



Impact of Terrorism on Foreign Direct Investment in Pakistan

Mian Awais Shahbaz¹, Asifah Javed¹, Amina Dar¹, Tanzeela Sattar¹

¹UCP Business School, University of the Central Punjab, Lahore, Pakistan

Email: awais966@gmail.com

ABSTRACT

This paper examines the relationship between terrorism and foreign direct investment. Using data from 2000 to 2011, the ordinary least square testing approach is used to examine the relationship in two variables. This methodology is used to check the linearity and normality of the data. By applying the model it is shown in results that terrorism having significant negative effect on foreign direct investment of Pakistan. Finding indicates that due to increase in the number of terrorist attacks foreign investor showing negative interest to invest money in Pakistan

Keywords: *Terrorism, Foreign direct investment*

1. INTRODUCTION

September 11, 2001 terrorist attack on world trade center brings a lot of change on the economic growth of different countries. After Pakistan support to America in war against terrorism, country has to face a lot of problems. In Pakistan there is a huge investment made by the foreign investors which ultimately effect on the country growth. After 9/11 accident there is increase in terrorist attacks which have indirect effect on the investor's behavior to invest money in Pakistan. There are many studies conducted to check the terrorism effect on growth of Pakistan but in this paper we will discuss the impact of terrorism on foreign direct investment in Pakistan. Terrorism leads a direct loss on humans and capital, which effect consumer, producer and mainly to investor. This effect decrease confidence and assurance of the investor to invest amount in any country.

Pakistan is an emergent economy and many developing countries depending on foreign direct investment. So that's why it is one of the most important key components for development of the Pakistan. Terrorism means any activity which has been done to create fear and harassment among the people of a country and the peoples who are engage to create that problem are called terrorist. Foreign direct investment means the amount which was invested by any one who is not belonging to that home country.

During the last decade, Pakistan is playing an important role in the war against terrorism. A chain of terrorist activities badly effecting foreign direct investment. Through this study, the true situation of impact of terrorism on Foreign Direct Investment of Pakistan will be analyzed. Secondary data is used in this research paper.

The objective of this study is to find out the relationship between terrorism and FDI in Pakistan, the impact of these attacks on business conditions and economic growth. We will evaluate the result from

last 12 years data of terrorism and FDI of Pakistan. In this study we will evaluate the statement that is there a negative relationship in terrorism and inflows of foreign direct investment or not?

2. LITERATURE REVIEW

It is observed that there is limited study has been done on the impact of terrorism on inflow of foreign direct investment in Pakistan. Foreign direct investment is an engine of development through which there is increase in technology, capital, expertise and income. This research aims closing the gap on the impact of terrorist attack on the inflow of foreign direct investment of Pakistan.

Abadie and Gandeazaba(2008) stated that terrorism activities, and increased in insecurity which effect on the ditribution of capital and investment among different countries. Due to globalization world financial system become more open through productive factors mobility.

Alomar and El-Sakka(2011) argued that there in negative significant impact in terrorist attacks and foreign direct investment inflows which results are taken from 136 Less developing countries.

Tavares(2003) suggested that terrorist activities in a country effect on development of a country,he evaluate the cost of terrorism in deveolping countries.It is noted by Economic Cooperation and development (2002) that due to increase in terrorism activities in a country there will be less collection of taxes or public revenue in a country, which creates financial problem for the government of that country. An augmented gravity model is used by Volker and Schumach(2004) to evaluate the growth of many countries from 1960 to 1993who is facing problem of terrorism , study shows results that there is less than 4% groth rate of that countries.

It is shown in the result of James, Li, McCarthy, Phumiwasana, and Yago (2006)that economic growth having negative relationship with terrorism, report shows that terrorism having more effect on private sector including investment from foreign investor. It is also shown in this research that there is positive relationship in Net inflow of Foreign direct investment and growth of a country.

3. THEORITICAL FRAMEWORK

This theoretical structure will facilitate us to build up the model having relationship between terrorism and foreign direct investment. Theoretical situation on these variables are reviewed as well as the empirical tests of the relationship. Terrorism could be measured in any study through causalities, injuries and No of terrorist attacks in a country. Terrorism is measured in this paper through No of terrorist attacks in the country and foreign direct investment is measured by net inflow in US\$ in Pakistan.

3.1. Research Design

Dependent variable of this study is foreign direct investment (FDI) of Pakistan and Independent variable is terrorism. FDI is measured by Net inflow of foreign direct investment in \$ in Pakistan and Terrorism is measured by No of terrorist attacks in our country. Sample of this study which is used to evaluate relationship is from 2000-2011 which consist of twelve years. Secondary data is used to conclude results on the basis of finding of study. Data of terrorist attacks is collected from different sources and foreign direct investment data is collected from World Bank source.

