ANALYZINGTHE NATURE OF LINK BETWEEN FOREIGN DIRECT INVESTMENT, FINANCIAL DEVELOPMENT AND OUTPUT GROWTH: ATIME SERIES EVIDENCE FOR PAKISTAN

Saba Ibrahim
Researcher, Department of Economics, Foundation University College of Liberal Arts and Science, Rawalpindi, Pakistan
Tel: 0092-332-8853266

Nazima Ellahi
Foundation University Islamabad
Email: nazimaellahi@yahoo.com
Tel: 0092-332-5225675

Abstract

With the rapid globalization, it has been found that developed financial sector and proper inflow of capital in the form of foreign aid and foreign direct investment (FDI) has been important to enhance the pace of development in developing countries. Against this backdrop the present study investigates the nature of link between FDI, development of financial sector and real output growth for Pakistan. This study utilized annual time series data set over the period 1980-2010 and applied the simplest OLS techniques of estimation. Empirical results recognized that financial development and FDI are connected with higher economic growth in Pakistan. The results also showed that financial development leads to economic expansion in terms of output. To make it more effective channelization of funds is inevitable which is supported by cross-country and time series data. Therefore, it is concluded that both financial development and FDI play effective role. Enhancing competition and providing friendly environment to foreign investors is suggested to be the suitable policy to improve development index.

1. Introduction

Foreign direct investment (FDI) has significant and constructive role worldwidefor development and economic growth. It provides spillover of technology, varietyof products, and skills along with new markets, marketing channels, and cheaper manufactureservices. As far as host countries are concerned they receive the investment, and are able tocontributein development. Foreign direct investment is a process in which individual company from one statemake a physical investment into building, a factory or in countries. Foreign direct investment (FDI) is asignificantelement of capital flows and is supposed to be one of the most imperativechannels through which financial sector settles the economy (Prasad, *et al*. 2003).

Financial development is an agent which brings perfection in quantity, quality, and competence of financial intermediary services, and it contributes the interaction of many activities and institutions..Since the last two decades, researchers have been working over the issue of determining, why countries were different in their performance of growth rates and found that financial sector development and reforms has attained much of attention of the growth of developing countries.

There is a widespread belief among policy experts and proponents of FDI that it enhances efficiency and productivity of host countries.Major instruments responsible for these externalities are the technological spillover, which flows through licensing agreements, imitation, and opposition for capital, and knowledge and export spillovers. And when all these,combined with the direct capital financing proposed that FDI has an imperative agentin modernizing economy and leads to enhancing the economic growth in developing nations Alfaro *et al.* (2006).

Literature has documented a positive and significant impact of FDI on growth through the channels of capital formation of host country, innovations of new technologies, such as new production processes and techniques, managerial skills, ideas, and new varieties of capital goods are also associated with FDI. Grossman and Helpman (1991), and Barro and Sala-i-Martin, (1995) suggested that Less developed Countries (LDC) are highly dependent on the volume of foreign direct investment. When they adopt technologies brought by developed nations, it provides asupplementto deficit financing. (Findlay, 1978). Financial sector development and its impact on economic development have critically important in LDCs (Khan 2005).

Some important studies on this subject argued that financial development is positively related with existing and upcoming economic growth through substantial capital growth and source ofefficiency (Falki*et al*, 2008, FitzGerald, 2006, and McKinnon, 1990**)**.Both theoretical and experimental evidencesrecommendedthat financial sector encourage economic growth. Banking sector act as a financier of productive activities through investments and thus acts as a catalyst for economic growth process (Schumpeter1934). There are three main ways in which the development of financial sector may affect economic growth using basic endogenous growth model. Firstly, the productivity of the investment is increased.Secondly, the development of financial sector which reduces or eliminates the transaction cost. Thirdly, the allocation of scarce economic resources which yield optimal output, (JepalliandPagano 1993)

For the economic growth, FDI and financial development play a supportive and key role. This study is conducted to find the effects of financial sector development and foreign direct investment on real output growthand investigate the advantages of FDI and financial development. Furthermore, the study also suggested recommendations to avoid the mismanagement arising from improper utilization of resources.

2. Literature Review

Athukorala (2003) tried to find the effects of foreign direct investment on economic growth of Srilanka. The study used time series data over the period 1959 to 2002 with the application of simple regression model. The major conclusion suggested that there exist weak association among FDI and economic growth for Sri Lanka. Lack of good governance, corruption, political instability and disturbance, bureaucratic inertia cause negative impact on FDI on foreign investor. On the same lines Zhou (2002) checked the effect of FDI on the productivity of domestic firms in China. The empirical analysis and showed that FDI may exert positive impact on regional level than on firms at the industrial level. The study also suggested that host governments should encourage foreign investors to develop new industries in regions.

