

# FDI, Trade and Economic Development in Pakistan

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## Abstract

This paper examined the relationship between FDI, imports, exports, terms of trade and investment in Pakistan for the period 1990-2015. Results show that an increase in all these factors will contribute significantly to FDI flows that may help the Pakistan's economy. FDI has negative and significant impact on GDP. Exports have an insignificant effect that may imply that historically economy had led exports more than the exports led the economy. More important fact is that world economic conditions play a crucial role in the macroeconomic performance. When these conditions are favorable, not only the economy but also the trade grow. Though global financial crisis did not seriously affect Pakistan's economy, Pakistan faced multifaceted challenges on external and internal fronts notably fight against extremism, energy crisis and uncertain external inflows. There is a need to pay more attention to domestic situation than to look abroad for financial assistance since FDI is not an unmixed blessing.

*Keywords:* FDI, Trade, Investment, Robust Least Squares

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## 1. Introduction

Foreign aid and foreign investment are two important sources of foreign capital. The former comprises grants and low interest rates loans and latter consists of foreign direct investment (FDI) and foreign portfolio investment (FPI). FDI plays more dominant role than FPI. Over the last decades there have been visible changes in the patterns and trends of these foreign capital flows to developing countries (Le and Attallah 2002). The flow of private capital in the form of foreign direct investment was an important aspect of globalization in the 1990s which is a vital source of development financing that contributes to productivity gains in the form of new investment, better technology, management expertise and export markets. In the neoclassical growth model, FDI promotes economic growth by increasing the volume of investment and its efficiency. Therefore, developing and least developed countries seek to attract FDI for several benefits it brings into the host country economy. Keeping in view the economic benefits and importance of FDI for promoting economic growth, most of the countries have formulated wide-reaching changes in national policies to attract FDI (Sahoo 2006).

Several international surveys have shown that the single largest component of net capital inflows to emerging markets is foreign direct investment (FDI). These are long term investments from investors, multinational corporations (MNCs) and other bodies from outside the country. It has been argued that foreign direct investment not only provides an initial capital inflow to support the balance of payments (BoPs) of the host country but also fills the saving-investment gap, enhances productivity, transfers advanced technology and management skills that promote economic growth. These alleged benefits convinced the policy makers in developing countries to liberalize domestic economies to attract foreign capital.

Large number of studies have examined FDI role from different perspectives. Majority of the studies has attributed positive role to FDI. FDI promotes economic growth through its impact on productivity, employment generation,

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addition to the country's capital stock and trade growth. It promotes forward and backward linkages within the domestic economy (Hale and Long, 2006; UNIDO, 2006; Pacheco-López, 2005; Ram and Zhang, 2002; World Bank, 1998; Mello, 1997). FDI helps a country integrate into global economic networks by technology transfer and improvement in total factor productivity and promotes growth by creating a better economic environment that promotes exports (Schneider, 2005; UNCTAD, 2002; Sun and Parikh, 2001). However, the growth-enhancing effect of FDI is not obvious that may vary from country to country and in some cases it may even adversely affect the growth process and the contribution of foreign direct investment depends on the ability of the host economy to absorb foreign technology. It has been generally highlighted that FDI can promote growth and encourage exports through the key role of creating a better economic environment (Xu, 2000; Aitken and Harrison, 1999; De Mello, 1999; Borensztein et. al., 1998; UNCTAD, 2002). Many studies have examined the FDI role in stimulating innovation and increasing trade as well as enhancing economic efficiency (Ghirmay et. al., 2001; Bayoumi and Lipworth, 1997; Balasubramanyam et. al., 1996 and 1999). The most frequently cited criticisms against FDI include the environmental damage it can cause to host countries like substantial damage that has been done in some primary sectors in order to provide goods for advanced country markets Other potential disadvantages of FDI include how FDI may affect local labor standards in recipient countries and cultural-political issues such as the influence of MNEs making the investments exert over host country governments. There has been a lot of debate on the impact of FDI on economies. Critics of FDI argue that the MNCs bringing FDI generally monopolize resources, supplant domestic enterprises, introduce inappropriate technology and create balance of payments problems though large remittances (Sahoo 2006).