Null and alternative hypothesis of this research study are:

Ho: There is no relationship in terrorism and foreign direct investment Pakistan

H1: There is a relationship among terrorism and foreign direct investment of Pakistan

4. DATA ANALYSIS

Table 5.1: Terrorism data and FDI of last 12 years

Years	No of attacks	Casualties	Injuries	Net Inflow of FDI in Pakistan in \$
2000	15	79	316	308,000,000
2001	63	48	342	383,000,000
2002	35	68	299	823,000,000
2003	41	34	155	534,000,000
2004	137	255	1040	1,118,000,000
2005	245	210	571	2,201,000,000
2006	300	359	766	4,273,000,000
2007	678	1078	2484	5,590,000,000
2008	599	1251	3073	5,438,000,000
2009	500	1668	4312	2,338,000,000
2010	473	1547	3581	2,016,000,000
2011	639	1092	2633	3,015,000,000

Source: South Asia Terrorist portal and World Bank database (2011) figure till 31st December 2011

Given table 5.1 shows all the relatively details of data which is used as secondary source to evaluate the relationship among the two variables. All information regarding terrorist attacks, casualties, injuries and foreign direct investment is given in the table. For good results of analysis data has been transformed in Log value .

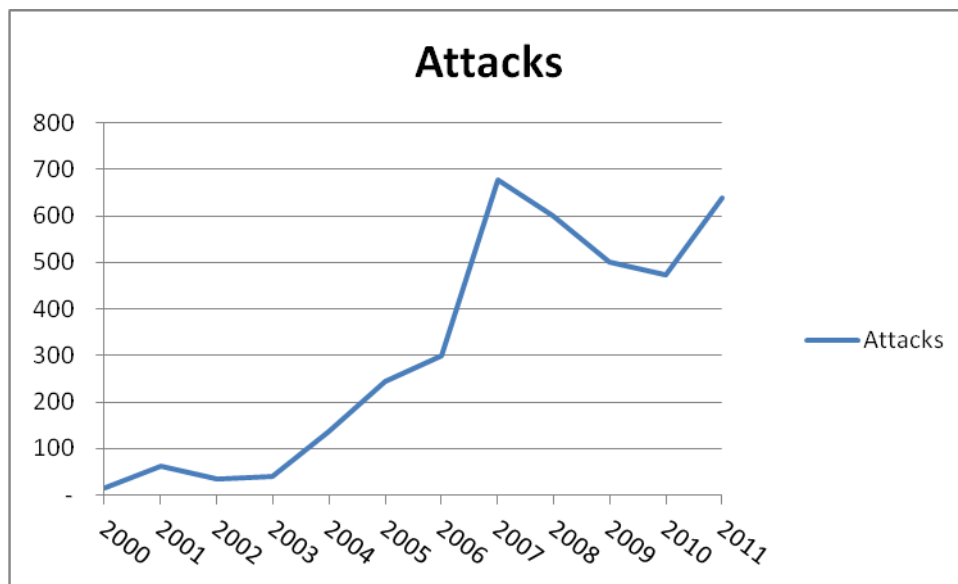


Figure 5.1: Terrorist Attacks in Pakistan

Given figure 5.1 shows the graphical representation of the No of attacks. It is shown that there are highest No of terrorist attacks in 2007 which results there is a big decrease in net foreign direct investment, and lowest attacks in 2000 which was favorable for the big increase in growth rate of foreign investment growth.

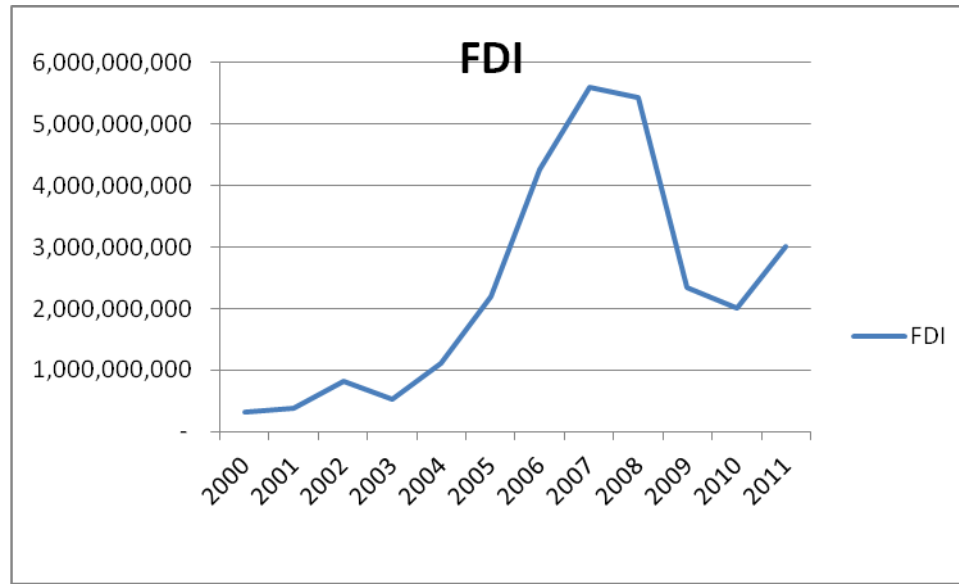


Figure 5.2: Foreign direct investment of Pakistan

It is shown in the given Figure 5.2 that there was almost consistency in increasing of foreign direct investment in Pakistan but after 2007 this falls rapidly. This was caused due to increase in terrorism in same year 2007 in Pakistan.

