

What Causes Internal Conflict – A Cross-Country Analysis

Syed Muhammad All-e-Raza Rizvi

*Université Clermont Auvergne (UCA), Ecole d'Economie
Clermont-Ferrand, France
allerazarizvi@gmail.com*

Marie-Ange Veganzones-Varoudakis

*Université Clermont Auvergne (UCA), CNRS, IRD, CERDI
Clermont-Ferrand, France
veganzones@aol.com*

Abstract:

In this Paper, we use Fixed Effect Poisson Regression with robust standard errors, to study the determinants of conflict in fragile states. We show that, Judicial Efficiency can deter conflict in fragile states. We also show that better economic performance reduces conflict. Democratic Accountability does not seem to reduce conflict, because democratic countries experience more violence. It also appears that human capital does not help to decrease conflict either. This result illustrates that in fragile countries where socioeconomic, political and demographic conditions are unfavorable, education can augment terrorism.

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1. Introduction:

Civil war causes immense human suffering. For the last decade the Uppsala Conflict Data Program (UCDP) has recorded an upward trend for number of armed conflicts in the world. It has increased from 33 armed conflicts in 2006 to 49 active conflicts in 2016. Number of fatalities was the highest in 2014 and since has seen a sharp decline in the next two years. The data on state-based conflict states that the number of fatalities has decreased from 105000 in 2014 to 87000 in 2016¹. The occurrence of armed based conflict was in 28 countries in 2014 and has increased to 34 states in 2016². Though the number of casualties has decreased since 2014, the expansion of armed conflict in another 6 countries can cause much harm in near future.

Along with this, civil conflicts³ also damage economic and political activities. It causes a decline in economic growth through negative effects on Foreign direct investment, trade, and economic activities in certain industries. It also produces distress in the whole region as political instability in one country, poses threat to the stability of other countries in the region (Teydas, Enia and James, 2011). For instance, civil strife in Syria led many other states, and international organizations to directly participate in their conflict.

Several researches state that armed conflict or terrorism in a country occurs when it has poor socio-economic and political conditions. Collier (2007) states: “Seventy-three percent of people of the bottom billion have recently been through a civil war or are still in one”. In last three decades, countries with low human development have faced civil wars (Stewart, 2005). However, “immiserizing modernization theory”, by Caruso and Schneider (2011) state that economic growth can also increase conflict. They base their theoretical foundation on Olson (1963), who argues that economic growth can create shifts in distribution of wealth. This shift can increase social and political unrest as some groups⁴ will lose.

Gur (1970) reasons that individuals in a society feel economically disadvantaged due to economic disparity and create conflict to change their economic situation. The inequality creates grievance among poor people and recruiting them for a conflict against government, on the

¹ Allansson, M., Melander, E., & Themnér, L. (2017). Organized violence, 1989–2016. *Journal of Peace Research*, 54(4), 574-587.

² Pettersson, T., & Wallensteen, P. (2015). Armed conflicts, 1946–2014. *Journal of Peace Research*, 52(4), 536-550.

³ Conflict and terrorism are used interchangeably in this article.

⁴ These groups can be a part of similar race, caste, religion etc

promise of better future life, becomes less costly for terrorist organizations. Ostby (2008) confirms that dependence on natural resources, inequality and poverty, explain much of armed conflicts in the world.

Rational Choice theory also provides an explanation for appearance of civil strife in a country. This approach suggest that human actions are based on the “calculus of risk, cost and incentive” (Teydas, Enia and James, 2011). Wintrobe (2006) assumes that extremists are rational. He explains that rationality is to choose best means to achieve a goal. He suggests that from an economist’s perspective goals are neither rational nor irrational. On the issue of people deciding to opt legal or illegal activities to increase wealth, Becker (1968) suggests that individuals commit crime if the expected benefits are higher than the costs. Caplan (2006) also suggests that the terrorists are rational, and the terrorist-based activities are the output of cost and benefit analysis. The benefits from these activities are the increase in power and wealth. Opportunity approach states that the most significant factor, to become a rebel, is the expectation of personal gain or reward (Teydas, Enia and James, 2011). It is easier to attract potential soldiers if the rebel leaders control the extractable natural resources. Collier and Hoeffler (2004) suggest that “rebellion may occur when forgone income is usually low”. Freytag et al (2011) propose that if the opportunity costs of terror are higher, people will choose material wealth instead of mental reward.

