Impact of Terrorism on Exclusive Indian Economy

Malik Shahzad Shabbir
Ibn Haldun University Turkey.
Maleeha Kiyani
Fatima Jinnah University Rawalpindi, Pakistan.
Aniqa Zeb
University of Karachi, Karachi, Pakistan.

ABSTRACT

The objective of this study is to investigate at what extent Indian economy becomes the victim of terrorism activities. However, we didn't find any comprehensive study on this issue, who used time series data for casual investigation between terrorism and economic growth. This study used time series data from 1994 to 2017 to examine the impact of terrorism attacks and their impact on Indian economy. The data analysis has done through auto regressor distributed lags (ARDL) method. The long run results revealed that terrorism, interest rate and unemployment have negative impact on economic growth, whereas net trade and foreign direct investment have positive impact on growth level. While in short run only terrorism has negative relationship on Indian economy and rest of all variables are statistically significant. Furthermore, error correction mechanism and stability tests indicate that model is consistence and efficient. The overall results through F-test concluded with these remarks that model is statistically significant.
Key Words: **Terrorism, Economic Growth, Ardl, Indian Economy.**

Introduction

It is very difficult to define the word "terrorism", as it has various definitions and most of them have contradicts. However, the definition of terrorism is tangible and it keeps on changing upon the geographical locations and historical perspective. Furthermore, according to Oxford Dictionary terrorism means "The use of violent actions in order to achieve political aims or to force a government to act". The word terrorism was first time coined in 1790's during the French Revolution. Moreover, the years 1793 and 1794 were called as "The Reign of Terror". The greatest evidence from holy book Quran in Surah Al-Anfaal (chapter 8, verse 60) is "cause terror in the heart of anti-social elements". It means those people who are killing wrong people, who are against humanity. In another surah Al- Ma'idah (chapter 5, verse, 32) "if any one kill to any human being whether it may be Muslims or non-Muslims, unless in the form of murder, or post-paid corruption of land, it is although killed whole humanity, and if any one saved any human being,

it is as although save all humanity". So killing any innocent person is totally prohibited in Islam. All religions in the world teach us the moral values of peace and humanity.

However, Frey & Luechinger (2003) described that the situation created by terrorist attacks can be reduced, when the opportunity cost of terrorism is increased. When the economic propensity exist in the country then the terrorist attacks by the terrorist groups will have many other alternatives, such as indulge in terrorist activities like jobs, more employment opportunities and eradication of poverty will take place. According to the Global Terrorism Database Report (2013), it was found that top ten country's economy is affected by the terrorist activities which are basically from developing countries. The Indian economy is the second largest economy in the world which was affected by terrorist activities. However, Ram (2013) explained that there is massive population of (1%) is involved in terrorist activities. It means 12 million people can be involved in terrorist activities overall.

It has a huge impact on the economy of India as terrorism not only impacts the external infrastructure of the country but it also impacts the internal infrastructure. Some researchers show that terrorism is the major factor due to these issues the economy goes down. However, Hess & Weerapana (2004) described that terrorist activities play an energetic role in decreasing economic activities and they also found that terrorist activities are more in high-income countries even during the recession. The terrorist activities in Pakistan and India are increasing and which inversely affects the human capital significantly and it has a huge impact on the economic display and speculation of foreign investment.

The terrorist activities recorded were highest among all previous attacks in 2013. In India, 699 terrorist attacks were recorded, whereas in neighbouring countries like in Pakistan there were 212 attacks, in Iran 2852 attacks, in Afghanistan 1443 attacks were recorded. These terrorists' attacks not only damage the current country but it has a devastating impact on the neighbouring countries. Its impact can be for a short time period or for the long time period; it depends upon the intensity of the terrorist attack. These terrorist attacks have a long-lasting impact on the economy of the country which decreases the economy and it may have a significant downfall. The poverty and unemployment are the major causes of terrorism; hence the people of all ages are indulging themselves in such activities related to terrorism. Indian economy is going down owed to terrorist activities and significantly increases in poverty ratio. Whereas, GDP is stimulated with terrorist attacks and a negative trend can be seen. Furthermore, terrorism is the major factor which causes a decrease in the economic growth of a country. It usually starts with political and social injustice and then results occur for the change of mindset towards the destructive perspective. This study examines that how terrorism is affecting the economy of India and its outcomes, which has more devastating and destructive as compared to those countries, who doesn't become the victim of terrorist activities. Moreover, these terrorist activities affect the per
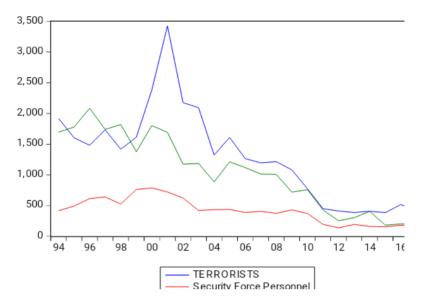
capita income of Indian nationals and government expenditure has significantly increased on defence and security sector.

