

Economic Determinants of Foreign Direct Investment in Pakistan

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ABSTRACT Pakistan aims to increase the investment GDP ratio by attracting foreign direct investment (FDI). The foreign investors mostly from the developed dynamic centers are enhancing international production by investing in resource abundant economies. Having an overview of the influx of cross border investments, this paper empirically attempted to investigate the determinants of foreign direct investment in Pakistan. The analysis enabled identification of some economic determinants of FDI in Pakistan, like GDP growth rate, volume of exports, human population, tariff on imports, and price index. Volume of exports has been emerged the most powerful determinant of FDI. The government should make a paradigm shift in its investment policy to attract FDI. It should focus on export-oriented industries instead of encouraging FDI for domestic consumption.

1. INTRODUCTION

Economic development of a country involves utilization of resources for increasing productive capacity. In many developing countries such as Pakistan, utilization of resources is rendered impossible by the scarcity of domestic capital. Lizondo (1991) acknowledged a better choice by developing countries of foreign direct investment (FDI) rather than to depend on bank loans and bonds. These countries could promote their economic growth, by receiving FDI (China is a classic example, where in 1997, FDI contributed about 15 percent of domestic investment, 41 percent of total exports, 19 percent of industrial output, 13 percent of tax revenue and 18 million employment). First, FDI transfer financial resources to recipients or host countries which could be used to expand production facilities in the host countries. Second, technology and managerial know-how, which play crucial roles in promoting economic growth, may be transferred to the host countries to participate in various networks such as sales and procurement networks of foreign investors. Using international networks, host countries could not only expand exports, which in turn would improve productivity in the host countries. On the other hand, the critics of FDI claim that foreign investors monopolize resources, supplant domestic enterprise, introduce inappropriate products and technology, and aggravate the balance of payments problem

through high remittances. They often use transfer pricing to minimize their tax liabilities. They may also come to wield considerable political influence, distort the path of development, exacerbate income inequality, and exploit the weak environmental standards in developing countries.

Being a capital-deficit country, Pakistan needs FDI. Since late 1990s the Government of Pakistan has initiated a number of policy and regulatory measures to attract FDI. For example, the requirement of Government approval for foreign investment has been removed and 100 percent of ownership by foreigners is permitted, with exception of few projects. Foreign investment is prohibited in the area of agricultural land, forestry, irrigation, real estate, insurance, health and related services. In the petroleum sector, the government has enacted a new petroleum policy which is significantly conducive for foreign investment. One of the most important measures to attract FDI is liberalization of the foreign exchange regime. Resident and non-resident Pakistanis and foreigners are now allowed to bring in, possess and take out foreign currency, open accounts and hold certificates in foreign currency. Export incentives have been broadened. The 55 percent income tax rebates for exports of high value-added products, and a 50 percent rebate for all other products is implemented. Import policy has been liberalized to attract FDI. Import of machinery not manufactured locally is fully or partially exempted from import duties,

depending on whether a project is located in a rural area, underdeveloped area, or industrial estate. A variety of other fiscal and monetary incentives have also been offered for projects in selected industries like electronics, tourism, pharmaceutical, dairy-farming, mining, engineering, fertilizer and cement.

The rate of return on FDI is highest for Pakistan among the major host countries of Asia. The average rate of return of world is 5.5, developing countries 4.2, China 5.8, Indonesia 5.4 and Pakistan 7.0 (UNCTAD 2003). Despite these facts Pakistan has been able to get FDI of US\$632.5 million in 2004-05, that is much less than China, India, Korea, Malaysia and Hong Kong.

The biggest foreign investor in Pakistan is Switzerland having 31.9 percent of total FDI in 2004-05. Then comes the USA and UK with 27.9 percent and 12 percent share of FDI in Pakistan (SBP 2005). In a developing country like Pakistan having abundant of natural resources, higher return is obtained in resource-oriented industries resulting the inflow of capital into these industries. Financial sector of Pakistan has absorbed the maximum of the FDI, after that oil and gas, and petroleum refining has obtained 23.9 and 8.6 percent of FDI. Textile is the largest manufacturing sector of the country, attracting 4.2 percent of FDI that has more absorbing capacity. The construction industry is passing through the boom for the last many years. It has also taken a small slice of 3.3 percent of FDI (SBP 2005).

The classical theory of international capital flow stated that FDI is a function of international differences in the rates of return on capital. Empirical analysis of FDI from UK and Canada into the US during 1950-1970 by Blais (1975) supported the hypothesis. Contrary to this Weintraub (1976) observed no significant relationship between the US capital flow and the relative rates of return.

