THE ROLE OF INCOME INEQUALITY ON INTERNAL CONFLICT, TERRORISM, POLITICAL VIOLENCE, CIVIL WAR AND CIVIL DISORDERS – PANEL DATA ANALYSIS WITH QUANTILE VIA MOMENTS AND DRISCOLL AND KRAY STANDARD ERRORS

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This study examines the impact of market and net income inequality on various forms of internal conflict, including civil war, terrorism, political violence, and civil disorder. Utilizing panel data from 132 countries spanning 1990 to 2021, the research employs two econometric models: Quantile via Moments to examine the effects of income inequality across the conditional distribution of internal conflict, and two-way fixed effects with Driscoll and Kraay standard errors. These models address heteroscedasticity, cross-sectional dependence, autocorrelation, and endogeneity concerns. The results highlight that income inequality is a more significant determinant of smaller-scale internal conflict. Notably, market income inequality stands out as a significant factor influencing political violence and terrorism, whereas net income distribution does not show the same relevance. The results underscore the role of "perception of income inequality" may play in fermenting smaller-scale internal conflicts. Furthermore, the research indicates that while governmental income redistribution efforts may not significantly lessen certain forms of conflict, they may act as buffers, preventing them from becoming a significant driver.

Keywords: Internal conflict, terrorism, political violence, civil disorder, income inequality

JEL Classification: 010

Introduction

Conflict has become increasing intra-state over the last twenty years (United Nations, 2022). Although there have been inter-state conflicts between countries, for example, between Ukraine and Russia, they are infrequent relative to internal conflicts such as civil disorder, political violence, and terrorism (United Nations, 2022). While internal strife, barring civil wars, might not be as deadly as external confrontations, the ramifications of intense internal disturbances can range from economic turmoil to fatalities (Collier, 2007; United

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Nations, 2022). Given rising trends of internal conflicts and their adverse repercussions, it underscores the importance of understanding the determinants of various forms of internal conflict. Parallel to increases in internal conflict, there has been an increase in income inequality in most countries since 1980 (United Nations, 2021). This study explores the role of vertical income inequality (e.g., across household populations) on internal conflict and its subcomponents of civil war, political violence/terrorism, and civil disorders.

The belief that large disparities in income distribution can lead to internal conflict has historical origins going back centuries. For example, Plato and Aristotle discuss economic disparity and its consequences on the polis (Plato, 380 BCE; Aristotle, 350 BCE). Historical researchers claim the fall of the Roman Republic was caused by social unrest and civil wars (i.e., Social Wars) over disparity in income and wealth (Plutarch, 75 AD). Furthermore, de Tocqueville (1835) claims revolutions often begin over income inequality. Although historical observations and theoretical beliefs link income inequality and internal conflict, empirical evidence is mixed (Mitchell, 1968; Alesina and Perotti, 1996; Hegre, Gissenger, and Gleditsch, 2003). Some researchers claim income inequality increases internal conflict (Østby, 2008; de Soysa and Fjelde, 2010). Other studies fail to find income inequality as a significant factor driving conflict (Cramer, 2003; Hegre and Sambanis, 2006). Furthermore, other determinants, such as the strength of government (Fearon and Laitin, 2003), cultural cleavages (Montalvo and Reynal-Querol, 2005; 2010), and the intricate relationships between these variables may influence results.

This study adds to internal conflict literature in several ways. For one, it is a large cross-national study that employs a panel dataset across 132 countries over 30 years (i.e., 1990 to 2021). A benefit of large-N cross-national studies is they allow greater generalizability of results than country-specific studies. Second, the research uses internal conflict and its subcomponents of civil war, terrorism, political violence, and civil disorder to analyze how income inequality broadly affects internal conflict and specific types of internal conflict. For example, is income inequality a significant factor driving civil disorder but not civil wars? Third, the study robustly tests income distribution across three measures (i.e., Gini coefficients and the bottom 50 percent share of national income). Fourth, the study uses Quantiles via Motion regression (MM-QR) that provides distributional insights on the conditional means at different quantiles and mitigates problems of outliers and endogeneity (Machado and Silva, 2019). Fifth, for an additional robustness check of results, the study uses Driscoll and Kraay (1998) standard errors (DKSE) with fixed effects for country and time.

The study begins with literature on the relationship between income inequality and internal conflict. Section 3 discusses sources and the econometric model. Section 4 presents the panel data analysis findings. Section 5 discusses insights and reflects on the study's contributions.

Literature Review

Income inequality within countries has long been identified as a factor driving social discontent (Gurr, 1970). Acemoglu and Robinson (2006) claim income disparities create

grievances in marginalized groups, which, if mobilized, can lead to larger protests and conflict. Furthermore, high income inequality that results in poverty and high unemployment can lead to opportunities for extremist groups to recruit low-income individuals (Krieger and Meierrieks, 2019). Recruits from these organizations can perpetuate acts of political violence and terrorism (Collier and Hoeffler, 2004). Therefore, income inequality can lead to deprivation, eventually manifesting in protest and, potentially, violence (Feirarbend and Feierabend, 1966; Gurr, 1968; Huntington, 1968).

Haggard and Kaufman (2012) claim that as income disparity becomes more pronounced, low-income or disadvantaged groups have more incentive to protest (Haggard and Kaufman, 2012). Opportunity cost analysis justifies Haggard and Kaufman's (2012) claim. Low-income individuals and groups experiencing poverty have a low opportunity cost to protest since they have less to lose, which increases conflict as income disparity increases. High income individuals and groups have much to lose if an income redistribution policy is enacted. Therefore, the high opportunity cost of income redistribution policy leads to incentives to repress the demands of low-income protesters. The opportunity cost dynamic increases the potential for conflict between low-income and high-income groups.

Parallel to the opportunity cost analysis, distributive conflict theory suggests that cost-benefit analysis drives conflict. Specifically, high-income groups decide whether to repress or concede to the lower-income group's demands based on the net cost of repression versus concession (Boix, 2003; Acemoglu and Robinson, 1998; 2001; 2006). Furthermore, when income disparity is high, the net loss will be large for the high-income group, and repression is the choice, which drives conflict. If income disparity is low, it is more likely compromise is the choice (e.g., more income redistribution), leading to less conflict. There are scholarly disagreements on the merits of distributive conflict theory and its foundations in cost-benefit analysis. For example, Weede (1981) claims distributive theories and models make unrealistic assumptions via subjective net cost calculations. Furthermore, there are practical limitations of distributive theories. Although low-income individuals and groups may have the self-interest to advocate income redistribution through protest and violence, it does not mean they will. For example, Ansell and Samuels (2014) claim that lower-income individuals often fail to mobilize to enact policy reforms. Furthermore, what if income is increasing across the income spectrum of a population? If income is rising for lower income groups and poverty is low, increasing disparity in income distribution might not matter as much as a factor of internal conflict.

Other theories related to economic inequality explain internal conflict (Russet, 1964; Paige, 1975; Muller, 1985). Resource mobilization theory claims conflict arises from collective action because of resource imbalance, wherein the rational "social actor" responds through force if the chance of success is greater than the risks (Tilly, 1978; Tarrow, 1989).[1] Like resource mobilization theory, the "misery thesis" claims poverty and oppression are the biggest drivers of internal conflict: as awareness of a marginalized group's absolute deprivation related to resource distribution increases, so does collective

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[1.] Some researchers claim the assumptions made in the resource mobilization theory rely too heavily on the actor's ability to calculate when uncertainty exists (Barkan and Snowden, 2001).

opposition (Sederberg, 1994; Turner, 2004). In addition, the relative deprivation theory claims that when subjective *individual* dissatisfaction hits a threshold, the politicization of discontent is reached, and conflict can arise (Gurr, 1970).[2] Dollard et al. (1939) claim relative deprivation can trigger frustration and aggressive behavior through psychological factors (i.e., frustration-aggression hypothesis).

Evidence on the relationship between income inequality and internal conflict is mixed (Mitchell, 1968; Alesina and Perotti, 1996; Hegre, Gissenger, and Gleditsch, 2003). Studies find a positive relationship between inequality and conflict (Russet, 1964, Nagel, 1974; Prosterman, 1976; Alesina and Perotti, 1996; Auvinen and Nafziger, 1999; Østby, 2008; Cederman, Wiedmann, and Gleditch, 2011), a negative relationship with conflict (Mitchell, 1968), or no significant relationship (Hardy, 1979; Weede, 1981; 1987; Hegre, Gissinger, and Gleditsch, 2003). Most studies find a positive relationship (Bartusevicius, 2014). Those studies that fail to find a positive relationship may analyze outlier cases. Additionally, studies that fail to find a relationship may contain methodological flaws or lack quality data (Lichbach, 1989; Sambanis, 2005; Bartusevicius, 2014). For example, Mitchell's (1968) study that finds increases in land inequality reduce conflict is unique to South Vietnam in the 1960s. Michell (1968) finds that if a landlord class has firm control over the peasantry and unequal land distribution exists; it is less prone to conflict than the opposite. Weede's (1987) study that fails to find a relationship between inequality and conflict is limited to 47 countries for only a few years in the 1960s. Studies often use different measures of conflict, which can lead to differences in results (Bartusevicius, 2014). For example, Weede (1987) uses deaths from political violence, whereas political violence or civil disorders not leading to death are not captured.

