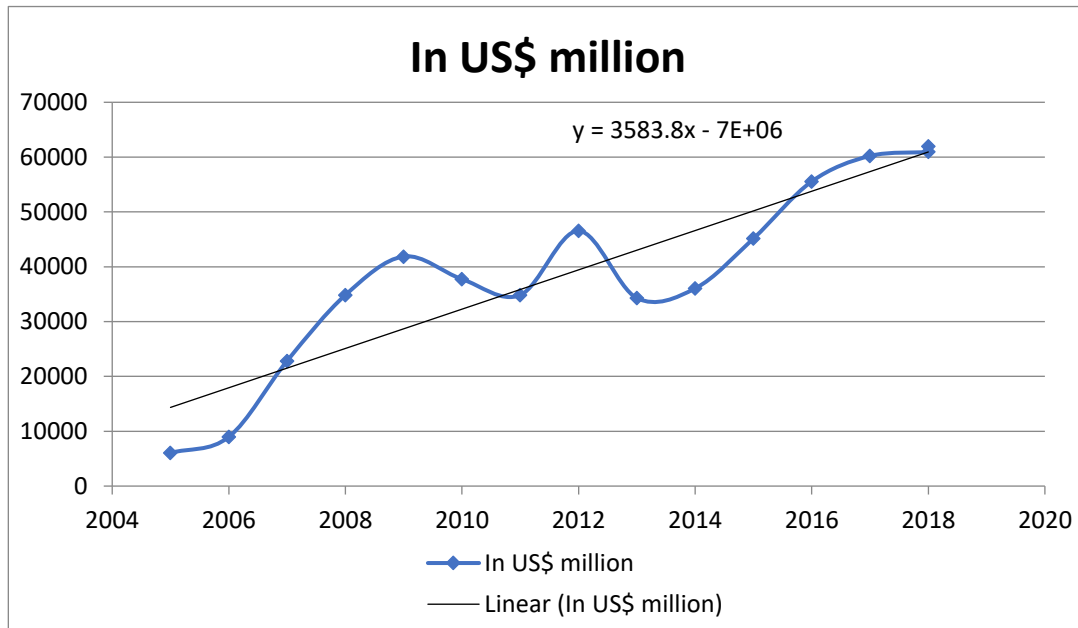
TREND OF FOREIGN DIRECT INVESTMENT TO INDIA:

After the balance of payment crisis in 1991 India government gave more attention to promote Foreign Direct Investment (FDI). **PV Narasimha Rao** and **Dr. Manmohan Singh** government took many reforms to liberalize our economy with an aim to attract more FDI inflows to India. The amount of foreign direct investment to India was US\$ 167 million in 1991 and in 2005 it reached US\$ 6051 million and in 2018, the amount is US\$ 62001 million. The trend of Foreign Direct Investment to India is increasing although in some of the period the foreign direct investment decreased, which can be attributed to the global slowdown.

FOREIGN DIRECT INVESTMENT INFLOWS OF INDIA

year	2005	2006	2007	2008	2009	2010	2011	2012
In US\$ million	6051	8961	22826	34843	41873	37745	34847	46556
year	2013	2014	2015	2016	2017	2018	2019	
In US\$ million	34298	36046	45148	55559	60220	60974	62001	

