

# Conflict and Regional Heterogeneity\*

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## Abstract

Conflict is a problem that transcends economic, social and political lines. As such, identifying the predictors of conflict should be an important focus for political leaders, policymakers and researchers alike. Using panel data analysis and a comprehensive geo-referenced conflict dataset disaggregated into state-based, non-state and one-sided violence(1989 to 2015), we identify several factors that contribute to the risk of conflict across the globe. We also address the role of institutions through state fragility. We find evidence of regional heterogeneity in the effects on conflict from some of the predictors, such as income per capita, military expenditure and globalisation. Only the effects of state fragility on conflict appear consistent across the different regions. These results indicate that there are nuances that policymakers must be aware of when adopting policy reforms that can be effective in avoiding conflict and promoting postwar recovery.

Keywords: determinants of conflict, regional heterogeneity, state fragility

JEL Classification: C33, H56, O10, O43

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## Introduction

Why should we be concerned about conflict in this day and age of pacifism? While it may seem that less countries in the world are engaged in conflict, the reality is that the adverse consequences of previous conflicts persist to the present day within the warring country and its neighbouring countries. Not only does conflict contribute to poverty, disinvestment, increased crime and disease, and lower human capital, but it is also costly to sustain which reduces national income. In turn, when economic development fails, the risk of conflict increases, and countries often find themselves caught in the conflict trap. As such, understanding the nature of conflict should be considered an important focus in economic growth.

While the existing literature looks at the factors that increase or decrease the risk of conflict (Collier and Hoeffler, 1998), (Collier and Hoeffler, 2004a), (Fearon and Laitin, 2003), we find that the evidence does not distinguish between the types of conflict, a concern highlighted by (Blattman and Miguel, 2010). They challenge researchers to classify conflict into different categories instead of analysing civil war as a single phenomenon.

Figure 1 illustrates the importance of their concern. Classifying conflicts into different categories helps to identify the players contributing to the overall conflict, especially when trying to find measures to reduce conflict. In our sample, the main contributor of conflict between 1989 and 2015 was government based. The number of non government based (group) conflict and one-sided conflict against civilians remained constant during this period.

We also find that the evidence is mostly based on a global dataset which assumes that the conflict predictors, such as income per capita, education, population or military expenditure have similar effects across the world (Collier et al., 2009), (Hegre and Sambanis, 2006). A fair amount of the evidence also focuses solely on Africa to the disadvantage of other regions (Collier and Hoeffler, 2002), (Miguel et al., 2004), (Arezki and Gylfason, 2013). In the last twenty years conflict has not only affected Africa (Rwandan genocide, Central African Republic civil war, Boko Haram insurgency, Sudan-South Sudan war, the Arab Spring), but also Asia (Iraqi civil war, Syrian civil war, Turkey-ISIL war, <sup>1</sup>Yemeni civil war), North America (Mexican drug wars, ISIL, al-Qaeda) and Europe (Kosovo, Russia, Ukraine). We also find little empirical evidence on the spill over effects from neighbouring countries on conflict ((Hegre and Sambanis, 2006) and (Gleditsch, 2007)).

We address these issues by disaggregating conflict into four categories, namely all conflicts, state-based conflict which involves the government, non state-based conflict which involves militia / rebel groups and one-sided conflict targeted at civilians. We also separate the world sample into regions East and South Asia (EAS+SAS), Latin America and the Caribbeans (LCN), Middle East and sub-Saharan Africa (MEA+SSF) and North America and Europe (NAC+ECS) <sup>2</sup>Based on these

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<sup>1</sup>Turkey and Islamic State of Iraq and the Levant (ISIL)

<sup>2</sup>See Table 14 in the Appendix for the breakdown of countries into regions

disaggregations, we compare economic and social indicators, as well as neighbour effects, across these four types of conflict and the different regions.

We find that the indicators' effects are unique to the type of conflict and to the region. We also find that only the fragility of a country has a common effect across the regions and conflict types. While the variables are not robust to the inclusion of other predictors, the fragility variable remains robust in increasing all conflict types. Moreover, we find evidence of significant neighbour effects on group conflict through state fragility in low income countries.

## Data

The conflict data is from the Uppsala Conflict Data Program Georeferenced Events Dataset (UCDP GED) and is broken down by the identity of the armed actor into 3 mutually exclusive 'events': 1) independent government state act of violence against an organized actor, 2) formal or informal group lethal violence against another formal or informal group, or 3) one-sided violence against citizens by an organized actor. Organized actors are defined as a government of an independent state or a formal (named) and informal organized group not linked to the government. An event is recorded when organized actor uses lethal force against any other organized actor or civilians that resulted in at least one death.

There are several events each year occurring in various countries. The UCDP GED provides the coordinates for the various acts of violence. We aggregate the separate events in each year and across each country to get a count of the number in each category.

To give an idea of the occurrence of each event, Figure (2) represents all, government, groups, and one-sided events across the regions. It is interesting to note that most of the conflict types are concentrated to the south of the world which is characterised by relatively more developing countries. Moreover, Africa, South America and Asia appear to be the contributors for increased conflict between 1989 and 2015, particularly government based and civilian based conflicts.

The economic and social indicators include income, education, globalisation, military expenditure and state fragility.

Income per capita at 2005 constant prices is taken from the World Development Indicators (WDIs) and measures the real gross domestic product. We expect that increases in income will reduce the grievances that make conflict more likely such as poverty and inequality. In (Collier and Hoeffler, 2002) and (Fearon and Laitin, 2003), they find that low incomes per capita facilitate easy recruitments for rebel groups as income opportunities are worse in the formal labour market. Furthermore, (Collier and Hoeffler, 2002) find Africa's poor economic performance attributed to the rising trend of conflict in the region during the 1980s and 1990s, which lends support to our statistical evidence in Figure 2.