Recent research from Bartusevicius (2014) studies 77 popular rebellions and finds income inequality measured by Gini indices significantly increases the likelihood of popular rebellion. The study finds inequality in income and education perform better as indicators than absolute well-being indicators such as Gross Domestic Product (GDP) per capita. Bartusevicius (2014) uses a logit regression spanning 1961 to 2009 with data from the Armed Conflict Dataset. A potential issue with Bartusevicius's (2014) model is multicollinearity. Their model uses polity scores and its square, which inherently leads to multicollinearity, creating unreliable coefficient estimates (Wooldridge, 2010; Baltagi, 2013).

This present study addresses gaps and adds to the literature by analyzing broad and specific measures of internal conflict (e.g., internal conflict and subcomponents like civil disorders) in a single study. Much income inequality-conflict literature is specific to severe internal conflicts such as rebellions and armed conflict, whereas this study analyzes less severe conflicts such as civil disorder. The study includes the most extensive set of countries currently in the literature, with up to 132 countries from 1990 to 2021. The study also improves upon the econometric model with richer insights into income inequality across the distribution of internal conflict.

[2.] Critics of the relative deprivation thesis argue empirical studies fail to support and subjective measures on individual rationality are difficult to measure. (Mider, 2014).

3. Methods and Data

3.1 Data Description and Variable Selection

Internal conflict is from the International Country Risk Guide (ICRG) and covers 132 countries from 1990 to 2021. Internal conflict measures the subcomponents of political violence, domestic terrorism, civil war/Coup threat, and civil disorder. The ICRG measure is an interval scale and continuous. The highest possible score of (12.0) is for a country with no current internal conflict and little risk of internal conflict. The lowest possible score of (0) is for a country with an ongoing violent civil war. See Appendix A for a binscatter of internal conflict by development status. See Table 1 for descriptive statistics of internal conflict and its subcomponent by panel.

The study also uses the subcomponents of internal conflict as dependent variables to analyze differences based on the type of internal conflict. The use of subcomponents of internal conflict is to test if income inequality is more significant in lesser conflicts, such as civil disorders, than in larger conflicts, like civil wars. The ICRG subcomponents of political violence and domestic terrorism, civil war and coup d'état, and civil disorder are all on a continuous interval scale of (0) to (4.0), with higher scores representing less conflict (e.g., political violence/domestic terrorism) and risk of conflict. The subcomponent covers 132 countries, but data is limited to 2001 to 2021. See Appendix A for binscatter graphs of subcomponents of internal conflict (i.e., political violence/domestic terrorism, civil war/ Coup threat, and civil disorder).

Table 1. Conflict Measures by Panel (Mean, Standard Deviation, Min-Max)

	Full Panel	**Developed Countries**	**Developing Countries**
Max Countries in Panel	132	42	90
Max Observations	3,741	1,469	2,272
Internal Conflict (0 to 12)	8.82 2.31 0-12.0	10.5 1.42 3.0-12.0	8.12 2.28 0-12.0
Political Violence and Terrorism (0 to 4)	2.83 .803 0-4.0	3.25 .687 5.83-4.0	2.65 .782 0-4
Civil War and Coup d'état (0 to 4)	3.61 .631 0-4.0	3.96 .219 1.29-4.0	3.46 .689 0-4.0
Civil Disorder (0 to 4)	2.67 .569 .4-4.0	3.08 .527 .50-4.0	2.48 .482 .50-4.0

The study uses three income distribution measures: the net (after tax and transfer) Gini coefficient, the market (before tax and transfer) Gini coefficient, and market income earned by the bottom 50 percent. The use of the selected income distribution measures is to test differences between net and market income distribution. Gini coefficient data is measured by the Standardized World Income Inequality Database (SWIID) (Solt, 2015). Gini coefficients range between (0) and (100), with (100) the most unequal distribution.

The Lorenz (1905) curve measures income distribution across a population of households. Pre-tax national income obtained by the bottom 50 percent is from the World Income Inequality Database (WIID). The smaller the percentage of income distributed to the bottom 50 percent represents higher income inequality. WID data increases observations by 700 over SWIID and is used to improve the robustness of results.

Table 2.   Income Inequality Measure by Panel (Mean, Standard Deviation, Min-Max)

	Full Panel	**Developed Countries**	**Developing Countries**
Max Countries in Panel	132	42	90
Max Observations	3,741	1,469	2,272
Net Gini Coefficient	40.0 8.81 16.8–65.4	30.8 5.81 16.8–50.8	42.3 7.33 22.6–65.4
Market Gini Coefficient	45.7 6.28 30.7–72.3	46.1 4.57 30.8-56.4	45.5 7.10 30.7-72.3
Bottom 50 Share	14.6 5.22 3.52–36.5	19.4 4.75 6.06–36.5	12.4 3.75 3.52–28.5

See Appendices B and C for the full list of variables, their descriptions, and summary statistics. The researcher briefly discuss other control variables below:

Ethnic tension measures the degree to which racial, nationality, or language divisions stress a country. Religious tension measures the suppression of religious freedom and exclusion of one or more religions from political and social processes. The ICRG measure for ethnic and religious tension is on an interval scale of (0) high to (6) low. Ethnic and religious differences manifesting in tension can cause ethnic warfare, terrorism, and, ultimately, civil war (Garment, 1993; Hall, 2004; Kim, 2009). Furthermore, tension is higher between ethnicities and religious groups if there is much disparity in horizontal inequality.

The government stability measures the subcomponents of government unity, legislative strength, and popular support. The government stability is on a scale of (0) most unstable to (12) most stable. Research finds government instability leads to more internal conflict (Mider, 2014). Weak governments create more opportunities for conflict (Fearon and Laitin, 2003).

The study measures regime from (0) for autarchy to (6) for alternating democratic. Studies find democracies can lessen conflict through political participation (Barkan and Snowden, 2001). Studies also find democracies have institutions that can lead to resolutions and compromise (Ellis, Mitchell, and Prins, 2010).

The study's measure of institutional strength and the quality of the bureaucracy is from the ICRG. It is on a scale of (0) low strength and quality to (4) high. Ineffective institutions and public service can lead to conflict (Krug et al., 2002; Mider, 2014). Additionally, stronger institutions and bureaucracies may lessen the impacts of shocks (Alesina and Perotti, 1996).

Unemployment data is from the World Bank. High unemployment can cause discontent manifesting in various forms of conflict (Moore and Shellman, 2004). Furthermore, high unemployment and poverty can increase extremist groups' size, leading to terrorism (Krueger and Malečková, 2003).

Trade as a percentage of GDP (World Bank) measures trade openness and globalization. Stiglitz (2013) claims foreign direct investment from developed countries can adversely affect domestic labor markets and make developing countries more prone to conflict.

The study controls economic development through the natural log of per capita gross domestic product (GDP) and annual growth rate. Although countries with high per capita GDP do not preclude conflict, high per capita GDP countries tend to have stronger governments and better institutions that lessen conflict, especially severe conflict such as civil war (Alesina and Perotti, 1996; Collier, 2007).

Empirical Framework

Panel data is unbalanced with data from 1990 to 2021. See Appendix D for a list of countries. The dataset includes 132 countries, 42 from developed and 90 from developing countries. The study uses one panel since applying the quantile regression at quantiles 10, 25, 50, 75, and 90 captures much of the distribution of the dependent variable.

See Appendix E for model specification tests, which include the following tests: Breusch-Pagan Lagrange Multiplier, Hausman, joint (time fixed effects), Wald, Pesaran, Wooldridge, Im-Pesaran-Shin, and Variance inflation factor. Specification tests support fixed effects for country and year. Wald, Wooldridge, and Pesaran's test results provide evidence of heteroskedasticity, autocorrelation, and cross-sectional dependence. The Im-Pesaran-Shin (2003) test rejects the presence of unit roots. The mean-variance inflation factor is 1.57, with no single variable above (2.5). Many studies on the income inequality-conflict nexus fail to address multicollinearity, leading to misleading specification tests, model design, and inconsistent estimates (Wooldridge, 2002; Baltagi, 2013).

