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Impact of Stock Indices on Foreign Direct Investment in India

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ABSTRACT

Foreign Direct Investment plays a very vital role in the economic development of both developing as well as developed nations. Large number of the countries are integrated and pursuing their international operations due to foreign direct investment. Fast growing economies like China, Korea and Singapore etc. have registered incredible growth at the onset of FDI. As we know that FDI provides an access to the foreign capital but at the same time FDI also helps to provide the most modernize technology available, various tools of innovations and other complementary skills. The government plays a very vital role in drafting and executing various policies regarding the inflow of FDI. The FDI policies framed on the part of the government act as a stimulus so that various foreign countries may be attracted to ensure their investment in India. No doubt that the amount of inflow of FDI will account to our growth in GDP but at the same time stock market fluctuation will influence the inflow of FDI. The current paper attempts to study the relationship and the impact of indices on Foreign Direct Investment (FDI) using statistical measures correlation and multiple regression analysis. Sensex and Nifty were considered as the representative of stock market as they are the most popular Indian stock market indices. The analysis was conducted for a period of 10 years data ranging from 2007 to 2016.The study concludes that Sensex and Nifty have a positive relationship with the FDI inflows. The regression analysis reports that the indices have a significant impact on determining the inflow of foreign direct investments in India.

Keywords: Foreign Direct Investment, Indices, Nifty, Sensex

I. INTRODUCTION

Unprecedented globalizations have witnessed double digit economic growth resulting in fierce competition and accelerated pace of innovation. As a result inflow of Foreign Direct investments has become a striking measure of economic development in both developed and developing countries. Any investment that flows from one country into another is known as foreign investment. Inflow of investment from other countries is encouraged since it complements and stimulates domestic investments in capital-scarce economies of developing countries.

Capital market is an integral part of the financial system of the economy. The capital market is replica of the economic strength of the country. The role of FDI in the development of stock market of developing economies is considered very strong. There is a triangular casual relationship between these two:

i) FDI stimulates economic growth.
ii) Economic growth exerts positive impact on stock market development.

Foreign direct investment refers to the investment made by a company based in one country, in to a company based in another country, companies make their investments in the fixed assets have a significant degree of influence and control over the company in to which the investment is made. Foreign Direct Investment (FDI) is fund flow between the countries in the form of inflow or outflow by which one can able to gain some benefit from their investment whereas another can exploit the opportunity to enhance the productivity and find out better position through performance. The FDI may also affect due to the government trade barriers and policies for the foreign investments and leads to less or more effective towards contribution in economy as well as GDP of the economy. The growth of FDI gives opportunities to Indian industry for technological up gradation, gaining access to globalmanagerial skills and practices, optimizing utilization of human resources and competing internationally with higher efficiency. Despite globalization, the essential role of foreign direct investment (FDI) in economic development has not changed. Foreign direct Investment plays a very vital role in the economic development of both developing as well as developed nations. Large number of the countries are integrated and pursuing their international operations due to foreign direct investment.

1.1Need for Foreign Direct Investment

Developing economies like India needs a large inflow of the capital in terms of FDI. This is required for the development of the basic infrastructure like roads, railways, warehouses, banking and insurance services etc. Many countries in the world may not be having appropriate infrastructure due to lack of the funds, now better infrastructure facilities can be easily created if a country allows the foreign giant to invest. We can say that foreign capital is a unique remedy for the scarcity of all resources. Moreover FDI may involve new technologies and expertise may not be available in the domestic economy. Another important motivation of FDI is efficiency seeking. Low cost of production, deriving mostly from cheap labour is the driving force of many FDIs in developing countries. It may be kept in mind that FDI would not take place in the absence of required infrastructural facilities to develop the industry. In nutshell we can say that there is significant need of FDI for those countries which are having scarcity of resources, lack of infrastructure facilities, and lack of modernized technology. All these above mentioned resources can be easily raised if a country allows the foreign capital to be invested in their country.

