

# Spillover Effect of Foreign Direct Investment on Economic Growth in Pakistan

Muhammad Kashif Khan<sup>1</sup>, Muhammad Aslam Khan<sup>1</sup>, Sajjad Latif Awan<sup>1</sup>, Abid Usman<sup>2</sup> & Amen Imran<sup>1</sup>

<sup>1</sup> Business Administration Department, Preston University Islamabad, Pakistan

<sup>2</sup> Foundation University Institute of Engineering and Management Sciences Islamabad, Pakistan

Correspondence: Muhammad Kashif Khan, Business Administration Department, Preston University Islamabad, Pakistan. Tel: 92-321-884-8737. E-mail: kashifdurrani81@hotmail.com

Received: May 17, 2012

Accepted: September 22, 2012

Online Published: October 16, 2012

doi:10.5539/ibr.v5n11p77

URL: <http://dx.doi.org/10.5539/ibr.v5n11p77>

## Abstract

Foreign direct investment has increasingly become an integral of economic growth in most developing economies, upon accepting the liberal market economic paradigm. Given this backdrop, the paper is geared at underpinning the impact of foreign direct investment on economic growth in developing economy, with particular reference to Pakistan. The paper considers a timeline of (2001 to 2010) in measuring the extent to which foreign direct investment spurs economic growth in the country. Similarly, we seek to ascertain whether there was an economic growth or decline amid a diminishing trend of FDI, though our paper suggests there is insignificant impact on the economy, as the latter faces a falling trend of FDI. The empirical results of the paper reveal a weak positive correlation of FDI with economic growth. The paper has gathered data from the State Bank of Pakistan, Ministry of Finance and Economic Surveys of Pakistan. Hence, the paper intends to provide guidance to investors as well as furnish policymakers in crafting out policies tailored at attracting foreign investors.

**Keywords:** FDI, economic growth, import, export, Multiple Regressions, Pakistan

## 1. Introduction

Developing countries have keen interest in Foreign Direct Investment with the fervent hope that foreign inflow (cash or technology) will invariably translate into domestic development, hence the adoption of open door policy should not be surprising. The motive behind foreign direct investment is simply to increase the growth potential and market size (Benacek, Goonicki, Holland & Sass, 2000), to produce value added goods, the know-how of technological advancement (Blomstrom & Kokko, 2001) and skills; ultimately to increase the productivity of the country (Knonigs, 2001) that will also contribute to increase the economic growth (GDP) of that country. It is particularly not only yield significant positive impact on the domestic growth but also create pressure on the domestic firms to improve the quality of the product.

The underlying significance of FDI cannot be underestimated in relation to economic growth. It is quite pertinent that the more capital can be collected; the advancement in technology and marketing expertise could be enhanced through economic growth, exports, imports, per capita income and inflation, but even more the FDI considered most influential factor not only confined to manufacturing but also in the services sector (UNCTAD, 1997).

Lipsey (2004) described Foreign Direct Investment in two broader concepts. First one is Foreign direct investment is a specific form of investment and used to strengthen a particular form of assets of the holding countries. The second one is that it is a specific form of activities or operations that are performed by the controlled firms at host country. Tsai (1994) suggested that economic growth is obvious with both indirect inflow and volume of the FDI in the host country.

Most of the previous studies revealed that the FDI considered as an explanatory variable with economic growth. The economic growth can be maximized through export strategies in developing countries especially in Pakistan (Musleh-ud-din, 2004).

It is explicitly expressed that not only domestic firms only contribute in the improvement of economic growth of domestic firms even more the influx of the foreign firms contribute a lot to enhance the economic growth of that

country through the advancement of technological support, investment both in human capital and fixed assets (Romer, 1986, 1987; Shawn, 1992).

