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Effect of Foreign Direct Investment on Economic Growth in India : An Empirical Investigation

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ABSTRACT

The present study examines the effect of FDI on economic growth in India by using annual data for Indian Economy over the post reforms period 1990-91 to 2011-12 estimated with help of statistical regression models of two variables equations through well-known computer software package, namely, Econometric Views (E-views 3.0).This paper is made to study the relationship between Foreign direct investment stock and economic growth level in Indian Economy. For this purpose empirical equations are estimated for the post reforms period 1990-91-2011-12. The regression result indicates that FDI is positively correlated to the economic growth of Indian economy. It has been established as a significant determining factor for the economic growth. The causality tests also shows unidirectional causation that FDI stock causes output to rise and also indicate unidirectional causality among the FDI to output. We conclude that there is significant effect of FDI on India's economic Growth which is an evidence of FDI-Output causal relationship.

Keywords : FDI, Effect, Economic Growth, Double Natural Logarithmic Regression Equation.

1. INTRODUCTION

Foreign direct investment (FDI) is often seen as important catalysts for economic growth in the developing countries. FDI plays very important role in economic growth of countries like India The relationship between Foreign Direct Investment (FDI) and economic growth has long been a subject of great interest in the field of international growth. In the era of volatile flows of global capital, the stability of FDI emerges as an effective channel to faster growth in developing countries, particularly in relation to Least Developed Countries (LDCs). The Neo-classical Growth model as well as endogenous growth models provides the basis for most of the empirical work on the FDI-growth relationship.

The gains from FDI inflows are unquestionable as it contributes to economic growth through an increase in productivity by providing new investment, better technologies and managerial skills to the host countries. The impact of FDI on economic growth depends on the degree of capacity of the host country to use FDI efficiently. Similarly, trade liberalization may facilitate economic growth through efficiency in production by utilizing the abundant factors of production more effectively and absorbing better technologies from advanced countries. On the one hand, it may harm the growth process through various forms of macroeconomic instability such as terms of trade deterioration and balance of payments crisis. Therefore, it is a challenge for developing countries to find out the appropriate direction of the role of FDI and trade liberalization in economic growth.

The basic shortcoming of conventional neo-classical growth models, as far as FDI is concerned, is that long-run growth can only be achieved by technological progress, which is considered to be exogenous factor. FDI would only affect output growth in the short run and, in the long run, under the conventional assumption of diminishing returns to capital inputs with a given technology, FDI would have no permanent impact on output growth. Within the new growth framework, FDI is treated as one of the factor inputs along with labor and capital and is expected to promote growth in the long run. Whether technological progress is best described as exogenous to the world as a system, the role of FDI in diffusing technology to developing countries? Consequently, a positive relationship between FDI and long run growth in a developing host country is expected.

It should be pointed out that the direction of causation may run either way. The FDI may be drawn to regions of faster growth or greater potential because their growth prospects have made it more attractive to foreign TNCs. De Mello (1997) envisions a case in which the size of the consumer market in a recipient economy is getting larger, as a result of faster growth leading to rapid increases in the potential purchasing power of consumers in a host country. Consequently, it is tenable that growth itself may be an important determinant of FDI in addition to those listed above.

The present study is a modest attempt to examine the empirical relationship between FDI and economic growth in India from 1990 to 2011. The main focus of this study lies in analyzing the behavior of some selected macroeconomic indicators accompanying the surge in inflows of foreign direct investment into India since 1990 the year in which the inflows started entering on a significant scale on account of adoption of New Economic Reforms and Policy of Liberalization in India. This paper is organised into Ten sections including earlier introduction. Section two presents theoretical foundation of the study, Section three describes the trends of FDI into india, Section four is review of earlier theoretical and empirical literature. Section five gives objectives of the study, Section six states hypotheses, Section seven describes and reports the data, methodology and model specification. The empirical findings are reported in Section eight , Section nine presents conclusion with some observations and section ten is about Policy Recommendations..

2. THEORETICAL FOUNDATION

Development economists state that effects of FDI are significant on economic growth. The gains from FDI inflows are unquestionable because it contributes to economic growth through an increase in productivity by providing new investment, better technologies and managerial skills to the host countries, However, the effect of FDI on domestic investment is an issue of concern because there is a possibility of displacement of domestic capital due to competition from foreign investors with their superior technologies and skills. Thus, the ultimate impact of FDI on economic growth depends on the degree of capacity of the host country to use FDI as efficiently as possible. Similarly, trade liberalisation may facilitate economic growth through efficiency in production by utilising the abundant factors of production more effectively and absorb-

ing better technologies from advanced countries. On the one hand, it may harm the growth process and on the other hand through various forms of macroeconomic instability such as terms of trade deterioration and balance of payments crisis. Thus, it is a challenge for developing countries to find out the appropriate direction of the role of FDI and trade liberalisation in economic growth.