## 2. FDI in Pakistan

Foreign Direct Investment in Pakistan increased by 2677.90 USD Million in 2015. Foreign Direct Investment in Pakistan averaged 2623.93 USD Million from 2010 until 2015, reaching an all-time high of 3184.30 USD Million in 2010 and a record low of 2009 and 10 USD Million in 2012. Foreign Direct Investment in Pakistan is reported by the State Bank of Pakistan. FDI fell by 45% in 2016.

Pakistan has been receiving substantial foreign aid since 1950s at mixed terms and conditions. Foreign aid has contributed significantly to Pakistan's economic development but at the same time much price has been paid in terms of debt servicing and perpetuation of external dependence. During 1970s and 1980s current account deficit was also financed by tremendous workers' remittances besides foreign aid. Now remittances have declined and foreign aid is not available at concessional terms after the end of cold war particularly to those countries like Pakistan that were deeply engaged in the conflict between the West and the Soviet Union (Afzal 2011). Since late 1980s foreign investment both direct and portfolio, has assumed immense importance as a source of foreign capital to developing countries (World Bank 1991). Total foreign direct investment in 1997 amounted to \$349.2 billion against US \$ 203.8 billion in 1996. Various governments have offered generous incentives to foreign investors because they will not invest unless they expect a high return as they perceive high risks keeping in view the fragile macroeconomic performance and political instability. Substantial benefits in the shape of capital, advance technology, new managerial and technical skills, marketing expertise, employment generation and linkages with the outside world are the potential advantages of foreign investment (Government of Pakistan (GOP), 1991-92, 88). During 1989- 1999, US enjoyed the principal share followed by UK and Japan (GOP 2000-01). Table 1 and Table 2 show sector-wise and country-wise FDI Inflows (\$ Million) in Pakistan during the period 2007-16. In this period financial services and communication has lion share followed by oil and other sectors. During the latter period US has the largest share followed by UEA and Norway. Figure 1 shows Pakistan FDI as percent of GDP for the period 1990-2014. The period 2005-2008 had the largest FDI share.

Studies on the FDI in Pakistan (Majeed and Ahmad, 2008; Khan, 2007; Le and Attaullah, 2002; Akhtar, 2000; Aqeel and Nishat, 2005; Khan and Kim, 1999; Shabbir and Mehmood, 1992) among other have analysed different aspects of foreign investment in Pakistan. Le and Attaullah (2002) have reviewed the trend of foreign capital inflows to Pakistan. The study finds an insignificant impact of foreign capital, foreign aid and foreign private investment on economic performance of Pakistan. Akhtar (2000) has studied the determinants of FDI in Pakistan. Shabbir and Azher, (1992) and Afzal (2004a) supported the displacement hypothesis, which posits that foreign financial flows discourage saving and resource mobilization efforts. Khan and Kim have analyzed policy issues and operational implications of FDI.

**Table 1.** Sector Wise FDI Inflows (\$ Million)

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Oil & Gas	634.8	775.0	740.6	512.2	629.4	559.6	502.0	246.1	261.6	37.8
Financial Business	1,864.9	707.4	163.0	310.1	64.4	314.2	192.8	256.4	28.2	13.5
Textiles	30.1	36.9	27.8	25.3	29.8	10.0	(0.2)	43.9	21.0	6.3
Trade	175.9	166.6	117.0	53.0	25.3	5.7	(3.2)	50.0	30.1	8.5
Construction	89.0	93.4	101.6	61.1	72.1	46.0	28.8	53.5	36.3	1.8
Power	70.3	130.6	(120.6)	155.8	(84.9)	28.4	71.4	201.7	566.6	61.7
Chemicals	79.3	74.3	112.1	30.5	96.3	71.6	94.9	55.3	64.6	8.4
Transport	74.2	93.2	132.0	104.6	18.7	44.1	2.7	6.2	36.8	3.2
Communication (IT&Telecom)	1,626.8	879.1	291.0	(34.1)	(312.6)	(385.7)	434.2	45.1	195.2	24.2
Others	764.5	763.4	586.3	416.3	282.2	765.5	375.2	(107.0)	40.7	84.0
Total including Pvt. Proceeds	5,409.8	3,719.9	2,150.8	1,634.8	820.7	1,456.4	1,698.6	851.2	1,281.1	249.4
Privatization Proceeds	133.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FDI Excluding Pvt. Proceeds	5,276.6	3,719.9	2,150.8	1,634.8	820.7	1,456.4	1,698.6	851.2	1,281.1	249.4