### *1.1 Research Problem*

It is extensively reviewed that the foreign direct investment has declined at 29% during the first 10 months of fiscal year 2010-2011 (July-April) against the last fiscal year 2009-2010 (July-April) (Economic survey 2010-2011, pp.7) by considering the downfall of foreign direct investment it tends me to analyze whether foreign direct investment yield a significant impact on economic growth. On the basis of extensive literature review and schematic frame work the following research question is tried to be answered in this study. What is effect of Foreign Direct Investment on Economic Growth?

### *1.2 Objectives of the Study*

The basic thrust of this study lies to know about the effect of FDI on economic growth. Some linked objectives of this study are as follows

1. To find out the important effect of factors effecting economic growth.
2. To identify the strength of economic factors contributing in its growth.

## **2. Literature Review**

Kejzar (2011) expressed the impact of foreign direct investment in selection of the industry and productivity of the domestic firms especially in the manufacturing industry of Solvenian during the period of 1994-2003. It is found that domestic firms increase their productivity by observing the pressure of penetration of foreign firms. Bode and Nunnenkamp (2011) analyzed the propensity of FDI and found by using the Markov Chain Approach that the countries having high tendency of FDI inflow can sustain its richness for longer period of time and can increase the income level of their employees; which ultimately increase the economic growth.

Ghazali (2010) analyzed the effect of FDI, Domestic Investment and GDP in Pakistan and it is found that great economic growth manipulates a positive role on high domestic investment. It is also analyzed that the Domestic investment and FDI contribute a long term effects on economic growth. Falki (2009) evaluated the impact of foreign direct investment through endogenous growth theory during the period of 1980-2006, and it is found that FDI yield a negative and insignificant effect on economic growth.

Tang, Selvanathan and Salvanathan (2008) expressed the relationship of FDI and domestic investment on economic growth. They found that the FDI tend to improve the economic growth and also optimize the domestic investment which ultimately enhance the economic growth. It was also stated that GDP and domestically invested capital do tends to influence the FDI for long run. Benacek, Goonicki, Holland and Sass (2000) expressed through surveys that market size and growth potential are the basic motive for investment in the Central East European Countries later it was evaluated that a significant improvement in the growth and market size is observed, it was further verified through tests that cost advantages revealed less influencing factor of investment. Worldwide factors and political steadiness contributed a vital role in the investment.

Lensink and Morrissey (2006) revealed the impact of volatility of Foreign Direct Investment on growth and found a negative effect on growth. Musleh-ud-din (2004) expressed the long-term positive effect of import and export on economic growth in Pakistan. Lee and Tcha (2004) found the positive relationship of total productivity and GDP with the influx of FDI and it is realized that the productivity and GDP gained significant positive effect with the foreign direct investment. It is also found that FDI played greater role to increase the total productivity than domestic investment.

Knonigs (2001) investigated the effect of foreign direct investment on the productivity of parental countries by considering the rising countries in central and eastern countries of Europe (Bulgaria, Romania and Poland). It is found that only in Poland the foreign direct investment comparatively performed better than the other two countries Bulgaria and Romania.

Berthelemy and Demurger (2000) explained the relationship between foreign direct investment and economic growth and it is found that it played a significant role in the economic growth. Sun and Parikh (2001) investigated foreign direct investment promote not only economic growth but also contribute to GDP and GDP growth. Hermes and Lensik (2003) expressed the positive relationship of developed financial system on foreign direct investment and economic growth. The strongly positive relationship found especially in Asia and Latin America.

Girma, Greenway and Wakelin (2001) make the comparison of foreign firms and host firms' productivity through considering the inflows of the foreign capital, and interestingly it is found that the productivity of the

foreign companies went high as compared with the host countries. It is further compared that the lower productivity firms gained lower growth and incentives to employees as compared with the foreign companies who normally making funds available at that country. Blomstrom and Kokko (2001) argued that as the technological inflow can create the positive impact on domestic productivity but also leads to the market failure, moreover it simply replacing the domestic monopoly with the foreign monopoly.

Wu, X. (2001) analyzed the impact of foreign direct investment by transferring the technology, considering the country on labor-biased and skill-biased through vertical product differentiation. It is found that the foreign direct investment which is labor-biased technology transfer decrease the wages gap whereas the skill-biased transfer of technology not only increase the profit margin but also increase the wage gap.

