AN EMPIRICAL ANALYSIS OF FOREIGN DIRECT INVESTMENT IN PAKISTAN

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Abstract:
The aim of this paper is to explore the trends in Foreign Direct Investment (FDI) inflows in Pakistan and to identify the key determinants of FDI for the period of 2000-2013. The country experienced a continuous surge in FDI inflows from 2000-2008. On the contrary, the phase of 2009-2013 has been characterized by a persistent decline in FDI in Pakistan. This slump is mainly attributed to political and economic instability as wells as poor law and order situation in the country. Keeping these periods with differing results in perspective, multiple regression analysis is employed to empirically analyze the key determinants that are expected to explain variation in FDI in Pakistan. The selected variables were found significant determinants of FDI in Pakistan. Gross Domestic Product (GDP), degree of trade openness and regime of dictatorship have a significant positive effect on FDI. While, terrorism attacks foreign debt, exchange rate, political instability, and domestic capital formation are negatively significant determinants of FDI inflows in Pakistan. Considering the dynamic changes in the broad macro factors in economy, this study provides a fresh perspective on the factors that determine FDI in Pakistan. Moreover, the study findings provide important insights to policy makers to design policy measures that enhance FDI inflows in Pakistan.

Key words: *foreign direct investment, gross domestic product, political instability, foreign debt*

1. Introduction

Investment brings a profitable outcome in any economy both domestically as well as globally. Flow of financial resources from one country to another can either be private or public investment. Moreover, foreign Private investment can be further classified in portfolio investment and foreign direct investment (FDI). Foreign direct investment is a way of utilizing productive assets of host country by a business unit of foreign country (Graham, 1982). In recent decades FDI has become an integral part of global economies. Being a developing economy, Pakistan is in need of foreign investors to come and make infrastructural investment in the country (Salman, 2012).

FDI provides several benefits to the host country that includes economic growth, employment opportunities, introduction of new technology and managerial skills (Javed, Amin, & Irshad, 2013).

Table 1: FDI Inflows in Pakistan

Year	FDI (Million USD)	Rate of Change (%)	Percentage of GDP
2000	469.9	--	0.64
2001	322.5	-31.37	0.45
2002	484.7	50.29	0.67
2003	798	64.64	0.96
2004	949.4	18.97	0.97
2005	1524	60.52	1.39
2006	3521	131.04	2.57
2007	5139.6	45.97	3.37
2008	5152.8	0.26	3.03
2009	3,719.90	-27.81	2.22
2010	2,150.80	-42.18	1.21
2011	1,634.80	-23.99	0.77
2012	820.7	-49.80	0.36
2013	1447.3	76.35	0.61

Source: Pakistan Board of Investment

Table 1 provides a detailed view on inflows of FDI in Pakistan during 2000-2013. The statistics revealed that the time span of 2000-08 has been characterized by a steady increase in the volume of FDI in Pakistan. This is mainly endorsed to political and economic stability and investment friendly policies that prevailed in the era of dictatorship. However, economic slowdown, poor law and order situation and prevailing political anarchy are the prime factors causing continuous decline in FDI inflows during 2009-13.According to the UNCTAD world investment reports of 2008, the FDI inflows in developing and transitional economies increased rapidly and reached at a record level in 2007 (Mohapatra, 2014).

Although FDI inflows in Pakistan rose impressively in the last decade but still it was only 3.37% of the GDP in 2007. However in the same year FDI in other developing countries was 7.5% of the GDP. From last two decades, the FDI inflow to Pakistan has experienced many ups and downs. In 2001 the amount of FDI in Pakistan was $322.5 million. Afterward it increased rapidly in the next seven years and reached to $5152.8 million in 2008. However, FDI experienced a sharp decline and reaches at the level of $820.7 million in 2012. The reasons for this decline were attributed to war against terrorism, political instability, and the effects of global financial slowdown. However, country witnessed a surge in FDI in 2013 mainly because of improvement in the broad macro factors.

