Impact of Foreign Direct Investment on Gross Domestic Product

By Qaiser Abbas, Salman Akbar, Ali Shan Nasir, Hafiz Aman Ullah, Muhammad Akram Naseem

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Abstract - This paper investigates the impact of foreign direct investment on Growth (GDP) of SAARC countries. This relationship is tested by applying multiple regression models. The change in GDP is taken as dependent variable while FDI and inflation are considered as independent variables. The data used for this is ranging from year 2001 to 2010 of SAARC Countries. The result shows that the overall model is significant. There is a positive and significant relationship between GDP and FDI while an insignificant relationship between GDP and inflation.

Keywords: GDP, FDI, CPI, SAARC.

GJMBR Classification: JEL Code: F21

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Impact of Foreign Direct Investment on Gross Domestic Product
(A Case of SAARC Countries)

Qaiser Abbasα, Salman Akbarβ, Ali Shan Nasirγ, Hafiz Aman Ullahψ, Muhammad Akram Naseemν

Abstract - This paper investigates the impact of foreign direct investment on Growth (GDP) of SAARC countries. This relationship is tested by applying multiple regression models. The change in GDP is taken as dependent variable while FDI and inflation are considered as independent variables. The data used for this is ranging from year 2001 to 2010 of SAARC Countries. The result shows that the overall model is significant. There is a positive and significant relationship between GDP and FDI while an insignificant relationship between GDP and inflation.

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I. INTRODUCTION

FDI refers to net inflows of investment in an economy of a country. It is the sum of equity capital, reinvestment of earnings, long term and short term capital. It usually involves participation in management, joint ventures, transfer of technology and experience. GDP refers to the market value of all final goods and services produced within a country in a given period. It is often considered an indicator of growth and standard of living for a country. Inflation when the price of most goods and services continues to rise upward. It is measured by the consumer price index (CPI). SAARC the South Asian Association for regional cooperation is an organization of south Asian nations. It was founded in December 1985 and dedicated to economic, technological, social and cultural development by emphasizing collective self reliance. Pakistan, India, Bangladesh, Nepal, Bhutan, Maldives and Sri Lanka are its founding members. Afghanistan joined the SAARC in 2005. Its head quarter is in Kathmandu, Nepal. The SAARC region is the home of fifth humanity with vast natural and human resources. It has the potential of becoming a vibrant region in the world by its resources like manpower, technological, agricultural and mineral assets further it has an attractiveness for tourism and historical art and cultural civilization.

II. LITERATURE REVIEW

Nuzhat Falki (2009) examined the Impact of FDI on Economic Growth of Pakistan. She collected the data of FDI from the Handbook of Pakistan Economy-2005 published by the State of Pakistan and the World Bank Development indicators-2008 from 1980 to 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 statically insignificant relationship between 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 collected 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. Pardeep Agarwal (2000) found that the increase in FDI inflows in South Asia were associated with a many-fold increase in the investment by national investors, suggesting that there exist linkage effects between FDI and GDP the impact of FDI on GDO growth is found to be negative prior to 1980, mildly positive for early eighties and strongly positive over the late eighties and nineties.

Jyun-Yi, Wu and Hsu Chin-Chiang (2008) they examine whether the FDI promote the economic growth by using threshold regression analysis. The empirical analysis shows that FDI alone play an ambiguous role in contributing to economic growth based on a sample of 62 countries covering the period from 1975 to 2000 and find that initial GDP and human capital are important factor in explaining FDI. FDI is found to have a positive and significant impact on growth when host countries have better level of initial GDP and human capital. Laura Alfaro at el (2003) they examine the various links among FDI and GDP growth. They explore whether countries with better financial systems can exploit FDI more efficiently. Using empirical analysis using cross-country data between 1975 and 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 in their economic growth. Muhammad I.AI-Halameh and Abedalsattar M. Sayah (2010) examined the impact of FDI on share market in Amman exchange market. They collected primary data by distributed self administrated questionnaire among 100 people and secondary data from the report of Amman Stock exchanges. By applying the multiple regression model they concluded that FDI has significant Impact on share market value in Amman exchange market. Mihir A. Desai at el (2005) study the FDI and domestic capital stock. They collect the data of 1970 to 1980 of the FDI and by applying the regression, concluded that FDI has significant impact on capital stock.

M. Sayeed Alam and Mahmud Zubayer (2010) they founded that in SAARC FDI from outside is more important than in intra regional investments in most the countries (the only exception is Nepal) where Indian investments dominated. The concept of some region can be applicable to increase intra regional FDI. The FDI has a significant impact on GDP of SAARC countries. Muhammad Zahid Awan at el (2010) they found that FDI in Pakistan is considered as a vital source of external capital flows to meet saving-investment gap and export-import gap as well. They examine the overall impact of FDI inflows into the economy of Pakistan by using annual time series data for the period of 1971 to 2008. They concluded that debt servicing and GDP found statistically insignificant and it seems that these variables have no significant impact on FDI inflows into Pakistan.