This study is exclusive from all the previous studies that have done on terrorism in the context of India due to several reasons; the updated data are used till 2017, which shows that every aspect till now is covered in it. A significant relationship developed among variables such as, GDP, unemployment, interest rate, net trade, FDI, and terrorism. This is first ever study on this topic, which includes a time series data along with such policy variables. The method used in this study is auto regress or distributed lags (ARDL) method. This ARDL method has several advantages, such as it measures accurately the speed of adjustment with error correction term (ECT) and a dynamic model for long and short run analysis. The variables used in this study have a good combination altogether, which converses all the perspectives related to terrorism, and its impact on the economy and fluctuations, capital inflows and outflows during and after the terrorist activities.

Terrorism in India from historical perspective

The below graph shows the numbers of terrorists, security force personnel and civilians died from 1994 to 2017. The highest rates of deaths belong to terrorist category, which were increasing with passage of time and it has a major impact on civilians as well as on death rate. This relationship is directly proportional to the number of terrorist increasing yearly. In 2013, six hundred eight (608) districts were affected through terrorists' activities. These terrorist activities have damaged only Indian economy, but also across the world 11,098 people died due to these activities. According to Moody's Investors Service, they explained that India has most terrorist attacks in 2001, which have a negative impact on the economy of the country and it has born the economy down. Terrorists can inflict heart-breaking loss of life and costly destruction of property in India. Moreover, terrorism also raises the costs of doing business with terror-affected countries. This increases the prices of products, which in turn tends to reduce the exports and imports of these nations. It creates a feeling of vulnerability in the country like India where the attacks occur. The below figure 1 indicates terrorism in India from 1994 to 2017.

Figure 1: Terrorism in India

Fatalities in India from 1994-2017

The number of deaths only happened due to these terrorist activities. These terrorist activities are very harmful to the developing countries like India as it is at the stage of growth so these minor and major terrorist attacks, result in continuous, decline in the economy. Moreover, in the year of 2001 marks the most deaths (5839) had caused in all three categories, while in years 2000 and 1996 were on second and third position in death rate (4975 and 4181) respectively. From 1994 till 2017 a long time span, the terrorist activities were increasing but due to effective forces and national action plan of anti-terrorism activities have decreased this rate in 2017, it is a positive entity towards the economy of the country. For more detail see appendix (3).

Top ten countries affected by terrorism attacks

The appendix (4) illustrated the terrorist attacks in top ten developing countries and how much destruction has done in those countries for that specific time period. These countries are affected by different terrorist activities, which not only affects the economy of the country but they also affect the internal and external infrastructure of the country. However Global Terrorism Database Report (2014) shows that there are approximately three Islamist groups, who have accepted that they are responsible for 15 percent overall deaths in 2014. Whereas Al-Qaida group has also announced their presence in India. This shows that terrorist activities were increasing as the passage of time has passed away. A list of top ten most effected countries can be found in detail at appendix (4).

Literature review

Terrorism is vast phenomena but it can be defined as something done in perspective to achieve the desired result. It also shows the mindset of a weaker person who is planning to achieve a certain goal with the help of weak people from a power state. In a broader way, it can be defined as a violent act which is used to achieve any social or political aim. In India, terrorism is increasing and it is not only affecting the people living in India but also the government and the economic growth level. However, different regions of India, which were affected by terrorism, are Jammu and Kashmir, east and south India and the Seven Sister States. According to the National Advisor of India, there are 800 terrorist cells functioning in India.

The advancement in technology and globalization new innovations are adopted which have a positive impact as well as negative impact on the economy of the country. Terrorism is one of the factors which is increasing due to the presence of social evils in the society. Indian economy is growing rapidly but there are also some factors, which affect it badly. The economic and financial development is very important for the country and it has a significant impact on the economy of the country. Greenwood and Jovanovich (1990), highlighted the relationship of financial improvement, disparity and poverty, who has a complex relationship but it effected the society overall.