Figure- (1) Trend of total FDI inflows to India



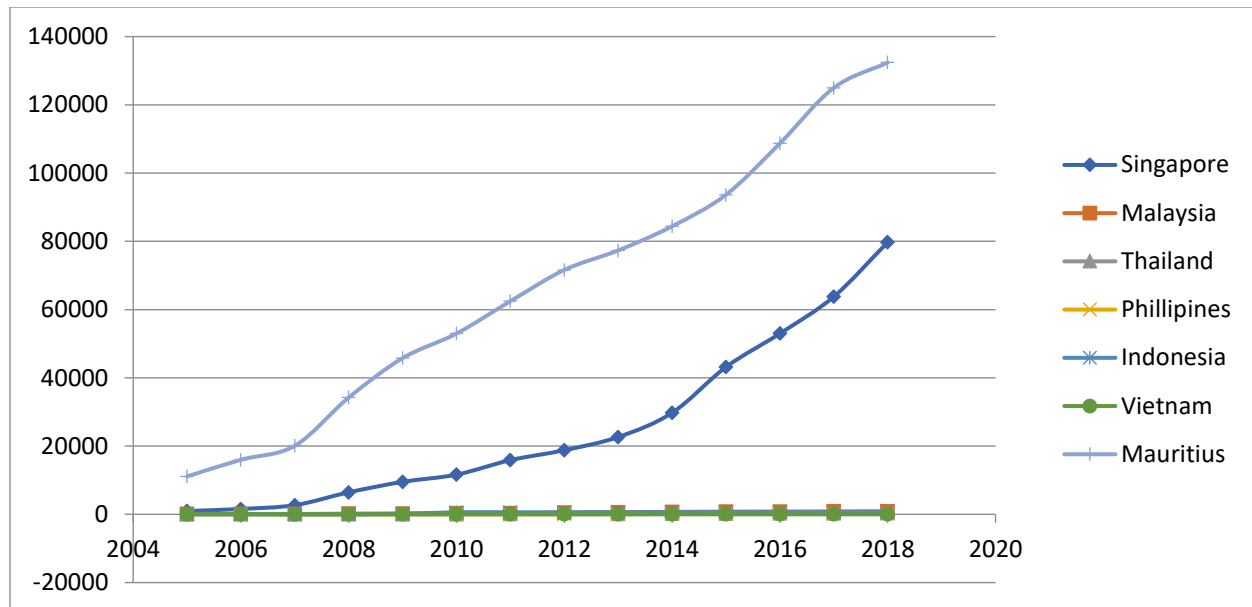
Source: Authors' own calculation

Mauritius contribute to 37% of total FDI inflows and Singapore 3.14% of total FDI inflows in 2005 But in 2018 the percentage share of FDI to India from Mauritius decreased to 32.36% and the share of Singapore to India increased to 19.49% because of two time modification of already sign the avoidance of double taxation agreement (DTA) between India and Singapore on (June 29 ,2005) and (September 1, 2011).The DTA modified agreement eliminates the double taxation of income between Singapore and India and reduces the overall tax burden of the residents of both countries. The trend of FDI inflows from the select countries are presented in figure- (2). From the figure-(2) it can be said that FDI inflows from Mauritius and Singapore shows an increasing trend.

Data of Foreign Direct investment inflows from the following countries to India

year	Singapore	Malaysia	Thailand	Phillipines	Indonesia	Vietnam	Mauritius
2005	962.41	135.82	74.73	52.35	30.32	0.1	11115.47
2006	1583.15	142.38	77.57	52.45	30.69	0.12	15999.54
2007	2694.81	105.54	41.04	0.67	27.89	0.12	20103.56
2008	6458.26	205.81	44.1	0.68	33.94	0.12	34241.36
2009	9517.84	244.45	65.41	0.9	172.25	0.13	45777.8
2010	11639.16	288.44	81.77	1.24	605.31	0.13	52985.64
2011	15894.26	309.27	92.06	2.99	605.72	0.14	62470.8
2012	18791.46	521.04		27.96	610.3	0.14	71621.44
2013	22665.6	631.74	164.5	32.65	611.44	0.24	77343.83
2014	29757.98	726.54	188.22	122.41	622.02	0.32	84416.95
2015	43172.31	787.46	213.69	130.28	624.28	0.45	93659.75
2016	52994.49	829.17	282.56	225.28	626.28	4.59	108729.2
2017	63803.31	863.15	364.32	235.81	628.47	4.76	124985.9
2018	79746.67	923.14	456.54	241.86	629.11	4.95	132408.3

Figure- (2) Trends of FDI inflows from the following selected countries



Source: Authors' own calculation

OBJECTIVES:

The study aims to investigate empirically the trends and determinants of FDI inflows to India from the following countries Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam and Mauritius. The determinants of such FDI inflows are both home country-specific as well as from the prospective of the above Asian countries from which this FDI inflows come to India. The selected source countries contribute more than 53 percentages of total FDI inflows to India.

