Examining the determinants of FDI inflows in India

Shiba Shankar PATTAYAT Central University of Punjab, Bathinda, India pattayatshiba@live.com

Abstract. This paper basically highlights the determinants factors of FDI and how these factors are affecting FDI which is the most important factors of economic growth. It includes GDP as a dependent variable and FDI, Trade Openness and Exchange rate are the independent variables. This study has used time series data which are from various secondary data sources like IMF, RBI etc. and installed ADF test for checking the stationarity of the data. It has also used Johnson Co-integration test for find out the long run relationship between the dependent variable and independent variables. Signifying the fact that all the variables of the study move together in the long run. If variables are co integrated, the slope coefficients becomes super consistent. Among the long run coefficients, the influence of GDP to inward FDI is the highest which is 2.276. This indicates the role of market size in attracting foreign capital flow.

Keywords: India, GDP, FDI Inflows, Trade Openness and Exchange rate.

JEL Classification: E01, F21, E31.

1. Introduction

Foreign direct investment (FDI) is a controlling ownership in a business enterprise in one country by an entity based in another country. Foreign direct investments differ substantially from direct investments such as portfolio flows, where in overseas institutions invest in equities listed on a nation's stock exchange.

As per the criterion of OECD an investment is considered as FDI if an investor owns directly at least 10% of the voting right. Hence the difference between FDI and FII is of the matter of degree rather than kind. It is stable form of the foreign capital and is preferred to FII, which is volatile and short-term in nature.

FDI refers to the Foreign Direct Investment, which means the investment in host country by the foreign country. It gives benefit to both countries (host and foreign country) through spillover effect. It is like a pump priming process by which underdeveloped country and developing country can develop. FDI supplements domestic investment and contributes to growth process of the economy. It is a non-debt foreign asset. The role of the FDI is quite important with regard to transfer of technology and know how. Recent years have witnessed significant change in the direction of world FDI, as developing country starts favorite for MNEs to set up their business. There are different theories that explain the motive and factor behind the investment decision away from home country.

On the other words, FDI refers to the net inflows in an enterprise operating in other than that of the investor. It is the sum of equity capital,

Other long-term capital and short term capital as shown in the balance of payment. FDI acts as a bridge to fulfill the gap between domestic investment and domestic saving.

Transitional economics including India need FDI inflow for its overall development. Liberalization policy of early 90s paved the way for foreign fund including FDI. FDI inflow has been increasing tremendously after the massive liberalization program following exchange rate crisis in India. The main objective of the liberalization program was to bring the stability, economic growth and development via Liberalization, Privatization and Globalization (LPG) process. Neoclassical growth model considers FDI to have just short term effect on growth rate whereas the new Growth Theory evaluates FDI endogenously in the model and regards it as having long term impact on growth rate through technology and spillover effect (Hsiao and Hsiao, 2006; Jayachandran and Seilan, 2010).

There are different factors that affect the FDI inflow into a country. However, the linkages differ from one country to another country depending upon the level of development (Denekas et al., 2007). For FDI inflows in India, there are many possible determinates which influence the FDI inflow into India. The possible determents are selected after the extensive literature study and summarized below.

The main scope of the study is that this study will increase the knowledge of people about inward FDI and it is also beneficial for researcher. The study would help all to take advantage of FDI inflows. Basically it helps to student, researcher who are working on this particular area.

The objective of the study is to investigate the determinants of Foreign Direct Investment (FDI) in India.

Limitation means that what I left for further study. The foremost limitation of our study is that we have taken only one country. So researcher can take more country for their research. Secondly we have used only four variables such as Inward Foreign Direct Investment, Gross Domestic Product, Trade Openness and Exchange rate. Including that variable researcher can include more macroeconomic variable for their project which will give valuable result. We have encompassed the data from 1980-2013 due to unviability of data.

The study has contains four sections, as follows:

Section 1 starts with introduction, scope of the study and also includes objective of the study and limitations of the study. Which will give some idea about this study. Likewise Section 2 comprises the literature review of the study. Section 3 encompasses data, methodology and empirical results of this study. Lastly I have placed Section 4, which includes conclusion of this project work.

2. Literature Review

The following is a review of some of the relevant literature relating to the various studies on determinants of FDI inflows in India.