Education measures the gross secondary enrolment rates obtained from the WDIs. This variable has contrasting results across the literature. While (Krueger and Maleckova, 2003) find no correlation suggesting that increased education decreases conflict, (Collier and Hoeffler, 2004a) report that males enrolled in secondary education have a negative effect on conflict. Education equips people with skills that they can use in employment and keeps young boys off the streets and out of rebel armies. Moreover, (Reynal-Querol, 2002) find that the level of education is a significant determinant in reducing conflict, especially when not used in conjunction with income per capita. The contrasting results make it difficult to infer a priori expectations, but we expect a negative relationship between education and conflict.

We use globalisation as our measure for openness. The variable is compiled by (Dreher, 2006) and updated by (Dreher et al., 2008). It combines three key components of globalisation (political, economic and social globalisation) into a weighted index ranging from 0 (no globalisation) to 100 (highly globalised). The globalisation index captures the international flows of goods, capital, businesses, people, technology, information and the presence of international organisations. Several studies find that openness decreases both the likelihood and the severity of civil conflict through its beneficial effects on growth, political stability and social progress ((Blanton and Apodaca, 2007), (Hegre et al., 2010)). In contrast, openness is also seen to increase conflict by creating conditions that increase income inequality and poverty, as well as facilitating social breakdown because of resistance from those who become oppressed ((Olzak, 2011)). We expect openness to create more opportunities for mutual economic, social and political gains, encouraging non-violent forms of interactions and reducing hostility countries.

Military expenditure as a percentage of GDP is taken from the WDIs. According to (Collier and Hoeffler, 2004b) military spending can deter conflict by lowering the prospects of rebel success. On the other hand increased military expenditure by the government post-conflict can increase risk of renewed conflict as rebels may perceive this as a breach of peace settlement. We expect increased military expenditure by the government to indicate its military strength and act as a deterrent to conflict.

The state fragility index is obtained from the Center for Systemic Peace. It measures a country's ability to fulfil basic functions, such as manage conflict, implement public policy, deliver public services and sustain progressive development. The index scores each country on the effectiveness and legitimacy of the state, and ranges from 0 (no fragility) to 25 (extreme fragility). Fragile states are institutionally weak and therefore more susceptible to conflict ((Fearon and Laitin, 2003)). According to (Rouen and Sobek, 2004), an effective state government reduces rebel victories. Moreover, (Olzak, 2011) attributes strong state capacity to decreased conflict as strong states have the capacity to suppress civil wars, compared to weak states, through superior military and policing strength, and strong bureaucratic administrations. We expect state fragility to be positively correlated with conflict.

## Methodology

Analysis of conflict<sup>3</sup> determinants have traditionally been estimated using Ordinary Least Squares (OLS), binary limited dependent variable models such as a probit or logit ((Collier and Hoeffler, 1998), (Collier and Hoeffler, 2004a), (Fearon and Laitin, 2003)), or proportional hazard model to analyse conflict duration ((Collier et al., 2004), (Rouen and Sobek, 2004)). Many researchers model the frequency of events, such as conflicts and wars, as continuous processes using OLS. (Wooldridge, 2010) notes that OLS is not ideal since  $E(V_{ijt}|X)$  can be negative even when  $V_{ijt}$  is nonnegative, where  $V_{ijt}$  is the count of the number of events.

The current paper aggregate the events in the UCDP GED data set which display multiple events in each period  $t$  and for each country  $i$ . We aggregate each type of event,  $j$ , by country and year so we have a count of the number of each type of event. Although we could use the same estimations techniques previously mentioned, our preferred method is the count model negative binomial<sup>4</sup> given that the dependent variable is a discrete nonnegative integer value.

The negative binomial model is used with count data in cases where the variance of the random variable is not equal to the mean. The conditional mean is

$$E[V_{ijt}|x_{it}, \phi_i, \epsilon_{itj}] = \exp(\gamma + \beta x_{it} + \phi_t + \epsilon_{itj})$$

and the model is estimated using Maximum Likelihood.<sup>5</sup> The variable  $V_{ijt}$  is the count of events for country  $i$ , type  $j$ , and year  $t$ , and  $x_{it}$  are a vector of determinants of conflict described in the data section, and  $\phi_i$  is the country fixed effect<sup>6</sup>. The country fixed effects are included to address the issue of statistical and/or economic endogeneity. Typically with conflict, the population size of a country can be an important factor for the onset of conflict so we offset the dependent variable or make the mean count proportional to log of population.

## Results

Table 1 gives a general overview of the effects of the predictors on all conflicts for the world sample. The results indicate that a unit change in the fragility of a country increases the number of conflicts by three to five. The evidence supports the argument that fragile countries are characterised by weak institutions that fail to support their population or control their territory. A further disaggregation of the index into effectiveness (ability to provide for population and control violence) and legitimacy (acceptance of rule by the population) shows that the positive effects on conflict are mainly driven

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<sup>3</sup>Many papers look specifically at ethnic and civil war or conflict.

<sup>4</sup>The negative binomial was chosen over the Poisson because there were signs of overdispersion.

<sup>5</sup>See (Cameron and Trivedi, 2005) for the the specific functional form of the conditional log likelihood.

<sup>6</sup>We also used year fixed effects and the results are available upon request. The year fixed effects had little or no effect in any of the regression results.

by the legitimacy score. The less convinced the population is by the government's rule the higher the incidence of conflicts.

Income per capita is positively related to the number of conflicts occurring. However we identify an inverted non-linear relationship with conflict. Countries with low levels of income per capita are more likely to be involved in conflicts, but this relationship is expected to change as the countries' levels of income per capita increases over time. There are several channels this outcome can work through. The wealthier a country is the more resources it has to sustain its population which decreases the risk of conflict over grievances ((Collier and Hoeffler, 2004a)). The wealthier a country is the higher the opportunity costs of engaging in conflict. A wealthier country can afford a bigger police and military force to keep the peace ((Pinker, 2011)).