De Mello, Jr. (1997) studied the impact of foreign direct investment in developing countries and found foreign direct investment play a significant positive role to improve the growth production.

### 2.1 Theoretical Framework

Based on extensive literature review the following schematic framework constructed to ascertain the effect of independent variables (FDI, Exchange Rate, Imports, Exports and Inflation) on dependent variable (Economic growth).

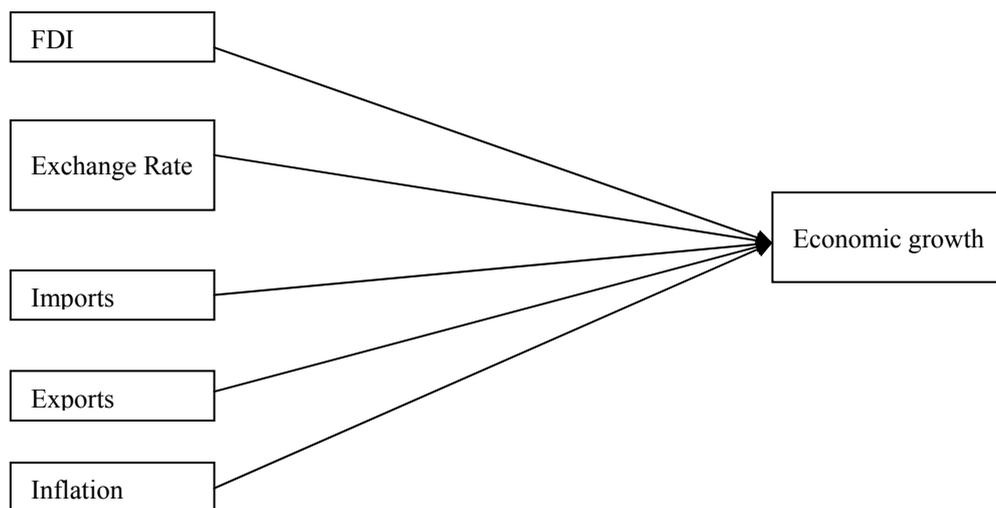


Figure 1. Schematic Diagram

### 2.2 Hypothesis

To analyze the effect of variables of the schematic diagram, the following hypotheses have been developed as under.

H:1 FDI has a significant positive impact on economic growth.

H:2 Import has a significant positive effect on economic growth.

H:3 Exports Yield a significant positive effect on economic growth.

H:4 Low Exchange rate influence a positive impact on economic growth.

H:5 Low Inflation rate yield positive impact on economic growth.

### 3. Research Methodology

A number of previous researches have conducted by considering the FDI as an explaining variable on the economic growth (Nunnenkamp, 2011; Ghazali, 2010; Selvanathan & Selvanathan, 2008; Lensink & Morrissey, 2006; Berthelemy & Demurger, 2000). To get appropriate results with the influx of foreign direct investment on economic growth and motivation for the domestic investors, the time span for analysis from 2001 to 2010 is considered. Data for all economic variables retrieved from the official websites of State Bank of Pakistan and Ministry of Finance/ Economic Surveys of Pakistan ([www.sbp.org.pk](http://www.sbp.org.pk) and [finance.gov.pk/survey](http://finance.gov.pk/survey)).