As part of developing countries, Indian economy was also concerned with issues pertaining to foreign private capital inflows and trade liberalisation initially. However, it later moved to liberalise its trade and investment policies to include various investment incentives, particularly, for foreign investors. Along with these, it has maintained high and steady economic growth, single-digit inflation rate; it has a growing domestic market, a large number of low-paid workers with growing number of skilled personnel and a more favorable investment climate. As a consequence, Indian economy, as a fast developing economy, has been successful in attracting a significant amount of FDI and raising its volume of trade (export plus import) as percentage of GDP during the last two decades. The question which naturally arises here is whether the increase in growth is brought about by FDI inflows. Therefore, it is important to explore the impact of FDI on the growth process, quantitatively, in Indian economy for a better understanding about the linkages among FDI and economic growth.

Foreign Direct Investment (FDI) is often seen as an important catalyst for economic growth in developing countries. Growth economists have long argued that countries pursuing outward-oriented growth strategies are more likely to achieve higher rates of economic growth than those that are internally focused. A number of studies have examined the relationship between inward foreign direct investment (FDI) and economic growth in the developing host countries. A generally accepted conclusion is that FDI has played a significant role in promoting economic growth in host countries because FDI represents “the transmission to the host country of a package of capital, managerial skills, and technical skills” (Dattaray 2003). A significant finding of previous studies is that the economic and technological conditions of a recipient economy manipulate the extent to which FDI contributes to growth.

3. TRENDS OF FDI INFLOWS INTO INDIA

FDI inflows into India was very low during 1970 to 1979 which ranges from 18 millions of US Dollars to 85 millions of US $. The average value of FDI inflows and annual growth rate in this decade works out to 45 millions of US $ and 0.99% per year respectively. During the period from 1980 to 1989, the FDI inflows into India had grown considerably.

FDI inflows into India had grown sizably during the period from 2000 to 2007.The value of FDI inflows has rose from 3.9 billions of US$ in 2000 and touched the highest level of 23 billions of US$ in 2007. The average value of FDI inflows and annual growth in this period works out to 9.4 billions of US$ and 77.17% per year respectively.

Currently, it is being discussed to deregulate FDI restrictions further, e,g. by allowing FDI in retail trade. Policymakers in India as well as external observers attach high expectations to FDI

4. REVIEW OF RELATED LITERATURE

The empirical literature of relationship between foreign direct investment and economic growth has been vigorously investigated by various researchers for different sample time periods and provided the conflicting evidences on this issue. The foundation of this investigations lies in its importance for conducting sustainable economic growth policy and its role in macroeconomic theory, but the magnitude of this researches reflects the differences in conclusions arrived by earlier researchers.

Laura Alfaro, Areendam Chanda and Selin Sayek (2003) examined the various links among foreign direct investment (FDI), financial markets, and economic growth. We explore whether countries with better financial systems can exploit FDI more efficiently. Empirical analysis, using cross-country data between 1975-1995, shows that FDI alone plays an ambiguous role in contributing to economic growth. However, countries with well-developed financial markets gain significantly from FDI. The results are robust to different measures of financial market growth, the inclusion of other determinants of economic growth, and consideration of endogeneity.

Sonia Luthra (2012) observed India’s record GDP growth throughout the last decade has lifted millions out of poverty and made the country a favored destination for foreign direct investment. However, the sharp downturn in Europe and the United States, coupled with significant domestic challenges, has slowed this trend and stands to disrupt future growth.In an interview with NBR, India-based economist Pravakar Sahoo (Institute of Economic Growth) discussed the outlook of India’s economy and the role that foreign investment might play in stimulating growth. Dr. Sahoo argues that the country will not realize the full potential of outside investment unless the government confronts political opposition to key policies, such as allowing FDI for multi-brand retailers like Walmart and Target, and undertakes crucial reforms to sustain investor confidence.

Priyabrata Bandyopadhyay (2012) Foreign Direct Investments being the leading source of external finance , have become very important factor in national growth strategies in our country. FDIs provide impetus for economic growth , enhance competitive efficiency , open up new opportunities , help to optimize allocation of resources . It can contribute to GDP , Gross fixed capital formation and balance of payments.

Though this is not an exhaustive survey of the literature that has gone into this area, we feel that it does provide analytical framework for enabling us to undertake the present study.

5. OBJECTIVES OF THE PAPER.

To investigate empirically the role and effect of Foreign Direct Investment (FDI)) on economic growth(GDP), the impact of Foreign Direct Investment (FDI) and the output- FDI relationship and their causality using annual data of Indian Economy over the post reforms period 1990-91 to 2011-12.

6. HYPOTHESES OF THE STUDY.

This paper seeks answers to the hypotheses as set below:

(i) Foreign Direct Investment has determined and accelerated the growth of Gross Domestic Product of the economy and subsequently increased economic growth in India.

7. DATA SOURCE AND METHODOLOGY

In this paper, empirical analysis is undertaken with a view to establish relationship between Foreign Direct Investment (FDI) and Economic Growth (GDP) and their causality using annual secondary data for Indian Economy over the period 1990-91 to 2011-12 by applying Computer software package, namely, Econometric Views (E-views 3.0)

All these data are collected from the Global Growth Finance (GDF) and World Growth Indicators (WDI); WDI-CD ROM Version 2008 published by the World Bank, World Investment Report (WIR) published by the UNCTAD, and International Financial Statistics (IFS) published by IMF, Economic Survey (Government of India) All the variables are taken in their natural logarithms to avoid the problems of heteroscedasticity. The methodology employed in this paper is the Simultaneous Autoregressive Equation Test modeling technique.

