

## **RELATIONSHIP BETWEEN TERRORISM AND ECONOMIC GROWTH: EVIDENCE FROM PAKISTAN**

**Afia Batool<sup>1</sup>, Prof.Dr.Abdul Ghafoor Awan<sup>2</sup>**

**ABSTRACT**-The aim of this research paper is to examine the effects of terrorism on economic growth of Pakistan during 2000-2014 period. In this respect, we used a time series data and ARDL model to analyze the number of terrorist events in the Pakistan. GDP growth rate was dependent variable and number of terrorist attacks and persons killed were independent variables. The result of the study shows that terrorist attacks have negative relationship with economic growth. We find that one percent increase in terrorist incidents caused reducing the GDP growth by 0.34 percent. We conclude that terrorism has brought significantly effect on Pakistan's our economy and we suggest that Pakistan needs peace and harmony for economic growth.

**KEY WORDS**; Terrorism, Economic Growth, ARDL model, GDP Growth Rate.

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1.M.Phil Scholar, Department of Economics, Institute of Southern Punjab, Multan.

2.Dean, Faculty of Management and Social Sciences, Institute of Southern Punjab.

[ghafoor&0@yahoo.com](mailto:ghafoor&0@yahoo.com). Cell # +0923136015051.

## **1.INTRODUCTION**

Today terrorism is the big problem for the whole world particularly for Pakistan of which economy has been suffered badly since 2001 when the United States has initiated war against terrorism in Afghanistan and sought help from Pakistan to eliminate terrorism. Terrorism is derived from the English word “terror” which is an adopted from a Latin word “Terrere” which means is “To frighten”. Terrorism itself a word that can make a specific reaction within a lot of people based on the ways that have been raised to view terrorism. We have a tendency to over react to terrorism by thinking that the terrorism causes so much casualties as well as death, despite the fact that it is actually a war against terrorism that can brings death and we must think of it as small-scale war instead. After the terrorist attacks in the United States in September 2001, we have a tendency to label it as the acts of violence in the country and the reason is that the United States believes that these attacks are on its foreign military forces within the country and military forces. So as a matter of fact, we tend to go to extremes the term “terrorism” and we categorize any act of violence against our allies or us an act of terror. The fear makes distinct between war and terrorism. If an act provokes fear among the people, it is more likely to fall under terrorism, and might lead to be labeled as terrorism. (Hawthorne 2012)

Before the 9/11 incident, there were almost no terrorists attacks in Pakistan. However, the law and order situated in Karachi in 1990 became worse and the whole city was handed over to the Army to establish the writ of Government. Although, after massive military operations by Pakistani army, the law and order situation was brought under control and a large number of illegal weapons and ammunition was recovered but a clean sweep was not possible.

After the incident of 9/11, the US declared a war against terrorism, specifically targeted the Al Qaeda and the Taliban. Then US Secretary of State Mr. Colin Powell, threatened to then President of Pakistan, General Pervez Musharraf, on telephone "You are either with us or against us", .In response, Pakistan joined this war on behalf of the United States and become main victim of terrorism since long. It was considered an appropriate option to fight terrorism together with US. Pakistan became the front line state to join US war once again after the cold war. Although Pakistan's government faced heavy resistance from its public on the issue of joining war but then President Gen Musharraf decided to side with United States.

The Pro-Taliban element in Pakistan did not support the decision and in retaliation began terrorist activities to show their anger to the government. It was also observed that after Taliban coming into power in Afghanistan; Pakistan's writ weakened in its tribal region. The majority of the tribal people along with Taliban were fighting against NATO forces. Now, the situation was much control than in the past, Pakistan's support to the US in the war on terror was taken seriously by tribal people due to their security concerns and close relations with the Taliban.

Al Qaeda, the Taliban and tribal lords propelled a crusade against the United States and rouse youth of Afghanistan and tribal territories to go along with them in their battle against the US and its partners. Indeed, even genuine endeavors were made to kill the President Musharraf twice through suicide attacks but he was saved. At last, Pakistan sent its military in tribal territories to establish the writ of government and to check the psychological oppressor systems.

