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Impact of Foreign Direct Investment on Economic Growth: Empirical Results from Pakistan

Samina Naz *
Department of Applied Economics, Institute of Management Sciences
1-A, Sector E-5, Phase VII, Hayatabad, Peshawar, Pakistan
Email: pakeconomist@hotmail.com

Gul Mina Sabir
Department of Applied Economics, Institute of Management Sciences
1-A, Sector E-5, Phase VII, Hayatabad, Peshawar, Pakistan
Email: mahadalidurrani@gmail.com

Mamoon Ahmed
Department of management sciences, Institute of Management Sciences
1-A, Sector E-5, Phase VII, Hayatabad, Peshawar, Pakistan
Email: mamoon.ims@outlook.com

Abstract
The study analysed the effect of foreign direct investment (FDI) on economic growth of Pakistan. Time series data for 35 years from 1979-2013 is utilized in this study. Impact of inflation (CPI) on GDP is also examined. Data of FDI, GDP and inflation is collected from world data bank. Multiple linear regression model is used to find out the impact of FDI and inflation on economic growth of Pakistan. Unit root test is used for stationarity of data. Results of the study show that FDI and inflation significantly affect economic growth of Pakistan. FDI has positive relationship with GDP while inflation has negative relationship with GDP.
Keywords: ECONOMIC GROWTH, FDI, GDP, INFLATION

1. INTRODUCTION

Foreign direct investment (FDI) plays significant role in improving economic growth of under developed countries (khan, 2007). Foreign direct investment or FDI is that investment which is made by citizens of a country in foreign enterprise, over which they have effective control. As most of the under developed countries are having inadequate capital formation and lack of technological progress, their economy growth rate is much slower than those countries which have high investment rate and huge expenditure for research and development. FDI is important for these underdeveloped countries in providing capital, managerial skills, entrepreneurial ability and new technology and to stimulate their economic growth. Dunning and Hamdani (1997) analysed that for transferring technology and knowledge, FDI is one of most effective means.

As Pakistan is underdeveloped country, having slow rate of economic growth. The reasons for slow rate of economic growth are low level of income, low saving, lack of capital, low level of industrialization, high population growth rate, deficit in balance of payment, heavy dependence on exports of primary goods, Burden of external debt, and lack of managerial and technical skill. FDI is one of the important means of controlling these weaknesses and to promote economic growth of Pakistan.

During 1970-75 world FDI inflow was US$ 20450.61 million. Out of which US$ 5188.5 million went to less developed countries and US$ 15262.08 million went to developed countries of the world. US$1160.16 million out of US$ 5188.5 million went Asian countries from which FDI inflows to Pakistan was estimated at US$ 8.6 million. World FDI inflow was increased to US$ 916300 million in the year 2005. FDI inflow to developed countries were US$ 452300 million while for that of underdeveloped countries US$ 334300 million. FDI inflow to Asian countries was estimated at US$ 200000 million from which US$ 1524 million came to Pakistan, WIR (19980, 1995, 2002, and 2005) UNCTAD, UN, New York, and Geneva.

Thus from 1991-1992 to 2004-2005 total FDI inflows to Pakistan were US$ 9089 million, means US$ 649.27 million come each year to Pakistan. Few sectors in Pakistan have attracted more FDI as compare to other sectors of the economy during last five years. IT and TELECOM is the top sector in economy attracting more FDI inflow, during last five years FDI inflow to IT and TELECOM was US$ 1090.1 million. FDI inflows to textile sector were estimated at US$ 138.4 million during last five years. FDI inflow has also considerably increased in power sector, as it was estimated at US$ 1007.9 million during last five years. FDI inflow to financial business sector has also increased; it was US$ 840.1 million during last five years (board of investment, Pakistan).

This paper is an attempt to identify the impact of FDI on economic growth and the relationship between inflation (CPI %) and economic growth of Pakistan for the period 1979-2013. Pakistan is underdeveloped country having high rate of unemployment, high growth rate of population, low per capita income, and underutilization of resources etc. aim of this paper is to provide suitable frame work to policy makers to draw FDI in our country and to maintain inflation rate at sustainable rate.