Table 2: Major Contributors towards FDI in Pakistan (Million USD)

Year	US	UK	UAE
2000	213.3	88.8	7.0
2001	92.7	90.5	5.2
2002	326.4	30.3	21.5
2003	211.5	219.4	119.7
2004	238.4	64.6	134.6
2005	325.9	181.5	367.5
2006	516.7	244	1424.5
2007	913.1	860.1	661.5
2008	1309.3	460.2	588.6
2009	869.9	263.4	178.1
2010	468.3	294.6	242.7
2011	238.1	207.1	284.2
2012	227.7	205.8	36.6
2013	223	632.3	19.9

Source: State Bank of Pakistan

The above statistics signify that US has been the major contributor towards FDI in Pakistan during the sampled period. This is attributed to the fact that several large US multinational corporations have made infrastructural investment in Pakistan. UK is the next largest contributor towards FDI in Pakistan. In 2007 UK corporations contributed 860 million $ in FDI in Pakistan. United Arab Emirates (UAE) is the third major contributor towards FDI inflows in Pakistan yet it reported a record highest FDI of 1424 million $ in 2007.

Past researches found different determinants of FDI inflows in pakistan for different time spans. Until 1990 FDI growth rate was not significant because of improper regulatory frame work in Pakistan. But after that trade liberalization has played a vital role in the growth of FDI in Pakistan (Javed, Amin, & Irshad, 2013). By reducing tariffs and giving concessions in tax to foreign investors a country can achieve high level of FDI inflows (Zaidi, 2004). Wage rates, economic growth, employment, and capital formation are the key determinants of FDI in Pakistan for long run (Hakro & Ghumro, 2011).

The core objective of this study is to empirically analyze major determinants of FDI in Pakistan for the most recent time span of 2000 to 2013. The study adds to the literature in a way that it incorporates the determinants based on recent developments in the economy. Considering the current state of the country, determinants like terrorism attacks, foreign debt, and political instability were selected along with the conventional determinants like GDP, degree of trade openness, domestic capital formation, exchange rates, and regime to find more expanded view of the factors that explain variations in FDI inflows to Pakistan in the current scenario. ADF unit root test was applied to check whether all the variables are stationary at same level. Subsequently, multiple regression analysis was conducted to find out the determinants that significantly affect the flow of FDI in Pakistan. Rest of the study is organized as follows. Section 2 includes the past theoretical and empirical work about the determinants of FDI. Section 3 elaborates data and methodology used in this study. Section 4 presents empirical results of the study and section 5 concludes the discussion.

2. Review of literature

The focus of earlier literature on FDI in Pakistan (Sharif, 1997); (Nishat et al., 1998); (Akhtar & Radice, 2001) and (Guisinger, 2001) was to determine the factors responsible for low FDI in Pakistan. In recent years this trend has been shifted towards finding the determinants influencing the inflows of FDI. Different researchers have made different classification about the determinants of FDI in their studies. Shamsuddin (1994) divided the determinants of FDI into Market factors, Cost factors, and Investment climate. Hakro and Ghumro (2011) postulated that there are four factors that determine the FDI inflows in an economy. These are macroeconomic development strategy factors, cost-related factors, investment environment improvement factors, and political stability.

Wang and Swain, (1995); Lucas, (1993); Barrell and Pain (1996); and Kravis and Lipsey (1982) found that there is either negative or no relationship between wage rates and FDI inflows in an economy. As low wage rates can be an attractive indicator for the organizations involved in labor-intensive production activities. In contrast, Love and Hidalgo (2000) found a positive relationship between wage rates and FDI flows. There empirical findings revealed that high wages indicate a greater level of productivity because hi-tech organizations always prefer highly skilled labor on cheap labor which is less productive.