Awan and Yaseen (2017) disclosed that more than 52,000 people including personnel of law enforcement agencies, and civilians were killed in terrorist attacks during 2002-2013. After the terrorism, there are now high national security challenges

for every country and terrorism has exacted an extremely high cost on the economy of the country both in terms of direct costs and the investment in flow. This war against terrorism in Pakistan is very long and has dreadful effects on social life. In order to expedite terrorists activities, militant groups have established close nexus with criminal networks, which has resulted in increase in crime rate all over the country. Now the new tools of the terrorists are target killing and sectarian violence. The psychosomatic impact of terrorism on the people of the Pakistan is the most underestimated effect even though it has the dreadful consequences for them. Since the event of September 11, 2001, the whole world is under threat of war from a number of terrorist organizations. As the India and Afghanistan are the hostile neighbors to Pakistan, and it has diverse ethnicity and culture, geo-political importance, economic, religious, social institutions and weak political parties and this Pakistan is most affected by terrorism.

Awan and Yaseen (2017) disclosed that during the period of 2003 to 2011 more than 33,000 casualties as well as fatalities have been occurred. It is estimated that war on terror of Pakistan caused a collective loss of nearby \$68 Billion (Pakistan Economic Survey, 2010-11).

## **2.Research Problem**

Our main research problem is to analyze “Economic Effects of War against Terrorism on Pakistan`s Economy during 2000-2014.”

### **Hypothesis**

#### **Null Hypothesis**

There is no effect of terrorism on economic growth

#### **Alternative Hypothesis**

There is strongly effect of terrorism on economic growth

### **3.Review of pervious study**

Rahman (2006) defined terrorism as an act of violence that creates disaster through the loss of human lives and their properties. The terrorism destroy the law and order situation and to discourage the attacking armies from combining their position. The terrorism can also be used to gain the attention of public with a view to appreciating certain political ends or objectives. The current decade has witnessed severe waves of this kind of terrorism from all over the world. Nevertheless, the continent of Asia has suffered more as compared to rest of the world and it seems the Asia cannot stop the devastating activities carried out by miscreants. If these activities are not managed to stop soon then these terrorists will take the whole world into its fold wherefrom there will be no point of return.

Looney R. (2004) described the causes of terrorism. He discussed various theories of terrorism. He suggests that failed economic take-offs, in addition to the usual factors argued, are an important element. His finding has a number of implications for Pakistan's economic reform programs. The foreign aid programs to the country will have to be modified if their effectiveness in reducing the attractiveness of terrorism is to be increased.

Awan (2014) argued that centuries, various acts of terrorism have been carried out in different parts of the world by different groups for a variety of purposes. Sometimes a communist organization, sometimes an advocate group, and sometimes having the shapes and individual factions assume responsibility of these acts. The nature of terrorism changes with changing world conditions and increases its impact and power with the new means made possible by developing technology. Terrorism is the suffering of pain of crimes. The universal revulsion at the events of September 2001, the "War on Terror" has make many folds the global threat of terrorism. It was

very unlucky for government of U.S. that they were unable to use the best opportunity that they had in the immediate aftermath of the removal of the Taliban Government in late 2001. It might be possible at that time to bring a broad-based Afghan government. It continued its military actions and brought criminal people into power in Kabul. Before the West attacked Afghanistan, Pakistan had no Talibanisation, no suicide bombers and no jihad but there is now a general recognition that the war against them in Afghanistan cannot be won in a military way. All the Taliban have to do to win is not to lose.

Arif (2001) presented some glimpses to show the effects of relations between US and Pakistan on strategic basis. There were many driving forces behind inclusion of Pakistan into US-sponsored alliances, the Central Treaty Organization (CENTO) (1955) and Southeast Asian Treaty Organization (SEATO) (1954). Ayub Khan (1958-1969) evolved pro-US foreign policy and joined these military treaties. The author contend that Pakistan is paying heavily in return for military aid as well as the economic aid from the United States. The role of US during India-Pakistan the successive wars in 1948, 1965 and 1971 has been examined. While taking into account the US-Pakistan relations during Zia regime, it was “seemingly friendly but internally bruised and uneasy”.

Rizvi (2003) explored the role of military in Pakistan with particular reference to the role of top brass of the army in seeking alignment of Pakistan with the US during 1953 and 1954. The author described as to how the US economic support and military sales, the extensive support in the era of Soviet military presence in Afghanistan, support to the military dictator in 1980s boosted the martial law government's position in Pakistan's domestic politics. This rule accentuated religious-sectarian cleavages, the ethnic, linguistic that further divided and

fragmented the political forces. These cleavages and divisions made transition of Pakistan to democracy in the post-1988 period uncertain as well as difficult. The support from international for a military government, mostly from the US, paved the way for all sorts of ills. The relationship between Pakistan and US have played a vital role in the reinforcement of the military and in economic conditions of Pakistan. He also claimed that the asymmetrical advantages from both country relations are not because of the insincerity of the United States but due to the deficiency of continuity of common security interests. The author has confessed that apart from the Nixon's 'tilt' in 1971, Washington has never supported Pakistan against India and Pakistani leadership continuously has been blamed for the deficiency in honesty.

Murtaza Haider explored the adverse impacts of terrorism on the net Foreign Direct Investment (FDI) flows to Pakistan. Since 2003, terrorist violence has killed over 52,000 individuals in Pakistan. The unrelenting violence has substantially increased investment and security risks. This study uses time series data and econometrics model to develop theoretically and empirically sound estimates for the impact of terrorism on FDI flows.

### **3. RESEARCH METHODOLOGY**

#### **5.1 Data and sources**

Data is basically time series for the period of 2000 to 2014. It has been taken from different source such as world development indicators, IMF Statistics and also taken from different issues of the Economic Survey of Pakistan.

#### **5.2. Model specification**

We measure economic growth by GDP growth rate and it's our dependent variable. We measure the terrorism by the proxy of number of people killed in a year.

Other supporting variables are population, gross fixed capital formation and foreign direct investment.

$$Y_t = f(\text{POP}, \text{FDI}, \text{TR}, \text{GFCF})$$

Where,

$Y_t$  = GDP growth rate

POP = Population

FDI = Foreign Direct Investment

TR = Terrorism

GFCF = Gross Fixed Capital Formation

Now the model is specified below,

$$\text{GDP} = \beta_0 + \beta_1 \text{FDI} + \beta_2 \text{POP} + \beta_3 \text{TR} + \beta_4 \text{GFCF} + \mu_t$$

Based on suggested econometric techniques, we have the following short run and long run ARDL model,

$$\text{GDP}_t = \beta_0 + \sum_{p=1}^a \beta_{1p} \text{FDI}_{t-p} + \sum_{p=1}^a \beta_{2p} \text{POP}_{t-p} + \sum_{p=1}^a \beta_{3p} \text{GFCF}_{t-p} + \sum_{p=1}^a \beta_{4p} \text{TR}_{t-p} + \beta_5 (\text{GDP})_{t-p} + \beta_6 (\text{FDI})_{t-p} + \beta_7 (\text{POP})_{t-p} + \beta_8 (\text{GFCF})_{t-p} + \beta_9 (\text{TR})_{t-p} + \mu_t$$

The above model estimate the impact of terrorism on economic growth. The equation coefficients  $\beta_1$  to  $\beta_4$  shows the short run effect and the coefficient  $\beta_5$  to  $\beta_9$  shows long run effect.



## 6. FINDINGS AND RESULTS

### 6.1 Descriptive Analysis

**Table 1 Statistical Analysis**

	FDI	GDP	GFCF	POP	TR
Mean	2.817338	1.675590	2.206250	4207.429	9.097393
Median	3.136942	2.097908	2.150000	4083.719	8.975747
Maximum	9.350069	7.154882	3.100000	6057.857	10.07437
Minimum	-6.943941	-7.260946	1.600000	2616.096	8.653263
Std. Dev.	4.059763	3.570810	0.513120	908.6667	0.420380
Skewness	-0.724145	-0.803899	0.351117	0.121296	1.108440
Kurtosis	3.574763	3.823347	1.805565	2.516548	3.212123
Jarque-Bera	1.618596	2.175278	1.279872	0.195051	3.306368
Probability	0.445171	0.337011	0.527326	0.907079	0.191439
Sum	45.07740	26.80944	35.30000	67318.86	145.5583
Sum Sq. Dev.	247.2251	191.2603	3.949375	12385128	2.650784
Observations	16	16	16	16	16

Source; Author's calculation based on E.views 9.0.

Table 1 represents the statistical analysis of all variables which are used to estimation of the equation. The key point of this study is impact of terrorism on economic growth.

## 6.2 Correlation Matrix

**Table 2 Correlation Matrix**

	GDP	GFCF	FDI	LE	POP	TR
GDP	1					
GFCF	0.48951	1				
FDI	-0.33026	-0.22279	1			
LE	-0.15108	-0.18744	0.258941	1		
POP	-0.37034	-0.23248	0.357287	0.866914	1	
TR	-0.02323	0.310853	0.307221	-0.46214	-0.42523	1

Source; Author's calculation based on E.views 9.0.

Table 2 shows the correlation among the variables which are selected in the study. Correlation matrix are showed the strength of relationship. Correlation matrix among the GDP (GDP), foreign direct investment(FDI), Gross Fixed Capital Formation (GFCF), population(POP), terrorism (TR) are shown in the above table 2.

## 6.3 Econometric Analysis

In this model, first we check the stationary of the variables which is checked by the following unit root test is given below

**Table 3 Augmented Ducky-Fuller Unit Root Test**

Level			First Difference		
Variables	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Conclusion
GFCF	-4.07820 0.0031	-0.42415 0.0188	-6.91623 0.0000	-6.80211 0.0000	I(0)
FDI	-2.5472 0.1155	-2.5545 0.3023	-6.7161 0.00000	-6.61800 0.0000	I(1)
TR	-2.54670 0.1151	-3.1643 0.1106	-7.6786 0.0000	-7.5498 0.0000	I(1)
GDP	-4.98726 0.0000	-4.37013 0.0000	-10.5159 0.00000	-8.73579 0.00000	I(0)
POP	-3.3636 0.0248	-6.0028 0.0002	-2.71128 0.0847	-4.32308 0.0127	I(0)

Source; Author's calculation based on E.views 9.0.

Table 3 shows the results Augmented Ducky-Fuller unit root test. The results shows that some variables are stationary at level such as GFCF,GDP,POP whereas FDI, TR are stationary at first difference.

**Table 4 Phillips-Perron Unit Root Test**

Level			First Difference		
Variables	Intercept	Intercept & Trend	Intercept	Intercept & Trend	Conclusion
GFCF	-5.6830 0.0001	-0.3283 0.0389	-7.97323 0.0000	-7.8038 0.0000	I(0)
FDI	-3.4379 0.2176	-3.4679 0.4022	-7.46788 0.00000	-8.5786 0.0000	I(1)
TR	-2.7930 0.1270	-2.5378 0.2106	-6.4790 0.0000	-8.7699 0.0000	I(1)
GDP	-5.8734 0.0008	-5.8343 0.0003	-9.8539 0.00001	-9.73579 0.00000	I(0)
POP	0.7636 0.9948	-1.1828 0.6404	-3.5165 0.0583	-3.5693 0.0045	I(1)

Table 4 shows the results Phillips-Peron unit root test. The results show that some variables are stationary at level such as gdp and gross fixed capital formation whereas the other variables as FDI, TR, POP are stationary at first difference.

#### **6.4 Bounds Test**

Before applying the ARDL technique to estimate first we check the long run relationship of the variables, by this we adopt the bounds test. Bound test elaborates that long run relationship in the model. It tells that if the f statistics value is greater than critical value than reject the null hypothesis and if f statistics value is less than

critical value than accept the null hypothesis. Table 4 shows that there have been long run relationship exit in the model.

Null Hypothesis: no long run relationship

Alternative Hypothesis: long run relationship exit.

**Table 5 Results of Bounds Test**

Test Statistic	Value	K
F-statistic	8.186910	5
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
1%	3.41	4.68

### 6.5 Estimation of econometric results

The main objective of this study is to find the relationship between terrorism and economic growth for the period of 2000 to 2014. To find the estimation of result, we used the ARDL model on the basis of unit root test. The long run result of ARDL is given on next page.

**Table 6 Dependent variable: GDP Growth rate**

Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GFCF	0.100957	0.032851	3.073176	0.0077
FDI	0.11209	0.054306	2.063466	0.0568
POP	0.445046	0.123458	3.604824	0.0026
TR	-0.34545	0.074015	-3.73433	0.0424
C	14.517697	8.436491	1.191552	0.0738

The goal of this study is the impact of terrorism on economic growth from period of 2000 to 2014 in the case study of Pakistan. The relationship between GDP and population have a positive and significant. The gross fixed capital formation and GDP have also positive and highly significant. Foreign Direct Investment has positive impact on GDP but it has significant effect on the economic growth. Terrorism has shown significant effect on economic growth but also shows the negative impact on the economic growth. The above results showed that one percent increase in terrorist incidents is resulting in reducing the GDP growth by 0.34 percent.

**Table 7 Vector Error Correction Model**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	0.686490	0.188932	3.633524	0.0077
D(GFCF)	0.106410	0.053916	1.973646	0.0659
D(FDI)	-0.075464	0.073026	-1.033389	0.3168
D(POP)	8.260073	2.574979	3.207822	0.0055
D(POP(-1))	-27.197635	10.637401	-2.556793	0.0211
D(TR)	-0.021216	0.165325	-0.064689	0.3424
ContEq(-1)	-0.852264	0.593110	-1.436940	0.0556

The table 7 shows short run estimation of the model. Cont Eq(-1) indicates that the speed of adjustment. It identifies that how variable quickly or slowly move towards its equilibrium path. However, the coefficient value of ContEq (-1) in above Table is -0.852264 which shows the convergence situation. It reveals that the adjustment in Pakistan will take place towards equilibrium in the long run with the speed of 85 percentage points.

## **7.CONCLUSION**

The objective of this study was to measure the impact of terrorism on economic growth for the period of 2000 to 2014 in the context of Pakistan. Our results show that the relationship between gdp and population have a positive and significant and these results are consistent with the results of Jandhlaya et al.2016, Akram 2012, Cervellati 2009). Our study reveals that one percent increase in terrorist incidents causes decrease GDP growth by 0.34 percent. In addition to that terrorist activities has brought substantial effect on FDI, reduction in international trade, loss of trade and business activities in Pakistan due to fear of terrorism. With this background it is

very clear that terrorism has significantly affected Pakistan economy and for a sustainable economic growth, Pakistan needs peace and harmony. So it is important that all sort of action must be taken to curb the terrorism. Another important implication that emerged from the present study is that over the years the economic aid that is being provided by the donor agencies, in the aftermath of the Pakistan participation in the wars against terrorism, has helped the country. Therefore, it is strongly recommended that at this critical juncture of country's history, international community may once again stand with Pakistan (not by word but with actions) to help the country by providing assistance in the shape of grants and debt rescheduling and access to the markets. Because underdevelopment and poverty, can provide fertile grounds to terrorists for new recruits.

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