Determinants of Terrorism in South Asian Countries: An Analysis of Panel Data

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Abstract

Historically, terrorism has left severe mark on societies. Presently South Asia is facing severe threats of terrorism. According to Global Terrorism Index (2020) Pakistan is 2nd highest affected country from terrorism after Iraq. Pakistan economy has faced a loss of US$ 103 billion in war against terrorism. This research provides an empirical examination of the determinants of terrorism in South Asia. For this purpose, panel data of six South Asian countries is used from the period of 1996 to 2020. The results of study show that poor education system, instable political circumstances and worse law & order situations are reason to trigger the terrorism in South Asia. The results of the study suggest that by increasing the quality of governance through improvement political stability, rule of law, and quality education terrorism can be reduced.

Introduction

The concept of terrorism has complexity in all of its aspects. Due to Terrorism severe threats are concerned to not only to peace, stability and prosperity of a country but also to cooperation coordination and friendship among the nations. That of course results to harm the trade among countries produces threats to political stability and harms the mutual understanding among countries in adopting common agenda or policies for economic prosperity for the people (Jabeen, 2013). Terrorism damages the economies in four ways by the reduction of capital stock of a country as a result of terrorist attacks, 2nd terrorist attacks causes higher level of uncertainty, 3rd they increase the counter terrorism expenditures, 4th they affect many industries negatively like tourism industry (Abadie, 2008).

Terrorism is a severe threat to defense of any country or region. Due to terrorism South Asia has turn out to be one of the riskiest regions of world due to terrorist activities. Since from several years South Asia especially the countries of Pakistan, India and Afghanistan are facing the problem of terrorism whose roots can be traced back from 1979 after the soviet invasion in Afghanistan but the problem become severe after 9/11 incident.

In order to understand and resolve the issue of terrorism the most important for all of us is to understand and find out the determinants of terrorism. Due to the complexity of the phenomenon of terrorism there are several reasons behind the occurrence of terrorism such as economic, social, political and religious etc. all of these contribute in flourishing and in the development of the terrorist activities. Another perspective that is prominent is that the causes behind the occurrence of terrorism can be different in different societies Because of its ethnic, political and religious nature. It is also important to reduce terrorism because in the presence of terrorism the development expenditure is shifted towards law enforcement policies for counter terrorism.

So, our main objective in this Research paper is to investigate the determinants of terrorism in South Asia. In this paper we will try to find out that why people become terrorist and are used by terrorist organization, we will try to find out some variables behind it that play an important role in order to push people in the hands of terrorist. For this purpose, we will try to find out that are the governance indicators are determinants of terrorism and what is the relation between them. There are many studies that have shown economic and social variables as

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determinant of terrorism but there are no much studies for the relationship between governance indicators and terrorism. After this we will also try to check the impact of education on terrorism. So, our article will contribute in the literature by finding out that whether governance indicators and education are determinant of terrorism if they are then how they are affecting terrorism.

Terrorism in South Asia

The situation of terrorism is seriously creating an alarming situation in south Asia. Especially the countries of Pakistan, Afghanistan and India have faces massive numbers of attacks. According to global terrorism index 2019 Pakistan ranked at 2nd position in the world after Iraq who is at 1st position and Afghanistan and India are at 3rd and 4th positions respectively while Sri Lanka is at 16, Nepal at 22 and Bangladesh at 39th position. Report also explains that after Iraq 3 south Asian countries, Pakistan, India, and Afghanistan experienced a sudden increase in terrorist activities especially from 2002 to 2009, that accounts for 12%, 11% and 10% of the global terrorist incidents (Global Terrorism Index, 2020). According to Another report annex of statistical information By START (2013) Pakistan leads the most terrorist attacked countries with terrorist attacks of 1404 leaving behind the countries like Iraq with 1271 terrorist attacks and Afghanistan with 1023 terrorist attacks. Similarly, more than half of the fatalities and injuries also take place in these 3 countries. This report also shows that 3 south Asian countries Pakistan, Afghanistan and India are in top 4 positions that have faced most terrorist attacks.

