Does an Inflation and Growth of a country affect its Foreign Direct Investment?

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Abstract

This paper investigates the impact on foreign direct investment due to the growth and inflation of a country. This relationship is tested by applying multiple regression model. The change in FDI is taken as dependent variable while GDP growth and inflation are considered to be independent variables. The data from 2001-2010 is used for this purpose. The results show that the overall model is significant. There is a positive but insignificant relationship found between change in FDI and GDP growth rate, while, a negative but insignificant relationship is observed between inflation and change in FDI.

Keywords: finance, foreign direct investment, inflation
INTRODUCTION AND LITERATURE REVIEW

Foreign direct investment is long term participation between two countries. This participation may be in the management, joint venture, transfer of technology and expertise. In simple words foreign direct investment is the ownership of productive assets and factories and land. Following are the types of foreign direct investments, Inward foreign direct investment and outward foreign direct investment; resulting in a net foreign direct investment (this may be positive or negative). Inward foreign direct investment means inflow of investment in your country and outward foreign direct investment means the flying of local capital towards foreign countries. Net foreign direct investment means the difference between the inward foreign direct investment and outward direct investment. Foreign direct investment may be in the form of incorporating a wholly owned subsidiary or a company, by the purchasing shares of associated enterprise, through merger or acquisition of enterprise and may be joint venture with an investor or company. There are many reasons of foreign direct investment like low corporate taxes, special economic zones, low interest rates and may be free land or land subsidies vary from country to country. Inflow or out flow of capital plays a vital role in any country economy it may be positive or negative. Nuzhat Falki(2009) examined the Impact of Foreign Direct Investment on Economic Growth in Pakistan she collected the data of FDI from the Handbook of Pakistan Economy-2005 published by the State Bank of Pakistan and the World Bank Development Indicators-2008 for the time period of 1980-2006 with variables of domestic capital, foreign owned capital and labor force. With the help of endogenous growth theory and applying the regression analysis she concluded that FDI has negative statistically insignificant relation between the GDP and FDI Inflows in Pakistan.

Anokye M. Adam & George Tweneboah(2009) examined the Foreign Direct Investment and Stock Market Development in Ghana’s they collect the data of market capitalization as a proportion of GDP, Ghana cedi-Dollar exchange rate and Net FDI inflow quarterly data from 1991 to 2006. They apply multivariate co integration analysis and Vector Error Correction Model (VECM) and concluded that FDI has significant influence in the development of Ghana stock market and also concluded that there is long-run relationship between FDI and nominal exchange rate and stock market in Ghana perspective.

Wu Jyun-Yi and Hsu Chih-Chiang (2008) examine Does Foreign Direct Investment Promote Economic Growth. To examine this they collected the data of 62 countries for the period of 1975 to 2000. They run the regression analysis and resulted that FDI plays an important role in the economic growth of these countries. In-Mee Baek and Tamami Okawa (2001) examined the Foreign exchange rates and Japanese foreign direct investment in Asia. They collected the data from 6 countries Taiwan (South Korea, Hong Kong, and Singapore) and ASEAN-3 (Malaysia, Indonesia and Thailand) and selected 8 sectors chemicals and allied products, electrical machinery, food, primary metals and fabricated metal products, general machinery, textile products, transportation machinery, and ‘others’ for the period of 1983 to 1992. They run the regression analysis and concluded that exchange rate variables—the yen against the Asian currencies and also against the dollar—are significant factor of FDI in manufacturing sector.