The focus of this study is to determine the variables that can be used to decrease terrorism in a country. Governments can counter the chance of a conflict by enhancing the living standard of people. Lai (2007) reveals that high-income levels and low-income inequality are negatively associated with terrorism. Providing political rights, better facilities to the citizens, equal opportunities to generate wealth, and investing in human development, can help governments isolate terrorists from their supporters and eradicate terrorism. Freytag et al (2011) show that government expenditures decrease terrorism in a state. Burgoon (2006) also reveal that welfare policies improve socio-economic condition thus decrease terrorism.

Countries with fragile economic and political conditions are more prone to face terrorism. Newman (2007) and Piazza (2008) reveal that it is easier for terrorist groups to establish their organizations in failed state. In earlier studies, poverty, state repression, political freedom, and ethnic fractionalizations have been used to determine conflict (Lai 2007; Krueger and Maleckova

2003). Coggins (2015) reveals that political collapse has a positive relationship with terrorism. George (2018) suggests that foreign terrorists face resentment from local tribes and clans, so in failed states the developed nations should take effective counterterrorism measures through focusing on institutions and local power structures.

In this study, we explore the socio-economic determinants of conflict, for different set of countries. Freytag et al (2011) uses the definition of terrorism from Tavares (2004) as the “premeditated use, or threat of use, of extreme violence to obtain a political objective through intimidation or fear directed at large audience”. We use the panel data for 8 different country samples: Total, Islamic, Diverse⁵, Main Conflict hit⁶, Middle East and North African (MENA), Asian, African, and Latin American countries. The time period for the data is from 2004 to 2017.

We use proxies for the main variables: Annual number of conflict base incidents as a proxy for conflict; GDP per capita for economic growth; Mean year of schooling, and Human Capital for human development, Enforcing Contracts - Time (days) for Judicial efficiency, trade openness for economic globalization. Along with these variables the study also uses log of population and political rights as control variables for conflict.

2. Theoretical Motivation:

To mitigate conflict from a country, one must analyze the reasons why people opt to stand against governments. Rational behavior demands the person to do cost and benefit analysis for any decision. The costs to stand against government includes decrease in wealth and punishment from government. This punishment can be either the use of military against the insurgents or through justice system. LaFree, Dugan and Korte (2009) reason that government response to criminals can have a negative backlash effect or positive deterrence effect. Deterrence models assume that threat or imposition of punishment can modify individual behavior. Nagin and Paternoster (1993) suggest that in deterrence perspective people commit to a certain act when they perceive that expected benefits are higher than expected costs. LaFree, Dugan and Korte (2009) classifies deterrence in two group. They state that specific deterrence occurs when an offender after punishment decides not to repeat the action and general deterrence occurs when people in a society decides not to opt for a certain action because they fear punishment. Dezhbakhsh, Rubin, and Shepherd (2003) reveal

⁵ Countries where more than 10 percent people belong to a different religious group

⁶ Countries that face at least 5 terrorist events in any year

that the probability of arrest, sentencing and execution cause a significant decrease in crime rate.

Higson-Smith (2002) suggest that there is a possibility of an increase in conflict (backlash) after the response of government. Terrorists use sympathies from public after a harsh government response and try to persuade potential group members. Sherman (1993) argues that effective applicability of deterrence models or backlash models depend on how offenders accept the sanctions. If they do not consider it legitimate, it will create grievance among them. We can also classify backlash behavior like deterrence. Specific backlash is when the offenders do not consider the punishment legitimate and carry on their activities. General backlash is when people in the society do not consider the punishment legitimate and have sympathy for offenders. Wintrobe (2006) suggests that people decide to commit terror related activities based on tradeoff between autonomy and solidarity. A person will give up his beliefs (autonomy) to experience social cohesion or solidarity. If in a society there is inefficient judicial system, and people consider the punishment as illegitimate, they can seek support from others to deny their shame. People who have grievance and do not believe in judicial system, will also try to get justice by force and create conflict.

