Determinants of Inflow of Foreign Direct Investment (FDI) into Pakistan

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Determinants of Inflow of Foreign Direct Investment (FDI) into Pakistan

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Abstract

The objective of this research paper is to examine the effects of various factors like violence, stock exchange performance and exchange rate on Foreign DirectInvestment (FDI) inflow into Pakistan. For econometric analysis monthly secondary data ranging from 2003 to 2011 has been used. Regression and correlationare used as analytical tools for theempirical estimation. In addition, for time series data analysis Augmented Dickey Fuller test and Phillips-Perron test have been used. This study finds that the violence in the country and Karachi Stock Exchange-100 Index are statistically significant factors with a positive sign. Moreover, the exchange rate has also been found to be statistically significant factor with negative sign. This study uses monthly time series data from 2003-2001, which enables a deeper understanding of FDI inflow in Pakistan. Results suggest that in order to enhance FDI inflow toa desirable level, the government should ensure the existence of a peaceful environment, efficient capital markets and a stable exchange rate in the country.

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Key words: Foreign Direct Investment (FDI) inflow, Exchange Rate, Violence, Karachi Stock Exchange (KSE)

1. Introduction

Foreign Direct Investment (FDI)inflow is a key factor in influencing the economy of the country. In Pakistan, the rapid decline in Foreign Direct Investment (FDI) inflow observed during the last three years has lead to unemployment, a fall in tax revenues and destabilization of the economy.The contributing factors werethe worsening law and order situation, violence, political destabilization, currency devaluation,poor governance of the country,poor performance of both macroeconomic variables and the stock exchange.In 2008, FDI inflow into Pakistan was 5409.8 Million US dollar, which reduces to US dollars 2150.8 Million only in 2011, which is a 71% decrease since 2008. Pakistan has become a center of terrorist activities since 2008. Due to the poor law and order situation many foreign workers from China, US, France are kidnapped for ransom and then killed which ultimately reducesthe inflow of foreign direct investment and also results in disinvestment by foreign investors. Currency devaluation is another main issue

affecting the economy of Pakistan. Since 2008, Pakistan's Rupee has been devalued by up to almost 50%. As foreign investorswithdraw return to their host country and convert their return into host country's currency which is reduced to 50%. On the other hand, the Karachi Stock Exchange (KSE) which is country's biggest stock market faced the crash in 2008 in which many investor lost their investments. In the last three years, trading activities in the Karachi Stock Exchange (KSE) decreased due to distrust of domestic investors which ultimately give bad signals to foreign investors. These factors along with many other macroeconomic factors, hence contributed towards a decline in inflow of foreign direct investment in Pakistan.

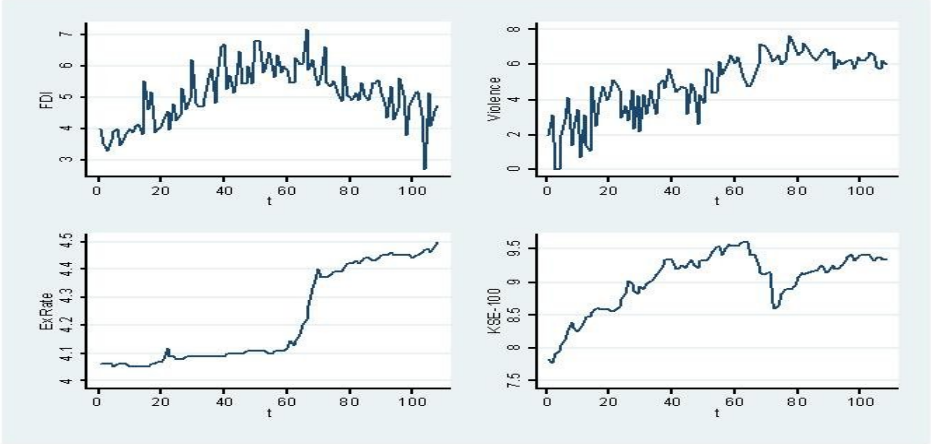
Foreign Direct Investment (FDI) helps in the growth of the economy of the country by developing the competitive markets with more advanced and modified international industries and also provides the chance to learn and experience the new technologies in an international environment which capable and recognize the employees internationally. It provides jobs opportunities, management skills, and new technology besides bridging the gapsbetween saving and investment.Furthermore, the foreign investors pay taxes on the returns such as Capital Gains Tax, Capital Value Tax and Income Tax which all support national income. To attain a desirable level of economic growth, FDI's are necessary especially for developing countries like Pakistan. There is a need of more FDI inflow into Pakistan due to shortage of capital. To attract more and more FDI inflow, Pakistan had created an investment-friendly environment in the country and offered many incentives in 1992, 1997 and 1999.