Stephen et al, (1997), found that GDP, imports and exports, political instability and infrastructure are significant influential factors for the decision makers of multinational corporations to invest abroad. Barrell and Pain (1996) investigated the relationship between FDI and inflation by impulse response analysis. They found that a 3% increase in the inflation rate of Canada reduces FDI from United States (U.S) in Canada by 2 percent and increases domestic investment in U.S by 1%. Furthermore, FDI from U.S decreased by 1.9% with a 7% increase in inflation rate in Turkish economy, although domestic investment in U.S increased by 0.3%.

Aqeel and Nishat (2005) studied that how liberalization in different sectors of Pakistan economy helped in attracting FDI. They use the co-integration and error-correction method to identify the factors that explained the FDI inflows in Pakistan. Tariff rate, per capita GDP, tax rate, credit to private sector and exchange rate were found to be statistically significant factors that attract FDI inflows and determine the growth of FDI in both short and long run.

Hussain and Kimuli (2012) analyzed panel data of 57 low and lower middle income economies to explore different variables responsible for changes in FDI flows for a time span of ten years. They discovered that market size is the most significant factor explaining FDI in developing economies. While, other influential determinants are stable macroeconomic environment, developed financial sector, availability of skilled labor force, and global integration. Similarly, Ulessever, (2008) discovered that trade openness, infrastructure, foreign capital stock and economic stability are the main factors of FDI in Turkish economy

Khan (2011) explored the impact of Pakistan's diplomatic relationship with other countries on the inflows of FDI for the period of 1972- 2009. Finding exposed that policies of U.S did not significantly influenced the FDI inflows to pakistan in long run. Although, in the short run the diplometic policies of U.S have a significant negative relationship with inflows of FDI. Financial development, domestic investment and infrastructure were found to be positively significant determinants of FDI in Pakistan both in long and short run. While, degree of trade openness have a negative significant relationship only in the long run. Furthermore, he explored that factors related to political risk have no significant impact on FDI inflows in the long run. Whereas, civil liberties have a significantly positive impact on FDI flows in short run.

Muhammad et al, (2013) used error correction model on a time series data for the period of 1971-2011. They found that GDP was the most significant determinant of FDI, while other important determinants was political instability, exchange rate, consumer price index and population. Mushtaq et al, (2009) discovered that political instability was the most signifcant determinant of FDI. Because it worked as an obstacle in building confidence of foreign investors. They also postulated that political stability was more impotant than democracy to attract foreign investment. This was evident from the fact that during the regime of dictatorship the amount of FDI inflows increased rapidly in Pakistan.

In a more recent study, Mohapatra (2014) examined the potential determinants of FDI flows from European union to India form 2000 to 2012. He found that GDP, domestic capital formation, imports and exports with Europe, and degree of trade openness are significant factors of FDI inflow for India. Hasen and Gianluigi (2007) discovered that for the countries in the Arab Maghreb Union (AMU), market size is a positively significant determinant of FDI, while measures of government mismanagement such as high fiscal deficit and inflation are negatively significant factors for FDI inflows.

3. Data and Methodology

The main purpose of this study is to examine the potential determinants of FDI inflow in Pakistan for the period of 2000- 2013. In our model FDI is regressed against economic variables that are GDP, degree of trade openness, exchange rates, foreign debt, terrorism attacks, political instability, domestic capital formation and regime. Data about these variables was obtained from State bank of Pakistan, World Development Indicator (WDI), global terrorism data base and center for systemic peace. Study used similar research framework as used by (Mohapatra, 2014) ;(Javed, Amin, & Irshad,

2013) and (Rehman et al, 2009). In this study political instability and regime are considered as two different variables as first one measures overall political situation and absence of violence and the later explains the authority spectrum that whether it was democratic or dictatorship in governing institutions. Political instability is measured by using worldwide governance indicator ranges from -2.50 reflecting poor to 2.50 representing strong political stability. Regime is measured by using polity scheme of “Center for Systemic Peace” here polity score ranges from -10 demonstrating hereditary monarchy to 10 reflecting consolidated democracy.