Sharmiladevi and Saifilali (2013) have explained the determinants of FDI inflows of India by taking Ordinary Lists Square (OLS) method. The author has taken FDI as a dependent variable and the independent variables are Gross Domestic Product (GDP), export, Inflation rate, Index of Industrial Product (IIP) and exchange rate. The data are collected from Reserve Bank of India data base and stated that 5% significance level of that independent variable, i.e. these variables are the important determinants of FDI inflows in India. He also uses the Breusch-pagan-Godfrey Test for heteroskedasticty, Durbin Watson test and serial correlation LM test. Lastly he rejects the null hypothesis and states that these independent variables are having a direct influence upon India's credibility in the international arena in terms of attracting more FDI.

GDP is the more important factor influencing FDI inflows. The changes in the level of real GDP of a host country reflect the purchasing power of a country and its market size. Root and Ahmed (1979), Bhattacharya et al. (1996) suggest that a growing market increases the prospectus of market potential and a large market size would generate economies of scale. While, Scaperlanda and Maurer (1969) suggest that FDI respond positively to the market size and many empirical studies in developing host countries have confirmed this hypothesis.

Nair-Reichert and Wienhold (2001) and another researchers, mainly focuses on the casuality running from FDI to GDP. The two-way link between FDI and GDP stems from the fact that increased FDI promotes growth in host countries, whereas brighter growth prospects in the host countries attract an increased flow of FDI.

Alfaro, (2003), argue that FDI provides growth only where there are sufficiently developed financial markets.

GDP growth and inflation positively impact the inflow of FDI in India and scientific growth negatively impact on FDI in India. This research paper also explained 63% variation in FDI inflows into India. He has explained his paper by taking some major independent variables like Gross Domestic Product (GDP), Openness (Free Trade) i.e. sum of total imports and exports, Inflation rate, Interest rate, Money growth and Scientific (Technological) progress and dependent variable as Foreign Direct Investment (FDI). He uses ARIMA model for measure the determinants of FDI inflows in India. (Singhania and Gupta, 2011)

Alam and Shah (2013) have described the bi-directional relationship between market size and labor costs in short run where as in long run labor costs yield significant confidents indicates the interaction of four variables. This study has taken the panel data of OECD member countries and tests it using by Granger Causality test. The OECD countries including Australia, Belgium, Canda, France, Italy, Japan, Norway, Spain, The USA and UK. This study has used Granger Casuality test including Durbin Watson statistics, Unit root tests and Co-integration test. They have used independent variables, which are affects on FDI, are market size, Labor cost, Labor productivity, Corporate tax rate, Trade openness, Political stability, Real effective exchange rate, Inflation and Quality of infrastructure and FDI as the dependent variable which is depends on the variations of independent variables. Chakraborty and Nunnenkamp (2008) stated that growth of FDI impact on various sectors like primary sector, secondary sector which refers to manufacturing sectors and service sectors. They have stated the transitory effects of FDI on output on service sector where as FDI stocks and output are mutually reinforcing in the manufacturing sector and casual relationship is absent in primary sector. They have used Co-integration causality test for deriving the economic reform, FDI and economic growth in India and panel data source is Reserve Bank of India (RBI).

Indian Express (2005) states the opinion of the policy makers, ministers about FDI. According to the former Finance minister, P. Chidambaram, "FDI works wonders in China and can do so in India". Various economists, including Bajpai and Sachs (2000), advice policy makers in India to through open the doors to FDI, which is supposed to bring "huge advantage with little or no downside".

Das (2014) proposed amendment to Insurance Laws Bill, 2008 in the parliament, making provisions to hike Foreign Direct Investment (FDI) cap from 29% to 49% in the insurance sector and facilitating the process of disinvestment of public sector general insurance companies.

Fedderke and Romm (2006) have argued that FDI can develop the economic growth by generating the lacking sources (technology, skill and resources) through the spillover

effect. Determinants of Foreign Direct Investment in South Africa lie in the net rate of return, as well as the risk profile of foreign direct investment liabilities. Policy handles are both direct and powerful. They have used the VECM method for determining the impact of FDI on growth and determinants of FDI. The data sources of their research is South African Reserve Bank and they have taken variables political instability and the property rights from 1960 to 2002, tested by Agumented Dickey-Fuller test.