FDI has few inherent pros like risk and knowledge sharing, the technology transfer and expertise. These facts show that FDI is an important source of private capital for developing economies, specifically countries which are able to create the hospitable environment required for the latest foreign investments (Singh and Jun, 1995). Foreign direct investments (FDIs) is a major source of inflow of capital in most of the developing economies including Pakistan and it bridges the gap of capital, technology, managerial skill, human capital formation and more competitive business environment (Kalim and Shahbaz, 2009).Another important advantage of Foreign Direct Investment (FDI) is that it is an engagement for long term commitment in the economic activities in the host country and provesless volatile as comparedto the other forms of the inflows of international capital (Adam and Tweneboah, 2008). A summary of trends and graph of FDI inflows, violence, KSE-100 and the exchange rate in Pakistan from 2003-2011 is given below:

Table 1: Trends of FDI Inflows, Violence, KSE-100 and Exchange Rate in Pakistan

Year	FDI	Violence	Exchange Rate	KSE- 100
2003	798	189	58.49	4,471.60
2004	949.4	863	57.57	6,218.46
2005	1523.9	648	59.35	9,556.61
2006	3521	1471	59.86	10,040.50
2007	5139.6	3598	60.63	14,077.16
2008	5409.8	6715	62.54	5,865.01
2009	3719.9	11704	78.49	9,386.92
2010	2150.8	7435	83.8	12,022.46
2011	1573.6	6303	85.5	11,347.66

Figure- 1: Graph of Trends of FDI Inflows, Violence, KSE-100 and Exchange Rate in Pakistan



The main objectives of this study are to analyze important determinants of FDI inflows into Pakistan during the 2003-2011periods. In this paper, we explore the Weightage given to basic reasons which resulted in reducing the inflow of Foreign Direct Investment of Pakistan especially in the last ten years. The factors related were the violence in Pakistan, the exchange rate and the performance of Karachi Stock Exchange as the Independent Variables which reflect changes in the Dependent Variable namely; the Foreign Direct Investment (FDI) inflow.
The rest of the paper is organized as follows. Section 2 discussesthe literature review;section3 explainsthe research methodology adopted and includes a discussion of the variables; section 4reportsthe empiricalresults and section 5provides a summary of the findings and recommendations.

2. Literature review

The investment is the accumulation of a few types of assets with the expectation of earning the return in future. In the wider sense, the investment facilitates the mechanism which requires financing for the growth and development of the economy. The foreign investment can be categorized into foreign direct investment and portfolio investment (Khan and Khattak, 2009).Foreign Direct Investment (FDI) is the real investment and refers to the medium to long-term investment with the objective to attain the power of managerial controls by using the capital (Aqeel and Nishat, 2005).
Direct investment is the engagement of capital for long term commitment in the economic activities in host country (Kolstad and Villanger, 2004). Commonly, the FDI generated by the big multinational organizations by merger and acquisition or through the construction of a new facility (IMF, 2003).

2.1Violence and FDI inflow

According to rational expectations, uncertainty and political violence affect the Foreign Direct Investment (FDI). Violence affects choice of location and amount of investment of FDI inflow (Li, 2006).

The investigation conducted by Bengoa, Sanchez-Robles(2003) indicated that theFDI and violence has relationship. Therefore, governments should strive for the achievement of a sound degree of political as well as the economic establishment with a market oriented environment.

2.2Exchange Rates and FDI inflow

The exchange rates are one of the influences on FDI activities as the behavior of movement. The definition of exchange rates is the price of domestic currency of a foreign currency. Exchange rates can change the amount of foreign direct investment which places and the allocation of these investments dealing across the range of country. Whenever depreciation in currency exists, it has both a positive and negative impact onFDI. Initially, it contracted the wages and production costs of country with the relationship of the foreign counterparts (Linda, 2011). On the other hand, it reduces the return on investment for the foreign investor.

