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Foreign Direct Investment and Capital Market: A study of FDI and Indian Stock Market

Prof. V. K. Pandey[1], Registrar and Professor, Apeejay Stya University, Sohna, Gurugram, Haryana
Mrs. Jyotsna Pandey[2], Research Scholar, Department of Commerce and Business Management
Ranchi University Ranchi.

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Abstract:
The role of Foreign Direct Investment in the economic development of any economy be it a developed nation or a developing nation is very crucial. Particularly after the adoption of the policy of globalization the FDI has become the major attribute for the development of developing economy like India. Indian government is playing a vital role in drafting policies and easing the process of inviting FDI's to ensure investment in the country. This paper will attempt to study the relationship between FDI and Indian Stock market. Statistical tools have been used to understand the relationship of FDI and the stock market. Such tools include the correlation, regression analysis. Data of last 18 years suggests that FDI has direct impact on both the stock market indicators BSE Sensex and Nifty.

Keywords: *Sensex, Nifty, FDI, Capital Market, Stock Market, Index*

INTRODUCTION

FDI plays a very important and critical for the growth of any developing economy like India. On one hand it helps in generation of capital for development of infrastructure and on the other hand it facilitates the country to increase its productivity and creates greater employment opportunities. The worsening situation in the year 1990 had compelled the Indian Government to adopt policy of LPG i.e. liberlisation, privatization and globlisation and the government has gradually opened many sectors for foreign direct investments. The country in last couple of decades has continuously eased the norms of FDI participation through direct route in Indian market in many of the sectors which includes Mining, Hospitality, and Telecommunication etc. Recently in the year 2019 the country has received a USD 27.2 billion USD investment in only the first half of the year and it is further expected to grow over the period of time. The continuous growth in the FDI over a period of time proves India to be one of the most attractive place of overseas investment. Considering the size and population of the country there is much scope to boost of the participation of the foreign direct investment further which will result in better GDP and employment growth. The employment generation has been one of the major challenge for Indian economy in couple of years. Further the Indian stock market i.e. BSE Sensex and Nifty 30 has shown a remarkable growth over the period of last ten years and recently it has touched the level of 42k and 12k which indicates that the increasing share of FDI has propelled the growth of the economy as a whole. The relationship between the growth in the share of FDI and growth in the stock market has been found positive and almost each year change in the share of FDI has been resulted in same directional change in the Indian stock market. However here one should not ignore the contribution of domestic private investment in the stock market as it has also shown a significant growth over the period of time. The year 2019 witnessed investment approximate to Rs 1.43 lakh crore investment through Foreign Institutional Investors and Domestic Institutional Investors. As per AMFI the total number of investors account

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number with 41 mutual fund houses reached to 79.03 at the fag of 2018 and against March, 2018.

1. **The Need for FDI:** Increased Employment and Economic Growth Development, Provision of Finance & Technology, Increase in Exports, Exchange Rate Stability, Improved Capital Flow are the some of the major economic challenges of any developing economy like India. Gross capital formation (% of GDP) in India was reported at 31.31 % in 2018. For a speedy and sustainable growth, the country needs a continuous backup of adequate capital and the FDI can be one of the major source of capital for the country. This will not only supplement the capital need of the country but als result in better employment opportunity, technolog upgradation and a sustainable growth of Indi Therefore, it can be easily concluded that if th country wants to sustain its growth it needs to attra more and more foreign capital in the economy.

REVIEW OF LITERATURE:

Azhar, Syed & KN, Marimuthu. (2012). In his study of the relationship of FDI and economic growth was able to conclude that FDI is vital for the overall economic development of the country and it plays a critical role in this. Sudha, B.. (2013) in her artic found FDI as one of the important source of extern finance for the developing countries because of th increasing requirements of the different sectors these economies. Reinhart,(2008) has studied th push and pull factor of Developing and emergin market economies' with reference to increasin participation in FDI inflows over the past tw decades. The relevance of financial market t aggregate gains from FDI was tested by, Alfaro et a (2004) and he found that there is no robust positiv impact of FDI on the growth of the economy i which investment is taking place. Rahul Dhiman1 Preeti sharma has studied the impact of FDI o Indian Capital Market and found both as positivel correlated. Jayachandran and Sielan tried t understand the relationship between trade, FDI and economic growth of India over the period 1970-2007. Rimpy Rana (2018) has also studied the role of FDI on India Share market and found both to be inter dependent and found that FDI turns to be more stable than FII's are regards to capital flow in the share market. FDI inflows have a positive effect on host country's economic growth in developing but not in developed economies (Johnson2005) concluded that FDI inflow affects the economic growth of the developing economies not the developed economies. Thus, till now the different theory produces different conclusions and relation between the impact of FDI on economic growth. Few models suggest that it can only benefit the growth in defined economic conditions