Interestingly, political globalisation decreases the number of conflicts by two in comparison to economic globalisation and social globalisation. The component measures the number of embassies in the country, membership in international organisations, participation in United Nations (UN) security council missions and number of international treaties. Most countries today are part of regional blocs (for example the North Atlantic Treaty Organisation, the Southern African Development Community, the European Union), and as such it becomes difficult to engage in conflict with political allies. On the other hand economic globalisation (accounts for trade of goods, foreign direct investments and tariffs) and social globalisation (accounts for tourism, the percentage of foreign population in countries, media use, and presence of multinational corporations) appear to aggravate the incidence of conflicts. Evidence from the recent xenophobic attacks in South Africa suggest that an increase in foreign population can put pressure on the host country's resources and reduce wage rates in the labour market which can increase conflict<sup>7</sup>An unfavourable trade balance can also crowd out local producers which can cause social unrest.

An unit increase in military expenditure increases the number of conflicts by six, a result which is not in line with our expectations. Increased military spending may be perceived as a threat by other states or rebel groups thus instigating conflict.

Natural resource rents are positively related with conflicts. Resource rents can increase conflict through rentier effects that accrue to elite groups and raise the incentive to stay in power ((Fearon and Laitin, 2003), (Pinker, 2011)). These rents also fund rebel groups for those authoritarian incumbents who want to intimidate civilians ((Barbieri and Reuveny, 2005), (Collier and Hoeffler, 2004a)).

Education appears not to have any significant effects on the incidence of conflicts.

In Tables 2 to 5, we identify different effects from some of the predictors across regions. While state fragility remains significantly consistent in increasing conflict across the regions and types of conflicts, we find that the non-linear relationship for income per capita is reversed in the Asian

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<sup>7</sup>The positive results from the migrant variable have a similar interpretation to social globalisation. Refugee flows can increase rebel recruiting.

region. A possible explanation could be that the recent high growth experienced in Asia is causing competition between the Asian tigers <sup>8</sup>which can lead to increased conflict. The results could also simply be dominated by the population weighting of China and India who have high income inequality.

Secondary education significantly reduces the number of group and one-sided conflicts in Middle East and Africa. This region is known for recruiting teenage boys into rebel armies and using them to infiltrate civilian communities (for example the Islamic State in the Middle East, Boko Haram in West Africa). On the other hand, secondary education is more effective in reducing the number of state-based conflicts in North America and Europe. A government with educated officials is more likely to seek diplomacy than conflict.

Political globalisation remains relatively consistent in decreasing the number of conflicts across the regions, regardless of type of conflict. Economic globalisation however significantly reduces the number of one-sided conflicts by 8 in North America and Europe. Engaging in civilian-based conflict would be costly to the global reputation of this highly integrated region which is known for advocating human rights.

The positive effects on government-based and one-sided conflicts from military spending are driven mainly by the Latin American and Caribbean region. A possible explanation could be linked to the prevalence of drug cartels in the region.

As further analysis, we split our sample of countries into high income and low income, using the World Bank income per capita classifications. Tables 6 to 9 report the results. We find that the results are similar to the regional ones for state fragility, political globalisation and secondary education. The low income results particularly appear to resemble the effects obtained from the Middle East and sub-Saharan African region, while the high income results follow the North American and European region.

For our final analysis, we include neighbour effects in the estimations. Figure 2 indicates that conflicts are concentrated in particular areas of the world and this may be due to spillover effects. Conflicts not only have regional economic spillovers through increased military budget or deterioration of the reputation of the region in relation to foreign investments, but they also incur social spillovers through refugee flows. ((Collier et al., 2003)). Moreover (Bosker and de Ree, 2014) and (Gleditsch, 2007) provide evidence that a conflict is not determined just by a country's internal factors, but also by the transnational factors and linkages between countries (for example, shared ethnic ties, foreign interventions, the executive constraints of political leaders in regions).

Tables 10 to 13 report the results. We find that an increase in the neighbouring countries' state fragility increases the number of group conflicts significantly in low income countries. According to (Michalopoulos and Papaioannou, 2013), conflict is more likely in countries with ethnic groups

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<sup>8</sup>Hong Kong, Singapore, South Korea and Taiwan

split by the artificial colonial borders because these split groups can be used by rebels to destabilise neighbouring countries. Furthermore (Gleditsch, 2007) finds that the presence of trans-boundary ethnic groups increase conflict risk. However high income countries show mitigating effects of neighbours' state fragility across all types of conflicts. A possible suggestion is a political strategy where countries protect their own borders and do not interfere in neighbouring countries' intrastate conflicts (for example Botswana has not experienced conflict since the demise of Zimbabwe and the political uncertainty in South Africa).

High income countries have less government based conflicts when they are surrounded by wealthy countries. This evidence suggests a cost effect which is large enough to deter countries from engaging in conflict for fear of losing the welfare gains associated with interacting with their neighbours ((Gleditsch, 2007)). On the other hand, an increase in neighbours' income per capita increases the number of group conflicts for low income countries. If rebel armies gain access to resources through looting, they can mobilise a larger movement and perform more raidings ((Azam, 2006)).

Neighbours' military expenditure decreases the number of government based and one-sided conflicts in low income countries through a show of military strength. However, a neighbour's military spending increases group conflicts in high income countries as it can be perceived as a threat and cause tension between countries (for example North Korea's insistence on testing nuclear warheads is a political headache to neighbouring South Korea and China as it puts them under close scrutiny by the United States of America).

## Conclusion

The aim of this paper is to highlight the heterogeneity present in conflict predictors across regions and income levels, and across types of conflict. We find evidence of regional heterogeneity in the effects of military expenditure, secondary education and income per capita. These effects remain consistent when we group the countries according to income levels. On the other hand, state fragility significantly increases the number of all types of conflict across all regions and irrespective of high or low income groupings, while political globalisation is relatively consistent in decreasing the number of conflicts.