We assume that efficient and effective implementation of strict laws change the behavior of citizens in a country. If the judiciary gives punishment in time, then the people will be reluctant to join conflict because of deterrence effect. We use enforcing contracts (from doing business) as a proxy for judicial efficiency. If the judiciary is efficient and citizens trust the decisions, it will deter terrorism in a country.

Freytag et al (2011) focus on the tradeoff between material wealth and mental rewards and suggest that the terrorists are rational. They propose that if the opportunity costs of terror are higher, people will choose material wealth instead of mental reward. In case of economic downturn, the relative price of material wealth will increase, and people will decide to select conflict⁷.

Bernholz (2004) explains that people have supreme values and they want to implement these values by force. They compare the behaviors and values of other people with their self-defined righteousness and perfection and use religious scriptures to motivate people against others. Black (2001) suggests that these extreme beliefs are based on deeply distorted religious doctrines to meet

⁷ For further details see Freytag et al (2011)

the objectives of the groups (Wintrobe, 2006). People with extreme beliefs tend to join the groups that have same ideology. Conflict based on supreme values can be decreased through education. To counter religious extremism, the state should educate masses with undistorted religious doctrines that rejects the concepts of extremism. Ghosh et al (2017) suggest that state should modify teaching methodology and curriculum content in a way that it can trigger the critical thinking and ethical behavior among students. In long run this will decrease the chances of people choosing terrorism. We use education index (human capital) as an explanatory variable for conflict. We assume that education provides more information to the people and can also provides more benefits and can cause economic improvement. Freytag et al (2011) also suggest that education increases the opportunity cost of conflict.

We also assume that globalization (proxied by trade openness) has a positive impact on conflict. Wintrobe (2006) state that globalization and integration can also be considered as a threat and can increase conflict. Caruso and Schneider (2011) also confirms this relationship and suggest that reforms can lead to decrease in the wealth of some stakeholders, and in response, they can instigate a conflict. Based on these theoretical motivations our hypotheses are as follows:

Hypothesis 1: Efficient judiciary diminishes conflict in a country.

Hypothesis 2: High GDP per capita decreases conflict.

Hypothesis 3: Globalization deters conflict as higher trade openness is perceived as a threat.

Hypothesis 4: A higher degree of education decreases terrorism.

3. Presentation of the Model and of the Variables

3.1. The Model

The equation to study the determinants of conflict is as follows:

$$\text{Conf}_{it} = \alpha + \alpha_1(\text{GDPc}_{it}) + \alpha_2(\text{Edum}_{it}) + \alpha_3(\text{Open}_{it}) + \alpha_4(\text{Pop}_{it}) + \alpha_5(\text{Cntrct}_{it}) + \alpha_6(\text{Demoa}_{it}) + \varepsilon_t \quad \text{Eq (1)}$$

$$\text{Conf}_{it} = \alpha + \alpha_1(\text{GDPc}_{it}) + \alpha_2(\text{HC}_{it}) + \alpha_3(\text{Open}_{it}) + \alpha_4(\text{Pop}_{it}) + \alpha_5(\text{Cntrct}_{it}) + \alpha_6(\text{Demoa}_{it}) + \varepsilon_t \quad \text{Eq (2)}$$

Where *Conf* is the count data variable to measure conflict, *GDPc* the logarithm of GDP per capita, *Edum* and *HC* is for Mean year of education and Human capital respectively, *Open* the trade

openness indicator, Pop the logarithm of population, $Cntrct$ the proxy for judicial efficiency, and $Demoa$ the proxy for Democracy variable. i the cross sections, t the time dimension and \mathcal{E} is the error term, α_1 to α_6 are the parameters to be estimated.