The relationship between financial improvement and economic growth was described by (King and Levine, 1993; Demetriades and Hussein, 1996; Arestis and Demetriades, (1997); Levine et al., 2000; Bell and Rousseau, 2001; Luint el et al., 2008). However, different theories of poverty and income disparity don't clearly describe the financial improvement or the policies regarding the financial control (Demirgu Kunt and Levine, 2008). Clarke et al. (2006) discovered the financial improvement in 83 countries. Shahbaz and Aslam (2011) highlighted a relationship between financial development, inequality and trade. He also described that income inequality is reduced by financial improvement.

Sonmez (1998) has warned that persistent terrorism in a country can harm a country's reputation as a safe tourist destination. He has further argued that the media attention surrounding a terrorist attack is usually intense, especially when tourists are among the casualty list. Feridun (2011) has investigated the causal impact of terrorist attacks on the tourism industry in Turkey based on the Autoregressive Distributed Lag (ARDL) bounds testing procedure for the period between 1986 and 2006. The study has shown that tourism is in a long-run equilibrium level relationship with terrorism.

Topalova (2004) highlighted a positive relationship of trade with the efficiency of firm which shows that Indian trade increases the efficiency and effectiveness at workplace. Agarwal (2000) explained the performance of financial sector of India and proved the economic growth of the country. Demetriades and Luitel (1996) describes a relationship of manoeuvring in nature, which is effecting the relationship overall in a positive manner and helping each other to grow

effectively and the relationship described through trade, financial improvement and banks.

However, several studies such as, Demetriades and Hussein (1996), Neusser and Kugler (1998) and Choe and Moosa (1999) Fase and Abma (2003) and Sachsida (2001) highlighted the relationship of financial improvement and economic growth with each other effecting in different manners. Mattoo et al. (2006) discovered a good relationship of financial improvement and economic growth with other by taking or collecting data from 60 countries. Khan and Qayyum (2007) described a close relationship of financial improvement and trade in development context of Pakistan. Chakraborty (2008) described a positive combination of financial improvement, banking sector and trade overall.
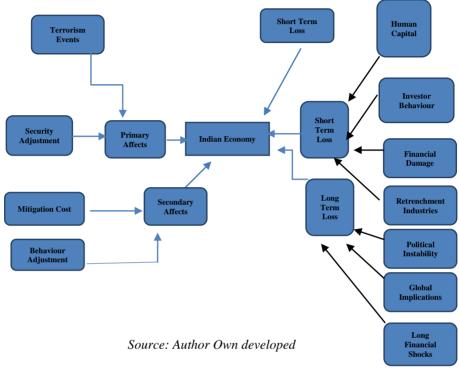
Baliamoune-Lut and Lutz (2005) explained the major effect of economic activity, trade directness and foreign investment on the inequality of income in between citizen of rural and urban areas of African countries. The impact of financial excavating and foreign investment have positive impact on each other, it further helps in decreasing the inequality of income in between citizen of rural and urban areas, whereas trade directness is working on a positive way. Shahbaz and Aslam (2011) highlighted the relationship of financial improvement, trade directness and income inequality in between rural and urban citizen. He founded that financial improvement decreases the inequality of income distribution in Pakistan. Knack and Keefer (1995) defined that the economic performance of the country is directly related to the excellence of the country's institution. Chong and Calderon (2000) emphasised that country's institutional framework is very important as it discovers the economic situation of the country and it also shows how the income distribution takes place in the country.

Theoretical framework

This theoretical model shows that how Indian economy is affected by the long-term and short-term effects of terrorism, which have a disastrous outcome on the economy. The long-term effect consists of political instability, global implications and financial lost whereas short-term effect consists of human capital, investor behaviour, financial damage and retrenchment industries which are related to terrorism condition of the country. Indian economy is growing upsurge but this current state of terrorist activities from last two decades lead toward down fall scale.

Terrorism has a massive impact on the economy of the country. There are two type of impacts: short term and long term impact. The short-term impacts include a loss of human capital, change in investors' behaviour, small monetary losses and a small effect on specific industries. Loss of human capital is the biggest loss for any nation. The behaviour of investors' changed when the terrorism was at its peak than no company or organization ready to investor in projects of that country. The long-term effects on the economy of the country are political instability, worldwide implication and extended financial losses. These long-term effects are

dangerous for economic growth. The political instability arises due to terrorism, when terrorist activities are increasing and political situation goes down and more complexity ascends. The long-term monetary losses are also increased as damages of buildings and infrastructures.