The independent variables considered for this study are FDI, Exchange rate (Rupees against US \$), Inflation Rate, Exports and Imports; whereas the dependent variable for this study is economic growth (GDP). To get

appropriate results the Multiple Regression Model used for this study. The Multiple Regression Model constructed by considering the independent and dependent variables as under:

$$\text{Economic Growth (GDP)}_t = \alpha_t + \beta_1 \text{Import}_t + \beta_2 \text{Export}_t + \beta_3 \text{Exchangerate}_t + \beta_4 \text{FDI}_t + \beta_5 \text{Inflation}_t + \epsilon_t$$

Whereas  $(\text{GDP})_t$  is the economic growth rate at time  $t$ ,  $\alpha_t$  denotes the y-intercept at time  $t$ ,  $\beta_1$  coefficient of Import at time  $t$ ,  $\beta_2$  co-efficient of Exports at time  $t$ ,  $\beta_3$  co-efficient of Exchange Rate at time  $t$ ,  $\beta_4$  co-efficient of Foreign Direct Investment at time  $t$ ,  $\beta_5$  co-efficient of Inflation at time  $t$  and  $\epsilon_t$  is the error term during the time  $t$ .

#### 4. Results and Discussion

To make an appropriate relation between predictor (independent) variables with the criterion (dependent) variable, Pearson correlation is used and to find out the effect of FDI on economic growth the multiple regression model is used.

Table 1. Results of Pearson Correlation

		Imports	Exports	FDI	Inflation	GDP
Exports	Pearson Correlation	.454				
	Sig. (2-tailed)	.188				
	N	10				
FDI	Pearson Correlation	.934**	.344			
	Sig. (2-tailed)	.000	.330			
	N	10	10			
Inflation	Pearson Correlation	.852**	.693*	.772**		
	Sig. (2-tailed)	.002	.026	.009		
	N	10	10	10		
GDP	Pearson Correlation	-.402	-.374	-.358	-.270	
	Sig. (2-tailed)	.249	.287	.309	.450	
	N	10	10	10	10	
Exchange rate	Pearson Correlation	.767**	.800**	.678*	.844**	-.702*
	Sig. (2-tailed)	.010	.005	.031	.002	.024
	N	10	10	10	10	10

Note: \*\*. Correlation is significant at the 0.01 level (2-tailed); \*. Correlation is significant at the 0.05 level (2-tailed).

The Pearson correlation finds the relationship (positive and negative) among independent and dependent variables. The correlational value falls between 0 to 1, whereas the sign reveals the influence of one variable on the others as positive or negative. The statistical results revealed that the exports have an insignificant positive correlation with imports, insignificant positive correlation with the FDI at 95% confidence interval, significant positive correlation with inflation, insignificant negative correlation with GDP and overwhelming significant positive correlation with the exchange rate. The FDI has a significant positive correlation with imports and insignificant positive with exports, significant positive with the inflation, insignificant negative with the GDP and significant positive with the exchange rate. Moreover, the exchange rate revealed a significant negative correlation with the GDP.

Table 2. Results of Multiple Regression Analysis

Variables	B	SE	B	t	p
GDP	19.287	2.276		8.473	.001*
Import	-2.195	.000	-.101	-.217	.839*
Export	5.058	.000	.440	1.660	.172*
FDI	3.515	.000	.036	.095	.929*
Inflation	.567	.164	1.140	3.456	.026*
Exchange Rate	-.282	.048	-1.963	-5.925	.004*

Note:  $R = .966$ ;  $R^2 = .933$ ; \* $p < .05$ ; \*\* $p < .01$ .

The statistical value of  $R^2$  shows that variation in economic growth (GDP) is explained by the independent variables. The value of  $R^2$  (0.933) revealed that the variation in the value of GDP (economic growth) is explained by the independent variables (Import, Export, FDI, Inflation and Exchange Rate). The value of  $R$

explains the correlation coefficient between independent and dependent variables whereas the magnitude of R lies between 0 and 1. The value closer to 1 shows stronger relationship between the variables included in the model and vice versa. It simply means that the value of  $R=0.966$  shows that there is an overwhelming relationship between the dependent (GDP) and independent (inflation, FDI, exchange rate, export and import) variables.

The overall level of significance of the model is  $p < 0.05$ , the value of F statistic (11.183) shows the model fitness. Significant value (0.018) shows the model is significant and there is a fair fitness of model. B coefficient (beta coefficients) explains the magnitude of independent variables with the dependent variable.