The roots of current wave of terrorism in Pakistan and Afghanistan can be traced back to 1979 after Russian Invasion into Afghanistan. Situation suddenly changed in the region and created huge and adverse impact on Pakistan. Economy, society and politics of Pakistan became direct victim of that militant organizations were created and supported by the super power with its ally countries working against soviet spread on the soil of Pakistan. Pakistan's decision-making authorities were also on the same page against soviet invasion and they played very pivotal role by providing assistance and training to the jihadist who were coming from all over the world and the concept of jihad promoted to attract the young population to fight against soviet forces. When war ended, soviet forces went back and then soviet union collapsed and America became superpower in the world, western block and America stopped taking interest in Afghanistan affairs as their objectives were completed, the net outcome of this was that all those groups which were prepared to fight started fighting with each other and because they all have much resources of arms and weapons and after withdrawal of soviet forces, they left huge amount of weapons behind in Afghanistan which also increased their resources of weapons. It created unrest in the whole country and all groups started ruling in their occupied areas. Because of having no central government authority, political instability, corruption, social injustice emerged as a consequence, which lead to the different forms of terrorism (Michael, 2007). So, in general after the fall down of Russia the world order and the geo-political circumstances of Pakistan and Afghanistan were changed.

After 9/11 Pakistan once again became the front-line state in war against terror in international community. The incident of 9/11 in 2001 was a major shift in global policies. And again, Afghanistan was the ground of battle. India being 2nd most populous country in the world after china also has severed issues related to security. Since people from several religions, viewpoints and people of different cultures and civilization lives there so it becomes very difficult for the government to maintain its security system. Moreover, India's relation with Pakistan and due to its wars with Pakistan and due to conflict situation between both countries of Pakistan and India also make them weak in order to fight against terrorism. However, India is still better than Pakistan and Afghanistan in terms of loss from terrorism.

According to the report of global terrorism database Sri Lanka lies at 16th position in the world. One of the main organizations that cause terrorism in Sri Lanka is (Liberation Tigers of Tamil

Elam) LTTE. But these were very transitory situations since the government of Sri Lanka managed to defeat these situations very quickly. Due to the strong writ of the government the LTTE was never able to get the total control of the Northern and Eastern provinces where they attacked and tried to set up a de facto state. The success of government of Sri Lanka is that it was constantly strong and they managed to never collapse the writ of their government.

Maoist group declared a people's war on 13, February 1996 in order to destroy backward-looking ruling system and to form the foundation of people's rule. These Maoist group were the believer of the viewpoint of Mao Tsetung who said that political power rises out of the barrel of a gun. Their main objective was to establish democracy in the country against the backward system. Bangladesh is relatively better in terms order to avoid terrorism as compared to Pakistan, Afghanistan and India.

Review of Literature

Many multinational studies have shown that terrorism has no economic root. Abadie (2006), Krueger and laitin (2003) are more prominent in this regard from all. According to Abadie (2006) terrorist risk is not much higher in poor countries. On the other hand, it seems that wealthy countries are main target of international terrorism. Good governance in any society can be ensured where this judgment involves clearness accountability and Rule of law (kaleem imam, 2011).

A study also indicates that educated individuals can also be terrorist of high rank due to political violence, this argument came from Krueger and Maleckova (2003). It is also found by Berrebi (2003) that high standard of living and educational levels is definitely linked with involvement in Hamas and Palestinian Islamic Jihad terrorist activity in Israel. On the other hand, findings of Krueger and Maleckova (2003) explore that the link between education, terrorism and poverty is not directly but probably weak enough. They say that all countries with same level of civil liberties, poor countries do not generate more terrorism than rich countries but seems preferable target for transnational target terrorism. Anyhow determinant of international terrorism are not relevant to the domestic determinants. Today's international terrorism is based normally on grievances against rich countries and secondly to get publicity by doing acts of terrorism in rich countries.

In this model the focal points to find out that whether the motivation to participate in terrorist activities can be influenced by raising the penalties by law enforcement agencies. They further explain that participation in terrorist activities by people depends on the possibility that whether the participation in terrorism will lead them to their desired political change against the differential payoff for the penalties linked with failure.