Zenegnaw Abiy Hailu(2010) examined the Demand Side Factors Affecting the Inflow of Foreign Direct Investment to African Countries: Does Capital Market Matter?. They collect the data of 45 countries from World Bank, World Development Indicator with 28 points for the period of 1980 to 2007.by applying the regression analysis they concluded that Natural resource, labor quality, trade openness,
market accession and infrastructure condition have positive and significant effect. Zeshan Atique, Mohsin Hasnain Ahmad, And Usman Azhar (2004) examined the The Impact of FDI on Economic Growth under Foreign Trade Regimes: A Case Study of Pakistan. they collect the data of five variables Gross domestic product (Y), foreign direct investment (FDI), labour force (L), gross capital formation as a percentage of GDP (K), education expenditure as a percentage of GDP (H), ratio of total merchandise trade (import + export) to GDP (OP) from the World Development Series and State Bank Annual report. By applying the regression analysis they concluded that Pakistan’s capacity to progress on economic development will depend on her performance in attracting FDI. E. Borensztein, J. De Gregorio and J-W. Lee (1998) examined how does foreign direct investment affect economic growth? They collected the data 69 developing countries for the period of last two decades. By applying the cross country regression analysis they concluded that FDI has a positive positive overall effect on economic growth, although the magnitude of

Marta Bengoa, Blanca Sanchez-Robles (2003) examined the Foreign direct investment, economic freedom and growth: new evidence from Latin America. To complete this study they collected the data of 18 Latin American countries and the period is 1970–1999 from International Financial Statistics & Development Finance and World. By applying the regression analysis they concluded that FDI is positively correlated with the economic growth and economic freedom in the host country is a positive determinant of FDI inflows. V. N. Balasubramanyam, M. Salisu and David Sapsford (1996) examined the Foreign Direct Investment and Growth In EP And is Countries. They collected the data of 46 countries for the time span of 1970 to 1985. By applying the regression analysis they concluded that FDI play a beneficial effect on economic growth for those countries which pursue an outwardly oriented trade policy as compared to other countries that adopting an inwardly oriented policy.

Risikat Oladoyin S. Dauda (2007) examined the Impact of FDI on Nigeria’s Economic Growth: Trade Policy Matters. Their variables are gross domestic product, gross domestic capital and the ration of total trade to GDP and FDI for the time span of 1970 to 2004 from CBN Annual Report and Statement of Accounts (various issues) and CBN Statistical Bulletin (various issues). By applying the regression analysis they concluded that FDI have significant impact on the economic growth. Mohammad Salahuddin, Muhammad Shahbaz and Muhammad Irfan Chani examined the A Note on Causal Relationship between FDI and Savings in Bangladesh. They collected the data of FDI and gross domestic saving (GDS) covering the period of 1985 to 2007. By applying the Vector Auto Regression (VAR) they concluded that there exist bi-directional causal relationship between foreign direct investment and gross domestic savings but the movement is stronger from domestic savings to foreign direct investment.

Muawya Ahmed Hussein (2009) examined the Impacts of Foreign Direct Investment on Economic Growth in the Gulf Cooperation Council (GCC) Countries. He collected the data of FDI and economic indicators from World Investment Reports of UNCTAD, the GCC governments official publications and reports, ESCWA (United Nations Economic and Social Commission for Western Asia), and Central banks publications of six countries (Kingdom of Saudi Arabia, United Arab Emirates, Oman, Qatar, Kuwait and Bahrain). By applying the regression analysis they concluded that there is week relationship between FDI and economic growth in GCC. Tokunbo S. OSINUBI*, Lloyd A. Amaghionyeodiwe (2010) examined Foreign Private Investment and Economic Growth in Nigeria. They collected the data of FDI from publications of the Central bank of Nigeria, such as the Statistical
Bulletin, the CBN's annual report and the Bullion for the time span of 1970 to 2005. By applying the they concluded that Foreign Private Investment, Domestic Investment growth and Net Export growth were positively related to economic growth in Nigeria.

Anokye M. Adam, George Tweneboah(2009) examine the relationship between foreign direct investment and stock market in Ghana. They use the market capitalization as a proportion of GDP, dollar exchange rate and net foreign direct investment .By applying Vector Error Correction Model (VECM) they concluded that foreign direct investment have significant impact on the development of Ghana’s stock market. Mohammad I. Al-Halalmeh and Abedalsttar M. Sayah (2010) examined the impact of foreign direct investment on share market in Amman exchange market. They collected primary data by distributed self administrated questionnaire among 100 people and secondary date form the reports of Amman stock exchange. By applying the multiple regression model they concluded that foreign direct investment has significant impact on share market value in Amman exchange market. Mihir A. Desai, C. Fritz Foley and James R. Hines Jr. (2005) study the foreign direct investment and domestic capital stock. They collect the data of 1970s to 1980s of the foreign direct investment and by applying the regression, concluded that foreign direct investment has significant impact on capital stock.