They have explained this in case of both open economy as well as closed economy. FDI will more effects on the host economy/country if it would be free trade i.e. open economy. So the positive benefits of FDI to be transferred to the host country. If economy is closed then there is negative impact on growth of the economy (Moran et al., 2005).

Seetanah and Khaadaroo (2007) have given their opinion through study that FDI provides a pump-priming method to economic growth i.e. though FDI is small, it is helpful for economic growth.

Nonnemberg et al. (2004) express about Foreign Direct Investment that more FDI inflow is possible through strong GDP growth but FDI doesn't induce the economic growth. On the other words, GDP growth can induce FDI inflow, FDI does not necessarily induce the economic growth.

Carkovic and Levine (2002) explains FDI doesn't induce economic growth independently but some other factors are responsible for the relationship between FDI and economic growth. Case studies of Argentina and Estonia states that although MNC s employ more and more skilled labor and higher spending on training but it shows the little effect on the growth of the economy.

Alfaro (2003) states about the impact of FDI on economic growth in various sectors of the economy. He told impact of FDI on economic growth varies across the sectors i.e. primary sector, secondary sector and tertiary sector. The impact of FDI on primary sector is not equal to another two sectors of the economy. Similarly the impact of FDI on secondary sector (Industrial sector) is not equal to primary sector (Agricultural sector), tertiary sector (Service sector) and vice versa.

Garibaldi et al. (1999) growth technical innovation and enterprise reconstructing as well as capital accumulation are possible through the FDI.

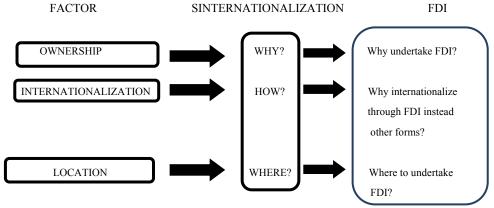
Further they state that FDI plays an important role to developed a country. This paper based on India. The aim of their study was to investigate the impact of FDI on economic growth in India. They defined the pattern and trends of the main determinants and dimensions of investment flow in India. They also discussed FDI inflow in India as compared to China, Singapore, Brazil and Russia and told India's share in global FDI has increased continuously but growth of India always less than the other developing country. The study has taken data from different sources like World Investment Reports, Asian Development Bank's Reports, Various Bulletins of Reserve Bank of India, Publications from ministry of Commerce, Govt. of India websites. The study has been taken data for the period between 1991-2011. (Kali Ram Gola et al., 2013).

Froot and Stein (1991) studied the effect the exchange rate valuation on FDI. They concluded that, within an adequate capital market model, the host countries with weaker currencies attract more FDI because of depreciation effects which make the asset of the home country more expensive than the ones in the host country.

Dimitrios and Pantelis (2003) have proved that real gross national product is the most important determinant of outward FDI. This study has proved by taking the time series data for five European Union members and four non-European Union countries. This research paper has taken dependent variables are Income, Interest rate, Exchange rate, Technology, Human capital and also taken the dummy variable. OLS method is used by researcher and the stationarity of all used date series has been tested by applying the Phillips-Person unit root test (Phillips and Person, 1988) and also used Durbin-Watson statistics which indicates the absence of autocorrelation. Lastly, the results verify that the outward FDI position of countries is influenced by national characteristics and that the same type of endowments have different significance for different countries.

Galan and Gonzalez-Benito (2006) study is based on 103 Spanish companies which have conducted Foreign Direct Investment (FDI). Studies have discussed about internationalization process and find out transaction costs and other questions related to knowledge transfer and accumulation are relevant in the choice of FDI over alternative forms of internationalization. They mainly focused on three advantages like Ownership advantages, Internalization advantages and Location advantages. They have showed a flow chart.

Figure 1. Model of determinant factors in the key decisions in the international process



Akinboade (2006) have emphasized "low inflation is taken to be a sign of internal economic stability in the host country. Any form of instability introduce a form of uncertainty that distort investor perception of the future profitability in the country.