Source: GOP, Board of Investment Pakistan 2016

Aqueel and Nishat (2005) examined the role of different policy variables (tariff rate, exchange rate, credit to private sector, trade, fiscal and financial sector liberalization ) in attracting FDI in Pakistan and have concluded that these policy variables have played significant role in attracting and determining FDI growth in both short and long-run in Pakistan for the period 1961-2003. Majeed and Ahmad (2008) analyzed the relationship between FDI and exports and their determinants for 49 countries including Pakistan for the period 1970-2004 and have concluded the absence of substitution relationship between FDI and exports.

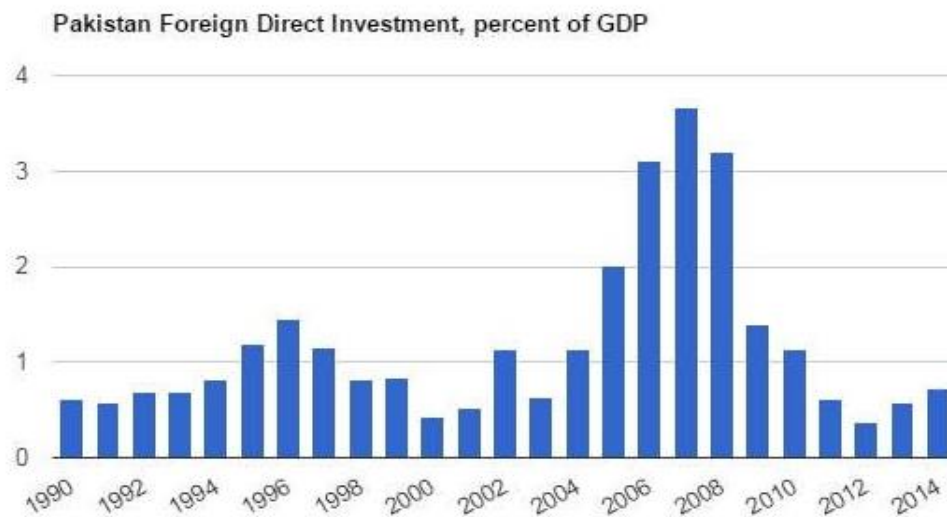
**Table 2.** Country Wise FDI Inflows (\$ Million)

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
USA	1,309.3	869.9	468.3	238.1	227.7	227.1	212.1	209.0	(65.5)	58.8
UK	460.2	263.4	294.6	207.1	205.8	633.0	157.0	174.3	79.8	21.5
U.A.E	589.2	178.1	242.7	284.2	36.6	22.5	(47.1)	216.4	164.2	38.1
Japan	131.2	74.3	26.8	3.2	29.7	30.1	30.1	71.1	21.6	5.2
Hong Kong	339.8	156.1	9.9	125.6	80.3	242.6	228.5	83.4	130.9	0.9
Switzerland	169.3	227.3	170.6	110.5	127.1	149.0	209.8	2.8	76.0	5.4
Saudi Arabia	46.2	(92.3)	(133.8)	6.5	(79.9)	3.2	(40.1)	(64.8)	(102..2)	(31.8)
Germany	69.6	76.9	53.0	21.2	27.2	5.5	(5.7)	(20.3)	(33.0)	(1.4)
Korea (South)	1.2	2.3	2.3	7.7	25.4	25.8	24.4	14.3	(18.6)	(1.3)
Norway	274.9	101.1	0.4	(48.0)	(275.0)	(258.4)	(21.6)	2.7	172.3	20.0
China	13.7	(101.4)	(3.6)	47.4	126.1	90.6	695.8	255.3	593.9	90.8