DATA AND METHODOLOGY
The aim of this paper is to examine the impact of GDP and inflation on Foreign Direct Investment in Pakistan. This paper also examined the trend of foreign Direct Investment inflows with respect to GDP growth and inflation of Pakistan. To do so we collect the Data of FDI, Inflation and GDP from State Bank of Pakistan, Board of investment of Pakistan and Federal Bureau of Statistics of Pakistan for the period of 2000 to 2010.

A multiple regression model is used to check the significant impact of FDI on economic growth. The model is as follows

\[ \Delta FDI = \alpha + \beta GDP + \delta INF + \varepsilon \]

Where

\( \Delta FDI \) = Change in Foreign Direct Investment

\( GDP \) = Gross Domestic Product

\( INF \) = Inflation Rate
In this model FDI is dependent variable whereas GDP and Inflation rate are independent variable. Here the time span of sample is very important because in this period a huge chunk of Foreign Direct investment came in Pakistan.

RESULTS AND CONCLUSION

Table-1
Regression Statistics

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>R Square</td>
<td>0.725</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.409</td>
</tr>
<tr>
<td>No of observations</td>
<td>8</td>
</tr>
<tr>
<td>F-Statistics</td>
<td>6.604</td>
</tr>
<tr>
<td>P-value</td>
<td>0.040</td>
</tr>
</tbody>
</table>

In table 1 we have regression statistics of our proposed model. The results suggest the overall model is significant at 5% and 10% level of significance because its p value is 0.004. Further, the R-square of this model is at a higher node i.e., 72.5%, which suggest that the only 27.5% variation in this model is unexplained while the remaining variation of this model is explained by GDP and Inflation.

Table-2 Independent Variable’s Co-efficient Statistics

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>T-Statistics</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>(0.105)</td>
<td>0.836</td>
<td>(0.125)</td>
<td>0.905</td>
</tr>
<tr>
<td>GDP</td>
<td>16.064</td>
<td>9.614</td>
<td>1.671</td>
<td>0.156</td>
</tr>
<tr>
<td>Inflation</td>
<td>(9.110)</td>
<td>5.179</td>
<td>(1.759)</td>
<td>0.139</td>
</tr>
</tbody>
</table>

Table-2 shows the regression statistics of the independent variable’s coefficients. The results show that GDP coefficient has a positive but insignificant relationship with change in foreign direct
investment. On the other hand, inflation coefficient has a negative but insignificant relationship with foreign direct investment.

The impression which is very normal among the economist and practitioners that if the country’s gross domestic product will increase then it will give a positive signal to the foreign investors to invest in the very country. Also a control and low inflation will also encourage foreign investor to in the country. This study is also come to the same conclusion and results are evident that the change in foreign direct investment is due to the country’s gross domestic production and inflation. The relationship between change in foreign direct investment and gross domestic production is positive while with inflation it is negative. This means if the gross domestic production of the country will increase then the foreign direct investment will also increase. Whereas decrease in inflation lead to increase in foreign direct investment

![Graph showing FDI, GDP, and Inflation over years](image)

**REFERENCES**


11) A Note on Causal Relationship between FDI and Savings in Bangladesh, Mohammad SALAHUDDIN, Muhammad SHAHBAZ and Muhammad IRFAN CHANI, Theoretical and Applied Economics,Volume XVII (2010), No. 11(552)


13) FOREIGN PRIVATE INVESTMENT AND ECONOMIC GROWTH IN NIGERIA, Tokunbo S. OSINUBI*, Lloyd A. AMAGHIONYEODIWE, review of Economics & Business Studies, Volume 3, Issue 1 June 2010