III. DATA AND METHODOLOGY

The aim of this research is to examine the impact of FDI ON GDP In SAARC. This paper also examined the trend of foreign Direct Investment inflows with respect to GDP growth and inflation of SAARC. For this we collect the Data of FDI, Inflation and GDP from the SAARC countries for the period from 2001 to 2010.

Data Nature: Panel Data
No. of Countries 07
No. of Years 10
Observation 70
No. of Variables 03

\[
\text{GDP} = \alpha + \beta_1 \text{FDI} + \beta_2 \text{CPI}
\]

FDI = Change in Foreign Direct Investment
GDP = Gross Domestic Product
CPI = Inflation Rate
Level of Significant 5 to 10 percent

In this model GDP is dependent variable whereas FDI and CPI are independent variable.

IV. HYPOTHESIS AND PURPOSE OF THE RESEARCH

In this research we want to know that the growth of the SAARC country depends on FDI and inflation or not so we develop following hypothesis.

**GDP depends upon FDI and inflation**

Assumption: Intercept and slop coefficient are constant over time over country.

V. RESULTS GDP Vs FDI AND CPI

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R Square</td>
<td>0.800</td>
</tr>
<tr>
<td>Standard Error</td>
<td>438.478</td>
</tr>
<tr>
<td>No of observations</td>
<td>70</td>
</tr>
<tr>
<td>P-value CPI</td>
<td>0.56</td>
</tr>
<tr>
<td>P-Value FDI</td>
<td>0.00</td>
</tr>
</tbody>
</table>

In table we have regression statistics of our proposed model. The results suggests that the overall model is significant at level of significance because its p value is 0.00 Further, the R-square of this model is at a higher node i.e., 0.800, which suggest that the only 20. % variation in this model is unexplained while the remaining variation of this model is explained by FDI and CPI. Moreover the CPI has a positive impact on GDP but insignificant so we ignore CPI and make analysis between GDP and FDI.

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R Square</td>
<td>0.799</td>
</tr>
<tr>
<td>Standard Error</td>
<td>436.358</td>
</tr>
<tr>
<td>No of observations</td>
<td>70</td>
</tr>
<tr>
<td>P-value CPI</td>
<td>0.00</td>
</tr>
</tbody>
</table>

In table we have regression statistics of our proposed model (GDP and FDI). The results suggests that the overall model is significant at level of significance because its p value is 0.00 Further, the R-square of this model is at a higher node i.e., 0.799, which suggests that the only 21. % variation in this model is unexplained while the remaining variation of this model is explained by FDI.
Country wise analysis

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Country</th>
<th>GDP (Billion)</th>
<th>β FDI</th>
<th>P-Value</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pakistan</td>
<td>23.49</td>
<td>0.06</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>India</td>
<td>51.72</td>
<td>0.00</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Bangladesh</td>
<td>121.35</td>
<td>0.04</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sri Lanka</td>
<td>46.64</td>
<td>0.00</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Maldives</td>
<td>-7.59</td>
<td>0.90</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bhutan</td>
<td>24.44</td>
<td>0.02</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Nepal</td>
<td>153.85</td>
<td>0.13</td>
<td>0.27</td>
<td></td>
</tr>
</tbody>
</table>

While making country wise analysis we find that overall impact of FDI on GDP growth positive and significant but only Maldives shows inverse impact of FDI on its GDP because of negative FDI Figure in some years also the p value of Nepal above the significant level but the model is positive in respect to the GDP to FDI.

India is a large economy having strong industrial and agricultural development which makes India at the top of the SAARC countries in respect with GDP and growth. Pakistan is at 2nd position in SAARC with respect to GDP then Bangladesh, Sri Lanka, Nepal, Maldives and Bhutan respectively at the GDP Chart in SAARC.
FDI in SAARC countries increased heavily from the years 2000 and above as the growing infrastructure and investment opportunities in the whole region especially in Indian emerging markets and attractive investment opportunities force external investors to invest in Indian economy secondly Pakistan also have a good attraction and positive investment facilities for foreign investors. After that Bangladesh and Sri Lanka also have a positive attraction for foreign investments. This increasing trend continue till 2007 and 2008 but as the world economic conditions and slump in American and European Markets the investment inflow decrease in all over the world which also effect the SAARC so the top countries like India and Pakistan also show a huge decline in FDI from 2007 to 2010.

VI. CONCLUSION

Growth of any country depends upon investments, increasing assets and infrastructure. Foreign Direct Investment in an economy shows that there is a good trend of investment which ultimately results in increasing the GDP and growth of the country as we have found in our research that increasing trend of FDI also increases the GDP of the country.

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