Source: GOP, Board of Investment Pakistan 2016

Similarly studies on imports and exports of Pakistan's economy (Afzal, 2011, 2008, 2006; Afzal and Hussain, 2010; Bader, 2006; Atique and Ahmad, 2003; Akhtar and Malik, 2000 among others) have investigated different aspects of trade. Neither of the above of studies has examined the relationship between trade and FDI and also the impact of FDI and other variables on economic growth of Pakistan. Therefore this paper has twin objectives as mentioned above.

This study is important because many studies on the exports promotion and FDI role have attributed a positive role of the two on economic growth.



**Fig. 1** Pakistan Foreign Direct Investment (% of GDP)  
Source: TheGlobalEconomy.com, The World Bank

### 3. Model

Since macroeconomics is based on general equilibrium approach, it is a well known fact that macroeconomic variables are interwoven and interact with each other and it is dangerous to examine these variables in isolation that may lead to misleading results, conclusions and policy prescriptions. Macroeconomic variables are influenced by a host of factors. It is difficult to consider all potential variables because the data may not be available and even if available their joint impact may be insignificant. Therefore modest number of variables is included in a model in order to render the model parsimonious.

During 1960s, 1970s, and 1980s foreign aid comprising grants and low interest rate served as a main source of external financial assistance to help the recipient countries to realize the development and growth goals. FDI and FPI assumed immense importance in 1990s that marked the beginning of trade liberalization and globalization. FDI has been claimed to be an important source of foreign capital to finance development and growth notably in the developing countries. There is vast literature on the determinants, benefits and costs of FDI. These may vary across the countries depending on the socio-economic-political conditions of a country(s). FDI has close relationship with macroeconomic performance conspicuously measured by investment scenario, imports, and exports behavior, and terms of trade besides other factors.

#### 3.1. Investment

The need for raising savings and consequently investment in accelerating economic growth is universally acknowledged. Rapid economic growth is the major economic objective of any development plan in a developing country, which in turn depends on substantial saving and investment because these factors play dominant role in accelerating economic growth. High rates of domestic saving are important because savings provide most of the funds for investment. Since capital stock is not available for most developing countries because of inherent difficulties of measurement, gross investment is used for capital. Since aggregate net investment has certain theoretical and empirical problems. Moreover, there are no data available on annual depreciation rates at hand Afzal (2004b).

### 3.2. Terms of Trade

Terms of trade also play a significant role in the economic growth. Favorable terms of trade (TOT) benefit a country as its exports fetch more goods in exchange and its capacity to import increases. Adverse TOT implies that the real opportunity cost of a unit of import rises when its export prices decline relative to its import prices. The adverse TOT drains out the resources because to maintain old level of imports more exports are needed and unfavorable TOT are an important factor in the balance of trade deficit ( Afzal and Ali 2008).

### 3.3. Exports and Imports

Almost all countries are dependent on trade because of different distribution of resources. Trade is not only desirable but also inevitable because countries have to cater to the growing needs of their economies. On the basis of nineteenth century trade pattern, traditional trade theory was termed an “engine of growth”. However, as the conditions changed later, economists emphasized the role of trade as “handmaiden of growth”. According to Afzal (2006) international trade plays a dynamic role. It widens the market, improves the division of labour and stimulates technical innovation and thus the country enjoys increasing returns and economic development. These arguments form the basis of the *export-led hypothesis* that has been widely discussed and empirically tested, mainly in a cross-country context.

Imports and exports are two sides of the same coin. To study the foreign trade regime of a country, a better picture could be obtained if imports are studied alongside exports. Imports play an important role in the investment environment and thus industrial development and economic growth. Therefore, study of the behaviour of imports is necessary not only to see the demand for imports that can determine the dependence on the foreign countries supply of raw materials, semi-finished and finished goods that have implications for balance of payments scenario but also serve as guide for comparing the purchasing power of exports that is terms of trade. Therefore, study of imports is highly desirable in order to have a pragmatic picture of the foreign trade situation that will help in formulating policies. During 1990s as Pakistan embarked on trade liberalization program, exports growth exceeded imports growth but imports increased in value terms resulting in current account deficit to the tune of 5% of GDP (Afzal 2011).