For this purpose of the analysis, we consider 5 variables as independent variables. They are as follows.

Gross saving: Gross Domestic Saving is GDP minus the final consumption expenditure. If in a country gross domestic savings increases more rapidly than the countries is Gross capital formation also increases more rapidly. With the new capital formation, the investor of the country either invests in the domestic country otherwise they invest the capital in foreign countries.

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Interest rate differential: It is the difference between the real interest rate of India and the source country of FDI inflows to India. As the difference between India's real interest and the source countries real interest rate increases the interest rate differential too increases. This in turn attracts FDI. Interest rate differential may be positive or negative.

Gross Domestic Product (GDP) growth rate: How fast the economy is growing is measured by the GDP growth rate. Gross domestic product is the total amount of goods and services produced in a country in a year. Personal consumption, retail sales, Government spending and net trade from these four components of GDP would generally drive the GDP growth rate.

Nominal effective exchange rate (NEER): NEER is an indicator of a country's international competitiveness in terms of the foreign exchange (FOREX) market. NEER describe the relative value of foreign countries' currencies unadjusted weighted average rate at which one country currency exchange for a basket of multiple foreign currencies.

Business Freedom Index (BFI): Overall indicator of the efficiency of government regulation is the Business Freedom Index. The Heritage foundation constructs the business freedom index, the quantitative score is derived from an array of measurements of the difficulty of starting, operating and closing a business. The business freedom score for each country is a number between 0 and 100, with 100 equaling the very conducive business environments.

BRIEF LITERATURE REVIEW

There is a wide range of literature devoted to the analysis of the determinants of foreign direct investment inflows to India. The determinants of foreign direct investment inflows to India have attracted good research interest from the academicians, economic analysts, and researchers from the domain of development economics, International finance, International economics and financial economics of various developed, developing as well as emerging economies. However, studies the determinants variables of FDI inflows to India in the context of variables of source countries from which the FDI inflows come to India are very limited. In this, the section presents

a brief account of those studies which are conducted to test the determinants of FDI inflows to the Indian economy.

Starting our review from the studies of Monica Singhania and Akshay Gupta (2011) found out evidence that GDP, Inflation and scientific research in India has a positive impact on more FDI inflows to India. Another notable research has carried out by Yuki Tsucheya (2015) the studies empirical results found that FDI inflows in India positively related to the gross domestic product (GDP) per capita length of state and national highway GDP of the service sectors, number of telephone 100 populations and the amount of natural gas produces. Range Sing, Hilton MC David, A Birect and Allen wright (2008) attempt to inquire and found significant a positive relationship with traditional variables i.e. Infrastructure, economic growth and openness to trade promote the flows of FDI to small developing nations.

Numerous studies of Kechagia Polyxeni, Metaxas Theodore (2019) empirically investigated FDI inflows in developing countries they found terrorism is a deterrent factor of FDI and that traditional and emerging determinants (political, institutional, social and financial condition). Across the world, different countries have different variables as factors determinants to inflows foreign direct investment. Among the determinants are common for some countries and others some factors are host country specifics. Fukunari kimura and Kozo Kiyota (2006) studies argued firm productivity and exports are the most important factors determinant of FDI inflows in Japan. From the empirical examination Xose, a Rodriguez and Julio Pallas (2008) shows labour productivity, demand for the product, human capital, the export potential and certain macroeconomic variables have successfully attracted FDI inflows to Spain. Researcher Zafar Mueen Nasir and Arshad Hassan's (2011) studies found the role of market size, exchange rate and economic freedom in attracting FDI inflows in South Asian countries. They found that in south Asian countries economic freedom is positively related to FDI. However, the magnitude of FDI in South Asia is relatively low. In the case of South Asian countries large market influence more FDI inflows, It has a positive impact and they also found that the real exchange rate is negatively related to FDI inflows. Kisor Sharma, James Nayagam and Huitton Chung (2012) studies found that openness, Infrastructure and Quality of labour force have been the influential factors attracting FDI to Malaysia. Qiam sun, Willson

Tong, Qiao (2002) Yu studies found in china wage have a positive relationship with FDI before 1991 and Negative after 1991, GDP has no significant relation before 1991 but after 1991 GDP and FDI is a highly positive relationship in Chinese economy .P.P.A. Wasantha Athukorala (2014)empirical analysis supports a robust link between Foreign Direct Investment and economic growth in Sri Lanka economy.