2. **Objectives of the study:**

3. Although many of the studies has been done in past but the present study proposes to study the Role of FDI in the development of Indian capital market in the light of more updated data and information. The study proposes to:

- Understand the trend of flow of FDI in India
- Understand the relationship between the FDI and the Key indexes of stock market i.e. Nifty 50 and the BSE Sensex.

4. **RESEARCH METHODOLOGY**:

5. For the purpose of study, the data of last 18 years from 2000-2001 to 2017-18 has been collected form bulletins of Reserve bank of India and tabulated in standard form similarly the average price at the opening day of the month has been collected for BSE Sensex and Nifty 50 and has been averaged to find out the value of the indicators for the years. The data regarding the index has been downloaded from investing.com website. Further to understand the relationship between the FDI and Index the regression test has been conducted by taking FDI as the independent variable and Index as the dependent variable. The ANOVA table has been used to check the validity of the model and its acceptance.

Hypothesis: The null hypothesis has been validated with respect to the Index and FDI. The hypothesis with reference to this are as follows:

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1. The FDI and the Sensex are independent of each other
2. The FDI and Nifty are independent of each other.

Data analysis and Interpretation:

It's an old saying that stock market is the barometer of economy. Therefore, if the stock market in the any country is successively taking its new high's and sustaining the same it can be concluded that the economy is doing good to very extent. FDI plays a critical role in the growth and development in any economy as it complements the domestic capital. It has been observed that the countries having a consistent flow of Foreign capital has demonstrated the reasonable growth over the period of time. The government of India since adoption of the policy of globalization and liberalization has taken lot of policy measures for attracting the foreign capital in India market and it has been seen in the recent past that the FDI has significantly increased in the Indian capital market. The growing participation of FDI has been resulted in the employment and growth of the country in the last decades which has been witnessed by the growth of the Indian stock market. On principal basis it can be said that more capital will lead to greater income and profit which will be reflected in the growth of the secondary market too. In India majority of companies shares are traded on either the NSE or the BSE. About 5,000 **companies** are listed on the **BSE**, while **NSE** has more than 1,600 **companies listed** on its platform. Hence the two major index of Indian stock market are well capable of representing the status of overall capital market of the economy. The following table shows the FDI and the Value of major index of Indian stock market i.e. BSE Sensex and Nifty.

Table 1

Year	FDI	Sensex	Nifty
2000-01	4 029.0	4212	1319
2001-02	6 130.0	3323	1074
2002-03	5 035.0	3167	1024
2003-04	4 322.0	4582	1456
2004-05	6 051.0	5786	1818
2005-06	8 961.0	8482	2571
2006-07	22 826.0	12375	3601
2007-08	34 843.0	16799	4968
2008-09	41 873.0	12125	3662
2009-10	37 745.0	15799	4716
2010-11	34 847.0	18648	5597
2011-12	46 556.0	17454	5254
2012-13	34 298.0	18272	5538
2013-14	36 046.0	20263	6046
2014-15	45 148.0	26814	8048
2015-16 (P)	55 559.0	26276	7973
2016-17 (p)	60 220.0	27573	8499
2017-18 (P)	60 974.0	32588	10080