We also find significant neighbouring effects on conflicts in the domestic country. These results indicate that there is a need for future research to contextualise these contagion effects, most likely in a game theory strategy.



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Table 1: All Conflicts Neg. Binomial

	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts
State Fragility	2.906*** (0.191)	3.807*** (0.247)	4.507*** (0.426)	4.447*** (0.505)	3.928*** (0.535)		5.294*** (0.557)	3.601*** (0.536)	3.529*** (0.556)	4.282*** (0.540)
effectn						0.807* (0.422)				
legitn						3.065*** (0.378)				
RGDPpc 1000s		0.057*** (0.008)	0.068*** (0.009)	0.058*** (0.010)	0.050*** (0.010)	0.042*** (0.010)	0.020* (0.011)	0.016 (0.012)	0.048*** (0.010)	0.163*** (0.026)
RGDPpc 1000s Sq.										-0.003*** (0.001)
Sec. Education			0.000 (0.273)	0.087 (0.289)	-0.006 (0.297)	-0.337 (0.310)	0.254 (0.316)	-0.183 (0.296)	-0.188 (0.305)	-0.410 (0.313)
globalisation				0.006 (0.007)	0.008 (0.008)	0.007 (0.008)		0.008 (0.007)	0.008 (0.008)	0.004 (0.008)
Pol. Global							-2.283*** (0.343)			
Econ. Global							1.937*** (0.464)			
Soc. Global							2.733*** (0.677)			
Military Exp.					11.178*** (1.601)	10.558*** (1.677)	7.049*** (2.574)	8.887*** (1.974)	10.851*** (1.636)	10.444*** (1.661)
migrant								6.768*** (1.320)		
Resource rents									0.856* (0.488)	
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2096.000	2050.000	1246.000	1180.000	1090.000	1090.000	1045.000	1090.000	1065.000	1090.000
LogLik	-5399.984	-5164.822	-3251.753	-3111.286	-2881.191	-2872.328	-2766.884	-2869.217	-2799.819	-2870.236

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 2: All Conflicts Neg. Binomial

	World	EAS+SAS	LCN	MEA+SSF	NAC+ECS
State Fragility	5.402*** (0.559)	5.497*** (1.818)	3.093* (1.632)	4.154*** (0.870)	5.321*** (1.718)
RGDPpc 1000s	0.088*** (0.029)	-1.813*** (0.381)	-0.247 (0.193)	0.163** (0.069)	0.331*** (0.079)
RGDPpc 1000s Sq.	-0.001** (0.001)	0.265*** (0.045)	0.016 (0.011)	-0.003 (0.002)	-0.006*** (0.001)
Sec. Education	0.080 (0.326)	0.920 (0.920)	-0.611 (1.082)	-1.189** (0.602)	-2.991** (1.294)
Pol. Global	-2.172*** (0.350)	-2.293** (0.982)	-2.428* (1.431)	-0.637 (0.623)	-2.778*** (0.869)
Econ. Global	1.962*** (0.464)	4.606*** (1.217)	9.464*** (2.325)	-0.923 (0.737)	3.330** (1.476)
Soc. Global	2.181*** (0.713)	3.818** (1.800)	-4.776 (2.917)	2.685** (1.316)	-0.686 (1.701)
Military Exp.	6.852*** (2.541)	-15.594 (16.539)	63.299*** (13.810)	3.619 (3.589)	6.927 (9.070)
Country FE	Yes	Yes	Yes	Yes	Yes
Obs	1045.000	181.000	155.000	472.000	237.000
LogLik	-2763.715	-762.186	-382.177	-1148.658	-394.204

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 3: Govt Neg. Binomial

	World	EAS+SAS	LCN	MEA+SSF	NAC+ECS
State Fragility	6.695*** (0.694)	7.492*** (2.079)	14.106*** (3.522)	3.616*** (1.105)	5.835*** (1.848)
RGDPpc 1000s	0.179*** (0.047)	-1.626*** (0.399)	1.021 (0.742)	0.166** (0.079)	0.366*** (0.101)
RGDPpc 1000s Sq.	-0.004*** (0.001)	0.244*** (0.045)	-0.060 (0.053)	-0.002 (0.002)	-0.008*** (0.002)
Sec. Education	0.578 (0.393)	1.212 (0.932)	-0.105 (1.602)	-0.655 (0.687)	-2.463* (1.432)
Pol. Global	-2.782*** (0.401)	-2.187** (1.009)	-2.464 (2.574)	-2.122*** (0.710)	-2.657*** (0.939)
Econ. Global	1.509*** (0.570)	4.588*** (1.340)	18.925*** (4.607)	-1.197 (0.905)	3.568** (1.513)
Soc. Global	2.900*** (0.819)	7.482*** (1.972)	-9.703*** (2.603)	2.641* (1.458)	-0.757 (1.788)
Military Exp.	8.483*** (3.116)	-0.568 (16.072)	58.464** (25.671)	5.403 (4.307)	8.514 (9.451)
Country FE	Yes	Yes	Yes	Yes	Yes
Obs	851.000	177.000	87.000	364.000	223.000
LogLik	-2098.789	-649.807	-164.737	-887.726	-342.243

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 4: Groups Neg. Binomial

	World	EAS+SAS	LCN	MEA+SSF	NAC+ECS
State Fragility	3.448*** (0.929)	4.332* (2.416)	-3.958 (2.697)	3.409** (1.388)	94.828 (129.805)
RGDPpc 1000s	0.025 (0.056)	-1.010 (0.918)	-0.950*** (0.332)	-0.073 (0.173)	14.133 (10.017)
RGDPpc 1000s Sq.	-0.000 (0.001)	0.023 (0.169)	0.054** (0.022)	0.001 (0.005)	-0.169 (0.116)
Sec. Education	-0.107 (0.621)	2.234 (1.624)	0.222 (2.081)	-3.057** (1.237)	-30.253 (28.604)
Pol. Global	-2.751*** (0.647)	-2.269 (2.049)	-2.735 (2.636)	-0.789 (1.093)	14.154 (61.178)
Econ. Global	1.098 (0.881)	1.542 (2.674)	7.857* (4.136)	-0.817 (1.406)	1.268 (27.764)
Soc. Global	1.096 (1.395)	2.870 (3.110)	6.447 (6.395)	7.979*** (2.654)	-98.280 (74.456)
Military Exp.	-0.343 (4.925)	-30.406 (20.702)	45.649 (30.708)	1.583 (5.811)	25.478 (228.583)
Country FE	Yes	Yes	Yes	Yes	Yes
Obs	610.000	148.000	127.000	274.000	61.000
LogLik	-934.613	-257.558	-182.242	-415.483	-11.902