The link between the exchange rate and the FDI arises in the situation when internationally integrated capital markets started the imperfect information. The imperfections are due to the external financing which is expensive as compared to internal financing and results in the changes in wealth diverted into changes in the requirement of the direct investment (Froot and Stein, 1991)

The coefficient of the exchange rate is negative as per expectation (Khan and Nawaz, 2010). The depreciation of the currency of the country mostly influences the inflow of FDI. This also confirmed through the hypothesis that foreign investors are definitely interested in high returns on the investment (Adam and Tweneboah, 2008).The negative impact of the exchange rate indicates that depreciation in host country currency negatively influences the inflow of FDI to that country. That is why the monetary policy plays an important role in FDI inflow (Nasir and Hassan, 2011). Hence, stable exchange rate is necessary for FDI inflow.

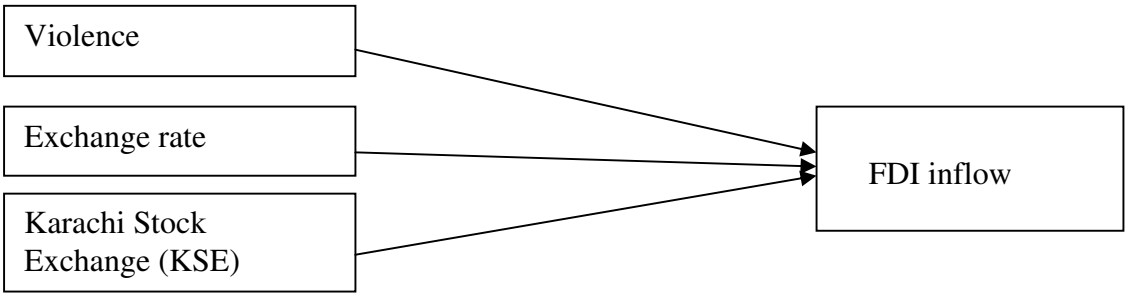
2.3Stock exchange and FDIinflow

It is generally identified that an established and organized financial system ensures economic growth and stability. The stock market is animportant pillar of the financial system of the economy. Investors invest in it for expected profits (Kalim and Shahbaz, 2009). The long term relationship between FDI and the stock market of Ghana has been observed during research. This has been proved that significant increase in Foreign Direct Investment (FDI) affect the development of the stock market (Adam andTweneboah, 2008).

The Stock Exchange development has a positive influence on growth of FDI (Olasukanmi, 2009).There is a positive and statistically a strong relationship between FDI and market capitalization which showed the important role of FDI in the stock market development of Pakistan(Shabaz, Ahmad and Ali, 2008).

3. Theoretical Framework

Figure - II



4. Hypotheses and Description of variable

4.1Dependent Variable

Foreign direct investment (FDI) is taken as the dependent variable. World Bank, (2003) defined foreign direct investment (FDI) as theflow of capital in terms ofequity financing from abroad being not less than10 percent of the share in a business activity. This flow of capital can be a combination of financial capital and intangible assets.Financial capital includes purchase of fixedcapital assets, import of capital equipments and the required foreign exchange for various businesstransactions. Intangible assets include technology, brand, image, goodwill,managerial capabilities, and marketing skills.

4.2Independent Variables

4.2.1 VIOLENCE

Degree of political certainty and the law and order situation both directly affect foreign direct investment in any country. Pakistan is one of those countries where violence emerged after 9/11 and the Afghan war. Pakistan is the centre of terrorist activities since the last decade. Many foreign investors have disinvested their investments due to the increase in violence and the deteriorating law and order situation in this country. Hence, violence is a strong determinant of foreign direct investment in Pakistan. Here, violence has been treated as independent variable.

H1: There is a negative impact of violence on inflow of foreign direct investment into Pakistan.

4.2.2 EXCHANGE RATE

An exchange rate is considered as one of the important determinants of foreign direct investment. As foreign investors take their profits to their home, therefore, appreciation and depreciation of currency rate both affect the return on investment. The exchange rate will have a negative relationship with FDI inflowwhich shows that devaluation of currency negatively influences the inflow of FDI. Exchange rate has been considered as the independent variable.