DATA AND METHODOLOGY:

To investigate the short determinants of FDI in India from the following countries Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam and Mauritius, the study employs the panel data analysis covering the time period from 2005 to 2018. The data on FDI, Gross saving, real interest rate and GDP growth rate is collected from World bank database, NEER data is collected from the website (<https://bruegel.org>), trade balance data is taken from UNCATED data base and Business freedom Index (BFI) data is taken from Heritage foundation.

METHODOLOGY:

This study employs multivariate regression analysis in a panel data framework to explore the dependence of foreign direct investment on business freedom and other factors like GDP growth rate, gross saving, interest rate differential, and nominal effective exchange rate. The panel data analysis helps to explore of cross-sectional and time-series data simultaneously. Panel data analysis has been used with an assumption of constant coefficients as well as in fixed and random effect settings.

Kreft and De leeuw (1998) distinguished between the fixed effect and the Random effect model. Applicability of fixed effect model has been tested by using standard F- test. If calculated value is greater than F critical value, we reject the hypothesis that all constants are same. In fixed effect model the cross sectional effect is captured through dummy. Random effect model is an alternative method of estimation which assumes that the constants for each section are not fixed but are random. Fixed effect model assumes that each country differs in its intercept term whereas random effect model assumes that each country intercept are not different. The fixed effect model better

suits in a long panel and for short panel, the random effect model becomes more appropriate **(Greene 2003)**.

The intercept and slope terms are constant and there are no differences among the data matrices of the cross sectional dimensions the model also assumes constant coefficients. The model of the study is presented in the following equation.

$$FDI_{it} = \beta_0 + \beta_1 RIRD_{it} + \beta_2 GDP_{it} + \beta_3 NEER_{it} + \beta_4 GS_{it} + \beta_5 BFI_{it} + \mu_t \quad \dots\dots\dots (1)$$

Where FDI_{it} is total amount of foreign direct Investment in flow to India from source country 'i' for the year "t" and $RIRD_{it}$ is the real interest rate differential of country 'i' for the year 't', NEER is nominal effective exchange rate, GDP is the gross domestic product growth rate of the source countries, GS is gross saving of source countries and BFI is Business freedom Index of sources countries. The error term is represents with the help of μ_t .

The choice between fixed effect and random effect model is made through **Hauseman test** (1978). The Wald test is used to find out among the model, which model variables are contributing something significant results.

EMPERICAL RESULTS

The purpose of our empirical Investigation to analysis the effect of GDP growth rate, Business freedom , Interest rate Differential, Gross saving and Nominal effective exchange rate on FDI in flows to India from the countries Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam and Mauritius. Table-1(a) exhibits the result of descriptive statistics of the variables.

Descriptive statistics in Table-1(a) For the period 2005-2018

Singapore	Mean	Standard Deviation
FDI	25691.55	25031.29
RIRD	0.410985	3.472481
GDP	5.28732	3.698901

NEER	111.0872	9.767069
GS	46.23367	2.494789
BFI	96.79286	2.123663
Malaysia	Mean	Standard Deviation
FDI	479.5679	305.6258
RIRD	2.192289	3.867256
GDP	4.960813	2.015288
NEER	97.89228	5.913077
GS	32.45514	4.442486
BFI	77.79286	9.614849
Thailand	Mean	Standard Deviation
FDI	165.1162	132.097
RIRD	1.908341	2.097568
GDP	3.538401	2.354525
NEER	103.5007	7.197033
GS	29.9448	1.650562
BFI	72.40714	2.237947
Philippines	Mean	Standard Deviation
FDI	80.53786	93.37824
RIRD	0.474595	2.491958
GDP	5.642531	1.724838
NEER	98.88204	5.952466
GS	44.70656	1.543808
BFI	54.78571	5.745347
Indonesia	Mean	Standard Deviation
FDI	418.43	280.3194
RIRD	-0.1005	3.437283
GDP	5.522629	0.566305