Table 3: Measurement of Variables

Variable	Definition	Measurement
FDI	Foreign Direct Investment	Total inflow of foreign direct investment
GDP	Gross Domestic Product	Total value of gross domestic product in a year
TA	Terrorism Attacks	Number of terrorism attacks
DOPN	Degree of Openness	Export + import/GDP
DCF	Domestic Capital Formation	Total value of domestic capital formation in a year
EXR	Exchange Rate	Exchange rate between Pakistan and U.S
FD	Foreign Debt	Total value of foreign debt in a year
PST	Political Instability	Political instability index
DD	Regime	Democratic versus dictatorship index

Source: Author (2014)

3.1 The Proposed Model

$$FDI = \beta 0 + \beta 1GDP + \beta 2TA + \beta 3DOPN + \beta 4\,DCF + \beta 5EXR + \beta 6FD + \beta 7PST + \beta 8DD + \sigma$$

$\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, $\beta 5$, $\beta 6$, $\beta 7$ *and* $\beta 8$ are coefficient of different determinants of FDI inflows such as GDP, TA, DOPN, CF, ER, FD, PST and DD respectively. Regression analysis has been used to analyze the significance of these coefficients.

3.2 Hypothesis

Based on the investigation of past empirical work, Gross Domestic Product (GDP), Terrorism Attacks, Degree of Trade Openness, Domestic Capital Formation, Exchange Rates, Foreign Debts, Political Instability and regime emerged as the main determinants of FDI inflows in Pakistan. Following hypothesis indicate the direction of relationship between FDI and the proposed determinants.

1. There exists a positive relationship between GDP growth and inflows of FDI (Stephen et al, 1997).
2. Number of terrorism attacks negatively affects FDI inflows.
3. An increase in degree of openness will attract more foreign direct investment (Ulessever 2008)
4. Domestic capital formation has positive relationship with FDI inflows (Mohapatra 2014).
5. Exchange rate fluctuations will negatively impact on FDI inflows (Mohapatra 2014).
6. Foreign debt is negatively related to the FDI inflow of country (Hasen and Gianluigi 2007).
7. Political instability will lead to lesser amount of FDI inflows and vice-versa (Mushtaq et al, 2009).
8. Democracy has positive relationship with FDI while; dictatorship is negatively related to FDI inflows (Hakro and Ghumro 2011).

4. Results of Analysis

As it is a pre-requisite for time series data that underlying series should be stationary. So ADF unit root test was conducted on all the variables to check whether they are stationary at same level or not.

Table 4: Results of ADF Unit Root Test

Variable Label	ADF Test Statistic	P-Value
CF	-1.883	0.059*
DOPN	-4.030	0.000***
FD	-1.076	0.083*
FDI	-2.406	0.021**
GDP	-2.413	0.020**
PST	-1.988	0.048**
DD	-2.279	0.027**
ER	-2.560	0.015**
TA	-9.543	0.000***

Note: *, **and ***indicates significance level at 10%, 5% & 1% levels, respectively.

All the variables were found to be stationary at first level difference. Terrorism attacks and degree of openness are significant at 1% significant level. Yet domestic capital formation and foreign debt are significant at 10% significant level as revealed by P-values of 0.059 and 0.083 respectively.

A multiple regression analysis was carried out on the data presented in Table-3 to examine an empirical relationship among FDI and all of its assumed determinants. The summary result of this regression analysis is presented in Table-5. All the explanatory variables stated in the econometric functions are seen to be significant determinants of FDI inflow in Pakistan.

Table 5: The Regression Model:

Dependent variable	Independent variables	t-statistic	p-value
Foreign Direct Investment (FDI)	Gross Domestic Product	8.8301	0.0031***
	Terrorism Attacks	-9.2126	0.0027***
	Degree of Openness	5.6315	0.0111**
	Domestic Capital Formation	3.4553	0.0408**
	Exchange Rate	-3.2314	0.0482**
	Foreign Debt	-16.195	0.0005***
	Political Instability	-2.9479	0.0601*
	Regime	11.668	0.0014***
Adjusted R^2	**0.9974**		

Note: *, **and ***indicates significance level at 10%, 5% & 1% levels, respectively.