2. LITERATURE REVIEW:

Many studied have been conducted at both national and international level in order find out the impact of FDI on economic growth.

Wu Jyun-Yi et al (2008) estimates threshold regression technique to determine whether the effect of FDI on economic growth is dependent upon different absorptive capacities like initial GDP, human capital, and volume of trade or not. The study was based on sample of 62 countries, and time series data was collected for year 1975-2000. The empirical results of the study show that FDI alone is playing an ambiguous role in contributing to economic growth of 62 countries of study. It was also found that by having better level of initial GDP and human capital, FDI has significant and positive effect on economic growth of host countries.

Muhammad Arshad Khan (2007) examined the relationship between FDI, domestic financial sector and GDP of Pakistan. Pearson cointegration technique was used for time series data from 1972-2005. Empirical results of the study show that if domestic financial system has achieved minimum level development, then FDI exerted positive impact on economic growth in both short run and long run. It is suggested that development of domestic financial sector is pre condition for foreign domestic investment to have a positive impact on GDP growth of host country

Amna Muhammad Gudaro et al, (2012) and Zia Ur Rahman, (2014) analysed the impact of foreign direct investment on economic growth. Multiple linear regression model was used to find out the effect of FDI and inflation CPI on GDP of Pakistan. The results of the study show that FDI is positively and significantly related with GDP while inflation CPI has negative and highly significant relationship with GDP.

Nayyara Zeb et al (2014) examined the impact of FDI and some other factors like political instability, trade openness, and terrorists attack on GDP of Pakistan. Time series data from 1972 to 2012 was used in the study. Results of multiple linear regression model show that FDI is highly significant and has positive impact on GDP of Pakistan.

Basem Mohammed Louzi1et al (2011) investigated the impact of FDI on economic growth in Gordan. Time series data for time period 1990-2009 was used for the study. Error correction model and cointegration was used to find two way relations among the dependent and explanatory variables. This study reveals that direct causation is not from FDI to GDP but from GDP to FDI i.e. if GDP of a country increases then inflow of foreign direct investment to said country increases.

Another important study by Nuzhat Falki (2009) examined impact of foreign direct investment on Pakistan economy for the period 1980-2006. Production function based on endogenous growth theory was used to analyse the relationship between FDI and economic growth. The effect trade, domestic capital and labour on economic growth was also analysed in the study. The results of the study show that domestic capital, labour and trade have positive and significant relationship with GDP and FDI has negative and insignificant relationship with economic growth.

Abdul Khaliq and Ilan Noy (2007) analysed detailed sectorial data for FDI inflows to Indonesia for time period 1997-2006 to determine the effect of FDI on economic growth. It was observed that FDI has positive impact on economic growth at aggregate level, while FDI does not have apparent impact on average growth performance of different sectors. FDI has positive effect on growth of few sectors while FDI inflow has negative impact on growth of mining and quarrying.

Ahmad Ghazali (2010) identified the casual relationship among FDI, domestic investment and economic growth of Pakistan. Time series data from year 1981 to 2008 was employed in the study. Empirical findings of cointegration technique show that there is positive long run relationship between domestic investment, FDI and GDP of Pakistan. FDI inflow in Pakistan supplements domestic investment which ultimately stimulates economic growth of Pakistan.

Laura Alfaro (2002) examined the effect of FDI on growth of primary sector, manufacturing sector and service sector by using cross country data from 1981-1999. Empirical results of the study show that the effect of total FDI on growth is significant. It was found that FDI in primary sector has negative impact on growth while FDI in manufacturing sector has positive effect on growth.

3. ROLE OF FDI IN ECONOMIC GROWTH

1-Flow of capital and technology

Foreign direct investment (FDI) may involve inflow of capital and technology to host country. Growth and trade theory show that capital inflow increase GDP per capita in country which import capital. And availability of better technology ensures economic sustainability.