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 5: One-sided Neg. Binomial

	World	EAS+SAS	LCN	MEA+SSF	NAC+ECS
State Fragility	4.574*** (0.683)	5.470*** (1.868)	4.572* (2.336)	3.498*** (1.182)	18.502*** (7.054)
RGDPpc 1000s	0.050 (0.046)	-1.712*** (0.506)	0.160 (0.340)	0.280*** (0.102)	0.911*** (0.288)
RGDPpc 1000s Sq.	-0.000 (0.001)	0.233*** (0.064)	-0.007 (0.019)	-0.006** (0.003)	-0.011*** (0.004)
Sec. Education	-0.424 (0.475)	0.612 (0.930)	-3.992*** (1.358)	-1.803* (0.932)	-2.274 (2.882)
Pol. Global	-2.851*** (0.518)	-3.306*** (1.008)	-0.979 (1.870)	-1.339* (0.799)	-1.284 (5.090)
Econ. Global	2.697*** (0.604)	6.415*** (1.447)	8.359*** (2.938)	0.469 (1.054)	-8.379** (4.065)
Soc. Global	2.079** (0.953)	3.123* (1.897)	-2.394 (3.619)	1.491 (1.836)	-4.430 (4.120)
Military Exp.	0.510 (3.537)	0.221 (15.962)	47.031** (18.505)	-0.914 (4.746)	4.104 (34.321)
Country FE	Yes	Yes	Yes	Yes	Yes
Obs	847.000	181.000	106.000	421.000	139.000
LogLik	-1570.956	-544.437	-201.980	-671.057	-106.876

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 6: All Conflicts Neg. Binomial

	World	High Income	Low Income
State Fragility	5.402*** (0.559)	5.206*** (0.845)	3.842*** (0.802)
RGDPpc 1000s	0.088*** (0.029)	0.058 (0.036)	0.991** (0.433)
RGDPpc 1000s Sq.	-0.001** (0.001)	-0.001 (0.001)	-0.433*** (0.123)
Sec. Education	0.080 (0.326)	2.394*** (0.552)	-1.243*** (0.460)
Pol. Global	-2.172*** (0.350)	-2.680*** (0.583)	-2.104*** (0.485)
Econ. Global	1.962*** (0.464)	4.773*** (0.855)	1.525** (0.638)
Soc. Global	2.181*** (0.713)	-0.963 (1.002)	3.873*** (1.195)
Military Exp.	6.852*** (2.541)	11.816*** (2.470)	-14.701*** (5.147)
Country FE	Yes	Yes	Yes
Obs	1045.000	515.000	530.000
LogLik	-2763.715	-1232.368	-1481.462

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 7: Govt Neg. Binomial

	World	High Income	Low Income
State Fragility	6.695*** (0.694)	7.255*** (0.826)	4.923*** (1.072)
RGDPpc 1000s	0.179*** (0.047)	0.098* (0.058)	-0.128 (0.583)
RGDPpc 1000s Sq.	-0.004*** (0.001)	-0.002 (0.001)	-0.243 (0.171)
Sec. Education	0.578 (0.393)	0.793 (0.722)	-0.270 (0.590)
Pol. Global	-2.782*** (0.401)	-0.990 (0.621)	-2.674*** (0.599)
Econ. Global	1.509*** (0.570)	5.305*** (0.983)	1.873** (0.819)
Soc. Global	2.900*** (0.819)	-1.320 (1.160)	6.115*** (1.457)
Military Exp.	8.483*** (3.116)	10.354*** (1.581)	-2.974 (5.319)
Country FE	Yes	Yes	Yes
Obs	851.000	407.000	444.000
LogLik	-2098.789	-915.444	-1133.166

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 8: Groups Neg. Binomial

	World	High Income	Low Income
State Fragility	3.448*** (0.929)	-1.606 (1.829)	4.211*** (1.121)
RGDPpc 1000s	0.025 (0.056)	-0.080 (0.082)	0.067 (0.703)
RGDPpc 1000s Sq.	-0.000 (0.001)	0.001 (0.001)	-0.215 (0.196)
Sec. Education	-0.107 (0.621)	1.527 (1.456)	-0.307 (0.777)
Pol. Global	-2.751*** (0.647)	-4.154** (1.733)	-1.618** (0.807)
Econ. Global	1.098 (0.881)	-2.907 (2.347)	3.342*** (1.069)
Soc. Global	1.096 (1.395)	3.841 (3.089)	1.564 (1.929)
Military Exp.	-0.343 (4.925)	20.020* (11.502)	-12.072 (7.559)
Country FE	Yes	Yes	Yes
Obs	610.000	233.000	377.000
LogLik	-934.613	-292.952	-624.246