Khaliq (2007) explored the impact of foreign direct investment (FDI) on economic growth of Indonesia. The study used a data of FDI outflows from OECD countries. Theconsequences of FDI on economic growth differ across segment like FDI in the mining sector, which has insignificantimpact on economic growth. The empirical evidence recommended that pace of the growth should be increased by subsidizing the FDI inflows in all sectors which is beneficial for Indonesia. Din, (2006) tried to check theeffect of foreign capital inflows (FCI) on economic growth in Pakistan. Time series data has been used from the period 1975 to 2004. The ‘Multiple Linear Regression (with no-intercept) model has been used for estimations. Result showed that foreign capital played a vital role for improving the GDP development through structural renovation of the financial system.

Waheed and Jawaid (2010) examined the impact of inward foreign direct investment (FDI) on aggregate imports in Pakistan by using annual time series data. Results suggested that a positive long run relationship exists between inward FDI and aggregate imports of Pakistan. For short run dynamic error correction model was used and verified in significant positive short run relationship between them. Iqbal*et al* (2010) checked the casual link among trade openness, foreign direct investment and economic growth for Pakistan. Study used quarterly data over the period 1998-2009.Vector Auto Regressive (VAR) model has been used to test the existence of long run relationship. Multivariate VECM is used to find the direction of causality. Results showed positive relationship between positive relationship between FDI and trade.

Khan and Qayyum (2006) explored theeffect of financial liberalization on economic growth in Pakistan. Study used time series data over the period of 1961 to 2005, empirical study applied ARDL methodology and suggested that financial liberalized policies haveasignificantimpact in long run and has negative effect in short run in the economic growth of Pakistan..

Ahmed and Malik (2003) explored the role of financial sector development in economic growth and domestic and foreign capital accumulation. Panel data set of 35 developing countries has been used over the period 1970-2003.A dynamic GMM estimation technique was used that controls for country specific effects and account of endogenity of the explanatory variables. The role of financial sector development in capital accumulation is not much significant. The study also found that the domestic rather than foreign capital accumulation that is instrumental is increasing per worker output and hence promoting economic growth in long run.

3. Research Methodology and ModelSpecification

Different studies were undertaken which used different methodologies and the variables to analyze the impact of foreign direct investment and financial development on the economic growth. OLS method is used for estimation. It is commonly used technique for estimation and applying it on the linear model. The endogenous growth model has been transformed to following model to be estimated.

$$GDP = f\ (FD, FAid, FDI, INV, LAB)$$

Where GDP is gross domestic product, FAID is foreign aid, INV is investment indicator, and LAB is labor force. The logarithmic function to be estimated is given as: ,

$$Ln\ (RGDP) = \beta_0 + \beta_1 Ln\ (RFD) + \beta_2 Ln\ (RAID) + \beta_3 Ln\ (RFDI) + \beta_4 Ln\ (RSI) + \beta_5 Ln\ (LAB) + \varepsilon_i \ldots\ldots\ldots \quad (1)$$

Since the financial sector is a market based phenomenon, so we introduce a dummy as the effect of FDI and financial sector development reforms, after the structural adjustment programme.

$$Ln(RGDP) = \beta_0 + \beta_1 Ln\ (RFD) + \beta_2 Ln\ (RAID) + \beta_3 Ln\ (RFDI) + \beta_4 Ln\ (RSI) + \beta_5 Ln\ (LAB) + D_{91} + \varepsilon i. \quad (2)$$

This study uses annual data with the sample period from 1980 to 2010. The all the data is collected from the economic Survey of Pakistan, official website of State Bank of Pakistan and International Financial Statistics (IFS).

4. Presentation of Results/Discussion and Findings

Results of ADF Test

For unit root test, Augmented-Dickey-Fuller (ADF) test was used to find, whetherthe variables of the model are stationary or non-stationary. in the same order. ADF test shows that all the variables are stationary of the same order, that is non-stationary at level and become stationary after taking first difference. These results are indicative of the fact that OLS methodology can be applied in this case because here all the assumptions are satisfied.

Table 4.1: Unit Root Test

Variables	ADF at Level	ADF at 1st Difference	Order of Integration
ln(RGDP)	-1.055871	-2.907057*	I(1)
ln(RFD)	-1.843062	-4.455607*	I(1)
ln(RAID)	-1.132518	-4.599682*	I(1)
ln(RFDI)	0.082921	-4.295281*	I(1)
ln(RLAB)	-0.576384	-3.233876*	I(1)
ln(RSI)	-1.693831	-4.274542*	I(1)

Note: *indicates significance at 5% level

The regression analysis and tests of hypotheses are conducted at 5% significance level. After running the relevant regressions, the following results were obtained and are presented below**:**

Table 4.2: Results of OLS Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.10970	2.359462	4.708572	0.0001*
Δln(FD)	0.462103	0.297274	1.554471	0.0506**
Δln(RAID)	0.111308	0.045388	2.452390	0.0218**
Δln(RFDI)	0.717466	0.213859	3.354861	0.0026*
Δln(RLAB)	-0.420963	0.523995	-0.803374	0.4296
Δln(RSI)	0.594383	0.288826	2.057932	0.1332
DUM_{91}	0.129265	0.065898	1.961591	0.0615***
R-Square(adj)	0.79		**F-statistics**	42.40983
D-Watson test	2.194208		**S.E**	0.014199

Note: *significance at 1% level, **significance at 5% level, *** significance at 10% level.

5. Discussion of Findings

The empirical results found above showed that financial development and FDI affect positively and this impact is significant on real output. Ln (RFD) is indicator of financial development which shows positive and significant impact on economic growth of Pakistan. Results indicate that 1 percent increase in FD leads 46 percent increase in GDP.Financial development indicator has significant impact show the way of better functioning intermediaries for mobilization of funds which help to accelerate investment and hence economic growth (Ellahi, 2011).Coefficient’s of ln(RAID) indicates that 1 percent increase in real aid will leads to increase 0.11 percent of GDP which shows AID has significant effect on growth. Foreign aid, has helped in enhancing the GDP Growth was enhanced through structural conversion of the economy followed by Foreign aid, in various sectors like industrial and agricultural sectors and also assist to overcome the twin deficits (Din, 2006).

Ln(RFDI) shows the significant and positive effect on GDP. Coefficient's values shows that 1 percent increase in foreign direct investment will leads to GDP by 71 percent. Saving-Investment gap should be reduced with the help of FDI, it opened new avenue of knowledge, technology transfer, labor force training and many other spillover effects and externalities in the host countries (Yousaf*et al*, 2008).A1 percent increases in real labor force than 0.42 percent decrease in GDP this shows that labor force and GDP has negative relationship. ln (RLAB) and investment have insignificant impact on economic growth. Being a developing country Pakistan has surplus labor force. Additional increase in labor force creates the negative consequence on economic growth (Ellahi, 2011).

GFCF is used as a proxy for the share of investment SI. Ln (GFCF) value shows that 1 percent increment in LRSI will lead to GDP by 0.59 percent. Positive sign of ln(GFCF)represent the significant effect of increase in investment share as a real GDP through multiplier effect, which is further mobilize the savings which is the most observable and important function of the financial sector (Khan,2007). For capturing the effect of FDI and financial sector development reforms and policies, we have introduced a dummy variable (D_{91}) which has positive but insignificant on economic growth of country. Adjusted R^2 is indicated that there is 79% variation in dependent variable explained by independent variables in model. F stats shows overall model is best fitted. Value of DW test shows that there exist negative autocorrelation because value less than 2.SE shows that 0.11% error exist in model.

6. Conclusion

Foreign direct investment (FDI) plays an important role. It provides new avenues for the firms in the form of new markets and marketing channels, reduces production cost of the firms by transfer of technology, skills and financing. While financial development is a process which focuses on the improvement in quality and efficiency of financial services. Recent economic literature has revealed that the higher economic growth is achieved by increased FDI and financial development. Moreover, there are strong cross-country references and time series evidences that financial development causes growth through mobilization of funds increases in the rate of capital accumulation which leads to improvement of productivity.

After the implication of trade liberalizations in 1984 the economic growth of Pakistan went upward due to transfer of technologies. Financial liberalization is unlikely to result in higher economic growth. For steady economic growth, the financial reforms must be undertaken in proper order along with envionment. Pakistan introduced banking sector reforms in the early 1990s, the basic motives of these reforms are to privatize formally nationalized commercial banks, liberalizing interest rates, make financial markets more competitive and strengthening the supervisory capacity of state bank. Our empirical study showed positive impact of these reforms on the growth of the Pakistan and corresponding with (Yousaf*et al*, 2008). Therefore, FDI and financial development play effective role in the country

Recommendations

Thee is a need to improve the quality of infrastructure whichleads to lower cost for firms and thereforeleading to high investment. Reducing the rate of tax, as it attracts the foreign investors in the country.Providing subsidies to firms forinvestment, it causes investment to be high. The financial sector should receive proper attention of policy makers. In addition, the volume of non-performing loans should be brought down.

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