STOCK MARKETS

Stock markets play a crucial role in the consolidation of a national economy in general and in the development of industrial sector in particular. It is the most dynamic and organised component of capital market. Especially, in developing countries like India, the stock exchanges play a cardinal role in promoting the level of capital formation through effective mobilisation of savings a ensuring investment safety.

BSE

Established in 1875, BSE [formerly known as Bombay Stock Exchange Ltd.], is Asia's first and fastest stock exchange with the speed of 200 micro seconds and one of the India's leading exchange groups. Over the past 140 years, BSE has facilitated the growth of the Indian corporate sector by providing it an official capital raising platform.

NSE

A leading stock exchange covering various cities and towns across the country, NSE was set up by leading institutions to provide a modern, fully automated screen-based trading system with national reach. The exchange has brought about unparalleled transparency, speed and efficiency, safety and market integrity. It has setup facilities that serve as a model for the securities industry in terms of system, practices and procedures.

NSE is the largest stock exchange of the country. It has a market share of nearly 70% in equity trading and 98% in futures and options trading in India.

II. LITERATURE REVIEW

Dr. Syed Tabassum Sultana, Prof. S Pardhasaradhi (2012) in their research titled **"Impact of flow of FDI and FII on Indian stock market"** made an attempt to study the trends and patterns of foreign capital flow in to India in the form of FDI & FII and to study the impact of Foreign Direct Investment (FDI) on Indian stock market and also to study the impact of Foreign Institutional Investment (FII) on Indian stockmarket. The study took 10 years data into consideration to study the impact of FDI & FII on Indian stock markets The research concluded that the flow of FDI & FII accelerated the Indian economy and also gave opportunities to Indian industry for technological up-gradation, gaining access to global managerial skills and practices, optimizing utilization of human and natural resources and global competitive advantage with greater efficiency.

R. Karthik (2011) in his research titled **"Impact of Foreign Direct Investment on stock market development: A study with reference to India"** noted that the stock market in India is classified as one of the fastest growing market in the global market. An integral part of the capital market is the stock market, the development of which is linked with the country's level of savings, investment and the rate of economic growth. The paper investigates the impact of FDI on the stock market development of India.It was concluded that FDI plays complementary role and there is positive relationship between FDI and stock market development and if it is substituting there is negative relationship between these two.

Rukhsana Kalim (2010) in his research titled **"Impact of Foreign Direct Investment on Indian stock market development: The case of Pakistan"** noted that it is generally recognized that a strong financial system guarantees the economic growth and stability. Stock market is an integral part of the financial system of the economy. The stock market is a replica of the economic strength of any country. It is argued on the one hand, that FDI in developing countries transfers business know-how and technology and on the other hand, some predict that FDI in the presence of pre-existing trade, price, financial, and other distortions will hurt resource allocation and hence slow economic growth.

Rahul Dhiman, Preeti Sharma (2013) in their research titled **"Impact of flow of FDI on Indian Capital Market"** stated that foreign direct investment plays a very vital role in the economic development of both developing as well as developed nations. FDI also helps in providing most modernized technology available in the market. The objective of the study was to study the trends and patterns of foreign capital flow in to India in the form of FDI and to study the impact of foreign capital in the form of FDI on the stock market. The study is based on secondary data.

Kali Ram Gola, Mridul Dharwal, and Ankur Agarwal (2013) in their research say that FDI refers to capital inflows from abroad that are invested in or to enhance the production capacity of the economy. Despite globalization, the essential role of foreign direct investment (FDI) in economic development has not changed. The main purpose of the study was to investigate the impact of FDI on economic growth in India, from the period of 1990 to 2011.The objective of this study was to study the trends and pattern of flow of FDIto assess the determinants of FDI inflows and to evaluate the impact of FDI on the Indian economy. The study attempts to analyse the important dimensions of FDI in India. The paper concluded that among the different sectors, the service sector had received the larger proportion followed by computer software and hardware sector and then telecommunication sector.