Some studies also find that terrorism may rise some with more education. For example, well-educated people may contribute greatly in terrorist organizations. There can be different reason behind the participation of an educated person such as if they imagine that they will presume leadership positions if they succeed in achieving something or if they recognize more strongly and quickly with the objectives of terrorist groups as compared to less educated individuals. Some educated person can also participate in such organization if they live in a region where the relative pay of well-educated person is greater in terrorist organizations as compared to those who are in the legal sector (Krueger and Jitka Malecˇkov, 2003).

According to these surveys the respondent also pointed out that due to the lack of accountability these institutions become corrupt because there is apparently no price paid by them or accountability for those action that involves corruption. Rule of law, merit laws and rules are not practiced in police and not implemented on those having links in the corridors of power they are only implemented on weaker sides. Empirical results of studies for implementation of rules and regulations in police administration also give similar results (kaleem imam, 2011). Since police is one of those organizations which is in charge for the maintenance law and order

within the country so its success can be gauged according to the extent of efficiency with which they guarantee rule of law. For successful rule of law consistent services of police are required.

Theoratical Framework

A person's mental composition certainly plays a role, but to what degree is unclear. Some may come to terrorism, not of any love for violence, but for their ideological goals. Others may be provoked to use terror simply because it appears to be a useful tactical option, or may additional the state's objectives. Certainly, terrorism may occur for ideological, psychological, and strategic grounds all at once. An individual may decide terrorism fits in his view about the world. A group may come to use terrorism because it furthers and is supported by their ideology. Finally, groups or persons may use terrorism because it fits with their tactical objectives and goals (United States institutes of peace, 2001).

This section gives the theoretical framework to scrutinize the determinants of terrorism. So, this study aims to contribute to existing literature by investigating the governance determinants of terrorism employing panel data. Economists have long been interested in understanding the causes of terrorism. The disappointment to eliminate terrorism in some regions of the world has often been ascribed to governance barriers such as rule of law, political stability, if these indicators are week then they offer greater access to terrorist groups by having fewer barriers in their way to assist training, and supply financial support through further unlawful activities. Similarly, non-availability of free media, freedom of choice also adds fuel to terrorism. Education is very important variable in order to deal with terrorism because there are many chances that an ignorant person will get to terrorism more easily as compared to an educated person.

Many studies are the evidence of the relationship of terrorism with governance indicators, education that the better is education the less is terrorism while some also shows that more education leads to more terrorism. According to the study of kaleem imam (2011) the purpose of governance in any society is that it fulfills Overall purpose and future outcomes and operates in a useful and well-organized manner. Good governance in any society can be ensured where this judgment involves clearness accountability and Rule of law

The governing bodies also need to have various accountabilities to other forum to citizen and to superior authorities that is internal and external oversight though courts constitute a major forum in this regard (Kaleem imam, 2011) According to the views of President George W. Bush that he delivered in the state union in 2006 he argued that terrorists are produced under the shelter of dictators and they nourish offense and extremism, and seek weapons of mass destruction. While Democracies restore offense with hope, admit the rights of their people and unite the fight against terror. So according to bush views every step in the direction of freedom in the world makes their country safer (Washington Post, 2006).

According to kaleem imam (2011) barriers in the way of rule of law have not only increased violence but also the terrorist activities throughout the country of Pakistan. There exists a difference of opinion about the causes behind terrorism but the highest rated cause is absence of rule of law. There are many studies that also emphasized the importance of education but there also some studies who results that higher level of education leads to more terrorism such as the study of (Berrebi, 2003). According to which better educated individuals would also become more productive and bloodier terrorists. It also rediscovered by Krueger and Malenkov (2003) for political violence in Israel.

Data Sources and Methodology

In this research quantitative approach is used. The purpose of this research is to explain the Factors affecting terrorism and. Secondary panel data of six south Asian countries is used for this study. Data of terrorism is taken from global terrorism database and the data of governance

indicators, Education and is taken from World Bank. The first section will describe the estimation and methodology. The next section will provide a complete portrayal of variables used in the study followed by the variable's selection and data description.