4.1. Hypothesis Testing

This research paper first of all tests the normality and linearity of time series data used in study. For this point Ordinary Least Square (OLS) technique is used and model is based on linear regression. OLS also provide information about the homoscedastic and multicollinearity of the given data. The assumptions of ordinary least square are that independent variable must be correlated with dependent variable of the study. There is should be constant variance of residual. Model should be linear and individual variable and overall model should be significant. Model is given below:

$$FDI = \beta_0 + \beta_1 T + E$$

B and other variable values are shown below

β_0 = Intercept

β_1 = Effect of Independent variable

FDI = Dependent variable

T = Independent variable

E = Error term

Model shows the value of content 20.109 and β 0.003 which shows the variation in FDI due to Terrorism. Beta value is small due to transformation of the data.

5. FINDINGS

The properties of variables have been checked by OLS-regression model. The outcomes of data by using linear regression in OLS are reported in following tables;

Table 6.1: Descriptive Statistics

	Mean	Std. Deviation	N
FDI	21.1784	1.01167	12
Terrorism	3.1042E2	255.86341	12

In descriptive statistics of table 6.1 it is shown that two variable are selected. Data of FDI was transformed in logarithm for the better results of analysis. In the given table Mean and standard deviation value is presented.

Table 6.2: Correlations

		FDI	Terrorism
Pearson Correlation	FDI	1.000	.871
	Terrorism	.871	1.000
Sig. (1-tailed)	FDI	.	.000
	Terrorism	.000	.
N	FDI	12	12
	Terrorism	12	12

In table 6.2 it is shown that there is strong correlation among the variables under consideration foreign direct investment being dependent variable and terrorism measured by being independent variable. The coefficient of correlation is .87 which is significant at 1% level of significance.

Table 6.3: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. Change	
1	.871 ^a	.759	.735	.52071	.759	31.522	1	10	.000	1.050

a. Predictors: (Constant), Terrorism

b. Dependent Variable: FDI

In table 6.3 R Square shows that terrorism predicts 76% variation in foreign direct investment. It means that there is some relationship among both the variables but there is problem of Durban Watson value which is 1.050 this shows that there is hatroscedasticity problem in the data.

Table 6.4: ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
-------	----------------	----	-------------	---	------

1	Regression	8.547	1	8.547	31.522	.000 ^a
	Residual	2.711	10	.271		
	Total	11.258	11			

a. Predictors: (Constant), Terrorism

b. Dependent Variable: FDI

It is shown in table 6.4 that F.stat as indicated by ANOVA table is 31.5 which indicate that model is good fit.

Table 6.5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.109	.243		82.875	.000
	Terrorism	.003	.001	.871	5.614	.000

a. Dependent Variable: FDI

Above Table 6.5 provides regression coefficient of terrorism for dependent variable of FDI. There is significant impact terrorism on foreign direct investment as provided by coefficient vale of .871 with t statistics of 5.61. Deeming the impact of terrorism on FDI significant at level 1 %.

6. CONCLUTIONS

We analyzed in findings that there is a negative relationship among Terrorism and Foreign Direct Investment in Pakistan. Terrorism activities decrease the foreign investor confidence which decrease the FDI. Null hypothesis is rejected which shows that there is no relationship among both the variables. It is also shown in the findings that increase in terrorist activity in a year having more effect on the investment of next year.

RERFERENCES

- [1]Abadie, & Gandeazaba. (2008). The economic costs of conflicts: A case study of the basque country. *The American Economic Review*, 93, 113-132.
- [2]Alomar, M., & El-Sakka, M. (2011). The impact of terrorism on the FDI inflows to less developed countries: A panel study. *European Journal of Economics, Finance and Administrative Sciences*(28), 116-125.
- [3]James, Li, T., McCarthy, D., Phumiwasana, T., & Yago, G. (2006). *Economic impacts of global terrorism*.
- [4]Tarzi. (2005). Foreign direct investment flows into developing countries:Impact of location and government policy. *The Journal of Social, Political, and Economic Studies*, 4, 497-515.
- [5]Tavares. (2003, November 21-22). The economic cost of terrorism.
- [6]Volker, N., & Schumach, D. (2004). Terrorism and international trade: An empirical investigation. *European Journal of Political Economy*, 20, 423-433.