Sameera P (2014) in her research titled **"Effects of Foreign Capital on Indian Capital Market: A study with reference to Bombay stock exchange"** made an attempt to analyze the trend and pattern of FDI and FII flows in Indian capital market and to find the correlation between these foreign funds and the Bombay stock exchange market. The present paper makes an attempt to understand the behavioural pattern of FII and FDI during the period of 2000 to 2013. The study is based on secondary data.The inflow of FDI and FII helps in aaccelerating the growth in Indian economy and also gave immense opportunities to Indian Industry.

Sheetal Maurya (2016) conducted a research titled "**Impact of FDI and FII on Indian Stock Market"**. The objective of this study was to understand the trends and patterns of foreign capital flow in to India in the form of FDI & FII, to study the impact of Foreign Direct Investment (FDI) on Indian stock market and to study the impact of Foreign Institutional Investment (FII) on Indian stock market. From the current study it is evident that there is a strong positive correlation between FDI & Sensex and FDI and Nifty and moderate correlation between FII and Sensex.

Dr. Sandeep Kapoor and Mr. Rocky Sachan (2015) in their research titled **"Impact of FDI and FII on Indian Stock Market"** said that FDI & FII are becoming important source of finance in developing countries including India. It is widely assumed that FDI & FII along with some other external factors such as global economic cues, exchange rate and internal factors such as demand and supply, market capitalization, EPS generally drive and dictate the Indian stock market. These foreign investors are coming to India in two ways i.e. FDI or FII. From the current study it is evident that there is a weak positive correlation between FDI & Sensex and FDI & Nifty and strong positive correlation between FII & Sensex and FII & Nifty.

Pooja Nagpal, and Chandrika R (2016) in their research titled **"An empirical study on Impact of FDI and FII on Indian Stock Market"** noted that foreign investment has become a striking measure of economic development in both developed and developing countries. Developing countries, including India, are witnessing changes in the composition of capital flows in their economies because of the expansion and integration of the world equity market. The flow of foreign capital is playing a significant role in the development of Indian stock markets. The FDI & FII on Indian stock market as per the results of the statistics demonstrate a positive relation with the stock market indices. Hence it can be concluded that the impact of flow of FDI & FII on Indian stock market is significant. In the practical life stock market movements does not depend on the FDI or FII alone, there are many other factors which drives the stock market to be either bullish or bearish.

John Andreas (2005) in his work titled **"The effects of FDI inflows on host country economic growth"** discusses the potential of FDI inflows to affect host country economic growth. The paper argues that FDI should have a positive effect on economic growth as a result of technology spillovers and physical capital inflows. Economic growth increases the market size of the host country market and strengthens the incentives for market seeking FDI. This could result in a situation where FDI and economic growth are mutually supporting. However, for the ease of most of the developing economies growth is unlikely to result in market – seeking FDI due to the low income levels. Therefore, causality is primarily expected to run from FDI inflows to economic growth for these economies.

III. OBJECTIVES OF THE STUDY

1. To study the relationship between Stock Indices and Foreign Direct Investment.
2. To study the impact of BSE Sensex and Nifty 50 Indices on Foreign Direct Investment.

IV. HYPOTHESIS

1. Relationship between Stock Indices and Foreign Direct Investment

H0: There is no relationship between Stock Indices and Foreign Direct Investment.
H1: There is relationship between Stock Indices and Foreign Direct Investment.

2. Impact of BSE Sensex and Nifty 50 Indices on Foreign Direct Investment

Ho: - Sensex and Nifty movements have no significant impact on FDI.
H1:- Sensex and Nifty movements have a significant impact on FDI.

V. RESEARCH METHODOLOGY

This study is based on secondary data. The required data related to FDI has been collected from various sources that are Bulletin of Reserve Bank of India, Publication from Ministry of Commerce, Government of India.

The BSE Sensex and Nifty 50 data is downloaded from the website of BSE India and NSE India respectively. The present study considers the data for 10 years from 2007 to 2016.

Tools Used: Correlation Matrix and OLS Regression Model.

