

What is the Effect of Foreign Direct Investment Inflows on Economic Growth in Pakistan? An Empirical Analysis in the Light of Religious Sectarianism as a Catalyst for Terrorism

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Abstract

The present study analyzes the effect of sectarian terrorism on the relationship between FDI inflows and economic growth in Pakistan for the period of 1989-2016. Although there are many factors which affect FDI and economic growth relationship but the factor of terrorism specifically related to religion and sects, is being observed as the main hurdle hindering high amounts of FDI inflows to boost economic growth of Pakistan. An empirical relationship has been tested by analyzing two-way causality between FDI inflows and economic growth of Pakistan by using the techniques of Johansen Cointegration test and Vector error correction model (VECM). The results reveal that both FDI inflows and economic growth are being negatively affected by terrorism (religious sectarianism) in Pakistan.

Keywords: FDI inflows, Economic Growth, Sectarianism, Johansen Cointegration, Vector Error Correction, Pakistan

1. Introduction

Pakistan has witnessed the highest growth rate of 5.28 percent in 10 years for the fiscal year of 2017⁽¹⁾. Although the government's efforts to improve Pakistan's business climate and to attract higher investment inflows under National Doing Business Reform Strategy 2016⁽²⁾ have attracted more FDI inflows as compared to previous years, yet it is not satisfactory. Policy makers are continuously working on creating a friendly environment for foreign investors, but the factor of terrorism is discouraging foreign investors. Apparently terrorism is likely to be the most important factor disrupting FDI led economic growth in Pakistan. According to Shahzad et al (2016), an increase in terrorist activities creates uncertainty and instability in economic and political accomplishments. As a result, foreign investors fear that their investments and profits might run the risk of loss which discourages them to invest. The worst form of terrorism has been observed in Pakistan where terrorist activities are being carried out due to religious differences and dogmatic beliefs. Religious sectarianism or extremism is a manifestation of prejudice and hatred amongst people believing in different religions as well as people belonging to different sects in the same religion, for example, differences between Muslims and Jews and Shia-Sunni conflicts. In case of Pakistan, as stated by Fair (2015), the internal war based on terrorist activities has claimed more lives than the wars fought at borders and all these clashes are based on religious sectarianism.

The incident of 9/11 resulted in reshaping the global scenario, and the differences between North and South increased. The most disastrous consequences were faced by developing countries and this trend is still going on. Out of developing countries, Muslim countries faced the worst consequences since the incident of 9/11 was attributed to Muslims and a wave of prejudice and hatred got spread against them, particularly in the West. Afghanistan got devastated with more than one million people dead. The Middle Eastern countries like Iraq, Libya, Syria, and Yemen etc. got worst hit and the spillover effects are still continuing in the form of destroyed economies, death of millions while millions got disabled, besides getting displaced. Although sectarian violence was already a part of Pakistan's socio-political-economic system but religious differences increased manifold after 9/11 incident. US started a war on terror against Muslim countries and Asia got hit in an unexpected worst way. This resulted in a reaction and many groups in Muslim countries turned to militancy and they fought back. Different groups came on surface based on ideologies; some had extreme reaction which led to suicide bombing with the belief that such an act would surely land the suicide bomber in heaven. Groups with opposing ideologies emerged who did not believe in killing and terror which led to armed conflicts among Muslim sects. While there are numerous other factors like energy crises, underdeveloped infrastructure and poor governance etc. but sectarian terrorism is the main stumbling block which is adversely affecting the entire socio-political-economic structure of Pakistan and is having a deep impact on its international relations for the last more than one decade. This study tests two way causation; in the first model, variable of FDI inflows has been treated as a dependent variable with economic growth and terrorism as independent variables. In the second model economic growth plays the role of a dependent variable and FDI inflows along-with terrorism work as independent variables. The rationale behind estimating two-way causality is to check the impact of sectarian terrorism on relationship between FDI inflows and growth rate. The next section gives a brief review of the literature (since this study uses sectarianism as a measure of terrorism in Pakistan, not much literature is available specifically talking about sectarianism as terrorism). The third section explains the empirical analysis and methodology in detail. The last

section discusses the empirical results, summary of findings along-with conclusion and policy recommendations.