H2: There is a negative impact of exchange rate on inflow of foreign direct investment into Pakistan.

4.2.3 STOCK EXCHANGE

A stock exchange is considered as the face of any country's financial system. High performance of the stock exchange indicates confidence of domestic as well as foreign investors. Commonly, it is believed that when stock exchange of any country is performing well, economy of the country is also doing well.This fact also attracts foreign investors.The Karachi Stock Exchange (KSE) is the biggest and oldest stock market in Pakistan which accounts for 85 per cent of total volume of trade in stocks in Pakistan (Iqbal, 2008). It has been declared as one of best performing markets of the world in 2002 by Business Week. In this study, we have taken independent variable KSE-100 index as a proxy of stock exchange performance. The rationale behind it is that Karachi stock exchange will positively influence flow of foreign direct investment.

H3: There is a positive impact of Karachi Stock Exchange (KSE) performance on inflow of foreign direct investment into Pakistan.

5. Data Description and Methodology

This study is based on monthly,secondary time series data ranging from 2003 to2011. The main reason behind using monthly data is to explore the impact of the independent variable on the dependent variable on a micro level. Even though foreign direct investment is a long term commitment of funds, taking the monthly data will enable us to minutely monitor the relationship between these variables. Majority of previous studies used annual data of FDI and other variables but in our opinion our variables like stock exchange, exchange rate and violence have an immediate impact on foreign direct investment. These variables are important determinants as investors are continuously monitoring these variables and make the decisionto invest in any country on basis of these variables. Data is taken from 2003 due to fact that before this period violence data is not available. It is also pertinent to mention that violence is rarely used variable. Hence, this study will enables us to determine very important determinants of foreign direct investment on short periods of time and enable us to closely monitor the relationship between independent and dependent variables.

Data used in this study has been obtained from the Economic Surveyof Pakistan (various issues) and the website of the State Bank of Pakistan (SBP).Data of violence in Pakistan has been collected from South Asia Terrorism Portal. Linear regression model and correlation analysis is used to analyze the impact of the independent variables, notably, violence, kse-100 index and exchange rate on the dependent variable (FDI inflows intoPakistan). Due tonon-linearity the data has been transformed into log form. The STATA 11 version statistical software has been used for computation.A complete summary of descriptive statistics are shown in Table 2.

Table 2: Descriptive statistics

Variable	**Obs.**	**Mean**	**Std. Deviation**	**Minimum**	**Maximum**
FDI	108	229.9523	212.472	14.52	1262.9
Violence	108	360.4259	393.0408	1	2024
Exchange Rate	108	69.05047	11.90309	57.2277	89.84894
KSE-100	108	9048.714	3237.91	2399.14	15125.89

6. **Results and Discussion**

6.1Unit root tests

The time series data has an inherent problem of non-stationarity in levelswhich often produce results. Thus, time series data is tested for unitroots to remove the problem of wrong results.Augmented Dickey-Fuller (ADF) test and Phillips-Perron testare applied for unit roots tofind out that the variables included are integrated of the same order. The results of AugmentedDickey-Fuller (ADF) test and Phillips-Perron testare reported in table 3. An ADF testand Phillips-Perron testindicated the existence of unit roots in levels and in first differences of all variables (p = 0.05).A complete summary of results of unit root test is reported in table 3.

Table 3: Unit Root Test

Variable	**ADF Test Test Statistic**		**Phillips-Perron test Test Statistic**	
	Level	**First Difference**	**Z(rho)**	**Z(t)**
FDI	-5.532 ***	-6.103 ***	-46.314***	-5.480***
Violence	-7.221 ***	-6.179 ***	-60.857***	-7.013***
Exchange Rate	-5.269 ***	-6.752 ***	-43.353***	-5.163 ***
KSE-100	-8.609 ***	-8.352 ***	-68.015***	-8.561***

***MacKinnon approximate p-value for Z(t) = 0.0000

6.2Correlation Analysis

The results of correlation analysis shows that FDI inflow is correlated 39.8% with violence, 4.04% with exchange rate and 62.64% with KSE-100. This shows the fact that KSE-100 has strong relationship with FDI inflows. A complete summary of correlation analysis is reported in table 4.