The study uses Machado and Silva's (2019) Quantile via Moment (MM-QR) for several reasons (Machado and Silva, 2019). First, the specification test finds heterogeneity. Quantile via Moments analysis inherently analyzes the impact of conditional heterogeneity in covariance (Koekner, 2004; Canay, 2011; Musa et al., 2023). Second, Quantile via Moments analysis can address the potential existence of endogeneity in independent variables. This is especially advantageous in scenarios where endogeneity effects are submerged within the panel data model (He, 1997; Machado and Silva, 2019). Third, Quantile via Moments produces reliable estimates in non-linear cases, as it has location-based asymmetries (Machado and Silva, 2019; Musa et al., 2023). Fourth, although other models have methods of addressing endogeneity and correlations, non-linearity and heterogeneity are still problems (Musa et al., 2023). Fifth, not only improving estimation over other econometric techniques, Quantiles via Motion provide information gains as it estimates how regressors affect the conditional mean across its entire distribution. Model (1) depicts the Quantile via Moment method, which addresses endogeneity and heterogeneity problems of non-linearity and asymmetric association of the dependent variable. Model (1)

uses fixed effects for time and country (i.e., absorbs). The model also clusters the standard errors of individual countries.

$$Q_y\left(\tau|X_{it}\right)=\left(a_i\left(\tau\right)+\delta_i q\left(\tau\right)\right)+X'_{it}\,\beta\left(\tau\right)+Z'_{it}\,\gamma\left(\tau\right) \tag{1}$$

whereas $a_i(\tau)$ represents the quantile -(τ) fixed and location/distribution effects for countries (i), $\delta_i q(\tau)$ is the scale effect (i.e., variability of dependent variable across different quantiles of the conditional distribution), τ is the quantile, $Q_y\left(\tau|X_{it}\right)$ is the dependent variable and its quantile, $X'_{it}\,\beta\left(\tau\right)$ is the vector of independent variables, and $Z'_{it}\,\gamma\left(\tau\right)$ is the vector of differentiable transformations of individual components of X.

To test the robustness of results, the study also uses an econometric model (2) with two-way fixed effects for time and country. Driscoll and Kraay (1998) standard errors (DKSE) account for heteroskedasticity, autocorrelation, and cross-sectional dependence. Model (2) uses Driscoll and Kraay (1998) standard errors with a one-year lag to mitigate problems of endogeneity and correlations.

$$IntConf_{it} = \alpha + X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \text{ and } \left(i=1,\ldots n; t=1,\ldots T\right) \tag{2}$$

$IntConf_{it}$ is the measure of internal conflict for country (i) and time (t). X_{it} is the vector set of explanatory variables that vary across time and countries. The parameter α contains a constant and country-specific variable invariant over time. The μ_i captures unobservable individual-specific effects and λ_t captures unobservable time-specific effects ε_{it} is the error term.

Results

Internal Conflict and Net Gini Coefficient

See Table 1 for results for the net Gini coefficient (after tax and transfer) with models (1) and (2). The net Gini coefficient is significant from the 50th quantile through the upper distribution while insignificant from the 25th quantile through the lower distribution. Therefore, since the distribution of internal conflict between the 25th and 50th quantile is between 7.58 and 9.16, it becomes significant within that range and remains significant through its upper distribution (i.e., internal conflict of 12.0).

The negative coefficients for the net Gini demonstrate that worsening net income distribution leads to more internal conflict (i.e., lower internal conflict score). A question is why the net Gini coefficient is insignificant in the lower distribution of internal conflict. It could be the case that other drivers of internal are more important in these lower quantile countries. For instance, factors such as ethnic tension, government instability, and the regime notably influence the quantiles representing the highest degrees of internal conflict.

Table 1.   Internal Conflict and Net Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Net Gini Coefficient	−.051	−.056*	−.061**	−.067**	−.071***	−.062***
	(.033)	(.029)	(.027)	(.026)	(.026)	(.019)
Covariates						
Ethnic Tension	.631***	.598***	.556***	.520***	.495***	.558***
	(.131)	(.113)	(.095)	(.088)	(.089)	(.076)
Religious Tension	.294*	.251*	.194	.147	.115	.197***
	(.161)	(.145)	(.129)	(.120)	(.114)	(.129)
Government Stability	.270***	.240***	.201***	.167***	.145***	.203***
	(.058)	(.049)	(.038)	(.034)	(.034)	(.029)
Polity	.327***	.315***	.300***	.289***	.278***	.301***
	(.083)	(.074)	(.068)	(.069)	(.073)	(.058)
Institutional Strength	.470**	.373**	.244*	.136	.062	.251***
	(.203)	(.174)	(.140)	(.125)	(.123)	(.140)
Nat Log Per Capita GDP	.005	−.024	−.062	−.094	−.117	−.060
	(.500)	(.434)	(.369)	(.332)	(.327)	(.171)
Trade	−.005	−.004	−.004	−.003	−.003	−.004*
	(.003)	(.003)	(.003)	(.003)	(.003)	(.002)
Unemployed	−.007	−.011	−.014	−.018	−.020	−.014
	(.027)	(.025)	(.023)	(.022)	(.022)	(.010)
GDP Growth Rate	.034**	.026**	.015	.006	.000	.016
	(.014)	(.012)	(.011)	(.009)	(.009)	(.005)
Constant	1.79	3.62	6.04*	8.06***	9.45***	6.07***
	(4.44)	(3.59)	(3.32)	(3.09)	(3.10)	(1.52)
No. in Group	130	130	130	130	130	130
Obs.	3,077	3,077	3,077	3,077	3,077	3,077
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R^2						.538

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG internal conflict—standard errors in parenthesis.

Internal Conflict and Market Gini Coefficient

See Table 2 for results for the market Gini coefficient (before tax and transfer). The market Gini coefficient is significant across the entire distribution (i.e., 10 to 90 quantile). The negative market Gini coefficients demonstrate that as the market Gini increases, it lowers (worsens) internal conflict. DKSE findings provide further support to the MM-QR findings.

The results suggest increases in market-based income inequality are better indicators of internal conflict across the distribution of internal conflict than net income inequality. Furthermore, the findings emphasize the importance of perceived income inequality as a driver of internal conflict. Market-based income inequality is often more transparent than net income inequality since it reflects income before government intervention (Piketty,

2014). Therefore, since the perception of inequality is linked to relative deprivation theory, the findings provide some support (Gurr, 1970).

Table 2. Internal Conflict and Market Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Mkt Gini Coefficient	−.089***	−.085***	−.082***	−.078***	−.076***	−.082***
	(.028)	(.025)	(.022)	(.021)	(.022)	(.017)
			Covariates			
Ethnic Tension	.617***	.583***	.539***	.502***	.476***	.541***
	(.132)	(.114)	(.096)	(.089)	(.090)	(.077)
Religious Tension	.283*	.245*	.196	.154	.124	.198***
	(.166)	(.149)	(.133)	(.123)	(.118)	(.045)
Government Stability	.263***	.234***	.198***	.167***	.145***	.199***
	(.058)	(.049)	(.039)	(.034)	(.034)	(.029)
Polity	.317***	.310***	.299***	.290***	.284***	.300***
	(.083)	(.073)	(.067)	(.069)	(.073)	(.054)
Institutional Strength	.458**	.361**	.234*	.129	.051	.241***
	(.201)	(.172)	(.139)	(.125)	(.122)	(.050)
Nat Log Per Capita GDP	.046	.012	−.033	−.070	−.098	−.031
	(.455)	(.398)	(.342)	(.319)	(.321)	(.165)
Trade	−.004	−.003	−.003	−.003	−.002	−.003*
	(.003)	(.003)	(.003)	(.003)	(.003)	(.002)
Unemployed	.002	−.003	−.010	−.015	−.019	−.009
	(.027)	(.025)	(.023)	(.023)	(.023)	(.010)
GDP Growth Rate	.034**	.026**	.015	.006	.001	.015**
	(.015)	(.012)	(.010)	(.009)	(.009)	(.004)
Constant	3.65	5.18	7.18**	8.84***	10.1***	7.20***
	(4.08)	(3.58)	(3.12)	(2.96)	(3.01)	(1.52)
No. in Group	130	130	130	130	130	130
Obs.	3,077	3,077	3,077	3,077	3,077	3,077
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R^2						.544

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG internal conflict—standard errors in parenthesis.

Internal Conflict and Income Share Bottom 50

See Table 3 for results for income inequality as the share of national income of the bottom 50 percent (before tax and transfer). Similar to the market Gini (Table 2), the income share of the bottom 50 is significant across the entire quantile distribution of internal conflict (i.e., 10 to 90 quantiles). The positive coefficients demonstrate that as the bottom 50 capture a higher percentage of national income, internal conflict levels improve (increase). DKSE findings provide further support for the results.

The findings further support the role of market-based income inequality indicators as drivers of internal conflict. Furthermore, the effects are highly significant (e.g., p<.01) and

have a substantial impact on internal conflict (e.g., up to 0.138 improvement in internal conflict for every percentage increase in market income obtained by the bottom 50 percent).