First order autocorrelation was found in the model. The problem of autocorrelation was cured by transforming the regression into AR (1) process. The aforementioned results indicate that GDP is a significant and positive determinant of FDI inflow in Pakistan. The results are consistent with (Mottaleba & Kalirajanb, 2010) that higher value of GDP is associated with a larger inflow of FDI in a country. Terrorism attack is negative and significant determinant of FDI because an increase in number of terrorist attacks created insecurity in the minds of investors and they preferred to either shift their existing investment or made new investment in countries where environment is more conducive for business operations. In addition, Degree of trade openness was found to be positively significant determinant of FDI as evident by the p-value of 0.011. This is due to the fact that an increase in imports and exports will demonstrate that country is more open for international trade. Consequently investors will be interested to invest more in that country to gain the benefits of liberalized economic and trade policies. Domestic capital formation is also found as positive and significant determinant of FDI inflow, as an increase in domestic capital formation is an indicator of economic progress and it is of considerable interest for the foreign investors. In contrast, Exchange rate is negative determinant of FDI inflows in the country and it carries a p-value of 0.0482 in our model. For the reason that Investors will be reluctant to invest in a country with unstable or fluctuated exchange rates, as in this case it will be hard for them to predict their future profits or expenses in terms of their home currency. So they will prefer to invest in an economy with more stable exchange rates to reduce the level of risk that can arise from volatile and unfavorable movements in exchange rates.

Similarly, foreign debts and liabilities have a negative and significant relationship with FDI. Because, an increase in foreign debt will reflect that country's economy is in trouble. Hence investors will be less interested to invest in such type of economy. Unsurprisingly Political instability is also found negatively significant with FDI inflows in Pakistan. Since political instability in a country will indicate several problems for investors such as delays in decision making by the government in major issues like tax rates, and frequent alteration in macroeconomic and trade policies. The Regime factor also has positive effect on FDI inflows in Pakistan; these results indicate that during the era of dictatorship FDI inflows were higher as compare to the era of democracy. The rationale behind this fact is, during the times of military dictatorship in Pakistan the country experienced less political conflicts. But eras of democracy were characterized by political instability. Mainly due to major disagreements between the ruling party and the opposition in most regimes, political anarchy, lack of vision at the part of democratic government to deal with policy issues and corruption culture in democratic leadership.

5. Conclusion and Policy Recommendations:

✓ Pakistan economy witnessed a continuous surge in FDI in Pakistan until 2008, however afterwards it experienced a consistent downward trend. Main factors behind slump in FDI inflows are global financial slow down, economic and political instability and terrorism attacks.

✓ Growth in the value of GDP, a more open economy, and growth in capital formation resulted increased inflows of foreign direct investment in Pakistan.

✓ During the regime of dictatorship foreign investors were more interested to make infrastructural investment in Pakistan because of a relatively higher political and economic stability as compare to democratic regimes.

✓ During the sampled period, number of terrorism attacks, surge in the value of foreign debts, and political instability caused decline in the value of foreign direct investment in the country

✓ Large fluctuations in Pakistan's currency market and unfavorable movements in exchange rates considerably affected the confidence of foreign investors and in turn resulted in decline in the value of foreign direct investment in Pakistan.

✓ Government can attract more foreign direct investment in the country by improving the law and order situation of the country and by ensuring a more politically stable environment that is conducive for the foreign corporations to establish and run their business operations in Pakistan.

- ✓ Both economic growth and economic stability shall be the top priorities of the government to attract FDI in the country. Furthermore, economic and trade liberalization can help the country in attracting FDI.

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