2. Literature Review

This section of literature review concentrates on the relationship between FDI inflows and economic growth of Pakistan. Since Pakistan is a developing economy and for developing countries, high economic growth rate is very important to enter the comity of developed countries. Same point has been emphasized by Chenery and Shout (1966) and according to them the present focus of all developing countries is towards getting a high growth rate of economic and social indicators. To achieve this goal, foreign assistance is playing the most important role which is leading towards an increase in economic growth. Iqbal and Zahid (1998) conducted an empirical study to analyze the effects of some important macroeconomic variables on Pakistan's economic growth. The authors state that Pakistan has been facing a downward trend in economic growth mainly because of unstable political and economic conditions which include increase in foreign debt, low demand of Pakistani products in international markets, poor law and order situation as well as low level of physical and human capital. The empirical results suggested that openness of Pakistan's economy promoted growth. Also government should provide education in order to increase human capital. There are many determinants of economic growth in Pakistan but out of all these, FDI inflows have proved to be the most important determinant amongst others. Therefore many studies have empirically tested the relationship between FDI inflows and growth rate in Pakistan. Malik (2015) carried out an empirical study to examine the impact of FDI inflows on economic growth of Pakistan over the time period of 2008-2013 and found that FDI is not the only factor leading to high economic growth but trade liberalization and domestic capital also have a positive impact on growth rate. The author also recommended that government must take steps to increase both foreign and domestic investment and should provide protection to domestic industries so that total output increases which will lead to a higher economic growth in Pakistan. Atique et al (2004) conducted an empirical study by using secondary data of Pakistan covering time period of 1970-2001 and concluded that FDI inflows have a positive impact on economic growth of Pakistan. Another empirical study carried out by Gudaro et al (2010) analyzed the impact of FDI inflows on growth rate of Pakistan by using multiple regression model for the data of Pakistan covering time period of 1981-2010. They found that an increase in FDI inflows lead to a higher growth rate and thus government must concentrate on policies to create a friendly environment which could attract foreign investors. Zafar et al (2016) empirically tested the impact of FDI flows and trade openness on growth rate of Pakistan by using time series data for the years of 1994-2014. After applying Johansen Cointegration test and ECM (error correction model), they found that FDI has a positive and significant impact on growth rate. The authors add that factors like political stability and improvement in macro level variables can make this relationship stronger over a long time period. Regarding trade openness, although it is significant but with a negative sign because Pakistan being a developing country, is presently unable to compete with foreign products and thus domestic products and industries are facing loses both in national and international markets. They suggested that better policies of trade openness can result in a positive impact on growth rate. Ghazali (2010) is of the view that FDI inflows have strong impact on economic activities of Pakistan and they play a significant role in increasing exports and economic growth rate of the country. The author conducted an empirical analysis to test the causal relationship between FDI inflows, domestic investment and economic growth of Pakistan covering a period of 1981-2008. The Cointegration analysis reveals that FDI leads to an increase in domestic investment which results in higher economic growth rate and this relationship runs both ways. Javaid (2016) conducted an empirical analysis to investigate the relationship between FDI inflows and growth rate of Pakistan by using time series data ranging from 1966 to 2014. After applying ARDL-ECM technique, the results indicated that FDI inflows have a significant and positive impact on growth rate in Pakistan both in short and long run.

2.1 Terrorism, FDI Inflows and Growth Rate

Terrorism not only affects the functioning of an economy but it also generates adverse effects on socio-political environment and international relations of a country. According to Shah (2014), terrorism originating from religious sectarianism, particularly between Sunnis and Shias, the age old two sects of Muslims, has given birth to suicide attacks on the worshippers in their respective places of worship. Moreover, the target killing of religious leaders of either sects has gravely affected the security of Pakistan since the last few decades. Naturally it had its adverse effects on the FDI related economic growth. Khan (2016) states that invasion of Afghanistan by Soviet Russia in 1979 brought Saudi Arabia, in addition to US, to the region, which resulted in the growth of Sunni sect, ultimately leading to the rise of Taliban, and overthrow of Monarchy in Iran through revolution in the same year which brought Shia sect in the lime light. The sectarian divide between the Shia and Sunni sects in Pakistan, supported respectively by Iran and Saudi Arabia, has ignited sectarian terrorism to the extent that this sectarian conflict is posing danger to the stability of Pakistan, despite the fact that followers of both the sects have lived in peace and harmony in this region for centuries. The author goes to the extent that the present conflict in different countries of the Middle East like Yemen, Iraq, Syria and rise of ISIS is the direct result of