2-Risk sharing element between capital owners and capital importing country
As in these countries (capital importing countries) FDI is not only the source of capital and technology. These countries also depend on their own saving and borrow money to add to capital stock and in order to upgrade technological sophistication, these countries also depend on their domestic research and development. But as far as under developed countries are concerned, they may face constraints on international credit markets, and also these countries lack necessary resources to undertake domestic research and development. So FDI implies an element of risk sharing between the country which owns the capital and which import the capital, so FDI make this type of capital inflow more desirable than loans. And also FDI is most cost efficient way to these developing countries to avail the modern technology.

3-Reduce unemployment
As unemployment is one of the sever problems facing less developed countries of the world. FDI may reduce unemployment in these countries by two ways. The first way that FDI effect unemployment is that establishment of foreign countries may increase labour demand in host countries and hence reduce unemployment. Secondly, as foreign firms are linked with local economy, they demand intermediate goods and producer services from local suppliers. This may also result to increase labour demand and reduce unemployment in host country.

4-Higher factor productivity and higher factor rewards for local firms
FDI also causes higher factor demand for local firms and higher factor rewards as the foreign firms have some technological advantages which allow these firms to compete successfully with local firms. This provides opportunities and potential to local firms to learn from foreign partners. This causes to increase both factor productivity of local firms and factor rewards.

5-Encourage efficiency among local suppliers
Efficiency among the local suppliers may take place when there is interaction between foreign affiliates and local suppliers of intermediate goods. As foreign firms demand for high quality of intermediates and timely delivery, ultimately local suppliers may become more efficient. As a result local firms may also benefit from efficient local suppliers if intermediates.

6-Encourage competition among local firms
FDI encourage competition among local firms as entry of foreign firms may reduce the concentration of firms in a market. This results in wider variety of goods and lower prices.

4. DATA AND METHODOLOGY:

4.1. Sample design and data description

In order to find out the relationship between FDI and GDP, time series data for the period of 35 years from 1979 to 2013 is used in this study. The secondary data of GDP, FDI and inflation is collected from world data bank.

4.2. Model specification

Multiple linear regression model is used to find the effect of FDI and inflation on GDP. The dependent variable is GDP and independent variables are inflation and FDI in the specified model. The basic purpose of this study is to determine the effect of FDI on GDP of Pakistan but the impact of foreign direct investment is also observed with relevance of inflation and GDP growth of Pakistan. For stationarity of the data unit root test is used.
The general equation of the model is
$LGDP= \beta_0+\beta_1 LFDI+\beta_2 LINF+\epsilon$
Where
LGDP= natural log of growth domestic product
LFDI= natural log of foreign direct investment
LINF=natural log of inflation rate
ϵ= error term

5. DATA ANALYSIS AND RESULT INTERPRETATION:

5.1. Augmented dickey fuller test for stationarity

Before going to find out the relationship between GDP, FDI and inflation rate, we check stationarity of data by using unit root (Augmented dickey fuller) test.
Table No. 1: Augmented dickey fuller test for stationarity

Variables	ADF at level	ADF at first difference	ADF at second difference
LGDP	-1.60955	-2.79024	-7.06872
LFDI	-0.500858	-2.74645	-3.99873
LINF	-2.36429	-1.93789	-7.95296

Note: McKinnon critical value for intercept at 5% level= -3.53 and at 1% level= -3.75

Table No 1 shows the results of augmented dickey fuller test. The proposed equations are used to find the stationarity in data with intercept at 5% and 1% level of significance. The results of the table show that all the three variables are non-stationary at level and at first difference. GDP, FDI and inflation became stationary at second difference. So it shows that all the three variables are integrated at degree two.

5.2. Regression analysis

Table No. 2: ordinary least square

Variables	Coefficients	Std. Error	t- ratio	P-value	R^2	F-statistic	P-value (F statistic)
Constant LINF LFDI	11.2164 -0.91 0.446688	0.238515 0.108205 0.0388307	47.0262 -8.4100 11.5035	0.00001 0.00001 0.00001	0.832243	79.37631	3.93e-13

Table No. 2 shows estimated results of ordinary least square. The dependent variable is GDP and independent variables are FDI and inflation. Estimated value of F statistic is 79.37631 and p value is 3.93e-13 which is less than 0.05 and 0.01 which show the overall significance of the model and concluded that fit is good. R^2 is 0.832243; showing 83% variation in dependent variable is explained by independent variables.

Empirical results of the model show that FDI has positive and highly significant relationship with GDP, while inflation has significant and negative impact on GDP. If FDI is increased by 1% it will increase GDP by 0.44%. And if inflation is increased by 1% it will cause to decrease GDP by 0.9%.

6. CONCLUSION AND RECOMMENDATIONS

Foreign direct investment plays a significant role in economic development of any country particularly in under developed country. This paper examined the relationship between FDI and economic growth of Pakistan. Multiple linear regression model is used to investigate the relationship between FDI, inflation and economic growth for the time period 1979-2013.Empirical results of the study show that the FDI has positive and highly significant impact on economic growth, 1% increase in FDI leads to increase in GDP by 0.44%. It was also observed that inflation has inverse relationship with economic growth, this relationship is also significant, 1% increase in inflation leads to decrease GDP by 0.91%.

Economic benefits of FDI are wide ranging as FDI inflow to a country opens new avenues of transfer of technology, knowledge, market networking, training of manpower, externalities in host countries etc. many developing countries including Pakistan have been taken number of measures to attract foreign investment including FDI. To attract FDI inflow to Pakistan, following recommendations are suggested on the basis of results of this study.

- First of all business friendly environment is essential to attract more FDI to our country.
- Decision in business sector usually based on political stability in country. Confidence of investors is reducing if there is political instability in a country. As at present there is democratic government in our country but FDI is diminishing, which show that to attract FDI to our country political condition must be stable.
- Education sector is highly negligible sector of Pakistan, causing massive talent deficiency. Which ultimately have negative impact on domestic and foreign investment. As Pakistan is highly populated country, most of which labour force is uneducated and unskilled. To develop this sector, grand amount of FDI is required. So in order to attract domestic and foreign investors, encouraging opportunities should be originated.
- Improved infrastructure facilities in a country are considered to be important mean to attract FDI inflow to country, so the govt. and policy makers must give proper attention to improve physical infrastructure in Pakistan to attract foreign investors.

REFERENCES

Alfaro, L. (2003). Foreign direct investment and growth: Does the sector matter. Harvard Business School, 1-31.
Dunning, J. and A. Hamdani. (1997). The new globalism and developing countries, Tokyo and New York: UN Univ. Press.
Falki, N. (2009). Impact of foreign direct investment on economic growth in Pakistan. International Review of Business Research Papers, 5(5), 110-120.
Ghazali, A. (2010). Analyzing the relationship between foreign direct investment domestic investment and economic growth for Pakistan. International Research Journal of Finance and Economics, 47(1), 123-131.
Gudaro, A. M., Chhapra, I. U., & Sheikh, S. A. (2012). Impact of foreign direct investment on economic growth: A case study of Pakistan.
Jyun-Yi, W., & Chih-Chiang, H. (2008). Does foreign direct investment promote economic growth? Evidence from a threshold regression analysis. Economics Bulletin, 15(12), 1-10.
Khaliq, A., & Noy, I. (2007). Foreign direct investment and economic growth: Empirical evidence from sectoral

data in Indonesia
Khan, M. A. (2007). Foreign direct investment and economic growth: The role of domestic financial sector (No. 2007: 18). Pakistan Institute of Development Economics.
Louzi, B. M., & Abadi, A. (2011). The impact of foreign direct investment on economic growth in Jordan. IJRRAS-International Journal of Research and Reviews in Applied Sciences, 8(2), 253-258.
Perkins, D. H. (2001). Economics of development. New York: W. W. Norton and Company.
Rahman, Z. U. (2014). Impact of Foreign Direct Investment on Economic Growth in Pakistan. Journal of Economics and Sustainable Development, 5(27), 251-255.
Zeb, N., Qiang, F., & Rauf, S. (2013). Role of Foreign Direct Investment in Economic Growth of Pakistan. International Journal of Economics and Finance, 6(1), p32

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