Model Specification
The following section presents the model employed for estimating the determinants of terrorism. The General and estimation forms of the model are as under;
Model 1 Governance determinants of terrorism
This model 1 estimates the determinants of terrorism such as
$$T= \beta_o+\beta_1 C_{it}+ \beta_2 G_{it}+ \beta_3 L_{it}+\beta_4 P_{it} +\beta_5 R_{it}+\beta_6 V_{it}+\mathcal{E}_{it}$$
Where i denotes cross section and while t is time period with i=1,2,…..,N and t=1,2,…..T. Where T is dependent and C_{it}, G_{it}, L_{it}, P_{it}, R_{it} and V_{it} are independent variables
Model 2 Impact of education on terrorism
This model also includes the education variable along with Governance variables
$$T= \beta_o+\beta_1 C_{it}+ \beta_2 G_{it}+ \beta_3 L_{it}+\beta_4 P_{it} +\beta_5 R_{it}+\beta_6 V_{it}+\beta_7 E_{it}+G_{Iit}+\mathcal{E}_{it}$$
Where i denotes cross section and while t is time period with i=1,2,…,N and t=1,2,…..T. Where Terror is dependent and C_{it}, G_{it}, L_{it}, P_{it}, R_{it},G_{Iit}, V_{it} and E_{it} are independent variables.

Data Description
In above models T is Terrorism, C_{it} is Control of Corruption, G_{it} is Government effectiveness, R_{it} is Regulatory Quality, P_{it} is Political Stability, L_{it} is Rule of Law, V_{it} is Voice and Accountability, E_{it} is Education, and G_{Iit} is GDP per capita. Terrorism is number of deaths per year. While education is School enrollment ratio. Control of Corruption Reflects perceptions of the degree to which public authority is exercised for personal gain, counting both little and impressive forms of corruption, as well as "capture" of the state by elites and personal interests. Voice and accountability reflect perceptions of the amount to which a country's inhabitants are capable to take part in choosing their government, as well as Freedom of association, freedom of expression and a free media. Law and order which Reflects perceptions of the degree to which agents have assurance in and stand by the rules of culture, and in particular the worth of agreement enforcement the police, possessions rights, and the courts, as well as the probability of crime and violence. Political stability and absence of violence/terrorisms which Reflects perceptions of the possibility that government will be weakened or overthrown by undemocratic or aggressive means, including politically-motivated violence and terrorism. Regulatory Quality that Reflects perceptions of the capability of the government to devise and put into practice sound regulations and policies that allow and encourage private sector development. Government Effectiveness Reflects perceptions of the excellence of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and performance, and the reliability of the government's loyalty to such. Voice and accountability, Control of Corruption, Law and order, Political stability Regulatory Quality and Government Effectiveness are measured by taking Estimate of governance (ranges from approximately -2.5 (weak) to 2.5 (strong) governance performances. Education is School Enrolment ratio (% gross) and GDP per capita.
Panel of 6 south Asian countries for the period of 1996 to 2020 is used in present study. Data for Terrorism is taken from global terrorism database. Data of Voice and accountability, law and order, Control of Corruption, Government effectiveness, population political stability and absence of violence/terrorism is taken from World Bank. View as statistical software package has been used to find out the result.

Estimation Methodology

In this research paper panel data is used for analysis. We applied fixed effect and random effect methods for our analysis. Hausman (1978) developed a test that which one forms these two models is better. (Wooldridge, 2009). A hypothesis is developed in panel data that the individual effects of error term are uncorrelated with the other regressors of the model. This hypothesis is tested with the help of Hausman specification test and the value of test is considered. If this value is greater than 0.05 then the hypothesis cannot be rejected and when this hypothesis is not rejected the random effect model is used.

In order to determine the determinants of terrorism panel data for 6 south Asian countries has been collected from the period of 1996 to 2020. The selection of these countries depends upon the availability of data on concerned variables.

The Hausman test

The Hausman test is used to test whether fixed or Random effect is appropriate. Statistically FE are considered more suitable model for panel because of consistent results but RE give more efficient estimators better P-value. Hausman (1978) proposed a test to check whether the individual effects with the repressors or not. If the value of Ch-square in hausman test is greater than 0.05 than random effect model will be used and if the value of chi-sequare in huasman test is less than 0.05 then fixed effect will be used.

Empirical Results

Hausman test is applied to confirm whether to apply fixed or random effect model. In our model auto-correlation was detected by Durbin Wartson which is removed by applying AR (1) further Akaik information criterion and Schwarz criterion is used for best model selection. The application of Hausman test shows that by applying Hausman test the direction of variables is changed in fixed and random effect model so we will use random effect model in this case.

Model 1

$$T= -0.4199+0.1185C_{it}-0.7580P_{it}-0.4434L_{it} + 0.4247G_{it} +0.4922V_{it}+0.0084R_{it} +\varepsilon_{it}$$

   {-2.7087}{0.4563} {-6.6991}{-2.0196} {1.7924}   {3.1082}   {0.0321}
    (0.0080) (0.6492) (0.0000) (0.0463) (0.0763)   (0.0025)   (0.9745)

Values in parentheses are t-statistics vales and below are probability values. In 1st model Political stability, Rule of law and Voice and accountability are significant variables while Corruption, Government effectiveness and regulatory quality are insignificant variables. So, among Governance indexes only political stability, rule of law and voice and accountability are determinants of terrorism. Among these indices' political stability and rule of law have negative relation with terrorism implying that improvement in rule of law are better conditions of political stability will decrease terrorism while voice and accountability have positive relation with terrorism so by increasing voice and accountability terrorism will also Rise.

Model 2

$$T= 0.4969+0.2564C_{it}-0.7605P_{it}-0.7022L_{it} + 0.3521G_{it} +0.6855V_{it}+0.2544R_{it}-0.0063E_{it}-0.0002GI_{it}+\varepsilon_{it}$$

   {1.1581}{0.9013} {-6.8385}{-2.7460} {1.4801}   {3.7688}   {0.9251} {-2.0932} {-1.1710}
    (0.2498) (0.3698) (0.0000) (0.0073) (0.1423)   (0.0003)   (0.3573) (0.0391) (0.2446)

Values in parentheses are t-statistics vales and below are probability values. In 2nd Model education is also significant variable along with political stability, rule of law and voice and accountability. While other 3 indexes of governance are insignificant in this model also. Like political stability and rule of law education also have negative relation with terrorism indicating that more and more education will reduces terrorism. While GDP per capita is insignificant variable.

Results and Discussion

Terrorism restricts the process of development that affects the poor most. South Asia being one of the most populous regions is largely affected by terrorism. So, the purpose of this study is to determine the governance and educational determinants of terrorism. For this purpose, panel data of six South Asian countries has been taken covering the time period from 1996 to 2012. The analysis reveals that some of governance indicators such as voice and accountability, political stability and rule of law are significant determinants of terrorism while others that include government effectiveness, control of corruption and regulatory quality are insignificant variables. So, these variables do not have any effect on terrorism in governance. Political stability and rule of law have negative relation which implies that improvement in political stability and rule of law will reduces terrorism and when political instability increases and law and order goes worsen then terrorism increases. These results are also proved by a wide range of economic literature that also supports this conclusion such as study of kaleem imam (2011). Results of this study also emphasized the importance of political stability, as to defeat terrorism is to solve political disputes. Whereas voice and accountability is positively related to terrorism since people with religious background and extremist don't like freedom of expression and they react dangerously if anything against their views is expressed. Especially among people of south Asia this trend can be experienced in countries such as Pakistan, India and Afghanistan.

In order to see the impact of education we will add it in our 2nd model. The inclusion of education variables improves the model overall and education also shows negative relationship with terrorism implying that as education increases terrorism decreases and as education decreases terrorism increases. The results of our discussion also contradict with the result of Berrebi (2003) who finds that higher levels of education increase the participation in terrorism he further finds that higher level of education and standard of living is positively associated with their participation in Palestinian Islamic jihad and hamas terrorist activities in Israel.

Conclusion

This study uses different panel techniques to determine the relationship between terrorism and its determinants. By applying Hausman test we find that from both techniques, Random effect model is more appropriate. From above results it can be concluded that Rule of law, political stability and voice and accountability are significant determinants of terrorism and Political stability and rule of law have negative and voice and accountability have positive relationship with terrorism in all 3 models. In 2nd model Education is also significant variable and has negative relation with terrorism. The addition of education also improves our model which signifies the relationship.

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