the conflict between Saudi Arabia and Iran. Due to this conflict of religious sectarianism, the goal of economic growth could not be achieved which resulted in extreme poverty. Abbas (2010) is of the view that religious sectarianism in Pakistan has taken a dangerous turn and it has now posed a great threat to both internal and external peace. The author suggested that political and military leaders must promote sectarian harmony which is a pre-requisite for peace in South Asia. According to Zaman (1998), Pakistan being an Islamic State in accordance with its Constitution, has to tackle the sectarian conflict between Shias (about 20 percent of the population) and Sunnis (about 80 percent of population) for its smooth sailing as a State since it is part and parcel of its socio-politico-economic life. Abbasi (2013) states that Pakistan has paid a heavy price as a "Frontline State" in this global war on terrorism led by US and NATO forces in the form of loss of more than 52000 human lives including civilians and men in uniform between the time span of 2002-2013. In addition, it has also paid and is still paying a direct cost in terms of shock to economic activities, investment inflow, flight of capital and shaken market confidence. It has escalated instability, insecurity and political violence in the country. Militant organizations successfully established close nexus with criminal networks which resulted in an increase in the crime rate across Pakistan in the form of sectarian violence, target killing and other forms of terrorism. Due to geographical proximity to Afghanistan, which was the theater of war on terrorism, Pakistan had to suffer not only huge losses in the form of human lives but also the massive damage to its infrastructure. According to Clarke (2011), in case of Pakistan, religion has entered into politics resulting in extremism and sectarianism. In political arena, Islamist parties receive more support from middle and lower classes as compared to high income entrepreneurs. This is intensifying sectarian conflict, leading to violence especially in the most crowded city of Pakistan i.e., Karachi, which is also an economic hub in the sense that it is the largest city with seaport having a huge industrial set up. All this is having a negative influence on economic growth as the determinants of economic growth particularly FDI inflows are being negatively affected. Shehbaz et al (2013) mention that Pakistan receives a huge amount of FDI inflows which affect economic growth but lately terrorism is negatively affecting this relationship. Authors add that terrorism directly causes the loss of human and capital resources resulting in a negative impact on three main actors of economy i.e. consumer, producer and chiefly the investor. This hurts investor's confidence and low FDI inflows act as a shock on economic growth.

Haider and Anwar (2014) conducted a time series regression analysis on Pakistan's data covering the time period of July 2001 to November 2011. They applied the econometric technique of ARMAX to examine the impacts of terrorism on FDI inflows to Pakistan. Their study found that terrorist violence reduces FDI inflows and exerts negative effects on Pakistan's economy leading to reduction in growth indicators. Rasheed and Tahir (2012) used the empirical technique of Granger Causality test on Pakistan's data ranging 2003 till 5th June 2011 and concluded that an increase in terrorist activities leads to reduction in FDI inflows. The authors state that because of terrorism, FDI decreases since investors lose their confidence and fear that their investment might suffer losses. This has spillover effects on economic growth. Authors also claim that after analyzing the results of their study, this relation does not only exist for Pakistan but any country would face same consequences as a result of terrorist activities/terrorism.

Ali et al (2015), carried out an empirical study to investigate the impact of terrorism on FDI inflows in Pakistan. According to their study, terrorism can affect economy in various ways which include damage of human and physical capital, increasing the factors of risk and uncertainty, diversion of resources from productive activities towards defense expenditures, counter terrorism and bringing harm to industrial sector specially tourism industry. All these consequences disrupt socio-economic conditions leading to low economic growth. After applying the econometric technique of autoregressive distributive lag model using data of Pakistan from 1989-2014, the results confirm that terrorism negatively affects FDI inflows in Pakistan.

Rauf et al (2016) explain the importance of FDI inflows towards developing countries; it reduces saving-investment gap, brings new technology and technical know-how, creates jobs and reduces unemployment. They conducted an empirical study to measure the impact of terrorism and political stability on FDI inflows in Pakistan. After applying OLS method on secondary annual data of Pakistan from 1970-2013, their empirical findings suggest that GDP (measure of economic growth), trade openness and political stability have positive and significant impact on FDI whereas terrorism has a negative influence on FDI inflows and growth. They used the data of number of bomb blasts in Pakistan to measure terrorist activity (including all motives behind bomb blasts; religious, political, social, others).

According to Farooq and Shehzad (2016), terrorism is a means of imposing your ideas (terrorist) on others to achieve their goals. There are many reasons for terrorism like social and economic factors, political issues, religious differences and extremism. They add that although there are many determinants of growth in Pakistan but FDI inflows are the most important source of growth rate. They carried out an empirical analysis by using OLS method on data of Pakistan from 1973-2013 and found that FDI inflows have a positive and significant impact on growth rate whereas terrorism is adversely affecting the economy. Moreover, it is discouraging FDI inflows therefore government must adopt such policies which could curb terrorism and increase FDI inflows in the country.

Zeb et al (2013) conducted an empirical study to test the relationship between FDI inflows and economic growth of Pakistan. For this purpose, they took three variables; trade openness, political instability and terrorist attack. After applying OLS model using time series data of Pakistan from 1972 – 2012, they found that FDI inflows positively affect growth rate but due to defense expenditures, FDI is not proving fruitful to the required level. Therefore, government must give attention to policy measures for reducing all kinds of terrorist attacks.

Ali and Gang (2016), have conducted a study by giving a complete analysis of current issues of Pakistan and their relationship with economic growth. According to this study, terrorism and bad security conditions have been hindering the relationship between FDI and economic growth of Pakistan. A favorable investment environment is necessary for attracting FDI inflows which could lead to an improvement in economic growth but in case of Pakistan, factors like poor law and order condition, energy crises, corruption, political instability and most importantly security conditions play a negative role. The authors claim that now environment is improving and FDI inflows are increasing leading to higher economic growth and CPEC is the latest evidence that Pakistan is moving towards better policy measures which are creating favorable environment for foreign investment and major credit goes to Operation Zarb-e-Azab (army operation) for fighting against terrorism.

A similar conclusion has been drawn by Shehzad et al (2016), who conducted an empirical study to find out a relationship between FDI, terrorism and economic growth in Pakistan analyzing the situation and data of pre 9/11 and post 9/11 incident. The results suggested that terrorism has negatively affected FDI inflows and economic growth post 9/11 which shows that government should take steps for controlling terrorist activities. The authors advocated that although government has launched a big military operation, yet more measures are required specially for handling the root causes of terrorism like poverty, illiteracy, unemployment, sectarianism and ethnicity etc.

3. Empirical Analysis

This study uses time series data (secondary) of Pakistan for the period of 1989 – 2016. Range of data is restricted to availability. Data for GDP and FDI inflows has been retrieved from World Development Indicators (WDI) and data for Sectarian violence has been taken from South Asia Terrorism Portal (SATP). In addition, GDP (Economic growth) is in current US dollars, FDI inflows is in BoP current US dollars. And Sectarian violence or sectarian terrorism (ST) is taken as number of incidents.

The Models (statistical representation)

Both time series models are static model, generally

$$Y_t = \beta_0 + \beta_1 Z_t + \mu_t, t = 1, 2, 3, \dots, n \quad (1)$$

Where Y_t and Z_t are dated contemporaneously

μ_t is disturbance term, $\Delta \mu_t = 0$

Δ Represents change overtime. For this purpose, ADF unit root test has been applied. Said and Dickey (1984) state that since time series data is marked with the presence of unit root i.e. series is not stationary. Series can be made stationary by taking differences (1st, 2nd etc.) and this is possible through unit root tests. Granger (1986) explains the importance of unit root tests with the help of an example that if a single series appears to be 'stationary', then it means that it possesses "linear properties" and such series are called $I(0)$ denoting 'integrated of order zero'. If a time series is not stationary and needs to be differenced to achieve the properties of linearity, then it will be integrated of order one denoted by $I(1)$. To continue further testing, all series must have same order of integration. To be stationary, a series must fluctuate around its mean value.

Cointegration tests can only be applied if all series have same order of integration.

In addition, this study uses log-linear model (each variable is converted into logarithms of original values) since time series data work better when converted into logarithms. Mayr and Ulbricht (2007) state that the classical econometrics approaches provide better results if data is transformed into logarithms especially in case of time series to overcome the detrimental effects of heteroscedasticity and skewness in the level data on estimating and testing. As the present study is also based on time series data, therefore all variables are used in their log forms.

The converted equation becomes:-

$$\log Y_t = \beta_0 + \beta_1 \log Z_t + \mu_t \quad (2)$$

All tests have been applied using EViews 9

Equation for first model

Hypothesis: FDI inflows have a positive relation with economic growth and a negative relation with sectarian terrorism.

$FDI = f(GDP, ST)$

$FDI = \beta_0 + \beta_1 (GDP) + \beta_2 (ST) + \mu_t$ where μ_t is a random error term

In the first model FDI is dependent variable whereas GDP and ST are independent variables.

Equation for second model

Hypothesis: Economic growth has a positive relation with FDI inflows and a negative relation with sectarian terrorism.

$$GDP = (FDI, ST)$$

$$GDP = \beta_0 + \beta_1 (FDI) + \beta_2 (ST) + \mu_t \quad \text{where } \mu_t \text{ is a random error term}$$

In second model GDP is a dependent variable whereas FDI and ST are independent variables. The **purpose** of having two models is to determine a two-way causation between FDI and growth which is being affected by sectarian terrorism.

3.1 Unit Root Tests

Table 1 shows Augmented Dickey Fuller (ADF) unit root test- statistics. All series are tested on the basis of two main components; (i) trend and intercept, (ii) intercept.

Table 1 ADF test statistic (t-values)

VARRIBALES COMPONENTS OF EQUATION	AT LEVEL		AT FIRST DIFFERENCE		ORDER OF INTERGRATION
	TREND AND INTERCEPT	INTERCEPT	TREND AND INTERCEPT	INTERCEPT	
LFDI	-1.601	-1.726	-4.311***	-4.319***	I(1)
LGDP	-1.760	0.645*	-4.669***	-4.707***	I(1)
LST	-3.948**	-3.456**	-7.001***	-7.160***	I(1)

Source: Author's estimation based on EViews output

*Significant at 10% level of significance **Significant at 5% level of significance *** Significant at 1% level of significance

All series are integrated of order (1) which allows for application of Johansen Cointegration test.

3.2 Johansen Cointegration Test

Table 2 Trace Test and Maximum Eigen Value Test (Results) --Model-1

Sample (adjusted): 1992 2016 Included observations: 25 after adjustments Trend assumption: Linear deterministic trend Series: LFDI LGDP Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.493412	17.79463	15.49471	0.0221
At most 1	0.031230	0.793198	3.841466	0.3731
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.493412	17.00144	14.26460	0.0180
At most 1	0.031230	0.793198	3.841466	0.3731

Max-eigenvalue test indicates **1 cointegrating eqn(s)** at the 0.05 level
 * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

Source: Author's estimation based on EViews output

Table 3 Trace Test and Maximum Eigen Value Test (Results) --Model-2

Sample (adjusted): 1992 2016 Included observations: 25 after adjustments Trend assumption: Linear deterministic trend Series: LFDI LGDP LST Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.656177	43.16698	29.79707	0.0008
At most 1 *	0.448725	16.47626	15.49471	0.0355
At most 2	0.061552	1.588207	3.841466	0.2076
Trace test indicates 2 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.656177	26.69072	21.13162	0.0074
At most 1 *	0.448725	14.88805	14.26460	0.0398
At most 2	0.061552	1.588207	3.841466	0.2076
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				

Source: Author's estimation based on EViews output

Johansen Cointegration test has been applied twice to check if the results give a second Cointegration. Table 2 indicates that both trace test and maximum Eigen values test statistics have one Cointegrating equation. Moreover it is applied using only LFDI and LGDP. In second case, as shown in table 3, all three variables (LFDI, LGDP, and LST) are taken and results show that there are two Cointegrating equations. In both cases, results indicate that there exists long-run Cointegration between variables. Since there is an evidence of one or more Cointegrating vector in long run, vector error correction model (VECM) is applied to adjust for short run adjustments and variations. Later system equation model is applied to find the speed of adjustment of both dependent variables towards equilibrium.

3.3 Vector error correction (VECM) and system equation models

Table 4 Vector Error Correction Estimates for Model-1

Vector Error Correction Estimates			
Sample (adjusted): 1992 2016			
Included observations: 25 after adjustments			
Standard errors in () & t-statistics in []			
Cointegrating Eq:	CointEq1	CointEq2	
LFDI(-1)	1.000000	0.000000	
LGDP(-1)	0.000000	1.000000	
LST(-1)	1.234954 (0.35920) [3.43804]	4.280324 (0.94226) [4.54262]	
C	-26.20168	-44.47661	
Error Correction:	D(LFDI)	D(LGDP)	D(LST)
CointEq1	-0.409240 (0.11408) [-3.58739]	0.034459 (0.02089) [1.64948]	-0.098904 (0.22082) [-0.44789]
CointEq2	0.007161 (0.05513) [0.12988]	-0.020542 (0.01010) [-2.03455]	-0.158062 (0.10673) [-1.48101]

D represents differences (short run)

Source: Author's estimation based on EViews output

Table 5 System Equation for Model-1

Estimation Method: Least Squares				
Dependent Variable: D(LFDI)				
Sample (adjusted): 1992 2016				
Included observations: 25 after adjustments				
EQUATION: D(LFDI) = C(1)*(LFDI(-1) + 1.23495448622*LST(-1) - 26.2016838894)				
+ C(2)*(LGDP(-1) + 4.28032393629*LST(-1) - 44.4766101224) + C(3)*D(LFDI(-1)) +				
C(4)*D(LFDI(-2)) + C(5)*D(LGDP(-1)) + C(6)*D(LGDP(-2)) + C(7)*D(LST(-1)) +				
C(8)*D(LST(-2)) + C(9)				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.409240	0.114078	-3.587390	0.0025**
C(2)	0.007161	0.055135	0.129880	0.8983
C(3)	-0.008352	0.196424	-0.042522	0.9666
C(4)	0.048690	0.185463	0.262532	0.7963
C(5)	0.789847	1.359557	0.580959	0.5694
C(6)	1.950521	1.497907	1.302164	0.2113
C(7)	0.450174	0.173019	2.601870	0.0193*
C(8)	0.213332	0.143511	1.486518	0.1566
C(9)	-0.113688	0.157879	-0.720094	0.4819

Source: Author's estimation based on EViews output

*Significant at 10% level of significance **Significant at 5% level of significance *** Significant at 1% level of significance

Table 6 Vector Error Correction Estimates for Model-2

Vector Error Correction Estimates			
Sample (adjusted): 1992 2016			
Included observations: 25 after adjustments			
Standard errors in () & t-statistics in []			
Cointegrating Eq:	CointEq1	CointEq2	
LGDP(-1)	1.000000	0.000000	
LFDI(-1)	0.000000	1.000000	
	4.280324 (0.94226)	1.234954 (0.35920)	
LST(-1)	[4.54262]	[3.43804]	
C	-44.47661	-26.20168	
Error Correction:	D(LGDP)	D(LFDI)	D(LST)
	-0.020542 (0.01010)	0.007161 (0.05513)	-0.158062 (0.10673)
CointEq1	[-2.03455]	[0.12988]	[-1.48101]
	0.034459 (0.02089)	-0.409240 (0.11408)	-0.098904 (0.22082)
CointEq2	[1.64948]	[-3.58739]	[-0.44789]

D represents differences (short run)

Source: Author's estimation based on EViews output

Table 7 System Equation for Model-2

Estimation Method: Least Squares				
Dependent Variable: D(LGDP)				
Sample (adjusted): 1992 2016				
Included observations: 25 after adjustments				
$D(LGDP) = C(1) * (LGDP(-1) + 4.28032393629 * LST(-1) - 44.4766101224) + C(2) * (LFDI(-1) + 1.23495448622 * LST(-1) - 26.2016838894) + C(3) * D(LGDP(-1)) + C(4) * D(LGDP(-2)) + C(5) * D(LFDI(-1)) + C(6) * D(LFDI(-2)) + C(7) * D(LST(-1)) + C(8) * D(LST(-2)) + C(9)$				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.020542	0.010097	-2.034547	0.0588*
C(2)	0.034459	0.020891	1.649475	0.1185
C(3)	-0.092226	0.248973	-0.370424	0.7159
C(4)	-0.602770	0.274309	-2.197409	0.0431*
C(5)	0.054365	0.035971	1.511378	0.1502
C(6)	0.000501	0.033963	0.014743	0.9884
C(7)	0.045745	0.031685	1.443763	0.1681
C(8)	-0.013392	0.026281	-0.509578	0.6173
C(9)	0.125540	0.028912	4.342129	0.0005**

Source: Author's estimation based on EViews output

*Significant at 10% level of significance **Significant at 5% level of significance *** Significant at 1% level of significance

- C(1) = Speed of adjustment towards long-run equilibrium
- C(1) is coefficient of dependent variable.

The coefficient of C(1) must be negative and significant to ensure that there is both long run and short run causality running from dependent variable to independent variables.

C(1) is negative and significant for Model-1 at 5 percent

C(1) is negative and significant for model-2 at 10 percent

NOTES

1. Economy of Pakistan has continued the growth momentum as the GDP growth reached to 5.28 percent in 2016-17 against the growth of 4.5 percent registered last year. The economic growth in outgoing fiscal year is highest in the last decade, which is an indicator that there is a strong turn around in economic activities of

the country. Refer, Economic Survey of Pakistan 2016-17 (Growth and Investment), Ministry of Finance Government of Pakistan.

2. Pakistan with the help of World Bank has implemented reforms under 'Doing Business Reform Strategy 2016'. The reforms include regulatory changes, improving technology of implementing agencies for reduction in time and simplification of procedures involved in making business operational. Refer, Economic Survey of Pakistan 2016-17 (Growth and Investment), Ministry of Finance Government of Pakistan.

4. Conclusion and Recommendations

In this study time series data of Pakistan covering a period of 1989 – 2016 has been used for conducting an empirical analysis to determine the relationship between FDI inflows and economic growth in the light of sectarian terrorism. In the first model, the variable of FDI inflows has been taken as a dependent variable along-with economic growth and terrorism as independent variables. In the second model, economic growth has been taken as a dependent variable whereas FDI inflows and terrorism act as independent variables. As every time series data requires a unit root test, ADF test has been applied to check the stationarity status of variables included in dataset which shows that all series are integrated of order 1. Later Johansen Cointegration test has been applied twice. In the first test LFDI and LGDP have been tested and in second test, all three series (LFDI, LGDP and LST) have been used. After establishing a long run Cointegration, VECM has been applied to check short run variation. For further clarity, system equation model is used to find the speed of adjustment towards equilibrium. The results suggest that FDI inflows lead to an increase in economic growth (measured by GDP) of Pakistan but this relationship is being negatively affected by terrorism, particularly religious terrorism or sectarianism.

This study has viewed terrorism in Pakistan from a different angle taking sectarian violence as the measure for terrorism, and has empirically analyzed the relationship between FDI inflows and economic growth. Though presently terrorist activities have been controlled in Pakistan after the Military Operation of Zarb-e-Azab and this is also evident from CPEC (China Pakistan Economic Corridor) which is one of the biggest investment in Pakistan carried out by China, yet more measures are required to control terrorist activities being conducted in the name of religion. Islam is a religion of peace, tolerance and enjoins its believers to respect life, honor and property of everyone irrespective of religious beliefs. Unfortunately, majority amongst the extremist groups have dubbed Islam for preaching terrorism against non-Muslims while the disgruntled elements amongst the Muslim sects have declared violence, including killing of non-Muslims as well as the believers belonging to opposite sects as virtuous deeds leading to heaven. Both are patently wrong. Therefore it is suggested that Muslims and non-Muslims must have an interfaith dialogue at global level to develop mutual understanding and tolerance for each other. Not only this, Muslim countries have to make concerted efforts to develop a consensus code of conduct in the light of fundamental teachings of Islam so that different sects amongst Muslims develop not only tolerance but brotherly feelings for each other. This multiple dialogue with complete sincerity and honesty is the only way out to develop tolerance and mutual respect not only amongst Muslims and non-Muslims but also amongst believers of different sects of Muslims which would definitely make this world a peaceful abode for all the human beings.

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