Table 4: Correlation analysis

Correlation	**FDI**	**Violence**	**Exchange Rate**	**KSE-100**
FDI	1			
Violence	0.3980	1		
Exchange Rate	0.0402	0.7393	1	
KSE-100	0.6264	0.6354	0.3837	1

6.3 Model Summary

Table 5: Model Summary

R- squared	**Adj. R-squared**	**F- Value**	**p-value**
0.48	0.46	32.42	0.000

6.3.1EXPLANATION

The results of model summary are given in the table 5.The dependent variable is the inflow of foreign direct investment (FDI) and the time period of the analysis is 2003-2011.R squared is the magnitude of determinants. In our study it has been found that we have R square value of 0.48 which means that 48% model has explained parts. Adjusted R squared is 0.46 which is close to R

square value.This shows that model and data is fit to use. In our analysis, F value is 32.42 at significant level of less than 1% which shows that independent variables explained variation in the dependent variable very well.

6.4Regression Analysis

Table 6: Regression results

Hypotheses	Variable	Coef.	t-value	p-value	Decision
	Constant	3.94	1.38	0.170	
H1: Violence has negative impact on FDI inflow	Violence	.191	2.97	0.004	Rejected
H2: Exchange rate has negative impact on FDI inflow	Ex. Rate	-2.38	-4.28	0.000	Accepted
H3: KSE-100 has positive impact on FDI inflow	KSE-100	1.13	6.06	0.000	Accepted

Dependent Variable: FDI inflow

EXPLANATION AND DISCUSSION OF RESULTS

6.4.1 HYPOTHESIS H_1

The results of regression show that t- value is 2.97 with positive sign at significant level of .004. As p-value is less than .05, results are significant but theoretically it should show negative sign. Hence, our first hypothesis i.e. H1: violence has negative impact on FDI inflow is rejected.This study found that the impact of violence is positively significant which is contradictory with literature. The results contradict the findings of Li, (2006) and Bengoa, Sanchez-Robles, (2003). There may be many explanations of this contradiction. The more reasonable explanation may be that due to rapid growth, attractive economic look, de-regulation of telecom and other sectors and many other attractive investment avenues, the investor invested more despite the increase in violence in the Pakistan.

6.4.2 HYPOTHESIS H_2

The results of regression show that t- value is -4.28 at significant level .000. As p-value is less than .05, results are significant. Hence, our second hypothesis i.e. H2: Exchange rate has negative impact on FDI inflow is accepted. Exchange rate is found negatively significant related with inflow of foreign direct investment, which confirms that the devaluation of a currency has a negative impact on the flow of FDI. The negative relationship is because when the currency of a country depreciates it reduces the return on investment for foreign investor. These results are consistent with Khan and Nawaz, (2010);Adam and Tweneboah, (2008)and Nasir and Hassan, (2011) who also found negative relationship between exchange rate and FDI inflow.Ourresults confirmthat foreign investors are definitely interested in high returns on the investment and devaluation of currency reduces their return. Hence, there is a need of stable exchange rate which can be controlled through effective monetary policy.

6.4.3 HYPOTHESIS H_3

The results of regression show that t- value is 6.06 at significant level .000. As p-value is less than .05, results are significant. Therefore, our third hypothesis i.e. H3: Karachi Stock Exchange (KSE) performance has positive impact on FDI inflow is accepted.The results show a positive relationship between the FDI inflow and stock exchange which is consistent with literature on

the subjects. This result is consistent with Olasukanmi, (2009) and Shabaz, Ahmad and Ali, (2008), who also found a positive relationship between stock exchange performance and Foreign Direct Investment (FDI). This fact shows that when stock exchange is doing well, foreign direct investment will be more. In the results, FDI inflow and the stock exchange show a strong correlation of 62.64% and confirm that stock exchange attracts foreign investment.