Source: Author Own developed

Methodology

The research design has a precise trend of policy on the bases of its context and persistence. The purpose of this study is to investigate the impact of terrorism on exclusive economic growth of India. This study takes various policy variables, such gross domestic product (GDP) as dependent variables and foreign direct investment (FDI), terrorism (TR), net trade (NT), interest rate (IR), and unemployment (UM) are the exploratory variables. The data on terrorism are collected from South Asia Terrorism Portal (SATP) and rest of all data have been taken from World Development Indicator (WDI) and various published reports of India economic surveys. The time period of data contains from 1994 to 2017, as terrorism data are not available before 1994 and it is a main exploratory variable of this study.

We didn't find any comprehensive study, which investigate the impact of terrorism of exclusive economic growth of Indian economy using auto regressor distributed lags (ARDL), that's why this study is using ARDL method to examine the nexus of terrorism on economic growth. This study framed on subsequent

equation. Moreover, this study adopted the ARDL structure byPesaran, et al. (1996), Pesaran and Shin (1995, 1999), Pesaran et al (2001) to set up the way of causation between variables.However, ARDL has many advantages, which highlights by several researchers such as, Ilyas et al (2010), Imran et al (2012), Shabbir (2018), Shabbir and Zeb (2018). The ARDL adjusts the speed of equilibrium with error correction term (ECT). Furthermore, it gives a dynamic model through long run and short run analysis.

GDP = f (FDI, Interest Rate, Net Trade, Terrorism, Unemployment)…………… (1)

The empirical equation of the model is as follow:

$GDP_t = \square_0 + \square_1 FDI + \square_2 IR + \square_3 NT + \square_4 TR + \square_5 UM + \varepsilon_t$…………… (2)

Whereas,

GDP = gross domestic product

FDI = foreign direct investment

IR = interest rate

NT = net trade

TR = terrorism

UM = unemployment

$\square$ = error term

The null hypothesis of this study is no co-integration exist among variables

Ho: ϑ GDP = ϑ FDI = ϑ IR = ϑ NT = ϑ TR = ϑ UM = 0

The alternative hypothesis of this study is co-integration exist among variables

H1:ϑ GDP $\neq$ ϑ FDI $\neq$ ϑ IR $\neq$ ϑ NT $\neq$ ϑ TR $\neq$ ϑ UM $\neq$ 0

Now the ARDL model of the estimated equations;

$GDP_t = \beta_0 + \beta_1 GDP_{t-1} + …… + \beta_k GDP_{t-p} + \alpha_0 FDI_t + \alpha_1 FDI_{t-1} + ……… + \alpha_q FDI_{t-q} + \delta_0 IR_t + \delta_1 IR_{t-1} + …. + \delta_r IR_{t-r} + \Upsilon_0\ NET\ TRADE_t + \Upsilon_1\ NET\ TRADE_{t-1} + …… + \Upsilon_s\ NET\ TRADE_{t-s} + \gamma_0\ TERRORISM_t + \gamma_1\ TERRORISM_{t-1+} …… + \gamma_x\ TERRORISM_{t-x} + \lambda_0\ UNEMPLOYMENT_t + \lambda_1\ UNEMPLOYMENT_{t-1} + ….. + \lambda_y\ UNEMPLOYMENT_{t-y} + \varepsilon_t$………… (3)

The bound test indicates if F-test values is greater than lower and upper bound of critical values, which means that alternative hypothesis is accepted and co-integration exists among variables. It further permits to examine the nexus of terrorism on economic growth in both long and short run analysis. The Akaike Information Criteria (AIC) has chosen for appropriate order of lags. Finally, stability tests such as cumulative sum control chart (CUSUM) and CUSUM square determined the model is best fitted or not. The purpose of these graphs to detect and monitor the change or trends in that series or variables. The both stability tests put in appendix (1) and (2) respectively.