The traditional factor endowment theory assumes that factors are internationally immobile. This is an unrealistic assumption as there are factors, which are relatively freely mobile. Therefore, it is necessary to distinguish between those factors, which are mobile, and those, which are not. To this extent, the traditional theory requires to be modified as it has considerable impact on the decision to locate investment in a region and thereby influencing the movement of mobile factors.

In the last three decades the FDI has changed the form and structure of the contemporary global economy. Grossman and Helpman (1991) have concluded that small-developed countries such as Sweden and Switzerland are more likely to invest abroad suggesting an inverse relationship between FDI and donor GDP. The supply and demand determinants of FDI have been explained theoretically along with empirical evidences. The work by Lucas (1993 for East and South Asia) and Jun and Singh (1996 for developing economies) have focused on the business environment, trade integration, labor costs and the form of the privatization process. Shamsuddin (1994) has investigated the effects of per capita income, GDP in host country, wage rate, per capita debt, per-capita inflow of public aid, validity of prices and the availability of energy in the recipient country on FDI for 36 developing countries by using cross section data (for the years 1971-81) through single equation econometric model. Garribaldi et al. (1999) and Resmini (2000) have focused on market access, along with other variables. These studies concluded that political and economic factors, the form and timing of the privatization process and the need to secure market access are the primary determinants of the allocation of FDI. For the Central and Easter Europe, Bevan and Estrin (2000) have found that FDI inflows are significantly influenced by risk, unit labor cost, host market size and gravity factors. At the second stage of analysis, they have identified that private sector development, industrial development, government balance, gross reserves and corruption are significant determinants of risk. Urata and Kawai (2000) examined the factors in the host countries that attract FDI by Japanese small and medium-sized enterprises. Supply side factors include abundance of low-wages labor availability of well-developed infrastructure, and good governance of the local government, while an important demand side factor included is presence of sizable local market. Asiedu (2002) focused on policy reforms in developing countries as determinants of FDI inflows. The study found that corporate tax rates and degree of openness to foreign direct investment are significant determinants of FDI. Bolingen (2005) has given the review of empirical evidences of FDI cross countries and suggested further research in this direction.

The literature on determinants of FDI in

Pakistan is still young enough that most theoretical hypotheses are still grab up. That is why Chakra-barti (2001) concluded that most determinants of cross-country FDI are fairly fragile statistically. Khan (1997) analyzed the factors responsible for lower level of FDI in Pakistan. The study identified a number of factors, i.e. lack of political stability, law and order situation, economic strength, government's policies, government bureaucracy, local business environment, infrastructure, quality of labor force, quality of life and welcome attitude.

Shah and Ahmad (2002) concluded that fiscal policy and high return from the investment have played a significant role in attracting FDI in Pakistan. From a data set of 1960-1999, the study concluded that cost of capital has strong impact on investment. The study proposed to minimize the cost and maximize the returns of FDI to attract FDI in Pakistan.

The determinants of FDI in Pakistan are estimated by Shah and Ahmad (2003) taking market size, cost factor, political and social factors as determining variables. They applied OLS and Cointegration and Error Correction Method (ECM) on the data for the time period of 1980-1999. The model is a supply side model while demand side aspects are ignored.

However, Ahmed et al. (2003) have applied Granger's concept of causality on the data for the time period of 1972-2000, to examine the effect of export, production, domestic output, foreign income and exchange rate on inflow of FDI in Pakistan. They concluded that domestic output is the most powerful determinant of FDI. The domestic output is a micro-level concept, therefore Pakistan should stress on micro economic approach, which would increase domestic output of international standard. Aqeel and Nishat (2004) have identified the determinant of FDI in Pakistan focusing on tariff, exchange rate, price index, wage rate (proxy of demand for labor) and GDP by using ECM on the data for the period 1960-61 to 2003-04.

For South Asia, determinants and trend of FDI are probed by Sahoo (2006). The study explored that sharp rise in private capital flows to developing countries come despite uncertainties caused by high oil prices, rising global interest rate and growing global payment imbalances. The rise in capital flows to developing economies was basically driven by abundant global liquidity, steady improvements in the credit quality of developing countries, lower yield in rich countries,

and the expansion of investors interest in emerging market assets.

The empirical literature pertaining to Pakistan indicated several determinants of FDI. They are mainly concerned with political and business environment, and macro-economic variables. We will analyze the economic determinants of FDI with a new data-set of recent 35 years.