3.2. The Model's Variables

3.2.1. Annual Conflict-Based Incidents as Proxy for Internal Conflict

The conflict-based incidents in the GTD codebook are defined as “*the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation*”. The study uses the annual conflict-based domestic incidents from Global Terrorism Database (GTD) as a proxy for conflict as explained by (Enders, Sandler and Gaibullov, 2011). The time for the annual data is from 2004 to 2017 and we have 8 different country samples for regression.

3.2.2. GDP per Capita as Proxy for Revenues and Wealth

In empirical literature the impact of GDP per capita on conflict is mixed. Collier and Hoeffler (2004) and Humphreys (2003) show that low resources in a state leads to civil war in a country. Caruso and Schneider (2011) and Shahbaz (2012) state a positive impact of GDP on conflict. Freytag et al (2011) and Lai (2007) reveal that in a simple specification the GDP has a positive impact on conflict, however, when they use the quadratic specification for GDPc, the impact is negative. They argue that a state should pass a threshold level of development to counter conflict through wealth. Piazza (2007) does not found a significant association between the two variables. We use log of real GDP per capita mainly from WDI (2017) as a measure of economic wealth for our panel data. We also collect data from National and International sources for missing values of some countries. The variable is denoted by LGDPc.

3.2.3. Efficient Judiciary as a proxy for deterrence:

Freytag et al (2011) suggests “possibility of punishment by the government”, as a cost, that terrorists consider while deciding to opt for terrorism. If the decision on the fate of a criminal is delayed, then it will lose the relevance. If the time of a civil war or conflict is short and the group who is fighting against the government know that judiciary is inefficient and there is a chance that they will not get severe punishments, they will continue the conflict. Punishment in time does send a message to other criminals that they can get the punishment too. It can lead less people to join or fund terrorist organization.

The study uses Enforcing Contracts - Time (days) as a proxy for Judiciary efficiency (taken from doing business database). The variable is denoted Cntrct.

3.2.4. Education Index as Proxy for Human Capital

Human capital is also a significant determinant of conflict. The empirical evidences show different variables have been used as a proxy for human capital. Collier and Hoeffler (2004) chose gross secondary schooling rate, Freytag et al (2011) use the average number of years of schooling of the population over 15, and Brockhoff et al (2015) select literacy rate along with different levels of education enrollment as explanatory variables for their conflict variable.

We use Mean Year of schooling provided and defined by United Nation Development Program (UNDP). It represents mean year of education for population aged 25⁸ or more and denote it by Edum. Along with that We also use Human Capital from Penn World Table (PWT 9.1)⁹ and denote it by HC.

3.2.5. Trade Openness as proxy for Economic Reforms

We also use trade openness as an explanatory variable for conflict. The impact of trade openness on conflict is uncertain. Kurrild-Klitgaard et al (2006) shows negative impact of trade openness on conflict. Trade openness impacts positively on economic indicators¹⁰ and it can also lead to modernization of the economy. These new opportunities created by trade, decrease internal conflict (Bloomberg and Hess, 2008). However, Freytag et al (2011) and Wintrobe (2006) state that globalization and integration can also be considered as a threat and can increase conflict. Caruso and Schneider (2011) also confirms this relationship and suggest that reforms can lead to decrease in the wealth of some stakeholders, and in response, they can instigate a conflict.

We use the ratio of exports plus imports to GDP (in real terms), designated Open. Data are from National and International sources.

⁸ <http://hdr.undp.org/en/content/human-development-index-hdi>

⁹ Feenstra, R. C., Robert, I., & Marcel P. T. (2015), "The Next Generation of the Penn World Table " *American Economic Review*, 105(10), 3150-3182, available for download at www.ggdc.net/pwt

¹⁰ See (Frankel and Romer, 1999; Dollar and Kraay, 2003)

3.2.6. Democratic Accountability as Proxy for Democracy

We use Democratic accountability, from International Country Risk Guide (ICRG), as an indicator of regime type to explain domestic conflict in Fragile states. Empirical studies provide evidence for both positive and negative impact of democracy on terrorism. Eyerman (1998), conclude that democracy in a country decreases terrorism. However, Weinberg and Eubank (1998) and Piazza (2007) found that democratic countries face more conflict than Authoritarian regimes. Rizvi and Veganzones-Varoudakis (2019) and Li and Schaub (2004) suggest that democracies face more conflict because it is easier and less costly for extremists to engage in conflict-based activities when they have more political freedom and rights.

The variable Democratic accountability shows lower values for Autarchies and higher values for Democracies¹¹ and is denoted Demoa. It should therefore have a positive relationship with the conflict in fragile states.

Along with these variables the study will also use log of population as explanatory variables for conflict.

3.3. Estimation of the model:

We use the panel data for 8 different country samples for regression: Total, Islamic, Diverse, Main Conflict hit, Middle East and North African (MENA), Asian, African, and Latin American countries. where more than 10 percent people belong to a different religious group. We select the Fragile states¹² from fragile State Index published by Fund for Peace¹³. We have 58 total countries for analysis, as data for some countries was not available. We use three specifications for each panel. We use two variables as the proxies for human capital. Data for Mean year of schooling was available for all 58 countries. However, for Human capital from Penn World Table (PWT 9.1), data was not available for some countries¹⁴. To match the sample and compare the impact of both human capital proxies, Total country list was reduced to 51 for our 2nd and 3rd specifications.

¹¹ Howell, L. D. (2011). International country risk guide methodology. East Syracuse, NY: PRS Group.

¹² Countries where overall fragility index score was higher than 70.

¹³ See the Fragile States Index 2017 by the Fund for Peace, <https://fragilestatesindex.org/data/>

¹⁴ Azerbaijan, Belarus, Guinea, Guyana, Lebanon, Libya, Moldova

We use annual number of conflict-based incident in a country from GTD as a dependent variable. This infers that our proxy for conflict is non- negative integers (count data)¹⁵, so we use Fixed Effect Poisson Regression (FEPR) with robust standard errors to address the issues related to count data. Poisson regression with fixed effects is robust and consistent for count data model (Wooldridge, 1999). The problem of under/ overdispersion while applying Poisson Regression has been highlighted in many empirical studies. Even in the case of overdispersion, FEPR with clustered standard errors, retains consistency, and allows us to estimate our model with robust standard errors (Simcoe, 2008). Many empirical researches have used Negative Binomial Regression¹⁶ (NBR) to answer this issue. However, Berrebi and Ostwald (2011) argue a restrictive assumption that dependent variable's conditional distribution should follow negative binomial distribution, is required to use NBR. They suggest that NBR provides possible efficiency gains, but the consistent estimates offered by Poisson regression are more valuable.

¹⁵ For more details on count data regression see Cameron and Trivedi (1998)

¹⁶ George 2018; Piazza 2008

4. Results and Discussion:

We use the panel data for 8 different country samples for regression. As the results for our different panels state positive impact of human capital on terrorism. So, we run 2 more regressions for each panel to incorporate another proxy of human capital (from Penn World table) for robustness of results. For these two regressions, number of countries decreases from 58 to 51 as Penn World Table 9.1 does not have data of human capital for 7 countries.

Table 1: Fixed Effect Poisson Regression for Total Countries

| Variables | Specification 1 | Specification 2 | Specification 3 |
|-------------------|---------------------|---------------------|--------------------|
| Lpop | 4.318*** (0.70) | 4.491*** (0.86) | 2.944*** (0.79) |
| Lgdpc | -1.164*** (0.32) | -1.063*** (0.37) | -0.479** (0.24) |
| Edum | 0.758*** (0.17) | 0.681*** (0.18) | |
| Hc | | | 4.957*** (0.98) |
| Cntrcty | 1.353* (0.77) | 1.360* (0.79) | 1.111 (0.88) |
| Open | -0.32 (1.00) | -0.457 (1.03) | 0.093 (0.99) |
| Demoa | 0.113** (0.06) | 0.087* (0.05) | 0.262*** (0.06) |
| Observations | 812 | 714 | 714 |
| Number of counnum | 58 | 51 | 51 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

Table 1 presents the results for total countries. The results show significant impact of all variables (except trade openness) on terrorism. For all three regressions real GDP per capita has negative and, population, judicial efficiency, and democratic accountability have positive influence (as expected) on terrorism. As mentioned above, we used two proxies for human capital. Edum and HC both shows positive impact of human capital on terrorism.

Table 2: Fixed Effect Poisson Regression for Muslim Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-------------------|---------------------|---------------------|--------------------|
| Lpop | 4.431*** (0.92) | 4.652*** (1.08) | 2.734*** (0.88) |
| Lgdpc | -1.251*** (0.27) | -1.108*** (0.30) | -0.556** (0.26) |
| Edum | 0.591 (0.40) | 0.452 (0.42) | |
| Hc | | | 4.629*** (1.63) |
| Cntrcty | 2.425*** (0.81) | 2.518*** (0.92) | 2.094*** (0.67) |
| Open | -0.082 (1.13) | -0.384 (1.22) | 0.205 (1.20) |
| Demoa | 0.158** (0.06) | 0.135** (0.06) | 0.286*** (0.06) |
| Observations | 350 | 294 | 294 |
| Number of counnum | 25 | 21 | 21 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

Results for Muslim countries shown in Table 2 state almost the same signs and significance as for total countries. Human capital is only significant for the third regression (HC from PWT 9.1) and insignificant for the first two regressions. For second and third specification of Muslim panel, number of countries decreased from 25 to 21 due to data unavailability for human capital from PWT 9.1. Table 3 depicts the results for the countries where number of terrorism-based activities are at least 5 in any given year. The results are similar to our main panel of total countries. Table 4 state the results for countries where religious minority has at least 10% share in total population. For this panel democratic accountability show insignificant results.

Table 5 to 8¹⁷ present regional panels for MENA, Asian, African, and Latin American countries respectively. For MENA human capital and democratic accountability do not show significant results. For second and third specification trade openness show negative impact on terrorism at

¹⁷ The results for regional panels are presented in Appendix

10 % significant level. For Asian Panel only 3rd specification has shown some significant results. For African panel trade openness and GDPC have positive impact at 10% significant level. Human capital and democratic accountability are insignificant. For Latin America only population and GDPC have significant results.

Table 3: Fixed Effect Poisson Regression for Main Conflict hit Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-------------------|---------------------|---------------------|--------------------|
| Lpop | 4.312*** (0.70) | 4.486*** (0.86) | 2.942*** (0.79) |
| Lgdpc | -1.166*** (0.32) | -1.065*** (0.37) | -0.479** (0.24) |
| Edum | 0.761*** (0.17) | 0.683*** (0.18) | |
| Hc | | | 4.962*** (0.98) |
| Cntrcty | 1.339* (0.78) | 1.338* (0.81) | 1.089 (0.89) |
| Open | -0.323 (1.01) | -0.462 (1.03) | 0.093 (0.99) |
| Demoa | 0.113** (0.06) | 0.086* (0.05) | 0.262*** (0.06) |
| Observations | 588 | 560 | 560 |
| Number of counnum | 42 | 40 | 40 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

The overall results show that population has a positive relation with conflict. Gaibullov and Sandler (2019) state the similar results. Taydas, Enia and James (2011) explain that number of potential rebels increases in countries with larger population. It is difficult for governments to manage, serve, and meet the demands of all in large populations. Real GDP per Capita has shown negative impact on terrorism for all panels except African Countries. The negative impact of GDPC on terrorism reveal that good economic conditions, increase the opportunity cost for carrying out terrorist activities. Collier and Hoeffler (2004) also state the negative impact of GDPC on terrorism.

For African Countries GDPC show positive relation with conflict at 10 % significant level. Blomberg and Hess (2008) also confirm the positive impact of GDPC on terrorism. Difference in

regional socio-economic and cultural dynamics can lead to different determinants of conflict. Olson (1963) argues that rapid economic growth can create shifts in distribution of wealth. This shift can increase social and political unrest as some groups will lose. Even perception of not getting expected economic share can cause grievance in people.

Table 4: Fixed Effect Poisson Regression for Diverse Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-------------------|---------------------|---------------------|---------------------|
| Lpop | 8.312*** (2.87) | 11.147*** (1.78) | 9.497*** (1.61) |
| Lgdpc | -1.531*** (0.08) | -1.571*** (0.09) | -1.090*** (0.09) |
| Edum | 0.725*** (0.26) | 0.499** (0.21) | |
| Hc | | | 3.794*** (0.94) |
| Cntrcty | 2.976 (2.57) | 4.961** (2.20) | 3.977* (2.19) |
| Open | 1.867 (1.63) | 1.834 (1.72) | 1.907 (1.41) |
| Demoa | -0.155 (0.45) | -0.409 (0.45) | -0.412 (0.40) |
| Observations | 238 | 224 | 224 |
| Number of counnum | 17 | 16 | 16 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

Impact of education on terrorism show mixed results. Table 1, 3 and 4 state that education has the positive significant impact on terrorism for all three specifications. Muslim and Asian countries show positive impact of human capital for only third specification (where HC is from PWT). The results are not significant for first two specification of Muslim and Asian countries and for all three specification of other regional panels. Brockhoff et al, (2014) and Berrebi (2007) have also shown positive influence of education on terrorism. Ideally, education should enhance socioeconomic conditions thus increase opportunity cost of terrorism. As Educated people do critical analysis and do not fall in hate propaganda. However, Brockhoff et al (2014) argue that relationship between education and conflict is based on country- specific conditions. In countries where socioeconomic, political and demographic conditions are unfavorable,

education can augment terrorism. They reveal that if advances in education do not translate into expected better life, it will enhance frustration and cause terrorism. People can consider joining terrorist organizations if returns from legal career paths are lower than expectations. Terrorist groups also prefer to recruit educated people as it can increase the probability of success to perform terrorist activities and create desired image for mass media.

Results for most of our regressions show positive impact of efficient judiciary on terrorism. It means that conflict decreases if judiciary takes lesser time to decide the fate of lawbreakers. The positive influence confirms the results of Dezhbakhsh, Rubin, and Shepherd (2003), who also support deterrence effect of punishment. It shows that when people decide the course of their actions on rational basis, expectation of punishment increases the opportunity cost of committing crime. Only for Asian countries, the result support backlash effect.

Trade openness show mixed results for our regressions. MENA and African countries show significant results. For MENA the impact is negative and show that economic integration decreases conflict in the country. However, For African panel the results are opposite and illustrates that economic integration is taken as a threat. Regressions for all other panels show insignificant results. Gaibulloev and Sandler (2019) state the same results. The mixed results reveal that differences in socioeconomic and political factors play a significant role in treating economic globalization as a threat or blessing. The results for political freedom show significant positive impact on terrorism for most of regressions. It means that when countries move from Autarchies to democracies, they face more violence. Weinberg and Eubank (1998) reveal that conflict rises in democracies. Rizvi and Vezanones-Varoudakis (2019) argue that extremists have more freedom of press, and rights for movement, and expressions in democratic fragile states. It reduces the organizational cost and give more freedom and ability to expand the ideology and create conflict.

5. Conclusion:

In this article, we study socio-economic determinants of conflict in fragile states. We explore and analyze different theories and empirical evidences to determine conflict. We apply Fixed effect Poisson regression for 8 panels (58 fragile countries in basic specification). We use three

regressions for each panel and the time period for analysis is from 2004- 2017. The outcomes of our empirical analysis offered some validation for our theoretical reasoning.

We found that except economic globalization, our proxies show significant results for most of our panels. Our results state that better economic performance and judicial efficiency reduces terrorism. Mostly in developing countries judiciary takes a lot of time to decide the fate of a criminal, thus loses the importance and relevance of punishment. We suggest that along with economic growth and stability, Fragile states should also focus on deterrence effect of punishment and create special courts to deal with terrorism.

We used two different proxies of human capital and found positive impact of both on conflict. We agree to Ghosh et al (2017) who suggest that state should modify teaching methodology and curriculum content in a way that it can trigger the critical thinking and ethical behavior among students. We also found Positive effect of population and democracy on conflict.

For African Countries, some of the coefficients show different signs than our other panels. It shows that diverse socioeconomic, political and demographic conditions, can cause differences in the determinants of conflict. We suggest that many factors can determine conflict in any region. In fragile states these factors can impact differently according to the socio-economic or political needs of those regions. To eradicate terrorism, we need proper understanding of those conditions that are unfavorable to general public.

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Appendix:

Table 5: Fixed Effect Poisson Regression for MENA Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-----------|-----------------|-----------------|-----------------|
|-----------|-----------------|-----------------|-----------------|

| | | | |
|-------------------|---------------------|---------------------|-------------------|
| Lpop | 3.613*** (0.95) | 3.603*** (1.08) | 3.107* (1.74) |
| Lgdpc | -1.246*** (0.29) | -1.101*** (0.35) | -0.650* (0.37) |
| Edum | 0.654 (0.49) | 0.531 (0.52) | |
| Hc | | | 2.608 (2.62) |
| Cntrcty | 3.023*** (0.95) | 2.882*** (1.04) | 2.967** (1.26) |
| Open | -1.299 (0.83) | -1.771* (1.06) | -1.277* (0.66) |
| Demoa | 0.425 (0.32) | 0.293 (0.20) | 0.31 (0.20) |
| Observations | 182 | 154 | 154 |
| Number of counnum | 13 | 11 | 11 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

Table 6: Fixed Effect Poisson Regression for Asian Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-------------------|------------------|------------------|--------------------|
| Lpop | 6.625 (6.38) | 6.647 (6.43) | 9.469** (3.75) |
| Lgdpc | 0.811 (2.61) | 0.796 (2.63) | -6.162** (3.02) |
| Edum | -0.065 (0.59) | -0.061 (0.59) | |
| Hc | | | 17.302** (7.36) |
| Cntrcty | -3.839 (4.23) | -3.869 (4.35) | -13.662* (7.06) |
| Open | 1.124 (1.70) | 1.126 (1.70) | 0.511 (1.20) |
| Demoa | 0.059 (0.33) | 0.058 (0.33) | 0.237 (0.21) |
| Observations | 126 | 112 | 112 |
| Number of counnum | 9 | 8 | 8 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

Table 7: Fixed Effect Poisson Regression for African Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-----------|--------------------|--------------------|---------------------|
| Lpop | 7.706*** (2.81) | 7.740*** (2.82) | 10.258*** (3.06) |

| | | | |
|-------------------|--------------------|--------------------|--------------------|
| Lgdp | 4.221 (2.60) | 4.284* (2.59) | 4.821* (2.64) |
| Edum | 0.356 (0.53) | 0.346 (0.53) | |
| Hc | | | -2.613 (3.15) |
| Cntrcty | 7.592*** (2.46) | 7.696*** (2.46) | 8.226*** (2.87) |
| Open | 2.652* (1.41) | 2.714* (1.43) | 2.640* (1.37) |
| Demoa | -0.249 (0.22) | -0.243 (0.23) | -0.116 (0.24) |
| Observations | 294 | 280 | 280 |
| Number of counnum | 21 | 20 | 20 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.

Table 8: Fixed Effect Poisson Regression for Latin American Countries

| VARIABLES | Specification 1 | Specification 2 | Specification 3 |
|-------------------|---------------------|---------------------|-------------------|
| lpop | 12.429*** (4.23) | 12.339*** (4.28) | 14.316 (15.42) |
| lgdp | -0.243** (0.11) | -0.248** (0.12) | -0.259* (0.14) |
| edum | -0.211 (0.41) | -0.198 (0.41) | |
| hc | | | -2.018 (7.25) |
| cntrcty | 1.193 (0.94) | 1.21 (0.94) | 1.123 (1.18) |
| open | 0.517 (1.04) | 0.671 (1.24) | 0.635 (1.36) |
| demoa | 0.302 (0.34) | 0.306 (0.34) | 0.326 (0.40) |
| Observations | 154 | 140 | 140 |
| Number of counnum | 11 | 10 | 10 |

Note: Dependent variable is annual number of terrorist-based incidents, robust standard errors are given in parenthesis, significance level: ***, **, * is less than 1%, 5% and 10% respectively.