It assumed that FDI is dependent on imports, exports, terms-of-trade (TOT) and investment as percentage of GDP. Therefore, the following model of FDI is proposed:

$$\ln fdi = \beta_0 + \beta_1 \ln imports + \beta_2 \ln exports + \beta_3 \ln TOT + \beta_4 \ln inv + \mu \quad (1)$$

Similarly the relationship between FDI and economic growth represented by GDP is also explored. Besides variables entered in equation (1) also influence GDP. Now  $US_y$  is used as a proxy for world economic conditions. This is an exogenous variable that can influence the economic growth in a multiplicity of ways as is evident from the various international events of crucial importance like 9/11 events, globalization etc. These events can significantly influence the exports, imports and exchange rate of a country. The rising oil- prices created rising and persistent balance of payments problems for LDCs (less developed countries) that have burdened these countries with heavy debt whose service over the years has become unbearable.

Exceptional rise in oil prices that increased from \$55 per barrel in 2007 to over \$120 per barrel (118.18% increases) in May 2008 and depreciation of dollar against major currencies resulted in huge import cost in countries like Pakistan and passing on of this cost to consumers propelled inflation (GOP 2007-08). Therefore, the following model is suggested:

$$\ln y = \beta_0 + \beta_1 \ln imports + \beta_2 \ln exports + \beta_3 \ln fdi + \beta_4 \ln inv + \varepsilon \quad (2)$$

### 3.4. Robust Least Squares

Ordinary least squares estimators are sensitive to outliers. This sensitivity can result in coefficient estimates that do not accurately reflect the underlying statistical relationship. Robust least squares consist of diversity of regression

methods which are robust, or less sensitive to outliers. M-estimation, S-estimation, and MM-estimation are three methods that EViews 8 offers. The three methods differ in their emphases:

M-estimation addresses dependent variable outliers where the value of the dependent variable differs markedly from the regression model norm (large residuals). The traditional least squares estimator is computed by finding coefficient values that minimize the sum of the squared residuals. S-estimation is a computationally intensive procedure that focuses on outliers in the regressor variables (high leverages). MM-estimation is a combination of S-estimation and M-estimation. The procedure starts by performing S-estimation, and then uses the estimates obtained from S-estimation as the starting point for M-estimation. Since MM-estimation is a combination of the other two methods, it addresses outliers in both the dependent and independent variables. Least squares diagnostics for outlier detection are given by leverage plots and influence statistics.

### 3.5. Data

Data on all above-mentioned variables were gathered from Government of Pakistan, Economic Survey (1992-93, 1997-98, 2005-2006, 2009-2010, 2015-2016 issues). Data on US<sub>y</sub> were obtained from IMF CD-ROM 2016. The period of the study is 1990-2015.

## 4. Estimation Results

The estimation results of equations 1 and 2 have been presented in Table 1 and Table 2. Table 1 shows the results of the factors that affect FDI in Pakistan. All the underlying variables that is imports, exports, TOT and investment have positive impact on FDI in Pakistan. Besides the coefficients of the fore-mentioned variables are all significant suggesting that these are the crucial determinants of FDI. An increase in all these factors will contribute significantly to FDI flows which are supposed to help the Pakistan’s macroeconomy.