2. MATERIAL AND METHODS

FDI linkage can be analyzed in different ways by the type of FDI, the strategy of transnational corporations, sector of economic activity, and by group of countries and their level of development. There may be a number of variables, which may determine FDI in Pakistan and other developing countries such as exports of goods and services, wage rate per day, energy imported, energy price, per capita debt, per capita public aid, foreign income, exchange rate, human population, quality of labor force, inflation rate, tariff, degree of openness to FDI, privatization, growth rate of GDP, political condition of the country, political relationship among countries, credit rating of the countries (as measure of economic, political and institutional performance), infrastructure, welcome attitude, returns to FDI, GDP of the domestic country, and GDP of the donor country. We have included annual growth rate of GDP (as a measure of market size), annual average exchange rate, whole sale price index, custom duty on imports, and export of goods as explanatory variables affecting FDI in Pakistan.

The data-sets for the years 1970-71 to 2004-05 have been taken from a number of sources, i.e. the amount of FDI, GDP growth rate, and custom duty has taken from the Fifty Years of Pakistan in Statistics by Federal Bureau of Statistics (FBS) and International Financial Statistics by International Finance Commission, exchange rate and exports from Economic Surveys by State Bank of Pakistan (SBP), and whole sale price index from Statistical Year Book of Pakistan by FBS. Our analysis is based on time series data so stationary properties of the variables would be taken into account. A regression of one non-stationary series on another non-stationary series can generate the so-called spurious regression and lead to incorrect statistical inference. An important indicator of spurious regression is that Durban Watson statistics remain less than

coefficient of determination. If such problem does not arise in our model, we will be comfortable to use OLS model, rather than co-integration technique.

In OLS regression, we use linear combinations of predictor (independent) variables to compute values of the response (dependent) variable.

$$\mu = E(y|x) = \sum x_j \beta_j = x\beta$$

These expected values are conditional on the independent variables. The full model for OLS includes both the structural or systematic component, $\hat{Ox}$, and a random component, $\hat{a}$.

$$y = \sum x_j \beta_j + \hat{a}_i = x\beta + \hat{a}_i$$

We proposed the following empirical model for determinants of FDI in Pakistan.

$$FDI = \beta_1 + \beta_2 GDP + \beta_3 EXR + \beta_4 EXP + \beta_5 AR + \beta_6 WPI + UI \dots \dots \dots (1)$$

Where

FDI	=	Annual Foreign Direct Investment in Dollars
GDP	=	Annual growth rate of GDP
EXR	=	Annual average exchange rate as Rupees/Dollar
EXP	=	Exports of good and services from Pakistan
TAR	=	Custom duty on imports in the country
WPI	=	General wholesale price index of the country

The foreign investors move a part of their production to the country where market is large to absorb a substantial part of their production. To investigate such type of effect we included GDP growth rate as proxy for market size (The other measures for market size may be GDP per capita and size of the middle income group). We hypothesized that the coefficient of GDP growth rate should be positive because foreign investors are interested where there is larger market for their production.

Until 1996 the common wisdom was that change in the level of exchange rate did not alter the decision by a donor country to invest in a foreign country. In rough terms, while an appreciation of home country's currency would lower the cost of assets, the (expected) nominal return goes down as well in the home currency, leading the rate of return identical. Froot and Stein (1991) presented an imperfect capital market story for why a currency appreciation may actually increase foreign investment by a firm. Imperfect capital market means that the internal cost of

capital is lower than borrowing from external sources. Thus, an appreciation of the currency leads to increased firm wealth and provides the firm with greater low-cost funds to invest relative to the counterpart firms in the foreign country that experience the devaluation of their currency. Another case may be that firms are interested in export production. The depreciation of the currency of a host country increases the attractiveness of that country as a host to FDI, because depreciation tends to improve export competitiveness of the products produced in that country. In this case the exchange rate would have positive coefficient. We hypothesized that coefficient of exchange rate for Pakistan would be negative, i.e. foreign investors are interested in high returns on their investment.

In the theory there may be two possibilities for the foreign investors to choose the host country depending upon the trade policy of the host country. The two broader categories of the policy represents the export promotion regime and import promotion regime. In export promotion regime, the foreign investors use lower labor costs and low price availability of raw material. On the other hand, in import promotion regime, the host country has no advantage leading to extra profit and rent seeking activities. Trade openness generally positively influences the export-oriented FDI into an economy. That is why the investors like to invest in countries, which have regional trade integration and where there are greater investment provisions in their trade agreements. The coefficient of export should be positive for Pakistan, i.e. country's investment policy is export-oriented and foreign investors make investment where there is high potential of exports.

The link between FDI and trade protection in the form of tariff is seen fairly clear by most trade economists, that is higher trade protection should make firms more likely to substitute by producing in foreign country for domestic consumption to avoid the cost of trade protection. This is commonly termed tariff-jumping FDI. It is hypothesized that if foreign investors are interested of goods for domestic use then there should be a positive relationship between tariff on imports and FDI. It has been observed generally that foreign investors in Pakistan are investing in small units to meet the domestic demand. The examples are automobile industry, chemical industry and home-appliance industry. The relationship may be positive.