7. Conclusions and Findings

Results of this study are important forenhancing FDI inflows intoPakistan. These results will also behelpful to formulate favorable policies to enhance FDI inflow into this country.The resultsshowed that the stock market emerged as the most important economicvariable which indicatesthat a country's equity market attracts foreign direct investment. Exchange rate shows a significant negative impact on inflow of foreign direct investment as devaluation of currency reduces return on investment of the foreign investor. Pakistan's government should make every effort to maintain a stable exchange rate. Hence, to enhance more FDI inflow into Pakistan, the government should ensurea stableeconomic and political environment, transparent, efficient and attractive financial markets, stable exchange rate, should maintain peace, security and the law and order situation in the country. The government should formulate relevant policies to take care of these factors which playan important role in the investment decision of foreign investors in a country.

Studies on the determinants of FDI inflows in Pakistan are very limited. Most are concerned with the long term determinant of the FDI flows and annual data was used. Contrary to that, this study exploresshort term determinants of FDI flows into Pakistan. This study uses monthly time series data from 2003-2001, which enables a deeper understanding of FDI inflow into Pakistan. To enhance desirable amount of FDI into Pakistan, the results suggest that the government make sure of a peaceful environment, efficient capital markets and stable exchange rate.

References

1. Anokye, A. M., & Tweneboah, G. (2008). Foreign Direct Investment and Stock Market Development. *Munich Personal RePec Archive* .

2. Aqeel, A., & Nishat, M. (2005). The determinants of foreign direct investment in pakistan. *20th Annual PSDE Conference to be held on 10-12 January 2005,* .

3. Bengoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European Journal of Political Economy* , 529–545.

4. Froot, K. A., & Stein, C. J. (1991). Exchange Rates and Foreign Direct Investment:An Imperfect Capital Markets Approach,. *The Quarterly Journal of Economics* .

5. Fuller, D. W. (1979). Distribution of the estimates for autoregressive time series with unit root. *Journal of the American Statistical Association* , 427-31.

6. Iqbal, J. (December 04, 2008). Stock Market in Pakistan: An Overview. *http://mpra.ub.unimuenchen.de/11868/1/MPRA_paper_11868.pdf (accessed 2 13, 2012).*

7. Kalim, R., & Shahbaz, M. (2009). Impact of foreign direct investment on stock market development: the case of Pakistan. *9th Global Conference on Business & Economics, ISBN :978-0-9742114-2-7* .

8. Khan, M. A., &khattak, N. U.-R. (2009). Effects of economic factors on foreign direct investment inflow: evidence from pakistan (1971-2005). *Sarhad J. Agric* .

9. Khan, R. E., & Nawaz, M. A. (2010). Economic Determinants of Foreign Direct Investment in Pakistan. *Kamla-Raj* .

10. Kolstad, I., & Villanger, E. (2004). Determinants of foreign direct investment in services. *Chr. Michelsen Institute 2004* .

11. Li, Q. (2006). Chapter 11. In Q. Li, *Political Violence and Foreign Direct Investment.* Regional Economic Integration (Research in Global Strategic Management,)Emerald Group Publishing Limited.

12. Linda, G. S. (2011). *Exchange Rates and Foreign Direct Investment.* New York: Princeton University.

13. Nasir, Z. M., & Hassan, A. (2011). Economic Freedom, Exchange Rates stability and FDI in South Asia. *Unpublished* .

14. Olasukanmi, I. (2009). Effect of Foreign Direct Investment and Stock Market Development. *European Journal of Business Management* .

15. satp. ((2012). *Fatalities in Terrorist Violence in Pakistan.* South Asia Terrorism Portal, Retrieved on 1st August, 2012. http://www.satp.org/satporgtp/countries/pakistan/database/casualties.htm.

16. sbp. (2012). *Historical Exchange Rate.* Economic Data, State Bank of Pakistan, Retrieved on 1stAugust, 2012. http://www.sbp.org.pk/ecodata/index2.asp.

17. sbp. (2012). *Net Inflow of Foreign Direct Investment.* Economic Data, State Bank of Pakistan, Retrieved on 1st August, 2012. http://sbp.org.pk/ecodata/NIFP_Arch/index.asp.

18. Shahbaz, M., Ahmed, N., & Ali, L. (2008). Stock Market Development and economic Growth: ARDL Causality in Pakistan. *International Research Journal of Finance and economics* , 184-194.

19. Singh, H., & Jun, K. W. (1995). Some New Evidence on Determinants of Foreign Direct Investmentin Developing Countries. *Policy research working paperThe World Bank* .