We have estimated and then fitted double natural logarithmic (log) of two variable and simultaneous equations for the Indian economy’s Foreign Direct Investment (FDI) and Economic Growth (GDP) relationship with the corresponding statistical values of student’s t-statistics, R2, F-value, D-W Statistics and the regression coefficients.

8.0 EMPIRICAL WORK, RESULTS AND DISCUSSION

By fitting the double natural logarithmic (Log) relationship to

the cross -sectional data (20 x 3) macro-economic variables matrix for the study years 1990-91 to 2010-011 as and having taken these variables as both dependent and independent variables, we have obtained the following results by examining the casual relationship between FDI and Economic Growth (GDP)

8.1 FDI - Output-Growth Relationship:

Here, we applied the Autoregressive model to measure Foreign Direct Investment –output relationships in this study as specified in two variable models to establish causal relationship between FDI as independent variable GDP as dependent variable

8.1.1 Two Variable Regression Model

Regression estimates covering period from 1990-91 to 2011-012 is presented with both dependent and independent variables in natural logarithmic (Log) below.

8.1.1.1 Dependent Variable: Gross Domestic Product (GDP) , Independent
Variable: Foreign Direct Investment (FDI)
Model: Log GDP = a + b1 Log FDI + u1..............

Where GDP stands for Gross Domestic Product year-wise and FDI stands for the year-wise total number of Foreign Direct Investment of India, and u1 stands for error terms.

Regression results: (For 1990-91 to 2011-012 data)
Log (GDP) =0.6562 + 0.0187 log (FDI)
(2.236) (2.519)*
R2 =0.997 F (1, 20) =3121.496 D-W =2.714

*** Significant at 5% level of significance**

The above regression results supports the fact that the relationship between Foreign Direct Investment (FDI) and Gross Domestic Product year-wise is significant and positive as shown by the student's t-values attached to it. The R2 is highly significance which shows that year-wise data of 'FDI' is an important factor and explains 99.7 % of variations in the determination of changes in Gross Domestic Product (GDP) year-wise. Besides, F-value is statistically highly significant which reveals a positive relationship between the variables of the whole result. D-W statistics is significant and it indicates the absence of auto-correlation among the residuals.

From the above analysis, we can conclude that the Foreign Direct Investment (FDI) is significant and has positive relationship on the determination of Gross Domestic Product (GDP) year-wise in India for the study period of 1990-91 to 2011-012.

9. CONCLUDING REMARKS

The main objective of this study is to analyse role of FDI in Economic Growth and causal relationship between Foreign Direct Investment and economic growth in India. From the analysis of double natural logarithmic regression it is evidence that there is a strong positive correlation between Foreign Direct Investment and growth of Gross Domestic Product

Regressions analysis revealed that Foreign Direct Investment expansion has influenced output variables, changes in Foreign Direct Investment causes annual output to increase. Our empirical work indicates the existence of causality between Foreign Direct Investment Our results indicate that whatever may be the cause of rise in stock of Foreign Direct Investment in India, but it definitely leads to rise in the output growth.

10. POLICY RECOMMENDATIONS:

The finding of the study is that Foreign Direct Investment plays significant roles in economic growth of India. The Foreign Direct Investment policy should be formulated in such a way that causes attraction of more foreign potential direct investors and NRIs to invest in the country in those sectors which create employment and income in a larger scale. The country needs more Foreign Direct Investment to the priority sectors, so that country gets immediate yields from the investment. Investment in infrastructures and export-led manufacturing sectors can contribute more and Foreign Direct Investment is imperative in this case.

REFERENCES

1. Barro, R (1991) Economic Growth in a Cross Section of Countries. Quarterly Journal of Economics, vol. 106, pp. 407-444. | 2. Borensztein, E., De Gregorio, J., and Lee, J. W (1998) How Does Foreign Direct Investment Affect Growth?. Journal of International Economics, vol. 45, pp. 115-35. | 3. Sahoo, P., (2006) Foreign Direct Investment in South Asia: Policy, Trends, Impact and Determinants. ADB Institute Discussion Paper No. 56, pp. 6. | 4. Carkovic, M and Levine, R (2002) Does Foreign Direct Investment Accelerate Economic Growth? University of Minnesota Working Paper, May, 2002. | 5. Laura Alfaro , Areendam Chanda and Selin Sayek (2003) FDI and Economic Growth:The Role of Local Financial Markets* Forthcoming: Journal of International Economics February 2003 | 6. Sonia Luthra (2012) "Determining India's Economic Trajectory: The Role of Foreign Direct Investment" Download a printer-friendly PDF January 31, 2012 | 7. Dr.priyabrata bandyopadhyay (2012) FDI and its Impact on Indian Economy | Category: Finance | Submitted: 2012-07-10 11:03:06