The sign of wholesale price index would be positive as it stands to represent the movement of the economy towards boom, along with increased demand for goods and services. The foreign investors are concerned with the hot investment climate of the country.

3. RESULTS AND DISCUSSION

For the model, the estimated results are encouraging and show theoretically correct signs of the coefficients. Since $D > R^2$ for the model so we used OLS model though, in the previous literature, Shah and Ahmed (2003) and Aqeel and Nishat (2004) have used co-integration and error-correction technique. The Durbin-Watson values reject the existence of auto-correlation in the model. They fall in area of no-autocorrelation that support the model specifications. The econometric results are shown in table 1. The value of R^2 shows that 91 percent of the variation in FDI inflows to Pakistan is due to variation in GDP growth rate, exchange rate, whole sale price index, tariff rate and exports. The T-value is significant. All variable coefficients bear expected theoretical signs.

Table 1: Regression Results of OLS model (Coefficients*)

Model	Standardized coefficients Beta	t-Values
Constant		2.055
GDP	.095	1.523 **
EXR	-.415	-1.923 *
EXP	1.163	3.109 *
TAR	.991	5.777 *
WPI	.076	1.159 **

a. Dependent Variable: FDI

$R^2 = 0.914$

Number of observations = 35

* and ** represents the level of significance at 5 and 10 percent respectively.

We have found the co-efficient of GDP growth rate positive, confirming the purchasing power hypothesis, i.e. higher growth rate as a proxy for purchasing power of nation is associated with greater inflow of FDI. The evidence suggested that foreign investors invest in search of new market opportunities. It explains that the purpose of foreign investors is to tap the domestic market, and thus domestic market size matter for domestic oriented foreign investment. A large market size provides more opportunities for sale and profit. The growth prospects symbolized by

GDP growth rate take the greater inflows of FDI than volatile economies (see also, Dasgupta and Rath 2000 and Durham 2002). Wei (2000) concluded that growth impart differ under different conditions of the economy. On the other hand, Asiedu (2002) narrated that economic growth has no impact on FDI.

The coefficient of exchange rate is negative as expected. One percent decrease in Pakistan's exchange rate is associated with 0.41 percent-age point increase in FDI annually. The depreciation of the country's currency would encourage the inflow of FDI. It also confirms the hypothesis that foreign investors are much interested in high returns on their investment.

Pakistan's trade policy focuses on boosting the exports that is connected with export-led growth policy of the country. We have found that FDI is positively related with volume of exports from the country. The results support the hypothesis that gains from FDI are higher in the export promotion regime than the import promotion regime. In the export promotion regime FDI uses low labor costs and available raw material for export promotion. It further explains that investors have incentives for investment, where there is higher potential of exports. Initially, firms trade in the foreign market, and after learning more about the economic, social and ruling conditions of their trading partners they may establish a subsidiary in the host country or they may embark on joint ventures with local enterprise. This implies FDI inflows, and after some period, these firms start to export. Pakistan is at the point where foreign exports is connected with additional capital, new technology and better management and marketing strategies that they bring with them.

There may be two possible bidirectional links between FDI and imports. First, if imports are evidence that a market exists for a commodity, FDI might be attracted to the host country to produce that product locally. In other words, a rise in imports in the host justifies investment and production by foreign investors, thus imports stimulate FDI inflows. Second, as soon as foreign investors establish in the host country, they import certain types of supplies (basic components and intermediate goods produced by the headquarters) to satisfy the quality standards required by the international market, therefore, FDI inflows increase the imports. Our results have shown that tariff on imports are effecting the FDI positively. It confirms the hypothesis that

Pakistan is absorbing tariff-jumping FDI. The foreign investors are investing in the sector where domestic demand is met by domestic production instead of imports.

The whole sale price index stands proxy for recovery of the economy from recession along with high demand for goods and services. We have found that FDI in Pakistan is positively related with whole sale price index.

4. CONCLUSION AND POLICY PROPOSALS

Our results may provide an opportunity to frame some policy implications. The regression results confirmed that an increase in GDP growth rate has positive effect on inflow of FDI in Pakistan. Hence the authorities should positively concentrate on maximum utilization of resources to increase GDP growth rate.

The important finding of the study is that export demand that is shown by the bulk of exports is major determinant of FDI in Pakistan. The national trade policy should focus on exports by increasing export processing zones, global market orientation and adjusting fiscal policies.

A co-efficient of import tariff suggested an important role of the government in promoting the foreign investment in the country. It needs effective and encouraging import policies from the public sector to restore the confidence of the investors.

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