Wint and Williams (1994) have observed that stable economy attracts more FDI this a low inflation environment ids desired in countries that promote FDI as a source of capital flow. Therefore the study expects a negative relationship in the regression analysis.

Gross and Trevieno (1996) have described a relatively high interest rate in a host country has a positive impact on inward FDI. However the direction of the impact could be in a reserve if

the foreign investors depend on host countries capital market for raising FDI fund. The researcher has used prime lending rates because investors are lenders and borrowers.

Froot and Stein (1991) have examined that exchange rate can affect FDI through an imperfect capital market channel. In this case a real depreciation of the domestic currency raises the wealth of foreign investors relative to that of domestic investors and thereby increases FDI. Overvalued exchange rates are associated with shortage of foreign currency, rent seeking and corruption, unsustainably large current account deficits, BOP crises and stop and go macroeconomic cycles all of which are damaging FDI. In addition, high levels of exchange rate volatility can be disruptive to exports and investment.

Similarly Nakamura and Oyama (1998), have proved in case of the foreign exchange market, an appreciation in exchange rate would cause a depreciation of domestic currency against US dollar. Normally trade in Malaysia usually uses the term of US dollar in their transaction. So, FDI is hypothesized to increase in response to the depreciation in Malaysian Ringgit. Nakamura and Oyama (1998) suggest that the exchange rate is the choice for MNCs to select FDI destinations.

Lokesha and Leelavathy (2012) provides an explanation for determinants of FDI inflows into as well as outflows from India. It analyzes the dynamics of several FDI determinants in relation to the inflows and outflows. It reviews the key results of research regarding the determinants of FDI. The study concludes that FDI inflows into India is simultaneously determined by the policy framework, market size, economic factors as well as economic stability and political factors.

Pan Y. (2003) have observe that the impacts of source and host country factors on the inflow of foreign direct investment (FDI) into China between 1984 and 1996. The author have explained that exchange rate is not found to be a significant determinant for aggregate FDI inflow in China.

Faik et al. (2012). Turkey research paper shows the explanations about FDI in Turkey economics. This paper has taken the dependent/explanatory variables are GDP growth, Labour cost, the electricity price growth, the growth in average prices of High sulphur fuel oil, Cookin coal, Stem coal and Natural gas, Export growth, Import growth, Discount rate. This paper has given the result by using Markov Resime-Switching Models (MSMs) by taking time series data IMF-IFS, 2011 CD ROM.

The OLI paradism is dynamic. The continuous incorporation of new companies to the internalization process and the changing and more and more respective policies in developing countries are giving rise to new trends in the way of carrying out FDI Dunning (1973); Dunning and Narula (1996).

In the survey approach the aim is that instead of relying on a deductive approach, the investing firm's motives are unfolded by directly asking them to identify the reasons for their foreign investment decision. This approach was very popular in the 1960s and 1970s Dunning, (1973). Later, several other attempts were made to test the importance of location factors in affecting FDI decisions, such as Chen (1983), Majumdar (1980) and Zhang and Yuk (1998).

3. Data, Methodology and Analysis

3.1. Data description

For this study we have taken data from different sources as dependent variable and independent variables. We have explained all the data below which are necessary for my project work.

3.1.1. Dependent Variable

The study has included the inward Foreign Direct Investment (IFDI) as dependent variable.

IFDI:- Where inward foreign direct investment (IFDI) is dependent variable i.e. Foreign Direct Investment is that investment, which is made to serve the business interests of the investor in a company, which is in a different nation distinct from the investor's country of origin. Inward Foreign Direct Investment (IFDI) is an inflow of foreign direct investment in domestic country. Inward FDI data is extracted from UNCTAD data base.

3.1.2. Independent Variables

Like dependent variable We have collected data for my study as independent variables are GDP, TRADE OPENNESS and EXCHANGE RATE.

Gross Domestic Product (GDP)

The gross domestic product (GDP) or gross domestic income (GDI) is the market value of all final goods and services produced within a country in a given period of time. It is often positively correlated with the standard of living. GDP has been collected from World Development Indicators (WDI) World Bank data base. This data is in millions of US dollar. For my work GDP data is converted to log of gross domestic product (LGDP).

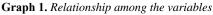
Trade Openness

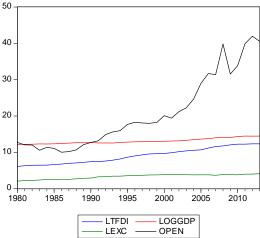
Trade is nothing but the relationship among the different counties through transforming goods and services from one country to another country. It is also called as international Trade, External trade or Inter-Regional trade. It consists of imports, exports and entrpot. The inflow of goods in a country is called export trade. Many times goods are imported for the purpose of re-export after some processing operations. This is called entrepot trade. Foreign trade basically takes place for mutual satisfaction of wants and utilities of tesources. This data has been measured from International Financial Statistics (IFS) IMF data base. Trade openness is the ratio of the sum of export, import of a country and GDP of a country. Trade Openness= $\frac{EXPORT + IMPORT}{GDP} * 100.$

Exchange Rate

In finance, the exchange rates also known as the foreign-exchange rate, forex rate or FX rate between two currencies specify how much one currency is worth in terms of the other. It is the value of a foreign nation's currency in terms of the home nation's currency. The concept of exchange rate is National currency per US dollars, end of period. Exchange rate has been collected from the International Financial Statistics (IFS) IMF data base and it is measured in National currency per US dollars.

Exchange rate also converted into log exchange rate which is suitable for my study.





This above graph shows the relationship among the variables. The blue color line mirrored the LTFDI which means inward foreign direct investment. It is a increasing trend. The black line reflected the trade openness which leads to increase in inward FDI. It increases over a period of time. Likewise red line displays the log of GDP and green line displays log of exchange rate which are maintaining the stability over a period of time.

Table 1. Sources of variables

Variables	Sources	Unit/Measures
INFLOWS FDI	Unctad data base	Us dollars at current prices and current exchange rates in millions
GDP	Wdi, world bank data base	Us dollar at current prices and current exchange rate in millions
EXCHANGE RATE	International financial statistics (ifs)	National curency per us dollar
EXPORT	International financial statistics (ifs)	National curency per us dollar
IMPORT	International financial statistics (ifs)	National curency per us dollar

3.2. Data Period

I have used secondary data from the year of 1980 to 2013 because of unviability of data. I have collected data which ever available in secondary sources like UNCTAD, RBI, IFS (International Financial Statistics) IMF data sources.

3.3. Methodology

Before moving for any time series analysis it is customary to check the stationary property of the variable. To serve my purpose Augmented Dickey Fuller (ADF) test is applied to check the level of integration of variables. To find out the determinants of FDI multiple regression technique can be applied to find out the significance and effect of independent variable on the dependent variables. After ascertaining the importance and

effects of regressions this study will make an attempt to determinates the FDI inflow with the help of **Johnson co-integration test**. So I have given co-integration equation below

$$LTFDI_t = \alpha_0 + \beta_1 LogGDP_t + \beta_2 OPEN_t + \beta_3 LEXC_t + U_t$$

Where:

LTFDI_t= Log of total inward FDI in period of t.

LogGDP= Log of GDP.

OPEN= Trade openness index which is equal to ratio of trade and GDP.

Trade Openness=
$$\frac{E+M}{GDP} * 100$$
.

Where E refers to export of the country and M refers to import of the country.

LEXC= Log of Exchange rate.

U_t refers to the error term of the equation.

 α_0 , β_1 , β_2 and β_3 are the coefficients of variables.

There are four error correction equations, which are given below:

1)
$$\Delta$$
LTFDI = λ_F (LTFDI_{t-1} - α_o - β_1 LogGDP_{t-1} - β_2 OPEN_{t-1} - β_3 LEXC_{t-1})+ ξ_{Ft}

2)
$$\Delta$$
LGDP = λ_G (LTFDI_{t-1} - α_o - β_1 LogGDP_{t-1} - β_2 OPEN_{t-1} - β_3 LEXC_{t-1}) + ξ_{Gt}

3)
$$\triangle OPEN = \lambda_O (LTFDI_{t-1} - \alpha_o - \beta_1 LogGDP_{t-1} - \beta_2 OPEN_{t-1} - \beta_3 LEXC_{t-1}) + \xi_{Ot}$$

4)
$$\Delta LEX = \lambda_E \left(LTFDI_{t-1} - \alpha_0 - \beta_1 LogGDP_{t-1} - \beta_2 OPEN_{t-1} - \beta_3 LEXC_{t-1} \right) + \mathcal{E}_{Et}$$
.

These above four equations are the error correction equation where Δ shows the changes of the all variables and λ shows the adjustment parameters.

3.4. Empirical analysis

Before moving towards the final result I will explain the stationarity of all variables which I have taken for my study. We have tested it by using Augmented Dickey Fukller Test which is generally known as ADF unit root test.

3.4.1. Unit root test

Unit root test is used for testing the stationary of all variables. On the Augmented Dickey–Fuller test (ADF) is a test for a unit root in a time series sample. The more negative of ADF statistic is the stronger the rejection of the hypothesis that there is a unit root at some level of confidence. So, we have tested our variables at level and at first difference.

Table 2. Augmented Dickey Fuller test (at level)

Variables	t-statistics	p value	
LFDI	-2.775453	0.2165	
LGDP	-1.006736	0.9293	
OPENNESS	-2.369237	0.3878	
LEXC	-4.167579	0.2256	

The above table shows that the variables LFDI, LGDP, OPENNESS and LEXC are non-stationary at level.

 Table 3. Augmented Dickey Fuller test (at first difference)

Variables	t-statistics	p value	
LFDI	-3.007940	0.0459	
LGDP	-4.511469	0.0056	
OPENNESS	-5.142016	0.0002	
LEXC	-7.121204	0.0000	

All variables are found to be stationary after first difference. It shows all the variables of our study are integrated of order one or I (1).

3.4.2. Co-integration Test

Since all the variables are found to be non-stationary at level and none of the variable is integrated more than one. So to ascertain the long run relationship among variable we proceed for the co-integration test developed by Johnson. The name of the integration test was Johnson test. It is a procedure for testing co integration of several I(1) time series. For testing co integration equation must be required which are given below.

 $LTFDI_t = \alpha_0 + \beta_1 LogGDP_t + \beta_2 OPEN_t + \beta_3 LEXC_t + U_t$.

Table 4. Johnson Co-Integration Result

Variables	Coefficients	t-statistics
β 1	2.176	-5.457
β 2	0.002	-0.091
β 3	0.654	-4.062

The above coefficients are long run coefficients signifying change in dependent variable as a response to corresponding change in dependent variable. One percent change in GDP leads to 2.27% change in inward FDI in the long run. Openness is found to be insignificant in our study. Exchange rate positively influences the inward flow of FDI is confirmed from the above empirical finding. The percentage influence of exchange rate to inward FDI is 0.65. Exchange rate affect FDI flow positively due to wealth effect is confirmed by this analysis. Finding of Exchange rate- FDI link is on the line with the finding of Cushman (19985), Zubair Hasan (2003).

The other studies which shows the relationship between GDP and inward flow of capital are Lankes and Venables (1996), Resmini (2000).

- 1) Δ LTFDI = λ_F (LTFDI_{t-1} α_0 - β_1 LogGDP_{t-1} β_2 OPEN_{t-1} β_3 LEXC_{t-1})+ ε_{Ft}
- 2) Δ LGDP = λ_G (LTFDI_{t-1} α_o - β_1 LogGDP_{t-1} β_2 OPEN_{t-1} β_3 LEXC_{t-1}) + ξ_{Gt}
- 3) $\triangle OPEN = \lambda_O (LTFDI_{t-1} \alpha_o \beta_1 LogGDP_{t-1} \beta_2 OPEN_{t-1} \beta_3 LEXC_{t-1}) + \mathcal{E}_{Ot}$
- 4) $\Delta LEX = \lambda_E \left(LTFDI_{t-1} \alpha_0 \beta_1 LogGDP_{t-1} \beta_2 OPEN_{t-1} \beta_3 LEXC_{t-1} \right) + \xi_{Et}$

Table 5. Error Correction Results

Variab	les Coefficients	t-statistics
λf	0.143	1.52
λg	0.059	1.084
λο	0.378	1.174
λe	-0.213	-3.818

The adjustment coefficient of FDI is found to be 14%. Explaining the fact that any deviation from the equilibrium is adjusted by 14% in a year. The error correction coefficients of GDP is adjusted 5% to long run equilibrium. Error correction results is explaining that the OPENESS correction coefficients adjusts 37% toward the inward FDI inflows.

4. Summary and Conclusion

4.1. Summary

In my study, "Examining the determinants of inward FDI in India", I have tried to analyses the determinants of foreign direct investments in India. Using ADF test for checking stationarity of variables and by employing Co integration test I have made a conclusion that the variables respectively gross Domestic Product (GDP), Trade openness (Openness) and Exchange rate (Exch) are the cardinal determinants which influences inward foreign direct investment.

4.2. Conclusion

Relying on the Johnson co integration test we found long run associationship among FDI, GDP, trade openness and exchange rate. Signifying the fact that all the variables of the study move together in the long run. If variables are co integrated, the slope coefficients becomes super consistent. Among the long run coefficients, the influence of GDP to inward FDI is the highest which is 2.276. This indicates the role of market size in attracting foreign capital flow.

Better market potential ensures profitability for foreign firms and hence rising GDP acts as an incentive for foreign firm to move away from home. Positive influence of exchange rate on FDI is also an important finding of this analysis. Depreciation of rupee vis-à-vis USD reduces relative production cost in India which in turn attracts foreign investment. Wealth effect which is phenomenal as one of the driving aspect for FDI is also confirmed by our analysis. Error correction coefficients which shows the rate of adjustment.

References

Akinboade O. and Makina D., 2006. Mean reversion and structural breaks in real exchange rates: South African evidence. *Applied Financial Economics*, 16(4), pp. 347-358.

Alam, A. and Shah, S.Z.A., 2013. Determinants of foreign direct investment in OECD member countries. *Journal of Economic Studies*, 40(4), pp. 515-527.

- Alfaro, L., 2003. Foreign Direct Investment and Growth: Does the sector Matter? Harvard Business School. Boston. MA.
- Bajpai, N. and Sachs, J.D., 2000. Foreign Direct Investment in India: Issues and Problems. Development Discussion Paper. 759. *Harvard Institute for International Development*. Harvard University. Cambridge. MA.
- Bhattacharya, A., Montiel, P. and Sharma, S., 1996. Private Capital Flows to Sub-Saharan Africa: An Overview of Trends and Determinants. *World Bank*. Washington DC. Mimeo.
- Bilgilia, F., Tulucea, N.S.H. and Doganb, I., 2012. The determinants of FDI in Turkey: A Markov Regime-Switching approach, tSciVerseScienceDirectdoi:10.1016/j.econmod. 2012.04.009.
- Carkovic, M. and Levine, R., 2002. Does foreign direct investment accelerate economic growth? *Working Paper*. University of Minnesota. Minneapolis and Saint Paul. MN.
- Chakraborty, C. and Nunnenkamp, P., 2008. Economic Reforms, FDI, and Economic growth in India: A Sector Level Analysis. *World Development*, 36(7), pp. 1192-1212.
- Chen, E., 1983. Multinational Corporations Technology and Employment. Macmillan. London.
- Das, D.K., 2014. China and the Asian Economies: Interactive Dynamics, Synergy and Symbiotic Growth. London and New York: Routledge.
- Dunning, J.H., 1973. The determinants of international production. *Oxford Economic Papers*. November.
- Dunning, J.H. and Narula, R., eds., 199. Foreign Direct Investment and Governments. Routledge. London.
- Fedderke, J.W. and Romm, A., 2006. Growth impact and determinants of foreign direct investment into South Africa, 1956-2003. *Economic Modeling*, 23(5), pp. 738-60.
- Froot, K.A. and Stein, J.C., 1991. Exchange rates and foreign direct investment: An imperfect capital markets approach. *Quarterly Journal of Economics*, 106 (November), pp. 1191-1217.
- Froot, K. and Stein, J., 1991. Exchange Rate and Foreign Direct Investment: An Imperfect capital Markets Approach. *Quaterly Journal of Economics. pp.* 1191-1217.
- Galán, J.I. y González-Benito, J., 2006. Distinctive determinant factors of Spanish FDI in Latin America. *Journal of World Business*, Vol. 41, No. 2, pp. 171-189.
- Garibaldi, P., Mora, N., Sahay, R. and Zettelmeyer, J., 1991. What Moves Capital to Transition Economics. *IMF Conference*. A decade of transition. Wasington. DC. February.
- Gert, G. Wagner, Joachim R. Frick and Jürgen Schupp, 2007. The German Socio-Economic Panel Study (SOEP) Scope, Evolution and Enhancements. *Journal of Applied Social Science Studies*. Berlin, Vol. 127(1), pp. 139-169.
- Gola, K.R., Dharwal, M. and Agarwal, A., 2013. Role of Foreign Direct Investment in the Development of Indian Economy. *Gyanpratha-ACCMAN Journal of Management*, 5(1).
- Grosse, R. and Trevino, L.J., 1996. Foreign direct investment in the United States: an analysis by country of origin. *Journal of International Business Studies*, pp. 139-155.
- Hsiao, F.S.T. and M-C.W. Hsiao, 2006. FDI, Exports, and GDP in East and Southeast Asia Panel Data versus Time-Series Causality Analysis. *Journal of Asian Economics*, 17, pp. 1082-1106.
- Jayachandran, G. and Seilan, A., 2010. A causal relationship between trade, foreign direct investment and economic growth for India. *International research journal of finance and* economics, 42, pp. 74-88.
- Kyrkilis, D. and Pantelidis, P., 2003. Macroeconomic determinants of outward foreign direct investment. *International Journal of Social Economics*, 30(7), pp. 827-836.
- Lokesha B.K., Leelavathy, D.S., 2012. Determinants of Foreign Direct Investment: a macro perspective. Shri Ram Centre for industrial Relations and Human Resources.
- Majumdar, B.A., 1980. A case study of the industrial organization theory of Foreign Direct Investment". *Weltwirtschaftliches Archive*, No. 2.

- Moran, T.H., Graham, E.D. and Blomsstrom, M., 2005. Does Foreign Direct Investment Promote Development? *Institute for International Economics-Center for Global Development*. Washington. DC. 411.
- Nair-Reichert, U. and Wienhold, D., 2001. Causality tests for cross-country panels: a new look at FDI and economic growth in developing countries. Oxford Bulletin of Economics of statistics, 63(2), pp. 153-171.
- Nakamura, S. and Oyama, T., 1998. The Determinants of Foreign Direct Investment from Japan and the United States to East Asian Countries, and the Linkage between FDI and Trade. *Bank of Japan Working Paper*, pp. 98-11.
- Nonnenberg, M. and Mendonca, M., 2004. The determinants of direct foreign investment in developing countries. Proceedings of the 32th Brazilian Economics Meeting. Brazil.
- Phillips, P.C.B. and Perron, P., 1988. Testing for Unit Roots in Time Series Regression. *Biometrika*, 75, pp. 335-346.
- Root, F.R. and Ahmed, A., 1979. Empirical Determinants of Manufacturing Direct foreign Investment in Developing countries. *Economic Development and Cultural Change*, 27, pp. 751-767.
- Scaperlanda, A. and Maurer, L., 1969. The determinants of US Direct investment in the EEC. *American Economic Review*, 59, pp. 558-568.
- Seetanah, B. and Khadaroo, A.J., 2007. Foreign direct investment and growth: new evidences from Sub-Saharan Afarican countries. Paper Presented at Economic Development in Africa 2007. *CSAE Conference*.
- Sharmiladevi, J.C. and Saifilali, M.I., 2013. An Empirical Examination of the Determinants of Foreign Direct Investment in India. *The International Journal of economics and Business Studies*.
- Singhania, M. and Gupta, A., 2011. Determinants of foreign direct investment in India. *Journal of International Trade Law and Policy*, 10(1), pp. 64-82.
- Wint and Williams, 1994. International Investment Location Decisions. The case of US Firms. *Journal of International Economics*, Vol. 33, pp. 57-76.
- Zhang, X. and Yuk, H.P, 1998. Determinants of Hong Kong manufacturing investment in China: a survey. *Marketing Intelligence & Planning*, 16(4).

Indian Express, November 11, 2005.

The Hindu, Nov. 17, 2014.