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 9: One-sided Neg. Binomial

	World	High Income	Low Income
State Fragility	4.574*** (0.683)	5.831*** (1.359)	2.304** (0.937)
RGDPpc 1000s	0.050 (0.046)	0.076 (0.064)	1.469*** (0.563)
RGDPpc 1000s Sq.	-0.000 (0.001)	-0.001 (0.001)	-0.620*** (0.161)
Sec. Education	-0.424 (0.475)	1.474* (0.836)	-1.811*** (0.602)
Pol. Global	-2.851*** (0.518)	-1.673* (0.945)	-3.548*** (0.610)
Econ. Global	2.697*** (0.604)	6.353*** (1.543)	2.273*** (0.810)
Soc. Global	2.079** (0.953)	-1.077 (1.372)	3.787** (1.554)
Military Exp.	0.510 (3.537)	5.528 (3.514)	-21.666*** (6.112)
Country FE	Yes	Yes	Yes
Obs	847.000	420.000	427.000
LogLik	-1570.956	-588.640	-942.532

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 10: All Conflicts Negative Binomial

	World	High Income	Low Income
State Fragility	4.624*** (0.574)	4.748*** (0.909)	2.908*** (0.868)
RGDPpc 1000s	0.088*** (0.029)	0.059 (0.036)	0.979** (0.436)
RGDPpc 1000s Sq.	-0.001* (0.001)	-0.001 (0.001)	-0.400*** (0.122)
Sec. Education	0.263 (0.338)	1.483** (0.654)	-1.146** (0.470)
Pol. Global	-2.432*** (0.349)	-2.292*** (0.626)	-2.570*** (0.505)
Econ. Global	2.252*** (0.481)	4.473*** (0.832)	1.691** (0.665)
Soc. Global	2.542*** (0.726)	-1.769 (1.175)	3.023** (1.242)
Military Exp.	10.329*** (2.483)	12.177*** (2.552)	-8.637 (6.007)
N. Fragility	1.677*** (0.633)	-3.320** (1.465)	1.976** (0.851)
N. RGDPpc 1000s	-0.019 (0.012)	-0.042*** (0.016)	0.052 (0.032)
N. Military Exp.	-9.053*** (3.017)	15.633* (9.090)	-9.850** (4.748)
Country FE	Yes	Yes	Yes
Obs	1045.000	515.000	530.000
Loglik	-2749.472	-1228.224	-1477.226

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 11: Govt Negative Binomial

	World	High Income	Low Income
State Fragility	5.947*** (0.714)	6.505*** (0.947)	3.969*** (1.185)
RGDPpc 1000s	0.161*** (0.046)	0.075 (0.060)	-0.151 (0.591)
RGDPpc 1000s Sq.	-0.003** (0.001)	-0.001 (0.001)	-0.218 (0.171)
Sec. Education	0.639 (0.398)	0.769 (0.778)	-0.245 (0.590)
Pol. Global	-2.937*** (0.399)	-1.004 (0.703)	-3.002*** (0.620)
Econ. Global	1.666*** (0.582)	4.947*** (0.973)	1.774** (0.844)
Soc. Global	3.714*** (0.833)	-0.567 (1.314)	4.949*** (1.539)
Military Exp.	12.590*** (2.999)	10.947*** (1.904)	5.383 (6.890)
N. Fragility	0.887 (0.734)	-1.155 (1.675)	1.196 (1.039)
N. RGDPpc 1000s	-0.045*** (0.015)	-0.058*** (0.020)	0.051 (0.038)
N. Military Exp.	-8.752** (3.602)	3.969 (11.558)	-11.330** (5.526)
Country FE	Yes	Yes	Yes
Obs	851.000	407.000	444.000
Loglik	-2084.468	-910.361	-1130.626

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .



Table 12: Groups Negative Binomial

	World	High Income	Low Income
State Fragility	2.650*** (0.957)	-1.674 (2.238)	3.111*** (1.192)
RGDPpc 1000s	0.033 (0.057)	0.018 (0.100)	-0.170 (0.719)
RGDPpc 1000s Sq.	-0.001 (0.001)	-0.001 (0.002)	-0.113 (0.197)
Sec. Education	1.227* (0.697)	1.644 (1.902)	0.245 (0.881)
Pol. Global	-2.820*** (0.644)	-5.219** (2.200)	-2.079** (0.845)
Econ. Global	2.468*** (0.913)	-1.568 (2.384)	4.268*** (1.085)
Soc. Global	0.850 (1.528)	-4.019 (3.795)	2.047 (2.094)
Military Exp.	-6.248 (6.337)	0.314 (14.754)	-17.101** (8.235)
N. Fragility	5.559*** (1.209)	-7.547* (4.327)	4.860*** (1.486)
N. RGDPpc 1000s	0.047** (0.021)	-0.025 (0.043)	0.093** (0.047)
N. Military Exp.	7.153 (5.345)	70.634*** (17.613)	6.531 (6.404)
Country FE	Yes	Yes	Yes
Obs	610.000	233.000	377.000
Loglik	-921.219	-285.355	-615.263

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 13: One-sided Negative Binomial

	World	High Income	Low Income
State Fragility	4.244*** (0.708)	8.559*** (1.027)	1.939* (1.033)
RGDPpc 1000s	0.033 (0.047)	0.139** (0.069)	1.670*** (0.560)
RGDPpc 1000s Sq.	0.000 (0.001)	-0.002 (0.002)	-0.632*** (0.161)
Sec. Education	-0.306 (0.499)	-1.967 (1.197)	-1.317** (0.639)
Pol. Global	-3.389*** (0.513)	-2.655*** (0.887)	-3.945*** (0.627)
Econ. Global	2.307*** (0.637)	12.003*** (1.354)	1.767** (0.838)
Soc. Global	2.614*** (0.972)	-4.482*** (1.612)	2.331 (1.586)
Military Exp.	8.751*** (2.701)	1.417 (1.447)	-1.570 (6.670)
N. Fragility	0.452 (0.875)	-5.978*** (2.274)	-0.273 (1.127)
N. RGDPpc 1000s	-0.016 (0.015)	-0.002 (0.022)	-0.062 (0.052)
N. Military Exp.	-26.752*** (4.670)	-0.269 (10.075)	-24.978*** (6.275)
Country FE	Yes	Yes	Yes
Obs	847.000	420.000	427.000
Loglik	-1545.958	-583.429	-926.513