$\Delta GDP_t = \delta_1 + \Sigma\ \delta_{GDP}\Delta GDP_{t-1} + \Sigma\delta_{FDI}FDI_{t-j} + \Sigma\delta_{IR}IR_{t-k} + \Sigma\delta_{NET\ TRADE}\ NET\ TRADE_{t-l} + \Sigma\delta_{\ TERRORISM}\ TERRORISM_{t-m} + \Sigma\delta_{UNEM}EX.DEBT_{t-o} + \Sigma\delta IR\ IR_{t-p} + \delta ECM_{t-1} + \varepsilon_t$………… (4)

The unrestricted error correction model (ECM) of autoregressive-distributed lag model (ARDL) bounds testing is modelled as above: whereas, ☐ denotes difference operator and t and ☐$_t$ are used for trend variable and stochastic term in the model respectively, which is assumed to be normally distributed with zero mean and fixed variance.

Empirical results

Unit root test

The study examines the impact of terrorism on economic growth. The unit roots results are portrayed in the table 1, to apply any econometric technique, it is important to check the stationary of the variables, for this purpose this study used augmented dicky fuller (ADF) test. The results for stationary are reported below in table no1, it is clear that our model is a mixture of levels and 1st difference. Hence, this study justified to apply ARDL bound testing approach to obtain further results. The table 1 shows the result of unit roots analysis.

Table 1: Unit Root Results

Variable	Levels	1st Difference
GDP	1.698	3.657*
FDI	0.476	5.098*
Interest rate	2.705*	6.262*
Net trade	3.566*	2.904*
Terrorism	1.280	4.806*
Unemployment	0.335	6.516*

Level of significance 5%

Vector auto regression (var) lags length criteria

The Vector auto regression (VAR) is a stochastic process model used to capture the linear interdependencies among multiple time series. The VAR models generalize the univariate autoregressive model (AR model) by allowing for more than one evolving variable. The table 2 has nominated the lag length criteria as (1, 1, 2, 2, 1) for lags selection.

Table 2 VAR Lag Length Criteria

Lags	Log	LR	FPE	AIC	SC	HQ
0	-4.254	NA	0.002	1.246	0.541	0.472
1	90.14	10.19*	2.145*	4.541	-5.217	-5.214*
2	115.8	18.354	3.214	7.251*	-6.214*	7.125

*Indicates the lag order selected by the criterion

Bound test

The bound test statistics describes that f-statistic must be greater than I(0) and I(1) bound, to find the probability of existence long run results. However, bound test results allow us to move forward for long run results. The results of bound test are as follows in table 3:

Table 3: Bound Test Results

Test Statistic	Value	K
F-statistic	5.825	5
Critical Value Bounds		
Significance	I(0) Bound	I(1) Bound
10%	1.81	2.93
5%	2.14	3.34
2.5%	2.44	3.71
1%	2.82	4.21

Level of significance is 5%

Long run coefficients

The above methodology has been explained that data are stationary and is a mixture of I(0) and I(1). However, the data are a mixture of I(0) and I(1), it is necessary to employ ARDL method to obtain the empirical evidence from long and short run models.

Table 4 Long Run Coefficients

Variables	Coefficients	T-Statistics	Standard Errors	P-Value
LFDI	0.033***	3.76	0.027	0.024
LTR	-2.12*	-1.78	1.204	0.089
LNT	5.96***	8.954	0.701	0.000
LIR	-1.217**	-2.103	0.346	0.039
LUM	-1.401	-1.275	0.756	0.214

$$GDP_t = \beta_0 + \beta_1 LFDI_t + \beta_2 LTR_t + \beta_3 LNT_t + \beta_4 LIR_t + \beta_5 LUM_t + \epsilon_t$$

The long run analysis indicates in table 4 indicates that if one unit increases in FDI it will influence the 0.033 unit in Indian economic growth. Whereas, terrorism has negative association with economic growth and one increase in terrorism, it will harm the (-2.12) unit in growth level. While terrorism doesn't distress the economy, but now it becomes a serious challenges for national security system as well as peace and priority of the country. Furthermore, this terrorism amount has negative significant impact on Indian economy, which doesn't only detriment economy but also creates serious matters against the particular country. However,

net trade has positively significant impact on growth level with (5.96) percent. Finally, interest rate and unemployment both have negative impact on economic growth with (-1.217) and (-1.401) respectively. Moreover, a significant increase in unemployment level becomes a serious challenge for government and policy makers, if they don't overcome on this issue on urgent basics.

Short run analysis

Once, the long run relationship among the variables in the model has been established, it is necessary to find short run impact of terrorism on economic stability. For the purpose, this study uses Error Correction Mechanism (ECM). Whereas, ECM_{t-1} is lagged error term and ϑ denotes the estimate of lagged error term that captures the speed of adjustment from short run towards long run equilibrium path.