#### 4.1 Discussion and Managerial Implications

On the basis of calculated value ( $b = -0.101$ , sig. 0.839) the researcher failed to accept H:2 (*Import has a significant positive effect on economic growth*), it simply implied that imports have a weak negative non significant effect on economic growth. Exports have moderate positive and non significant relationship with GDP (0.440, 0.172) therefore researcher failed to accept the H:3 (*Exports Yield a significant positive effect on economic growth*). Most importantly on the basis of inferential results ( $b = 0.036$ , sig. 0.929) FDI revealed a weak positive non significant relationship with the economic growth. On the basis of calculated results the researcher failed to accept the H:1 (*FDI has a significant positive impact on economic growth*) which is inconsistent with the previous studies like FDI has a positive impact on economic growth (Bode & Nunnenkamp, 2011; Hermes & Lensik, 2003; Sun & Parikh, 2001; Berthelemy & Demurger, 2000; Tang, Selvanathan & Selvanathan, 2008) and consistent with the previous studies like FDI yield no significant effect on economic growth or yield lower economic growth or having lower economic growth of host companies (Lensink & Morrissery, 2006; Girma, Greenway & Wakelin, 2001). The hypothesis H:5 (*Low Inflation rate yield positive impact on economic growth*) is failed to be accepted, inflation has a moderate (0.567) and significant relationship with GDP (0.026). The researcher failed to accept the H:4 (*Low Exchange rate influence a positive impact on economic growth*) on the basis of low exchange rate influence a positive impact on economic growth weak negative ( $-0.282$ ) and significant relationship (0.004) with GDP.

### 5. Conclusion and Recommendations

The basic objective of this research is to find out the potential effect of FDI on economic growth. The declining trend of FDI explicitly not influenced the economic growth of Pakistan. So this study supports the argument of previous researchers (Lensink & Morrissery, 2006; Girma, Greenway & Wakelin, 2001) that merely FDI does not support the economy of respective country. This study diverts the consideration on the local investors that they should have to put their investment in local industry to boom the economy of Pakistan. Through this study the preemptive measure can be taken to overcome the diminishing rate of FDI, it also sheds the importance of government to make attractive strategies that may attract foreign investors. The empirical results revealed even though a weak positive relationship of FDI on economic growth, weak correlation too and yield insignificant effect on economic growth. As export revealed a moderate positive impact on economic growth but insignificant, mean it supported to increase the economic growth of Pakistan but not as proportionate with the increase in the export and import has a weak negative and insignificant effect on economic growth. Exchange rate and inflation yield significant effect on economic growth. It is further investigated that the devaluation in the Pakistani currency with the US \$ led economic growth decline significantly. Policymakers should have to make such policies that facilitate foreign investors for example the tax consideration may be reduced and additional obligations in the shape of tariff charges on import and exports may be curtailed for some extent to foreign investors.

#### 5.1 Future Line of Studies

The more appropriate results of FDI on economic development can be generated through extending the time span of the study. The further studies can be carried out by adding more independent variables on the economic growth, for example the implication of tax and political instability. The volatility of FDI and its impact on the economic growth can be analyzed. The effect of foreign direct investment on manufacturing sector development and in services sector development can be investigated.

### References

- Benacek, V., Goonicki, M., Holland, D., & Sass, M. (2000). Central and Eastern Europe: A Comparison of Survey and Econometric Evidence. *Journal of United Nations*, 9(3), 163-212.
- Berthelemy, J. C., & Demurger, S. (2000). Foreign Direct Investment and Economic Growth: Theory and Application to China. *Review of Development Economics*, 4(2), 140-155. <http://dx.doi.org/10.1111/1467-9361.00083>