**Table 1.** Dependent Variable Infdi  
Robust Least Squares Method  
MM-estimation method

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-52.49	11.07	-4.74	0.0000
lnimports	1.07	0.43	2.49	0.0126
lnexports	0.16	0.07	2.19	0.0283
Intot	3.43	0.98	3.47	0.0005
lninv	9.34	1.28	7.25	0.0000
Robust Statistics				
R <sup>2</sup>	0.67	Adjusted R <sup>2</sup>	0.60	
Rw <sup>2</sup>	0.80	Adjust Rw <sup>2</sup>	0.80	
Deviance	6.68	Schwarz criterion	34.21	
Rn <sup>2s</sup> tatistic	62.50	Prob(Rn <sup>2</sup> )	0.000	

Keeping in view the unstable situation of the economy, FDI plays a benign role. FDI is needed to finance development plans that may have spill-over effects on the economy. Of all the four factors, investment has the largest coefficient meaning that promotion of investment will contribute significantly to attract FDI. The coefficient of imports exceeds exports implying much dependence on imports. Afzal and Ali (2008) have arguably demonstrated that historically exports have not figured prominently in Pakistan mainly attributable to composition and concentration of exports in few commodities and markets.

The impact of FDI in addition to other variables has been shown in Table 2. FDI has negative and significant impact on GDP. Exports also have an insignificant effect on GDP that is in agreement with Afzal and Ali (2008) conclusion that economy had led exports more than the exports-led the economy. Economic growth has responded more to the

emphasis on domestic market rather than on trade.  $US_y$  has the largest coefficient meaning that world economic conditions play a crucial role in the macroeconomic performance. When these conditions are favourable, not only the economy but also the trade grows. Global financial crisis that originated in the mid-2007 had adversely affected the world economies and Pakistan was not an exception though its incidence was not as severe as it had been in other countries. Government of Pakistan (2011-12) reported that the global financial crisis did not seriously affect Pakistan's economy because of its lower exposure to international finance. However, Pakistan faced multifaceted challenges on external and internal fronts notably fight against extremism, energy crisis and uncertain external inflows.

**Table 2.** Dependent Variable:  $\ln y$   
Method Robust Least Squares  
Method: MM-estimation

Variable	Coefficient	Std. Error	z-Statistic	Prob.
c	-10.04	1.38	-7.26	0.0000
$\ln fdi$	-0.11	0.02	-6.87	0.0000
$\ln imports$	0.53	0.08	6.82	0.0000
$\ln exports$	0.0002	0.006	0.044	0.9650
$\ln inv$	0.44	0.14	3.28	0.0010
$\ln us_y$	1.90	0.23	8.16	0.0000
Robust Statistics				
$R^2$	0.84	Adjusted $R^2$	0.81	
$Rw^2$	0.99	Adjust $Rw^2$	0.99	
Deviance	0.04	Schwarz criterion	44.33	
$Rn^2$ statistic	14057.16	Prob( $Rn^2$ )	0.000	

Imports also have a positive significant coefficient. Excepting few years Pakistan has faced a persistent trade deficit. Pakistan industry has relied heavily on imports. After  $US_y$  investment has the higher coefficient than in Table 1. This is in agreement with the literature. It is difficult to find any country, which was able to grow at high rate for a long period without experiencing high rates of capital formation and/or high rates of savings (Afzal 2004a). The bottom portion of the output in Table 1 and Table 2 shows the goodness-of-fit and adjusted measures which indicate that the model explains for roughly 60-80% and 81- 99% of the variation in the model in the two tables respectively. The  $Rn^2$  statistic and corresponding  $p$ -value of 0.000 indicate strong rejection of the null hypothesis that all non-intercept coefficients are equal to zero.

## 5. Conclusions

This paper examined the relationship between trade factors and investment. Imports, exports, terms of trade and investment have positive impact on FDI in Pakistan suggesting that an increase in all these factors will contribute significantly to FDI flows that may help the Pakistan's economy. FDI has negative and significant impact on GDP. Exports also have an insignificant effect on GDP that may imply that historically economy had led exports more than the exports-led the economy.  $US_y$  has the largest coefficient meaning that world economic conditions play a crucial role in the macroeconomic performance.

When these conditions are favorable, not only the economy but also trade grows. Though global financial crisis did not seriously affect Pakistan's economy due to its lower exposure to international finance, Pakistan faced multifaceted challenges on external and internal fronts notably fight against extremism, energy crisis and uncertain external inflows. There is a need to pay more attention to domestic situation than to look abroad for financial assistance since FDI is not an unmixed blessing.

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