Table 3.   Internal Conflict and Income Share Bottom 50

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKDE
Income Bottom 50	.138***	.130***	.119***	.110***	.103***	.119***
	(.051)	(.043)	(.036)	(.031)	(.029)	(.024)
			Covariates			
Ethnic Tension	.617***	.637***	.588***	.546***	.515***	.590***
	(.133)	(.116)	(.096)	(.087)	(.087)	(.090)
Religious Tension	.422***	.362**	.282**	.215**	.164*	.246***
	(.163)	(.142)	(.119)	(.103)	(.096)	(.051)
Government Stability	.298***	.275***	.245***	.220***	.200***	.246***
	(.052)	(.045)	(.037)	(.034)	(.036)	(.030)
Polity	.281***	.273***	.262***	.253***	.246***	.087
	(.085)	(.074)	(.065)	(.065)	(.066)	(.081)
Institutional Strength	.251	.178	.082	.001	−.061	.088
	(.219)	(.185)	(.149)	(.134)	(.133)	(.081)
Nat Log Per Capita GDP	.606	.570	.522	.482	.452	.525***
	(.408)	(.368)	(.332)	(.325)	(.333)	(.166)
Trade	−.003	−.002	−.003	−.002	−.001	−.002
	(.003)	(.002)	(.003)	(.002)	(.003)	(.002)
Unemployed	−.019	−.014	−.008	−.002	.002	−.008
	(.028)	(.025)	(.023)	(.022)	(.021)	(.009)
GDP Growth Rate	.020*	.015*	.007	.001	−.004	.007**
	(.011)	(.009)	(.007)	(.006)	(.006)	(.003)
Constant	−7.78**	−6.03*	−3.71	−1.77	−.305	−3.75
	(3.58)	(3.20)	(2.89)	(2.89)	(3.02)	(2.90)
No. in Group	132	132	132	132	132	132
Obs.	3,733	3,733	3,733	3,733	3,733	3,733
F Stata						***
R^2						.568
Model #	1 (MM–QR)	1 (MM–QR)	1 (MM–QR)	1 (MM–QR)	1 (MM–QR)	2 (DKSE)

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG internal conflict—standard errors in parenthesis.

Civil War/Coup d'état and the Net Gini Coefficient

See Table 4 for regression results when civil war and coup d'état is the dependent variable and the net Gini coefficient is the independent variable of interest. Results indicate net income distribution is an insignificant indicator of civil war and coup d'état. The findings are consistent across MM-QR and DKSE models.

Since civil war and coup d'état are infrequent and tend to be more prone in developing countries, there is slight variation in its measure in the upper quantiles. For example, the mean score for civil war and coup d'état in developed countries is 3.96 out of 4.0. Therefore, with little change in the measure for civil war and coup d'état, it leads to small coefficients

and statistical insignificance in nearly all variables. In the lower quantile countries with more internal conflict, religious and ethnic tension are significant indicators of civil war and coup d'état rather than net income distribution.

Table 4.   Civil War/Coup d'**état** and Net Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Net Gini Coefficient	.003 (.028)	.003 (.018)	.003 (.011)	.003 (.009)	.003 (.008)	.003 (.015)
Ethnic Tension	.210** (.094)	.152** (.072)	.105* (.057)	.084* (.048)	.054 (.048)	.119*** (.031)
Religious Tension	.233** (.118)	.151** (.075)	.086* (.049)	.055 (.039)	.014 (.035)	.105*** (.032)
Government Stability	.033 (.023)	.025* (.014)	−.004 (.041)	.016** (.007)	−.013 (.029)	.020** (.009)
Polity	.026 (.094)	.011 (.064)	−.004 (.041)	−.006 (.034)	−.013 (.029)	.003 (.031)
Institutional Strength	.285 (.298)	.140 (.195)	.026 (.123)	−.028 (.097)	−.099 (.075)	.059 (.092)
Nat Log Per Capita GDP	.327 (.419)	.169 (.285)	.044 (.185)	−.015 (.147)	.093 (.112)	.081 (.095)
Trade	−.003 (.003)	−.002 (.002)	−.001 (.001)	−.005 (.001)	−.001 (.001)	−.008 (.003)
Unemployed	−.009 (.015)	−.009 (.010)	−.008 (.007)	−.008 (.005)	−.008** (.004)	−.008** (.003)
GDP Growth Rate	.016** (.007)	.009* (.005)	.004 (.003)	.001 (.002)	−.003 (.002)	.005** (.002)
Constant	−2.38 (3.99)	.243 (2.71)	2.33 (1.75)	3.32** (1.40)	4.63*** (1.13)	1.12 (1.32)
No. in Group	129	129	129	129	129	129
Obs.	2,145	2,145	2,145	2,145	2,145	2,145
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R^2						.278

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG civil war/Coup d'état-standard errors in parenthesis.

Civil War/Coup d'état and the Market Gini Coefficient

Consult Table 5 for the regression outcomes related to civil war and coup d'état using the market Gini coefficient. As with the net Gini coefficient shown in Table 4, the data indicates market income distribution does not significantly impact the likelihood of a civil war or coup d'état. This consistency is observed in both MM-QR and DKSE models.

Similar to the net Gini coefficient, countries in the higher quantiles exhibit minimal risk of civil war and coup d'état, resulting in limited variation in its metrics and subsequent insignificance across variables. Cultural tension is a more reliable predictor of civil war and coup d'état in countries with lower internal conflict quantiles.

Table 5. Civil War/Coup d'**état** and Market Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Net Gini Coefficient	−.002 (.023)	−.001 (.015)	.000 (.010)	.001 (.008)	.001 (.007)	.000 (.011)
Ethnic Tension	.208** (.094)	.152** (.072)	.106* (.057)	.083* (.048)	.053 (.048)	.119*** (.031)
Religious Tension	.228* (.119)	.149* (.079)	.086* (.049)	.054 (.039)	.013 (.035)	.104*** (.033)
Government Stability	.032 (.023)	.024* (.014)	.018** (.008)	.015** (.007)	.012 (.008)	.020** (.009)
Polity	.027 (.094)	.013 (.064)	.001 (.010)	−.004 (.034)	−.012 (.029)	.004 (.030)
Institutional Strength	.278 (.296)	.139 (.195)	.026 (.123)	−.028 (.096)	−.102 (.075)	.059 (.092)
Nat Log Per Capita GDP	.310 (.417)	.162 (.286)	.043 (.185)	−.015 (.146)	.093 (.110)	.077 (.093)
Trade	−.003 (.003)	−.002 (.002)	−.001 (.001)	−.004 (.007)	−.001 (.001)	−.001 (.001)
Unemployed	−.009 (.014)	−.008 (.010)	−.008 (.007)	−.008 (.005)	−.007** (.003)	−.008** (.004)
GDP Growth Rate	.016** (.007)	.009* (.005)	.004 (.003)	.001 (.002)	−.003 (.004)	.005** (.002)
Constant	−1.96 (4.13)	.476 (2.83)	2.45 (1.83)	3.41** (1.45)	4.70*** (1.12)	2.50 (1.63)
No. in Group	129	129	129	129	129	129
Obs.	2,145	2,145	2,145	2,145	2,145	2,145
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R²						.298

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG civil war/Coup d'état-standard errors in parenthesis.

Political Violence/Terrorism and net Gini coefficient

See Table 6 for regression results for political violence and terrorism and the net Gini coefficient. Net income distribution has an insignificant effect on political violence and terrorism. The findings are consistent across all quantiles in the MM-QR models.

Regression results suggest government instability and ethnic tension are better indicators of political violence and terrorism. Furthermore, the regime is significant from the 50th quantile through the upper distribution. The positive coefficient for regime indicates that regime democratization lessens political violence and terrorism in some cases. Specifically, for the 50th quantile, the score for political violence and terrorism is around 3.0 on a scale of 4.0. This indicates that regime democratization has a limited impact in reducing political violence and terrorism in countries that already exhibit high levels.

Table 6.   Political Violence/Terrorism and Net Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Net Gini Coefficient	−.004 (.016)	−.008 (.014)	−.013 (.013)	−.018 (.015)	−.021 (.016)	−.013 (.009)
Ethnic Tension	.145 (.091)	.147** (.072)	.149** (.058)	.152*** (.049)	.154*** (.051)	.149*** (.031)
Religious Tension	.142* (.078)	.125** (.062)	.101* (.055)	.077 (.056)	.061 (.062)	.102** (.041)
Government Stability	.067*** (.019)	.059*** (.016)	.046*** (.014)	.034** (.014)	.027* (.015)	.047** (.005)
Polity	.021 (.049)	.053 (.043)	.099** (.038)	.144*** (.039)	.175*** (.042)	.091*** (.013)
Institutional Strength	−.004 (.174)	−.043 (.228)	−.099 (.176)	−.155 (.148)	−.192 (.151)	−.097 (.092)
Nat Log Per Capita GDP	.068 (.301)	.102 (.260)	.149 (.219)	.197 (.210)	.229 (.225)	.148 (.118)
Trade	−.002** (.001)	.002 (.001)	−.001 (.001)	.001 (.001)	−.001 (.001)	−.001 (.001)
Unemployed	−.009 (.012)	−.005 (.010)	−.004 (.008)	−.001 (.004)	.009 (.008)	−.002 (.006)
GDP Growth Rate	.005 (.005)	.003 (.003)	.001 (.004)	.002 (.002)	−.002 (.004)	.001 (.002)
Constant	.401 (2.88)	−3.02 (2.26)	−.728 (1.74)	.591 (1.49)	1.58 (1.33)	−1.29 (1.74)
No. in Group	129	129	129	129	129	129
Obs.	2,145	2,145	2,145	2,145	2,145	2,145
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R^2						.132

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG political violence/terrorism—standard errors in parenthesis.

Political Violence/Terrorism and market Gini coefficient

See Table 7 for regression results of political violence and terrorism and market income distribution. Findings indicate market income distribution is a better indicator of political violence and terrorism than net income distribution. As the market Gini increases, political violence and terrorism levels worsen. The significant relationship between political violence/terrorism and the market Gini begins at the 25th quantile (2.17) and remains significant through the upward distribution of the political violence and conflict measure (i.e., 4.0). The study continues to find regime democratization lessens political violence and terrorism from the 50th quantile through the upper distribution.

The difference in significance of net versus market income inequality, as drivers of political violence and terrorism, is stark. The findings suggest that while government intervention via income redistribution policies might not substantially curtail political

violence and tension, it appears to mitigate them to the extent that they do not emerge as significant catalysts for discontent. The results also continue to indicate the importance of market income distribution as a potential conflict indicator. Furthermore, it further supports perceived income inequality and its connections to relative deprivation theory (Gurr, 1970; Piketty, 2014). Theory claims that market-based inequalities might more strongly elicit feelings of relative deprivation, as they could be viewed as more reflective of "true" economic disparities before government intervention (Gurr, 1970; Crosby, 1976; Osberg and Smeeding, 2006).

Table 7. Political Violence/Terrorism and Market Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Mkt Gini Coefficient	−.025 (.017)	−.025** (.012)	−.026** (.012)	−.027** (.013)	−.028** (.014)	−.026*** (.006)
Ethnic Tension	.143 (.089)	.144* (.074)	.145** (.057)	.147*** (.048)	.148*** (.051)	.145*** (.031)
Religious Tension	.135* (.078)	.120* (.067)	.099* (.056)	.077 (.056)	.063 (.064)	.099** (.040)
Government Stability	.067*** (.019)	.058*** (.016)	.045*** (.014)	.034** (.014)	.024* (.015)	.046** (.004)
Polity	.034 (.048)	.063 (.042)	.105*** (.038)	.147*** (.038)	.176*** (.041)	.104*** (.014)
Institutional Strength	.003 (.273)	−.041 (.229)	−.105 (.176)	−.169 (.147)	−.212 (.148)	−.103 (.092)
Nat Log Per Capita GDP	.045 (.295)	.085 (.253)	.143 (.206)	.201 (.192)	.240 (.204)	.142 (.120)
Trade	−.002* (.001)	.001 (.001)	−.001 (.001)	.001 (.001)	−.001 (.001)	−.001 (.001)
Unemployed	−.005 (.011)	−.002 (.010)	.002 (.008)	.007 (.008)	.010 (.008)	−.002 (.007)
GDP Growth Rate	.005 (.005)	.003 (.004)	.001 (.004)	.001 (.004)	−.003 (.004)	.001 (.002)
Constant	.401 (2.88)	−3.02 (2.26)	−.728 (1.74)	.591 (1.49)	1.58 (1.33)	−1.29 (1.74)
No. in Group	129	129	129	129	129	129
Obs.	2,145	2,145	2,145	2,145	2,145	2,145
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R^2						.137

Note: ***$p<0.01$, **$p<0.05$, *$p<0.10$. The dependent variable is ICRG political violence/terrorism—standard errors in parenthesis.

Civil Disorder and net Gini coefficient

See Table 8 for civil disorder and net income distribution. Both MM-QR and DKSE models indicate increases in the net Gini significantly worsen civil disorder levels regardless

of quantile distribution. Additionally, neither ethnic nor religious tension variables are significant across quantiles, while they were in many cases for political violence, terrorism, and civil war/ coup d'état. Results also indicate that the regime has an insignificant effect on civil disorders. Lastly, government instability leads to higher levels of civil disorders across the entire distribution of civil disorder.

Table 8.   Civil Disorder and Net Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Net Gini Coefficient	–.038** (.014)	–.036*** (.012)	–.032*** (.010)	–.027*** (.010)	–.025** (.011)	–.031*** (.006)
Ethnic Tension	.025 (.047)	.021 (.044)	.014 (.043)	.007 (.045)	.004 (.049)	.014 (.028)
Religious Tension	.011 (.083)	.005 (.068)	–.004 (.052)	–.013 (.047)	–.019 (.051)	–.004 (.023)
Government Stability	.107*** (.016)	.103*** (.014)	.097*** (.013)	.090*** (.014)	.086*** (.015)	.096*** (.021)
Polity	.055 (.042)	.050 (.038)	.044 (.034)	.037 (.034)	.033 (.037)	.043 (.026)
Institutional Strength	.044 (.183)	.024 (.155)	–.007 (.121)	–.039 (.096)	–.057 (.091)	–.007 (.094)
Nat Log Per Capita GDP	–.270 (.210)	–.245 (.187)	–.207 (.166)	–.169 (.162)	–.147 (.169)	–.207 (.143)
Trade	–.001 (.001)	–.002 (.001)	–.001 (.001)	–.001 (.001)	–.001 (.001)	–.001 (.001)
Unemployed	–.017* (.009)	–.015* (.008)	–.012* (.007)	–.009 (.007)	–.007 (.008)	–.012* (.008)
GDP Growth Rate	.011** (.005)	.010** (.004)	.008** (.003)	.007** (.003)	.006** (.003)	.008** (.004)
Constant	–5.23* (2.76)	–3.02 (2.26)	–.728 (1.74)	.591 (1.49)	1.58 (1.33)	–1.29 (1.74)
No. in Group	132	132	132	132	132	132
Obs.	2,636	2,636	2,636	2,636	2,636	2,636
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R²						.201

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG civil disorder—standard errors in parenthesis.

Civil Disorder and market Gini coefficient

See Table 9 for the model of civil disorder and market income distribution. Results for net and market income distribution are similar. Contrary to the scenario with terrorism and political violence, where the market Gini is significant and the net Gini is not, both Gini coefficients appear to influence civil disorder. Still, the distinction between the Gini coefficients is less pronounced.

Table 9. Civil Disorder and Market Gini Coefficient

	Quantile 10	Quantile 25	Quantile 50	Quantile 75	Quantile 90	DKSE
Mkt Gini Coefficient	–.052***	–.047***	–.040***	–.032***	–.028**	–.040***
	(.013)	(.012)	(.010)	(.010)	(.011)	(.005)
Ethnic Tension	.019	.016	.009	.004	.003	.009
	(.046)	(.043)	(.042)	(.045)	(.049)	(.029)
Religious Tension	.011	.005	–.005	–.015	–.021	–.005
	(.081)	(.067)	(.051)	(.049)	(.053)	(.022)
Government Stability	.105***	.101***	.094***	.088***	.084***	.094***
	(.016)	(.015)	(.013)	(.013)	(.015)	(.020)
Polity	.064	.058	.049	.040	.034	.049
	(.041)	(.037)	(.034)	(.034)	(.037)	(.026)
Institutional Strength	.030	.012	–.015	–.041	–.057	–.014
	(.183)	(.156)	(.120)	(.097)	(.094)	(.092)
Nat Log Per Capita GDP	–.288	–.254	–.202	–.153	–.122	–.204
	(.204)	(.182)	(.157)	(.149)	(.153)	(.142)
Trade	–.001	–.001	–.001	–.001	–.001	–.001
	(.001)	(.001)	(.001)	(.001)	(.001)	(.001)
Unemployed	–.012	–.011	–.008	–.005	–.004	–.008
	(.009)	(.008)	(.007)	(.007)	(.006)	(.007)
GDP Growth Rate	.011**	.010**	.008**	.006**	.006**	.008**
	(.005)	(.004)	(.003)	(.002)	(.003)	(.003)
Constant	–5.23*	–3.02	–.728	.591	1.58	–1.29
	(2.76)	(2.26)	(1.74)	(1.49)	(1.33)	(1.74)
No. in Group	132	132	132	132	132	132
Obs.	2,636	2,636	2,636	2,636	2,636	2,636
Model	MM–QR	MM–QR	MM–QR	MM–QR	MM–Q	DKSE
F Stata						***
R²						.124

Note: ***p<0.01, **p<0.05, *p<0.10. The dependent variable is ICRG civil disorder—standard errors in parenthesis.

Discussion and Conclusion

The study provides important insights into the relationship between income inequality (both net and market-based) and several forms of internal conflict, such as civil war/coup d'état, political violence, terrorism, and civil disorder. Here are some key takeaways from the study.

First, Tables 3-9 analysis demonstrates income inequality is a more significant predictive of smaller-scale internal conflict than larger-scale conflicts. Furthermore, cultural cleavages, such as ethnic and religious tension, appear to be better predictors of larger-scale internal conflicts, such as civil wars, than vertical income inequality. However, ethnic tension may arise because of horizontal income inequality among ethnic groups (Stewart, 2008). Therefore, it could be the case that horizontal income inequality among groups may drive severe conflict more than vertical income inequality. Ethnic minority groups with lower incomes are more likely to mobilize than low-income individuals dispersed across

various ethnic groups (Fearon and Laitin, 2003; Stewart, 2008). Additionally, ethnic and religious tension may elicit more intensity of conflict than income disparity in some cases (Horowitz, 1985).

Second, the role of the type of income inequality, whether market or net, exhibits significantly different relationships with internal conflict. Market income inequality has a more consistent and pervasive relationship across quantile distributions. The results demonstrate that although governmental income redistributive policies may not markedly reduce certain internal conflicts, such as political violence and terrorism, they appear to prevent them from becoming significant drivers. Furthermore, the significance of market-based income inequalities as a driver of conflict over net-based inequality underscores the importance of perceived inequality. Results suggest individuals may perceive income inequality more at the market level which can then manifest in smaller-scale conflict like political violence. Inequalities rooted in market dynamics might intensify perceptions of relative deprivation, given they can be seen as a more representation of economic disparities before governmental adjustments (Gurr, 1970; Crosby, 1976; Osberg and Smeeding, 2006).

Third, given the findings that suggest the important role of market-based income inequality as a determinant of all types of internal conflict other than civil war, policymakers should approach income redistribution considering the perspectives of both direct economic implications and individual perceptions. For example, even if direct governmental income redistribution does not significantly reduce political violence, it appears to dilute it enough, so it is no longer a statistically significant determinant.

A limitation of the study is some tradeoffs with its broad scope. Specifically, the study explores internal conflicts ranging from civil wars to civil disorder using consistent covariates and econometric design. There are benefits to targeted approaches to one type of conflict in specific countries. Future research should explore the interplay between vertical and horizontal income inequality across different types of internal conflict.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

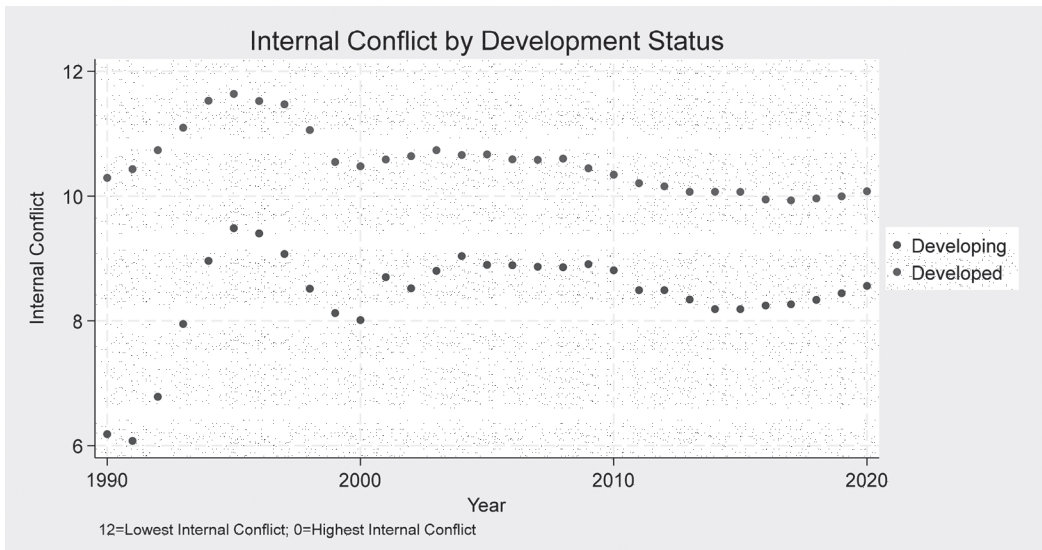## **Appendix A – Internal Conflict and Subcomponent - Binscatter**

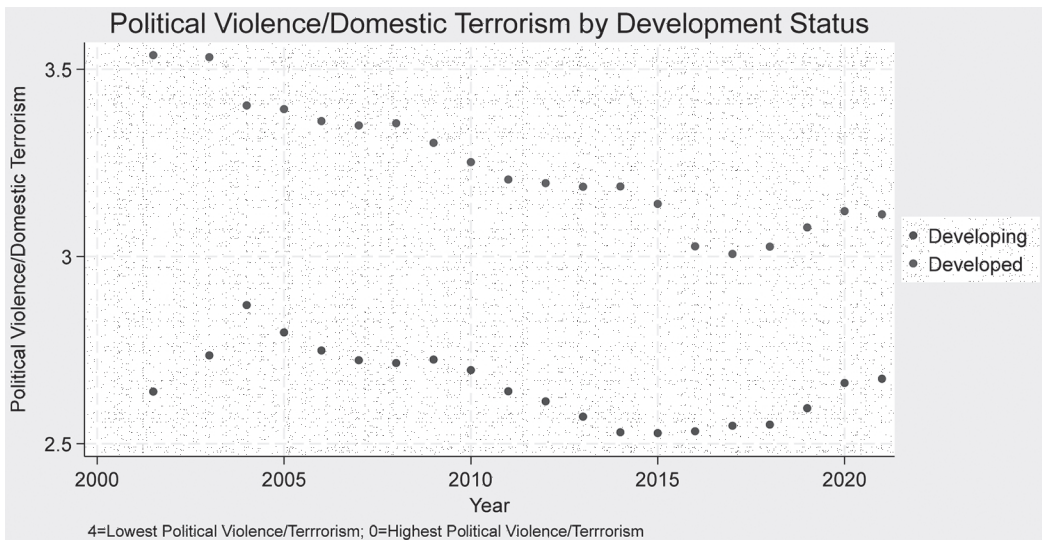**Figure 1.**   Internal Conflict – By Development Status (Binscatter)

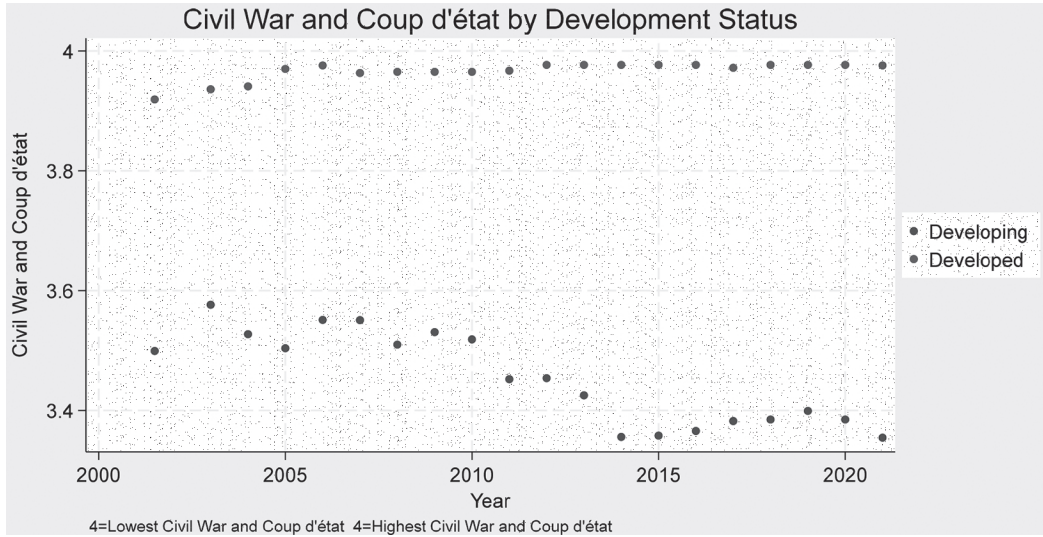**Figure 2.**   Political Violence and Domestic Terrorism – By Development Status (Binscatter)

Figure 3.   Civil War and Coup d'**état** by Development Status (Binscatter)
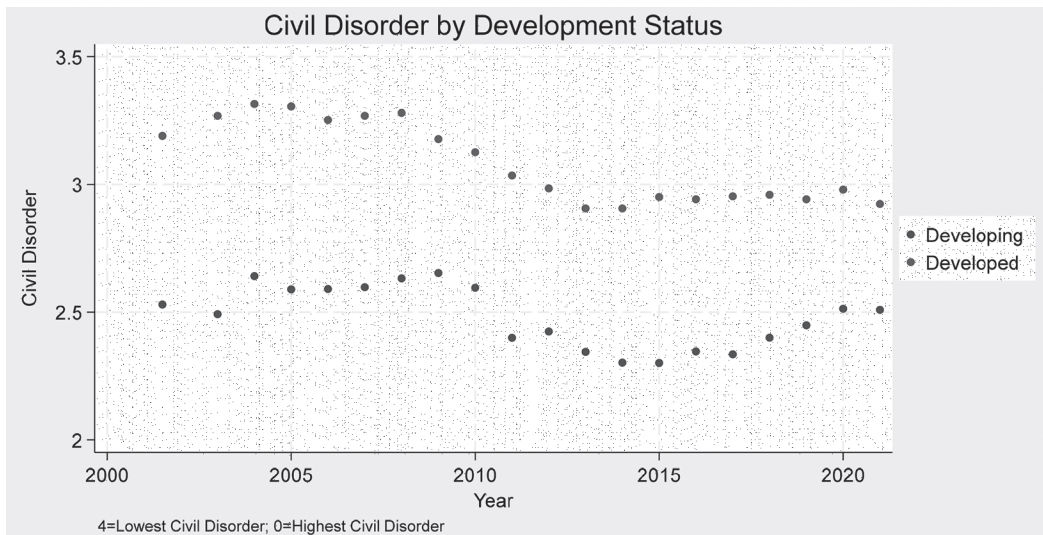

Figure 4.   Civil Disorder by Development Status (Binscatter)

Appendix B – Variable Sources and Descriptions

Variable	Indicator/Description	Source
Ethnic Tension	The ICRG measure of ethnic tension is on a scale of (0) high tension to (6) low tension and is based on levels of racial, nationality, or language divisions.	ICRG
GDP Growth Rate	Annual growth rate of GDP.	World Bank
Government Stability	The ICRG government stability measure is on a scale of (0) highest instability to (12) most stable. The subcomponents of the ICRG government stability score include government unity, legislative strength, and popular support.	ICRG
Internal Conflict	ICRG measure of internal conflict is on a scale of (0) high conflict to (12) low conflict and is based on the subcomponent measures of civil war/coup threat, terrorism/political violence, and civil disorder.	ICRG
Market Gini Coefficient	The net Gini measures household income inequality pre-tax and pre-transfer.	Standardized World Income Inequality Database (SWIID)
Natural Log of Per Capita GDP	The natural log of per capita gross domestic product (GDP).	World Bank
Net Gini Coefficient	The net Gini measures household income inequality in post-tax and post-transfer.	Standardized World Income Inequality Database (SWIID)
Polity (Political Regime)	The democratic accountability index is on a scale of (0) for autarchy to (6) for alternating democracies.	ICRG
Quality of Institutions and Bureaucracy	The ICRG data is on a scale of (0) low strength and quality to (4) high strength and quality. Institutional strength and the quality of bureaucracy affects internal conflict through consistency of policy and government services.	ICRG
Religious Tension	The ICRG measure of religious tension is on a scale of (0) high tension to (6) low tension.	ICRG
Share of Bottom 50	The measure of income inequality is from the World Income Inequality Database (WIID). The study uses the percentage of pre-tax income obtained by the bottom 50 percent. The smaller the percentage of income distributed to the bottom 50 percent denotes higher income inequality.	World Income Inequality Database (WIID)
Trade/Globalization	Imports plus Exports as a percentage of GDP.	World Bank
Unemployment	Unemployment as a percentage of the labor force.	World Bank

Appendix C – Descriptive Statistics (Observations, Mean, Std. Dev., Min-Max)

	Full Panel	Developed Countries	Developing Countries
Max Countries in Panel	132	42	90
Max Observations	3,741	1,469	2,272
Civil Disorder	2.67	3.08	2.48
	.569	.527	.482
	.4–4.0	.50–4.0	.50–4.0
Civil War and Coup d'état	3.61	3.96	3.46
	.631	.219	.689
	0–4.0	1.29–4.0	0–4.0
Ethnic Tension	3.94	4.54	3.67
	1.38	1.18	1.37
	0.0–6.0	.5–6.0	0.0–6.0
GDP Growth Rate	3.32	2.74	3.58
	5.52	3.61	6.12
	–64.0–86.8	–23.8–25.2	–64.0–86.8
Government Stability	7.50	7.83	7.35
	1.97	1.67	2.07
	.667–12.0	1.25–11.5	.667–12.0
Internal Conflict	8.82	10.5	8.12
	2.31	1.42	2.28
	0–12.0	3.0–12.0	0–12.0
Market Gini Coefficient	45.7	46.1	45.5
	6.28	4.57	7.10
	30.7–72.3	30.8–56.4	30.7–72.3
Natural Log of Per Capita GDP	8.53	10.1	7.81
	1.48	.676	1.12
	5.11–11.6	8.30–11.6	5.11–11.3
Net Gini Coefficient	40.0	30.8	42.3
	8.81	5.81	7.33
	16.8–65.4	16.8–50.8	22.6–65.4
Political Violence and Terrorism	2.83	3.25	2.65
	.803	.687	.782
	0.0–4.0	5.83–4.0	0.0–4
Polity	3.81	5.18	3.22
	1.65	1.28	1.42
	0.0–6.0	0.0–6.0	0.0–6.0
Quality of Institutions and Bureaucracy	2.16	3.37	1.63
	1.16	.775	.866
	0.0–4.0	0.0–4.0	0.0–4.0
Religious Tension	4.55	5.22	4.25
	1.32	.908	1.37
	0.0–6.0	1.0–6.0	0.0–6.0
Share of Bottom 50	14.6	19.4	12.4
	5.22	4.75	3.75
	3.52–36.5	6.06–36.5	3.52–28.5
Trade/Globalization	78.7	98.7	69.1
	52.3	72.6	35.3
	.021–442	15.8–442	.020–275
Unemployment Rate	7.68	7.73	7.65
	5.39	4.14	5.86
	.100–33.6	1.10–27.5	.100–33.6

Appendix D – Country List

Full panel: Albania, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bahamas, Bangladesh, Belgium, Belarus, Bolivia, Botswana, Brazil, Brunei, Bulgaria, Burkina Faso, Cameroon, Canada, Chile, China, Columbia, Congo Democratic Republic, Congo Republic, Costa Rica, Cote d'Ivoire, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Ethiopia, Finland, France, Gabon, Gambia, Germany, Ghana, Greece, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Latvia, Lebanon, Liberia, Libya, Lithuania, Luxembourg, Madagascar, Malawi, Malaysia, Mali, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, Somalia, South Africa, South Korea, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syria, Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

Appendix E – Model Specification Testing

Hausman (1978) specification test

	Coef.
Chi-square test value	45.76
P-value	0

Joint Test – test perm

F(28, 2976) = 11.42
Prob > F = 0.0000

Cross sectional independence

Pesaran's test of cross sectional independence = 12.76, Pr = 0.0000
Average absolute value of the off-diagonal elements = 0.592

Modified Wald test for groupwise heteroskedasticity in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i
chi2 (134) = 5.9e+05
Prob>chi2 = 0.0000

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation
F(1, 134) = 1600
Prob > F = 0.0000

Fisher-type unit-root test

Based on augmented Dickey–Fuller tests
Inverse chi-squared(278) P 320.0692 0.0174
Modified inv. chi-squared Pm 2.3082 0.0136

Variance Inflation Factor

VIF	1/VIF
1.810	0.552
1.560	0.641
1.510	0.663
1.430	0.698
1.380	0.724
1.140	0.878
1.100	0.905
1.060	0.946
1.020	0.981
1.570	

References

Acemoglu, D and Robinson, J. (1998). Why did the West extend the franchise? Democracy, inequality and growth in historical perspectives. *Quarterly Journal of Econometrics*, 115(4): 1167–1199.

Acemoglu, D., and Robinson, J. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review*, 91 (5): 1369–1401.

Acemoglu, D and Robinson, J. (2006). *Economic Origins of Dictatorship and Democracy*. Cambridge and New York: Cambridge University Press.

Alesina, A., and Perotti, R. (1996). Income distribution, political instability, and investment. *European Economic Review,* 40(6): 1203–1228.

Ansell, B., and Samuels, D. (2014). *Inequality and Democratization: An Elite-Competition Approach* (Cambridge Studies in Comparative Politics). Cambridge: Cambridge University Press.

Auvinen, J., and Nafziger, W. (1999). The sources of humanitarian emergencies. *Journal of Conflict Resolution*, 43(3): 267–290.

Aristotle. (350 BCE). *Politics*. Trans. Benjamin Jowett.

Baltagi, B. (2013). *Econometric Analysis of Panel Data*. Chichester: John Wiley and Sons.

Barkan, S., and Snowden, L. (2001). *Collective violence*. Boston, Mass: Allyn and Bacon.

Bartusevicius, H. (2014). The inequality–conflict nexus re–examined: Income, education and popular rebellions. *Journal of Peace Research*, 51(1): 35-50.

Boix, C., and Stokes, S. (2003). Endogenous democratization. *World Politics*, 55(4): 517-549.

Canay, I. (2011). A simple approach to quantile regression for panel data. *The Econometrics Journal*, 14(3): 368-386.

Cederman, L., Wimmer, A, and Min, B. (2010). Why Do Ethnic Groups Rebel? New Data and Analysis. *World Politics*, 62(1).

Collier, P. (2007). *The Bottom Billion: Why the Poorest Countries Are Falling and What Can Be Done About It*. Oxford: Oxford University Press.

Collier, P. and Hoeffler, A. (2004). Greed and grievance in civil war. *Oxford Economic Papers*, 56(4): 563-595.

Cramer, C. (2003). Does inequality cause conflict? *Journal of International Development*, 15(4): 397-412.

Crosby, F. (1976). A model of egoistical relative deprivation. *Psychological Review*, 83(2), 85–113.

de Soysa, I., and Fjelde, H. (2010). Is the hidden hand an iron fist? Capitalism and civil peace, 1970–2005. *Journal of Peace Research*, *47*(3), 287–298.

de Tocqueville, A. (1835). *Democracy-in America, Volume II*. New York: Schocken Books.

Dollard, J., Miller, L., Doob, Mowrer, R., and Sears, R. (1939). *Frustration and Aggression*. New Haven, CT: Yale University Press.

Driscoll, J., and Kraay, A. (1998). Consistent covariance matrix estimation with spatially dependent data. *Review of Economics and Statistics*, 80, 549-560.

Ellis, G., Mitchell, S., and Prins, B. (2010). How Democracies Keep the Peace: Contextual Factors that Influence Conflict Management Strategies. *Foreign Policy Analysis*, 6(4), 373–398.

Fearon, J. and Laitin, D. (2003). Ethnicity, Insurgency, and Civil War. *The American Political Science Review*, *97*(1), 75–90. http://www.jstor.org/stable/3118222

Feierabend K., and Feierabend, R. (1966). Aggressive behaviors within polities 1948–1962: A cross-national study. *Journal of Conflict Resolution*, 10(3): 249–271.

Garment, D. (1993). The International Relations Dimension of Ethnic Conflict: Concepts, Indicators, and Theory. *Journal of Peace Research*, 30:137-150.

Gurr, T. (1968). A causal model of civil strife: A comparative analysis using new indices. *American Political Science Review*, 64(4): 1104-1124.

Gurr, T. (1970). *Why Men Rebel*. Princeton, NJ: Princeton University Press.

Haggard, S., and Kaufman, R. (2012). Inequality and Regime Change: Democratic Transitions and the Stability of Democratic Rule. *American Political Science Review*, 103(3).

Hall, T. (2004). Ethnic Conflict as a Global Social Problem. *In Handbook of Social Problems*, edited by George Ritzer. London: Sage. 139–155.

Hardy, M. (1979). Economic Growth, distributional inequality, and political conflict in industrial societies. *Journal of Political and Military Sociology*, 7(2): 209–227.

He, J. (1997). A new approach to non-linear partial differential equations. *Communications in Nonlinear Science and Numerical Simulations*, 2, 230–235.

Hegre, H., Gissinger, R., and Gleditsch, P. (2003). Globalization and internal conflict. In: Gerald Schneider, Katherine Barbieri and Nils Petter Gleditsch (eds) *Globalization and Armed Conflict*. Oxford: Rowman and Littlefield, 251–276

Hegre, H. and Sambanis, N. (2006). Sensitivity Analysis of the Empirical Literature on Civil War Onset, *Journal of Conflict Resolution*, 50 (4): 508–535.

Horowitz, D. L. (1985). *Ethnic groups in conflict*. University of California Press.

Huntington, S.P. (1968). *Political Order in Changing Societies*. New Haven, CT: Yale University Press.

Im, K., Pesaran, H., and Shin, Y. (2003). Testing for Unit Roots in Heterogeneous Panels. *Journal of Econometrics*, 115(1).

Kim, H. (2009). The Complexities of Internal Conflict in the Third World: Beyond Ethnic and Religious Conflict. *Politics and Policy*, 37(2): 395–414.

Koenker, R. (2004). Quantile regression for longitudinal data. *Journal of Multivariate Analysis*, 91, 74–89

Krieger, T., and Meierrieks, D. (2019). Income Inequality, redistribution and domestic terrorism. *World Development*. 116: 125–136

Krueger, A., and Malečková, J. 2003. Education, Poverty and Terrorism: Is There a Causal Connection? *Journal of Economic Perspectives*, 17 (4): 119–144.

Krug, E., Dahlberg, L., Mercy, J., Zwi, A., and, Lozano, R. (2002). World report on violence and health. World Health Organization

Lichbach, M. (1989). An evaluation of 'does economic inequality breed political conflict. *World Politics*, 41(4): 431–472.

Lorenz, O. (1905). Methods of measuring the concentration of wealth. Publications of the American Statistical Association, 9(70), 209—219.

Machado, J., and Sivla, S. (2019). Quantile via Moments. *Journal of Econometrics*, 213(1): 145–173.

Mider, D. (2014). Determinants of Political Violence: A Study of the Literature. *Journal of Social Science Studies*, 1(22).

Mitchell, E. (1968). Inequality and insurgency: A statistical study of South Vietnam. *World Politics*, 20(3): 421–453.

Montalvo, J., and Reynal-Querol, M. (2005). Ethnic Polarization, Potential Conflict, and Civil Wars. *American Economic Review*, 95 (3): 796–816.

Montalvo, J., and Reynal-Querol, M. (2010). Ethnic polarization and the duration of civil wars. *Econ Gov,* 11, 123–143.

Moore, W. and Shellman, S. (2004). Economic Deprivation and Political Violence: A Cross-National Analysis of Protest and Rebellion. *American Journal of Political Science*, 48(4), 624–643.

Muller, E. (1985). Income inequality, regime repressiveness, and political violence. *American Sociological Review*, 50:47–61.

Musa, K., Sohag, K., Said, J., Ghapar, F., and Ali, N. (2023). Public Debt, Governance, and Growth in Developing Countries: An Application of Quantile via Moments. *Mathematics*, 11, 650.

Nagel, J. (1974). Inequality and discontent: A non-linear hypothesis. *World Politics*, 26(4): 453–472.

Osberg, L., and Smeeding, T. (2006). "Fair" Inequality? Attitudes toward Pay Differentials: The United States in Comparative Perspective. *American Sociological Review*, 71(3), 450–473.

Østby, G. (2008). Polarization, horizontal inequalities and violent civil conflict. *Journal of Peace Research,* 45(2): 143–162

Paige, J. (1975). *Agrarian Revolution: Social Movements and Export Agriculture in the Underdeveloped World*. New York: The Free Press.

Piketty, T. (2014). Capital in the Twenty First Century. Cambridge, MA: Harvard University Press.

Plato. (380 BCE). *The Republic.* Trans. G. M. A. Grube.

Plutarch. (75 AD). *Plutarch: Lives of noble Grecians and Romans*.

Prosterman, R. (1976). IRI: A simplified predictive index of rural instability. *Comparative Politics*, 8(3): 339–353.

Russet, B. (1964). Inequality and instability: The relation of land tenure to politics. *World Politics*, (16(3): 442–454.

Sambanis, N. (2005). Using case studies to refine and expand the theory of civil war. In: Paul Collier and Nicholas Sambanis (eds) *Understanding Civil War, Vol. 1*. Washington, DC: World Bank, 303–334.

Sederberg, P. (1994). *Fires Within: Political Violence and Revolutionary Change*. New York: HarperCollins.

Solt, F. (2009; 2015). The Standardized World Income Inequality Database. *Social Science Quarterly*. (97)5: 1267–1281.

Stewart, F. (2008). *Horizontal inequalities and conflict: Understanding group violence in multiethnic societies*. Palgrave Macmillan.

Stiglitz, J. (2013). The Price of Inequality. *New Perspectives Quarterly*. 30(1).

Tarrow, S. (1989). *Political Protest and Social Change: Analyzing Politics*. New York: Oxford University Press.

Tilly, C. (1978). *From mobilization to revolution*. Reading, MA: Addison-Wesley.

Turner, J. H. (2004). *Structure of Sociological Theory*. Warsaw: Wydawnictwo Naukowe PWN.

Weede, E. (1981). Income inequality, average income, and domestic violence. *Journal of Conflict Resolution*, 25: 639–53.

Weede, E. (1987). Some new evidence on correlates of political violence: Income Inequality, regime repressiveness, and economic development. *European Sociological Review,* 3(2) 97-108.

Wooldridge J. M. (2010). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

United Nations. (2022). A New Era of Conflict and Violence. https://www.un.org/en/un75/new-era-conflict-and-violence