NEER	87.78469	10.61304
GS	29.64203	2.792306
BFI	51.61429	3.51696
Vietnam	Mean	Standard Deviation
FDI	1.165	1.955579
RIRD	2.397363	3.963467
GDP	6.343497	0.729171
NEER	86.33099	11.75682
GS	27.7008	4.4574
BFI	59.65	5.824451
Mauritius	Mean	Standard Deviation
FDI	66847.12	39407.04
RIRD	-3.87449	3.666803
GDP	3.936211	0.968548
NEER	108.0647	4.070352
GS	17.43641	3.138924
BFI	73.90714	3.448849

Source Authors' own calculation

Table-1(b) Correlated random effects

Housman test

	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	
H Statistics	80.668969	5	0.0000	
Cross-section random effects test comparisons:				
Variable	Fixed	Random	Var(Diff.)	Prob.
RIRD	1395.068941	-892.797702	81235.320021	0.0000
GDP	-1697.203627	-199.637947	159835.155065	0.0002

NEER	568.752935	1127.172903	19956.803240	0.0001
GS	-287.228477	-1299.749445	381655.413916	0.1012
BFI	459.655328	321.481088	131211.482236	0.7029

Source Authors' own calculation

In the above table, the Housman test results shows that the value of H statistics is high and P value is less than 5 percent level. So the null hypothesis random effect model is rejected and fixed effect estimators are consider appropriate. The results of fixed effect model are reported in the following table-1(c)

Panel data analysis in Table-1(c)

Fixed effect model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-57593.1	49380.27	-1.16632	0.2467
RIRD	1395.069	522.0925	2.672072	0.009
GDP	-1697.2	910.342	-1.86436	0.0657
NEER	568.7529	215.0758	2.644431	0.0097
GS	-287.229	643.1633	-0.44659	0.6563
BFI	459.6553	382.5376	1.201595	0.2329
Adjusted R-squared	0.6974		Prob(F-statistic)	0
F-statistic	21.11368			

Source: Authors' own calculation

The results clearly indicate the presence of significant positive relationship between the real interest rate differential and nominal effective exchange rate (NEER) with foreign direct investment (FDI) inflows to India from the selected Asian countries. This relationship has rationale as percentage of interest rate differential increase FDI inflows to India becomes more attractive, also as exchange rate increases in the selected countries, more and more FDI inflows to India occurs. GDP growth rate is significant but negatively related. As the source countries GDP growth

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rate increases the investor are not interested to put their capital in the destination country. The investors are more interested to invest in their respective domestic country because of optimisation. The investors think that home country growth may be high that would fetch a higher returns on their capital.

CONCLUSION:

In India, there is a lack of a sufficient amount of capital for new investments. To fulfill this gap of capital deficiency, foreign direct investment in India has a significant role in the economic growth and development of the country. This study analyzes the determinants of foreign direct investment flow to India from the following countries Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam, and Mauritius. The determinants of foreign direct investment (FDI) are both source country-specific as well as destination country-specific. The results of the econometric analysis indicate that there are some common factors that encourage foreign direct investment and other factors discourage. In our analysis, we get that as the gross domestic product (GDP) growth rate increases in the source country the investor invests more and more in to their home country rather than investing in the destination country. We also conclude that as the Nominal effective exchange rate (NEER) and interest rate differential increases the foreign direct investment to India increases too. So from our study of previous literature and empirical analysis, we can say that foreign direct investment to India from the above countries not only depends on GDP growth rate and interest rate prevailing in India but also on the growth rate and interest rate of source countries. So the suggestion to policymakers is that during the time of policymaking and both the destination countries factors as well as source countries factors are to be taken in to account.

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