VI. DATA ANALYSIS

CORRELATION ANALYSIS

Table No. 1: Correlation Matrix

	FDI	SENSEX PRICES	NIFTY PRICES
FDI	1		
SENSEX PRICES	0.435482	1	
NIFTY PRICES	0.455259	0.998770452	1

(Source:-Authors Compilation)

In order to analyse the above data correlation matrix was used. Correlation coefficient is a statistical measure that determines the degree to which two variable movements are associated. Correlation coefficient ranges from -1 to +1.

From the above Correlation Matrix it is observed that Nifty 50 and BSE Sensex have a Perfect Positive Correlation among them, which implies that both these variables are perfectly related to one another. Thus it can be concluded that fluctuations in any of these variables will have a direct effect on the other variable, which means that if any fluctuation takes place in Nifty prices, it will have a direct impact on Sensex prices.

In the above Correlation matrix it is observed that Sensex prices and Foreign Direct Investment have a positive correlation among them (0.435482) and Nifty prices and Foreign Direct Investment also have a positive correlation among them (0.455259).

The above variables having a positive correlation among them indicates that these variables are correlated to each other indicating the movement of variables in the same direction.

REGRESSION ANALYSIS

The equation for regression analysis is as follows:
$$\mathbf{Y = \alpha + \beta_1 x_1 + \beta_2 x_2}$$

Where **Y** is the dependent variable and $\mathbf{x_1}$ and $\mathbf{x_2}$ are independent variables.

In the above equation the dependent variable Y is Foreign Direct Investment (FDI) and the independent variable $\mathbf{x_1}$ and $\mathbf{x_2}$ are Sensex prices and Nifty prices respectively.

Table No. 2: Impact of BSE Sensex and Nifty of FDI

	Coefficient	Std. Error	t-ratio	p-value	
Const	985.932	473.886	2.0805	0.0397	**
SENSEXPRICE	−0.95526	0.430383	−2.2196	0.0284	**
NIFTY PRICES	3.37301	1.39484	2.4182	0.0171	**
Adjusted R-squared		0.740344			
P-value(F)		0.000053			

(Source:-Authors Compilation)

Adjusted R square is 74.03% which implies that changes in FDI are explained by the changes in Sensex and Nifty. Therefore only 74.03% of variations are explained in the above framed model and there may be other factors which influence the flow of FDI in India.

Sensex is having a negative coefficient of -0.955260 which means that if Sensex prices increase by 1 unit then Foreign Direct Investment will decrease by 0.955260 units.

Nifty prices is having a positive coefficient of 3.37301 which means that if Nifty prices increase by 1 unit then Foreign Direct Investment will also increase by 3.37301 units.

It is found that both Sensex Prices and Nifty Prices have a significant impact on FDI at 5% significance level. It is also found that the probability value of constant is 0.0397 which is significant at 5% level indicating that there might be other factors having significant impact on FDI flows in India.

CONCLUSION

The flow of FDI accelerated the Indian economy and also gave opportunities to Indian industry for technological up-gradation, gaining access to global managerial skills and practices, optimizing utilization of human and natural resources and global competitive advantage with greater efficiency. Most importantly FDI is central for India's integration into global production chains which involves production by MNCs spread across locations all over the world.

The objective of the study was to know the impact of Sensex and Nifty indices on Foreign Direct Investment. The study used variables such as FDI, Sensex and Nifty for a 10 year period from 2007 to 2016. Correlation and Regression analysis were used to test the relationships and impact.

The following conclusions were drawn from the study:

- Sensex and FDI have a positive correlation and Nifty and FDI also have a positive correlation. Nifty and Sensex are strongly correlated.
- Sensex and Nifty have a significant impact on FDI in India.
- Movements in FDI in India is explained by the movements of Sensex and Nifty which was evidenced from the Adjusted R square results.
- Sensex has a negative impact which implies that an increase in Sensex will lead to a decrease in FDI movements in India.
- Nifty has a positive impact which implies that an increase in Nifty will lead to an increase in FDI movements in India.

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