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Figure 1: Number of World Conflicts

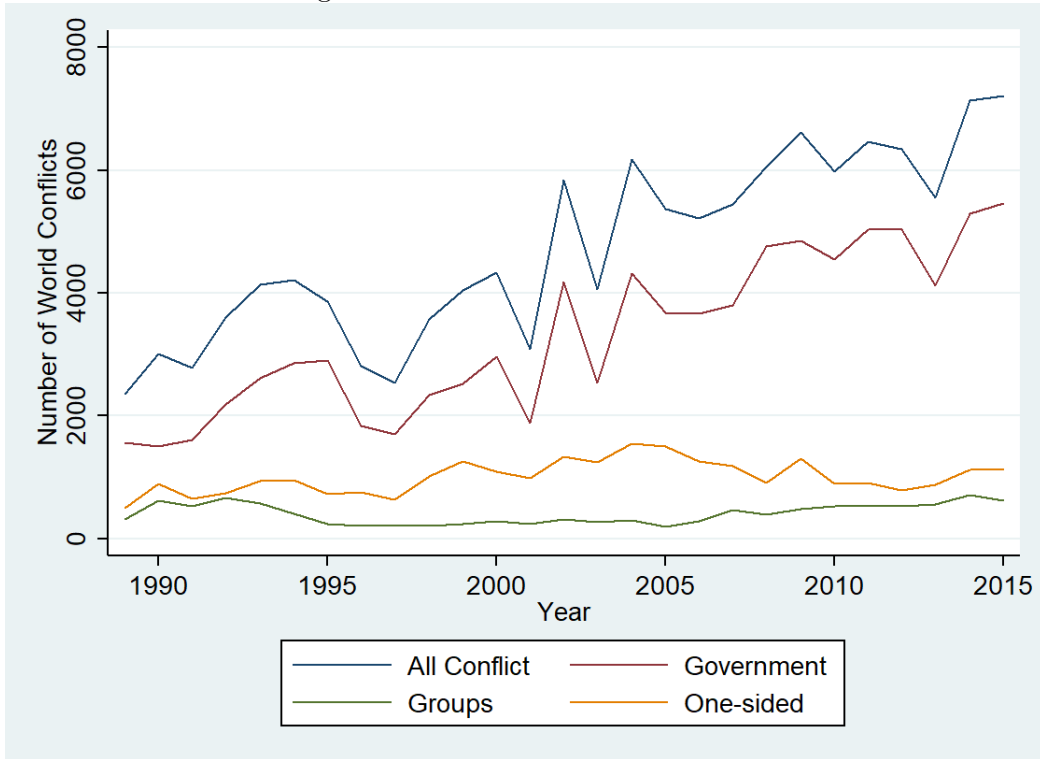
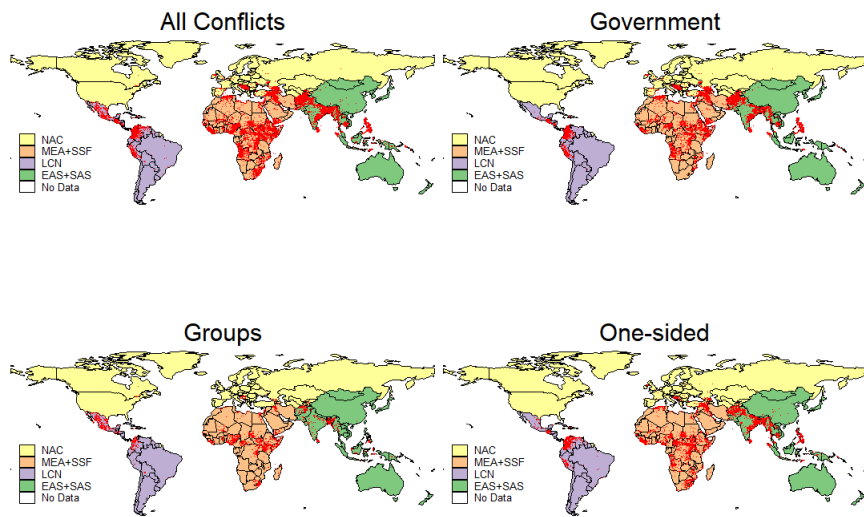