- Blomstrom, M., & Kokko, A. (2001). Foreign Direct Investment and Spillovers of Technology. *International Journal of Technology Management*, 22(5), 435-454. <http://dx.doi.org/10.1504/IJTM.2001.002972>
- Bode, E., & Nunnenkamp, P. (2011). Does Foreign Direct Investment Promote Regional Development in Developed Countries? A Markov Chain Approach for US States. *Rev World Econ*, 147, 351-383. <http://dx.doi.org/10.1007/s10290-010-0086-2>
- De Mello, Jr. L. R. (1997). Foreign Direct Investment in Developing Countries and Growth: A Selective Survey. *Journal of Development Studies*, 34(1), 1-34. <http://dx.doi.org/10.1080/00220389708422501>
- Economic Survey of Pakistan 2010-2011.
- 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, 123-131.
- Girma, S., Greenway, D., & Wakelin, K. (2001). Who benefits from Foreign Direct Investment in the UK? *Scottish Journal of Political Economy*, 48(2), 119-133. <http://dx.doi.org/10.1111/1467-9485.00189>
- Hermes, N., & Lensik, R. (2003). Foreign Direct Investment, Financial Development and Economic Growth. *Journal of Development Studies*, 40(1), 142-163. <http://dx.doi.org/10.1080/00220380412331293707>
- Kejzar, K. Z. (2011). The Role of Foreign Direct Investment in the Host-Country Firm Selection Process: Firm-Level Evidence from Slovenian Manufacturing. *Rev World Econ*, 147, 169-193. <http://dx.doi.org/10.1007/s10290-010-0077-3>
- Konings, J. (2001). The Effect of Foreign Direct Investment on Domestic Firms: Evidence from Firms-Level Panel Data in Emerging Economies. *Economics of Transitions*, 9(3), 619-633. <http://dx.doi.org/10.1111/1468-0351.00091>
- Lee, M., & Tcha, M. (2004). The Color of Money: The Effect of Foreign Direct Investment on Economic Growth in Transition Economies. *Review of World Economics*, 140(2), 221-229. <http://dx.doi.org/10.1007/BF02663646>
- Lensink, R., & Morrissey, O. (2006). Foreign Direct Investment: Flows, Volatility and the Impact on Growth. *Review of International Economics*, 14(3), 478-493. <http://dx.doi.org/10.1111/j.1467-9396.2006.00632.x>
- Musleh-ud-din. (2004). Export, Import, and Economic Growth in South Asia: Evidence Using a Multivariate Time-Series Framework. *The Pakistan Development Review*, 43(2), 105-124.
- Romer, P. M. (1986). Foreign Direct Investment and Investment under Uncertainty. *Journal of International Business Studies*, 27, 335-337.
- Romer, P. M. (1987). Growth Based on Increasing Returns Due to Specialization. *American Economic Review*, 77, 56-62.
- Shaw, G. K. (1992). Policy Implications of Endogenous Growth Theory. *Economic Journal*, 102, 611-621. <http://dx.doi.org/10.2307/2234298>
- Sun, H., & Parikh, A. (2001). Exports, Inward Foreign Direct Investment (FDI) and Regional Economic Growth in China. *Regional Studies*, 35(3), 187-196. <http://dx.doi.org/10.1080/00343400120039597>
- Tang, S., Selvanath, E. A., & Selvanath, S. (2008). Foreign Direct Investment, Domestic Investment, and Economic Growth in China. *United Nations University- World Institute for Development Economic Research, Research paper no. 2008/19*.
- Tsai, P. (1994). Determinant of Foreign Direct Investment and Its Impact on Economic Growth. *Journal of Economic Development*, 19(1), 137-163.
- UNCTAD. (1997). Survey of Best Practices in Investment Promotion. UNCTAD New York and Geneva.
- Wadhwa, K., & Reddy, S, S. (2011). Foreign Direct Investment into Developing Asian Countries: The Role of Market Seeking, Resource Seeking and Efficiency Seeking Factors. *International Journal of Business and Management*, 6(11), 219-226. <http://dx.doi.org/10.5539/ijbm.v6n11p219>
- Wu, X. (2001). The Impact of Foreign Direct Investment on the Relative Return to Skill. *Economics of Transition*, 9(3), 695-715. <http://dx.doi.org/10.1111/1468-0351.00096>