Source: RBI annual issue, 2017, (P): Projected

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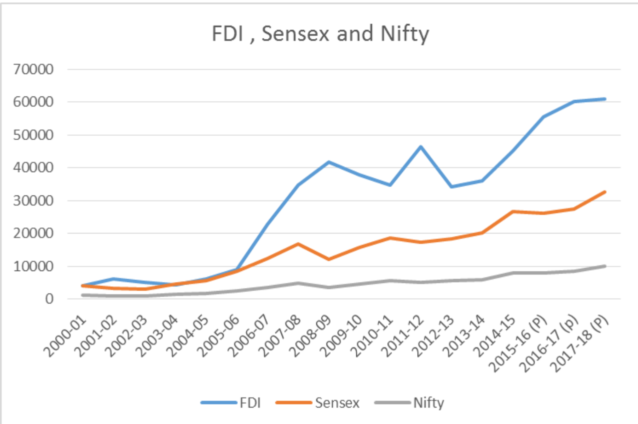
The above table show that there has been a consistent growth in the FDI over a period of time. However, in the year 2002-03, 2010-11 and 2012-13 the quantum of the FDI has come down as compared to previous year. The two index has shown a fall in the year 2002-03, 2008-09. The following chart shows the FDI inflow in comparison of the two indexes. From the graph its seems that all the three variables are moving in the same direction. It is also apparent with the chart that the Nifty has shown much stable performance as compared to Sensex in the years in which there has been a negative growth in the FDI which means Nifty is more robust to the change in FDI as compared to Sensex.



Relational Analysis of FDI inflow and Sensex:

In below table the coefficient of correlation i.e. R is having a value of 0.942 and the coefficient of determination i.e R square as 0.888 which shows that there is a high correlation between the two variable i.e. FDI and Sensex. In other word it can be concluded that the model explains that the independent variable FDI explains 88.8% of the dependent variable i.e. Sensex. Whereas adjusted R2 attempts to yield a more realistic picture of the fit of regression value to estimate the R square

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.942[a]	.888	.881	3175.39406

a. Predictors: (Constant), FDI

The ANOVA table below, tests the acceptability of the model from a statistical perspective. The residual row displays information about the variation which has not been considered by the model. As per the table around 88% of the variation in Sensex has been able to got explained by the model. The, F statistic is significant, since the p value (0.000) less than 0.05. The p-value associated with the F-value is very small (.000) that is why it can be inferred that independent variable explain variations in the dependent variable which is statistically significant

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1277098956.624	1	1277098956.624	126.657	.000[b]
	Residual	161330039.154	16	10083127.447		
	Total	1438428995.778	17			

a. Dependent Variable: SENSEX
b. Predictors: (Constant), FDI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2238.837	1377.393		1.625	.124
	FDI	.429	.038	.942	11.254	.000

a. Dependent Variable: SENSEX

Relational Analysis of FDI inflow and Nifty:

In below table the coefficient of correlation i.e. R is having a value of 0.941 and the coefficient of determination i.e. R square as 0.885 which shows that there is a high correlation between the two variable i.e. FDI and Nifty. In other word it can be concluded that the model explains that the independent variable FDI explains 88.5% of the dependent variable i.e. Nifty. Whereas adjusted R2 attempts to yield a more realistic picture of the fit of regression value to estimate the R square

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.941[a]	.885	.878	975.46747

a. Predictors: (Constant), FDI

The ANOVA table below, tests the acceptability of the model from a statistical perspective. The residual row displays information about the variation that has not been taken by the model. As per the table around 88% of the variation in Nifty 50 has been able to got explained by the model whereas the F statistic is significant, since the value of p (0.000) is less than 0.05. F-Value which is found to be (123.388) has been calculated by dividing mean square regression by mean square of residual. The p-value associated with the F-value is very small (.000) that is why it can be inferred that independent variable explain variations in the dependent variable which is statistically significant.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117408617.518	1	117408617.518	123.388	.000[b]
	Residual	15224588.482	16	951536.780		
	Total	132633206.000	17			

a. Dependent Variable: NIFTY

b. Predictors: (Constant), FDI

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

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1	(Constant)	678.964	423.129		1.605	.128
	FDI	.130	.012	.941	11.108	.000

a. Dependent Variable: NIFTY

Conclusion:

From the analysis and interpretation, it can be concluded that the dependent variable Sensex and Nifty are strongly and positively related with the independent variable FDI i.e. foreign direct investment and hence any change in the FDI inflow will result in the change in the value of Major market index. Therefore, it is advisable to the government of the country and the key policy makers to take supportive steps so that more and more FDI investment can be attracted which will help the country for better economic growth and reap other incidental benefits such as employment acquisition of technology, creating a competitive market, favorable balance of trade etc.

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