Figure 2: Conflicts 1989-2015



# Appendix

Table 14: Regions

EAS and SAS <sup>9</sup>	LCN <sup>10</sup>	MEA+SSF <sup>11</sup>		NAC+ECS <sup>12</sup>	
Afghanistan	Antigua and Barbuda	Algeria	Namibia	Albania	Russian Federation
American Samoa	Argentina	Angola	Niger	Armenia	San Marino
Australia	Aruba	Bahrain	Nigeria	Austria	Serbia
Bangladesh	Bahamas, The	Benin	Oman	Azerbaijan	Slovak Republic
Bhutan	Barbados	Botswana	Qatar	Belarus	Slovenia
Brunei Darussalam	Belize	Burkina Faso	Rwanda	Belgium	Spain
Cambodia	Bolivia	Burundi	Sao Tome and Principe	Bermuda	Sweden
China	Brazil	Cabo Verde	Saudi Arabia	Bosnia and Herzegovina	Switzerland
Fiji	Cayman Islands	Cameroon	Senegal	Bulgaria	Tajikistan
French Polynesia	Chile	Central African Republic	Seychelles	Canada	Turkey
Guam	Colombia	Chad	Sierra Leone	Channel Islands	Turkmenistan
Hong Kong SAR, China	Costa Rica	Comoros	Somalia	Croatia	Ukraine
India	Cuba	Congo, Dem. Rep.	South Africa	Cyprus	United Kingdom
Indonesia	Curacao	Congo, Rep.	Sudan	Czech Republic	United States
Japan	Dominica	Cote d'Ivoire	Swaziland	Denmark	Uzbekistan
Kiribati	Dominican Republic	Djibouti	Syrian Arab Republic	Estonia	
Korea, Dem. Peoples Rep.	Ecuador	Egypt, Arab Rep.	Tanzania	Faroe Islands	
Korea, Rep.	El Salvador	Equatorial Guinea	Togo	Finland	
Lao PDR	Grenada	Eritrea	Tunisia	France	
Macao SAR, China	Guatemala	Ethiopia	Uganda	Georgia	
Malaysia	Guyana	Gabon	United Arab Emirates	Germany	
Maldives	Haiti	Gambia, The	Yemen, Rep.	Greece	
Marshall Islands	Honduras	Ghana	Zambia	Greenland	
Micronesia, Fed. Sts.	Jamaica	Guinea	Zimbabwe	Hungary	
Mongolia	Mexico	Guinea-Bissau		Iceland	
Myanmar	Nicaragua	Iran, Islamic Rep.		Ireland	
Nepal	Panama	Iraq		Italy	
New Caledonia	Paraguay	Israel		Kazakhstan	
New Zealand	Peru	Jordan		Kosovo	
Northern Mariana Islands	Puerto Rico	Kenya		Kyrgyz Republic	
Pakistan	Sint Maarten (Dutch part)	Kuwait		Latvia	
Palau	St. Kitts and Nevis	Lebanon		Liechtenstein	
Papua New Guinea	St. Lucia	Lesotho		Lithuania	
Philippines	St. Martin (French part)	Liberia		Luxembourg	
Samoa	St. Vincent and the Grenadines	Libya		Macedonia, FYR	
Singapore	Suriname	Madagascar		Moldova	
Solomon Islands	Trinidad and Tobago	Malawi		Monaco	
Sri Lanka	Turks and Caicos Islands	Mali		Montenegro	
Thailand	Uruguay	Malta		Netherlands	
Tonga	Venezuela, RB	Mauritania		Norway	
Tuvalu	Virgin Islands (U.S.)	Mauritius		Poland	
Vanuatu		Morocco		Portugal	
Vietnam		Mozambique		Romania	

<sup>1</sup> E. Asia, Pacific, and S. Asia; <sup>2</sup> Latin America and Caribbean; <sup>3</sup> Middle East, N. Africa, and Sub-Saharan Africa; <sup>4</sup> N. America, Europe, and C. Asia.

Table 15: All Conflicts FE

	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts
State Fragility	37.652 (69.034)	89.905* (47.980)	201.168 (165.700)	217.378 (151.881)	197.369 (145.208)		200.601 (149.780)	201.592 (146.069)	202.519 (149.607)	188.845 (145.900)
effectn						36.031 (83.175)				
legitn						172.569* (98.667)				
RGDPpc 1000s		0.544 (0.679)	-1.082 (1.701)	-1.776 (1.431)	-1.426 (1.354)	-1.920 (1.444)	-1.967 (1.593)	-2.126 (1.425)	-1.516 (1.365)	-4.091 (7.234)
RGDPpc 1000s Sq.										0.037 (0.084)
Sec. Education			188.874 (214.990)	189.224 (236.318)	141.473 (215.492)	135.832 (215.395)	144.432 (214.789)	140.784 (215.322)	142.281 (220.869)	144.160 (216.731)
globalisation				0.833 (1.042)	1.070 (1.061)	0.833 (1.048)		1.231 (1.080)	1.254 (1.120)	1.162 (1.029)
Pol. Global							-19.895 (46.057)			
Econ. Global							53.163 (85.348)			
Soc. Global							120.480 (103.224)			
Military Exp.					81.908 (242.930)	56.460 (244.788)	78.056 (360.093)	101.658 (239.733)	48.449 (257.236)	84.168 (241.676)
migrant								267.064* (138.669)		
Resource rents									-25.551 (46.180)	
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	2362.000	2312.000	1529.000	1468.000	1359.000	1359.000	1313.000	1359.000	1334.000	1359.000
R <sup>2</sup> Adj	0.000	0.003	0.014	0.015	0.009	0.011	0.009	0.009	0.008	0.008

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .

Table 16: All Conflicts Logit

	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts	All Conflicts
State Fragility	8.332***	7.128***	4.686***	5.764***	4.926**		5.450***	4.935***	4.816**	4.410**
	(0.963)	(0.992)	(1.552)	(1.748)	(1.913)		(2.011)	(1.915)	(1.981)	(1.967)
effectn						1.613				
						(1.483)				
legitn						3.525**				
						(1.461)				
RGDPpc 1000s		-0.250***	-0.275***	-0.292***	-0.319***	-0.329***	-0.309***	-0.325***	-0.316***	-0.579**
		(0.065)	(0.080)	(0.083)	(0.086)	(0.087)	(0.087)	(0.093)	(0.086)	(0.252)
RGDPpc 1000s Sq.										0.004
										(0.003)
Sec. Education			-1.584	-2.410*	-2.070	-2.178	-1.594	-2.070	-2.436	-1.907
			(1.249)	(1.465)	(1.520)	(1.525)	(1.566)	(1.521)	(1.553)	(1.542)
globalisation				0.051**	0.051**	0.048*		0.052**	0.050*	0.057**
				(0.024)	(0.026)	(0.026)		(0.026)	(0.028)	(0.026)
Pol. Global							-0.256			
							(1.525)			
Econ. Global							5.089**			
							(2.061)			
Soc. Global							0.535			
							(2.864)			
Military Exp.					2.334	2.307	-1.534	2.423	3.384	2.755
					(6.917)	(6.940)	(11.158)	(6.946)	(7.091)	(6.966)
migrant								1.241		
								(7.289)		
Resource rents									2.229	
									(2.334)	
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	1701.000	1679.000	942.000	884.000	816.000	816.000	773.000	816.000	802.000	816.000
Pseudo R <sup>2</sup>	0.063	0.075	0.063	0.061	0.056	0.057	0.063	0.056	0.058	0.058

Robust standard errors in parentheses. \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .