THE RELATIONSHIP BETWEEN TERRORISM AND ECONOMIC GROWTH

[1]Muhammad Inamullah Qamar and [2]Shahid Rahid

ABSTRACT

The study has been conducted to evaluate the relationship between terrorism and tourism with economic growth (GDP), Foreign Direct Investment (FDI) and employment. The study has adopted time series technique for the time period of 2003 to 2019. The methodology has been based on two periods i.e. pre period 2003 to 2014 and post period 2014 to 2019. The study has taken terrorism and tourism as independent and economic growth (GDI), FDI and employment as dependent variable. The study has taken co-integration test for estimating the long run relationship among the series. Independent sample t-test has been used comparison of two sample time periods. The findings reveal that there is a long run relationship between terrorism, tourism and GDP and FDI while no relationship has been seen with employment. The findings further added that there is a significant difference of terrorism and tourism between pre and post time periods.

INTRODUCTION

As per the statement of GTI (Global Terrorism Index) 2018, the definition of terrorism is fraught of multiple complications. Therefore, the definition of this term is not straightforward. There is no specific and internationally accepted definition regarding terrorism and literature on terrorism which has typologies and definitions (GTI, 2018). Keeping the above statements, the description of terrorism is "the premeditated use of violence and threats by group of individuals and individual to get social and political goals with the help of large and extreme audience beyond that of the immediate victim" (Sandler and Enders, 2005).

The studies argued that the importance of terrorism has been popular among the researchers after 9/11 attack in 2011. After this attack, The Taliban government has been alleged by US for providing support and base for the attack. The NATO, US and his allies were then use full force to attack Taliban in Afghanistan. Being the neighbour country and having porous border with Afghanistan, Pakistan has been affected by this so called Global War on Terror (GWOT). The war on terror by US and allies then extended their operations to South Asia and Middle East and they conducted different intelligence based operations. In this war, the US and allies have destroy the structure of Libya and Iraq by using different statements but later on all the claims have been found false.

1.   *M.Phil Scholar, Abasyn University Peshawar*
2.   *Assistant Professor, Abasyn University Peshawar*

The global war on terror and terrorism not only affected the military structure but also damages the public infrastructure. The studies conducted on terrorism concluded that it does not affected the economy of any country i.e. the financial markets shows its consistent pattern when the US plan was hijacked by terrorists in 11 Sept 2011, London and Madrid train attacks in 2005 and 2004, in 2002 Bali suicide attacks in night club and series of bomb blasts in Pakistan (Tahir, 2012). The study continued that the terrorism affected the foreign direct investment to 910 $ million from 1.4 $ billion in 2008-09 and the poverty level has been shoot from 37.5 to 41.4 % in 2008 to 2009.

Studies conducted on terrorism argued that different incidents globally shows negative impact on the financial markets and some of the factors argued that the news of attacks also having negative effect on the business and stock markets. After 9/11 NYSE has been found indexes crush to ground, lowest turnover in S & P 500, and decline in the European markets after different attacks in Europe. These kinds of activities always having negative impact on the investor's sentiments and then the investors hesitate to invest in these markets which ultimately showed negative impact on the economy. Moreover, countries like Pakistan who has been involved for the war against terrorism for the last 17 years have seen huge variations in the economic growth. In the current study, the concept of terrorism has been explored and estimated its effect on the economic growth, employment and tourism. Majority of the previous studies have examined only single direction while the existing study explored two other factors i.e. tourism and employment.

Objectives

- To investigate the effect of terrorism on economic growth.
- To examine the relationship between tourism, economic growth.
- To find out the long run relationship between terrorism, , FDI and employment.
- To evaluate the relationship among tourism, , FDI and employment.
- To compare the effect of terrorism on economy from 2003 to 14 and 2014 to 2019.

Rational of the study

Majority of the studies conducted on terrorism have estimated its effect on the economy and no other directions till 2014. The existing study has taken the gap of including two more directions FDI and employment and also taken number of tourist's arrival as independent variable. The study has also taken most recent data for terrorism i.e. 2019 and also the first study that compare the two time periods i.e. (2003-2014, 2014-2019) for the terrorism effect on the economy.

LITERATURE REVIEW

Zakaria et al., (2019) investigated the effect of terrorism on economic growth in Pakistan. This study has

used FDI, government spending and domestic investment as the measure of terrorism factors and its effect on the country's economic growth. The study has used GMM (generalized method of momentum) for the sample time period of 1972 to 2014. The findings of the study revealed that terrorism has shown negative and significant effect on the domestic investment and economic growth. The findings show that there is negative relationship between FDI, domestic investment, economic growth and terrorism.

Mubashara et al., (2018) examined the counter terrorism and its effect on economic growth in Pakistan. The data in the study has been collected from WDI and constructed from GTD from 1980 to 2015. After taking the econometric model from the literature, the study has used negative binomial regression model for the effect of terrorism and economic growth. The study has used ARDL and causality model has been used for checking causality among the selected models. The study reveals that the government has taken three types of actions to control the violence i.e. military actions/operations, civilian policies and peace accords. The findings of the study reveal that there is long run relationship between counter-terrorism and economic growth of Pakistan.

Pratwi et al., (2018) investigated the effect of criminal act of terrorism on the economic growth and extended that there is economic losses due to the criminal acts in the last two decades. The study argued that the studies are increasingly interested in terrorism and economic growth. The federal government is the most affected due to the criminal acts of terrorism. The study has used index method for taking the law and order and find that Thailand ranked on 16th with 6.6 score, Indonesia ranked 42 with 4.55 score. The findings reveal that the government should uses comprehensive efforts to establish law and order in the country and control terrorism acts. This will lead to have economic prosperity.

Ali et al., (2017) examined the long run association between terrorism and Pakistan's foreign direct investment (FDI). The study has measured the terrorism by taking number of injuries, incidents and events taken in single year. The study has collected year base time series data and collected data for the variables from World Development indicators and also Global Terrorism Database from 1980 to 2015. The study has employed co-integration model to check the long run relationship between the variables. The findings exhibits that the terrorism has shown negative relationship with the FDI which means that the terrorism events and criminal acts always decrease FDI. The study concluded that the terrorism will affect negatively the foreign funds flow to the country.

Hypotheses

H_1:   *There is a long run relationship between terrorism, tourism and GDP*
H_2:   *There is a long run relationship between terrorism, tourism and FDI*
H_3:   *There is a long run relationship between terrorism, tourism and employment*
H_4:   *There is a significant difference between terrorism in the pre and post terrorism period.*
H_5:   *There is a significant difference between tourism in the pre and post terrorism period.*

METHODOLOGY

The present study has explored the concept of relationship between terrorism and tourism with economic

growth (GDP), foreign direct investment (FDI) and employment in Pakistan. The study has quantitative nature and quantitative method has been adopted in the modelling and analysis. The economic time period of Pakistan was taken into consideration and by purposive sampling, the study has taken the peak time of terrorism. Based on the objective, the study has taken the time period from 2003 to 2019. The sample time period has been divided into two windows i.e. terrorism time: 2003-2014 and after terrorism time: 2014-2019.

The data in the study was found time series in nature. The data for the selected variables have been collected from 2003 to 2019. There are different source which can be used for the data collection i.e. Pakistan Bureau of Statistics from 2000 to 2019, Global Terrorism Index (GTI), Economic Survey of Pakistan 2000 to 2019 and South Asian Terrorism Portal. Eview 8 has been used for the results analysis for the recommended models.

Models

Unit Root

The model selection in time series data is based on the nature of the data. The studies have used different models before going to the final model of data analysis. The issue of unit root means that the data should examined for the constant and non-constant movement. Studies have recommended the test of ADF (Augmented Dickey Fuller test) for the estimation of unit root.

Co-integration Model

The existing study was based on objective of checking the long run relationship between terrorism, tourism arrivals, GDP, FDI and employment. Literature recommends that co-integration can be used for evaluating the long run relationship among the selected vectors. The objective of co-integration model is that to check the variation in the vectors relating to each other in the respective time period.