Table 5 Short Run Coefficients

Variable	Coefficient	Std. Error	T-Statistic	P-value
ΔFDI	0.031	0.013	3.676	0.001
ΔTR	-2.341	1.214	-1.468	0.134
ΔNT	0.726	0.436	1.354	0.176
ΔIR	1.318	1.725	0.823	0.614
ΔUM	0.315	0.526	0.547	0.856
ECM(-1)	-0.674	0.310	-3.763	0.003

*Significant at 10%, **Significant at 5%, ***Significant at 1%

The short run analysis in above table 5 describes that foreign direct investment, net trade and unemployment have significant impact on small level. Whereas, interest rate shows that a good positive relationship with economic growth, which means that one percentage increase in interest rate, it will effect (1.318) percent on growth level. However, terrorism has again highly negative relationship with economic growth in short run dynamic. This designates an alarming situation for Indian economy. The actual purpose of ECM is to correct the disequilibrium of the system. The speed of ECM disequilibrium of below table shows that (67.4%), which means that ECM is correcting the disequilibrium of data 67.4 percent on annual basis, as this study comprises on annual time series data.

Conclusion

Terrorism has a destructive impact on the economy of the country it does not only destroy the economy but it also have long term impact on country which required a long period of time to recover. Terrorism is increasing day by day which not only affects the economy of the country temporarily but it has a long-term effect. The biggest threat to Indian economy is terrorism, which leads the country towards its downfall. Furthermore, terrorism does not only affect the economy, it creates the

worst environment for international investors to withdraw their investment for that particular country, and India is the one of them. When investors withdraw their investment for partially or fully, this consequence further generates the labour unemployment in the entire market. Moreover, unemployment affects the domestic life of labours. On the other side, trade factor is also realised by terrorism due to capital outflows increase as compared to capital inflows in the entire country. The exports and imports of Indian economy also influence and exports curve continuously decline due to terrorism. The final major effect of terrorism challenges to security issues and political instability of that country. The aggregation of all these individual effects has a significant impact on overall economy with different aspects.

The results of unit root test express that interest rate and net trade variables are stationary and level, while rest of all GDP, terrorism, unemployment and FDI variables are stationary at first difference. The unit root results revealed that a mixture of both levels, which allows this study for further step. However, bound testing (F-test) result indicates that overall model is significant at all (1%, 5% & 10%) levels. Furthermore, long run analysis results indicate that terrorism has highly negative association with economic growth, while interest rate and unemployment variable also have negative relationship with growth level but at small level. While rest of two FDI and net trade variables have positive association with economic growth. Finally, in short run analysis only terrorism has found a negative relationship with economic growth, while rest of all variables are statistical significant. The values of error correction mechanism (ECM) are also show significant and fitted for the required conditions of ECM. The stability tests such CUSUM and CUSUM square tests concluded that the estimated results are consistence and proficient for both long and short run models respectively.
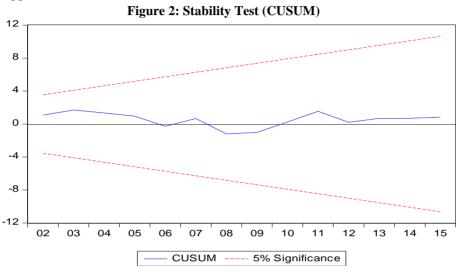
Recommendations

This study indicates the future recommendations for researcher to address this issue with following way: terrorism can be decreased when the accountability system is maintained from the grass root level. It can be decreased when the citizen of the country are treated similar at the same level like same education for all with no discrimination that will play its part in creating a new society of educated people. Moreover, it has decreased to a minimum level only by the action of government on the policies equally and just sublime them in a manner that citizen stay happy. The one of main root causes of terrorism is poverty, which motivated the people to diminution this equality and it should be maintained by power of law, so that terrorism can be dwindled to a minimum level. Finally, terrorism and economy of country are interlinked with each other and they can have equilibrium when terrorism is decreased and economy will boost up to a next level.

References

Arestis, P., & Demetriades, P. (1997). Financial development and economic growth: assessing the evidence. *The Economic Journal*, *107*(442), 783-799.

Atje, R., & Jovanovic, B. (1993). Stock markets and development. *European Economic Review*, *37*(2-3), 632-640.

Bailiamoune-Luts, M. and Lutz, S.H. (2005), "Rural-urban inequality in Africa: a panel study of the effects of trade liberalization and financial deepening", Journal of African Development, Vol. 57 No. 1, pp. 1-19.

Beck, T., Demirguc-Kunt, A., Laeven, L., & Levine, R. (200q 8). Finance, firm size, and growth. *Journal of Money, Credit and Banking*, *40*(7), 1379-1405.

Bell, C., & Rousseau, P. L. (2001). Post-independence India: A case of finance-led industrialization? *Journal of Development Economics*, *65*(1), 153-175.

Blomberg, S. Brock, Gregory Hess and Akila india Weerapana, (2004). An Economic Model of Terrorism, Conflict Management and Peace Science, 21: 17-28.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Chakraborty, U. K. (Ed.). (2008). *Advances in differential evolution* (Vol. 143).

Chaudhry, I. S., Safdar, N., & Farooq, F. (2012). Energy consumption and economic growth: Empirical evidence from Pakistan. *Pakistan Journal of Social Sciences*, *32*(2), 371-382.

Chong, A., Calderon, C. (2000). Institutional quality and income distribution. Economic Development and Cultural Change, 48, 761–786.

Demetriades, P. and Luitel, K.B. (1996), "Financial development, economic growth and banking sector controls: evidence from India", Economic Journal, Vol. 106 No. 435, pp. 359-74

Demetriades, P. O., & Hussein, K. A. (1996). Does financial development cause economic growth? Time-series evidence from 16 countries. *Journal of development Economics*, *51*(2), 387-411.

Eldor, R., & Melnick, R. (2004). Financial markets and terrorism. *European Journal of Political Economy*, *20*(2), 367-386.

Feridun, Mete (2011) "Impact of Terrorism on Tourism in Turkey: Empirical Evidence from Turkey" Applied Economics 43, 3349-54.

Frey, B. S., & Luechinger, S. (2003). How to fight terrorism: alternatives to deterrence. *Defence and Peace Economics*, *14*(4), 237-249.

Gaibulloev, K., & Sandler, T. (2009). The impact of terrorism and conflicts on growth in Asia. *Economics & Politics*, *21*(3), 359-383.

Global Terrorism Database (2016). Available at http://www.start.umd.edu/gtd/

Ilyas, M., Ahmad, H. K., Afzal, M., & Mahmood, T. (2010). Determinants of manufacturing value added in Pakistan: An application of bounds testing approach to cointegration. *Pakistan Economic and Social Review*, 209-223.

King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *The quarterly journal of economics*, *108*(3), 717-737.

Khan, M. A., Qayyum, A., & Ahmad, E. (2007). Dynamic Modelling of Energy and Growth in South Asia [with Comments]. *The Pakistan Development Review*, 481-498.

Knack, S., & Xu, L. C. (2017). Unbundling institutions for external finance: Worldwide firm-level evidence. *Journal of Corporate Finance*, *44*, 215-232.

Luintel, K. B., Khan, M., Arestis, P., & Theodoridis, K. (2008). Financial structure and economic growth. *Journal of Development Economics*, *86*(1), 181-200.

Mattoo, A., Rathindran, R., & Subramanian, A. (2006). Measuring services trade liberalization and its impact on economic growth: An illustration. *Journal of Economic Integration*, 64-98.

Neusser, K., & Kugler, M. (1998). Manufacturing growth and financial development: evidence from OECD countries. *Review of economics and statistics*, *80*(4), 638-646.

Pesaran, M. H., & Smith, R.(1995).Estimating long-run relationships from dynamic heterogeneous panels. *Journal of econometrics*, *68*(1), 79-113.

Pesaran, M. H., and B. Pesaran (1997) Working with Microfit 4.0: Interactive Econometric Analysis. Oxford: Oxford University Press

Pesaran, M H. Shin, Y & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association*, *94*(446), 621-634.

Pesaran, M., Shin, Y., and Smith, R. (2001), Bounds testing approaches to the analysis of long-run relationships", *Journal of Applied Econometrics 16*, pp. 289–326

Ram, S. (2013), Terrorism in India: are we missing something? Front Line Defence Issue 1. Link: www.frontlinecanada.com

Shabbir, M. S., (2018). The impact of foreign portfolio Investment on stock market of Pakistan. *International Journal of Ethics and Systems, 6(2).*

Shabbir, M. S., & Zeb, A., (2018). Impact of Economic Stability on Male Unemployment Ratio: a case of Pakistan. *Gaja Mada journal of Business and economics,* 3(4)**.**

Shahbaz, M., & Islam, F. (2011). Financial development and income inequality in Pakistan: an application of ARDL approach. *Journal of economic development*, *36*(1), 35.

Shabbir, M. S., & Rehman, A. K. (2015). The Impact of Financial Crises and Economic Growth of East Asian Countries. *Journal of Internet Banking and Commerce*, *19*(1), 1.

Shabbir, M. S. (2016). The Impact of Financial development on economic growth of Pakistan economy. American Based Research journal, 5(3), 35-43

Sonmez, S. (1998) "Tourism, Terrorism and Political Stability" Annals of Tourism Research 25, 416 – 456.

Shiller, R. J. (2003). From efficient markets theory to behavioral finance. *Journal of economic perspectives*, *17*(1), 83-104.
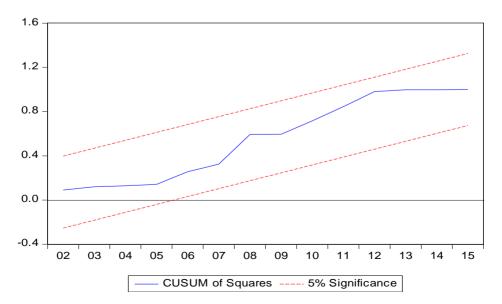
Topalova, P. (2004), "Trade liberalization and firm productivity: the case of India", IMF Working Paper, Asia and Pacific Department, International Monetary Fund, Washington, DC.

Appendix 1

Figure 2: Stability Test (CUSUM)

Appendix 2

Figure 3: Stability Test CUSUM Square

Appendix 3
Table 6. India Fatalities: 1994-2017[1]

Years	Civilians	Security Force Personnel	Terrorists	Total
1994	1696	417	1919	4032
1995	1779	493	1603	3875
1996	2084	615	1482	4181
1997	1740	641	1734	4115
1998	1819	526	1419	3764
1999	1377	763	1614	3754
2000	1803	788	2384	4975
2001	1693	721	3425	5839
2002	1174	623	2176	3973
2003	1187	420	2095	3702
2004	886	434	1322	2642
2005	1212	437	1610	3259
2006	1118	388	1264	2770
2007	1013	407	1195	2615
2008	1007	374	1215	2596
2009	720	431	1080	2231
2010	759	371	772	1902
2011	429	194	450	1073
2012	252	139	412	803
2013	303	193	388	884
2014	407	161	408	976
2015	181	155	386	722

---

[1]http://www.satp.org/

2016	202	180	516	898
2017	200	170	427	797
Total	**25041**	**10041**	**31296**	**66378**

Appendix (4)

Table 2: Ten countries with the most terrorist attacks, 2016

	Total Attacks		Total Deaths*		Deaths per Attack*		Total Injured*		Injured per Attack*		Total Kidnapped/ Hostages	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Iraq	2965	2417	9764	6973	3.44	3.01	13314	11900	4.74	5.25	8586	4008
Afghanistan	1340	1716	4561	5312	3.58	3.24	5054	6250	4.03	3.99	1673	1134
India	927	798	337	289	0.38	0.38	636	500	0.73	0.66	317	866
Pakistan	734	1010	955	1087	1.34	1.11	1729	1338	2.43	1.37	450	279
Philippines	482	490	272	260	0.58	0.54	418	430	0.90	0.90	216	127
Nigeria	466	588	1832	4940	4.35	9.13	919	2786	2.66	7.70	265	858
Syria	363	387	2088	2767	6.42	7.91	2656	2830	9.16	9.63	1406	1476
Turkey	363	309	657	337	1.81	1.11	2282	828	6.37	2.78	18	141
Yemen	363	460	628	1517	1.89	3.90	793	2599	2.44	6.97	173	456
Somalia	359	241	740	659	2.18	3.05	943	463	2.91	2.28	373	161
Worldwide	11072	12121	25621	29424	2.44	2.56	33814	37419	3.32	3.40	15543	12264

*Includes perpetrators

Biographical Note

Malik Shahzad Shabbir is at Ibn Haldun University Turkey, Turkey.

Maleeha Kiyani is at Fatima Jinnah University Rawalpindi, Pakistan.

Aniqa Zeb is at University of Karachi, Pakistan.

_____