RESULTS AND DISCUSSIONS

Unit Root

Table 1:

Variable	At levels		1st difference	
	Test	p-value	Test	p-value
FDI	-1.19	.113	-11.87	.00
GDP	-2.01	.098	-7.117	.00
Terrorism	-2.47	.144	-5.312	.00
Tourism	-1.56	.401	-3.189	.00
Unemployment	-2.11	.108	-4.981	.00

The findings of the table are the output of unit root test which has been generated to check the status of unit root. The test has been implemented on two stages i.e. at levels and first difference. The results

exhibits that the series were found insignificant which means that the series were found non stationary at levels. The results of first difference have been found significant which shows the stationary of series.

Lag Selection

Table 2:

Lag	SC	HQ
0	-4.188	-5.247
1	-6.374*	-8.732*
2	-10.326	-13.350
3	-12.341	-9.338

* Indicates lag order selected by the criterion
SC: Schwarz criterion
HQ: Hannan-Quinn information criterion

The table shows the findings of lag selection model which has been used for the best analysis in the time series model. For the time series analysis the lag selection is important before running final results by recommended model. The test has been proposed from 0 to 3 lags and the findings are in favour of one lag selection. Therefore, it has been recommended that the final model of analysis should be run with single lag model.

Co-integration (Trace)

Table 3:

Hypothesized No. of CE(s)	Model 1(GDP)		Model 2 (FDI)		Model 3 (Employment)	
	Eigenvalue	p-value	Eigenvalue	p-value	Eigenvalue	p-value
None *	.543	.001	.812	.000	.569	.095
At most 1	.398	.341	.501	.007	.318	.217
At most 2	.348	.013	.723	.000	.211	.066

The table is the findings of co-integration model which was used by the existing study to estimate the long run relationship between terrorism, tourism, GDP, FDI and employment. The model is based on three stages i.e. none*, at most 1 and 2. The findings are combined for three dependent variables and only eigenvlaue and p-value are taken from the results to testify the long run relationship among the selected time series. The findings show that there is long run relationship between terrorism and tourism with economic growth (GDP) as the p-value of none* is significant. The study supports that the different military actions is showing the most significant factor in bringing law and order and controlling terrorists activities in the countries. Specifically, the event of Zarb e Azab and Radd ul Fasad by Pak army makes significant contribution in controlling terrorism in the country. The findings support the relationship between terrorism and GDP and the findings are consistent with the study of Farooq and Khan (2014) who argued that Pakistan's economy has suffered a lot in this war against terrorism and specially due to

some criminal acts i.e. Army public School give negative signals to the investors. These events bring the FDI on the lowest level in the history. The results further suggested that terrorism and tourism is having long run relationship with foreign direct investment and there is no long run relationship between terrorism and tourism and employment.

Table 4:

Variable		Levene's Test for Equality of Variances		t-test		
		F	Sig.	t	df	P-value
Terrorism	Equal variances assumed	6.109	.000	-7.112	81	.000
	Equal variances not assumed			-5.781	81	.000
Tourists	Equal variances assumed	4.491	.000	-3.198	80	.000
	Equal variances not assumed			-6.176	81	.000

The table shows the findings of independent sample t-test for the comparison of two time periods i.e. 2003 to 2014 and 2014 to 2019. The findings of table show that there is a significant difference among the time period for terrorism. This means that the terrorism was at peak in the first time period but due to some military operations, the terrorism decreases and showing significant decrease in the level of terrorism. While the tourism was found at lowest in the history due to terrorists activities in the northern areas while after bringing peace, the number of tourists arrivals were found increasing.

CONCLUSION

The study was conducted for exploring checking the relationship between terrorism, tourism with economic growth, FDI and employment. Time series data has been used for the selected variables and adopted time series for the data analysis. The findings of test show that there is a long run relationship between terrorism, tourism and economic growth (GDP) and with FDI while no relationship with employment. The study supports for the negative association between terrorism and GDP which shows that the terrorism activities in the time period has proven that Pakistan has seen heavy losses in this war against terrorism. Different terrorist groups in FATA were very strong and easily doing their terrorists activities. These kinds of terrorists activities showed negative effect on the business and secondary markets. It has been recommended that the government should take some collaborative actions with business community to monitor different kinds of financial transaction which can possibly giving support to the terrorists organizations.

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