Armed Non-State Actor Power Accrual Mechanisms in Times of Apolitical National Crisis

Samantha J. Kane Jiménez
Colby College

Follow this and additional works at: https://digitalcommons.colby.edu/honorstheses

Part of the Peace and Conflict Studies Commons

Colby College theses are protected by copyright. They may be viewed or downloaded from this site for the purposes of research and scholarship. Reproduction or distribution for commercial purposes is prohibited without written permission of the author.

Recommended Citation
https://digitalcommons.colby.edu/honorstheses/1291
Armed Non-State Actor Power Accrual Mechanisms in Times of Apolitical National Crisis

SAMANTHA KANE JIMÉNEZ

Colby College Government Department
Advisors: Laura Seay & Guilain Denoeux
December 2020

Abstract

This thesis seeks to ascertain the apolitical crisis conditions under which armed non-state actors (ANSAs) accrue power. Existing literature examines the structures that nurture ANSA power, including territorial control, group legitimacy, and access to resources. A monopoly on the use of force enables groups to sustain these structures. I explore whether ANSAs instrumentalize moments of apolitical national crisis to nurture these pillars of power and expect that groups will decrease their reliance on the use of force, instead utilizing catastrophes as opportunities to bolster legitimacy among local populations. Statistical, spatial, and qualitative analyses buttress this pursuit. In short, this research suggests that groups do try to accrue power in times of crisis, though not through service provision. Instead, they rely on force initially, and with an interaction effect between the temporal and spatial variation of their use of force—a curious finding that necessitates further investigation. As well, inter-group competition does not increase; groups instead seek to build alliances when threatened. Lastly, some groups rely on performativity sometimes—namely, politically motivated ANSAs use symbolic appeals. The duration and expansiveness of a disaster might also affect which groups make these appeals.
Acknowledgements

I have endless gratitude for the key individuals who made this project possible, and the words here do not suffice to express just how much their kindness, time, and guidance means to me.

First and foremost, I would like to thank Professor Laura Seay, who not only had faith in my ability to produce quality work on a compressed timeline but also went out of her way to convince “the powers that be” to at least let me try. She has gifted me with unwavering support and critical technical guidance throughout the entire process – even when I didn’t have anything tangible to show for my work. Thank you, Dr. Seay, for being an insightful sounding board, a meticulous editor, a friendly critic, and a motivating role model – with regard to both my thesis specifically and my experience as a Colby government major at large.

As well, I have immense gratitude for Professor Guilain Denoeux, who graciously agreed to lend a second pair of eyes to review this thesis. Throughout this past year, he has taught me to investigate the nuance and minutiae of systems while communicating those intricacies parsimoniously (and in style!). Thank you, Professor Denoeux, for setting tremendously high expectations and offering critical feedback under a rubric of bullets, not hugs. Though at times intimidating, your appraisals of my work always push me to be more precise, concise, and deliberate, ultimately making me feel more secure and prouder of the final product.

I am also tremendously indebted to Manny Gimond, who spent far too many hours sharing his infinite knowledge of R and GIS with me. Without Manny, the quantitative components of this thesis would never have come to fruition. A data-wrangling star, Manny helped me puzzle out the shape my data needed to take and how to get it there, trouble-shooting every brain-teaser R threw at us with a huge smile and patient concentration. Thank you, Manny, for your kindness, for your time, for giving me the tools and support to pursue and develop my interests in quantitative analysis, and for all the lively conversations that only end because the chickens need to be put back in the pen. ¡Muchísimas gracias por todo!

Of course, the powers that be – the Colby Government Department, under Professor Dan Shea’s leadership – have also been instrumental in letting this project take off the ground. Thank you for trusting me to conduct an expedited honors thesis, for imparting your wisdom on me through a multitude of riveting courses throughout my four years at Colby, and for making Diamond a space where we can explore innumerable quandaries and engage in critical debates. In that vein, a special shoutout goes to Professor Nick Jacobs, who proved instrumental for the conceptualization of my statistical models and their ever-important units of analysis.

Much appreciation also goes to Diamond’s unsung heroes: the Colby Library staff. Although much of the contemporary works on armed non-state groups eluded the Miller stacks early in 2020, the library staff made sure that it did not elude my research, going to every effort to secure access to the resources that set the foundation for my research.

Last, but not least, I would like to highlight the support of my friends and family. I feel so fortunate to have a long list of cheerleaders who have patiently and attentively listened to my unsolicited reviews of non-state actors and their parallels to authoritarian governments and still had the will to ask, “What did you learn today?” at dinner every evening. Thank you for sharing (or at least celebrating) my excitement for box plots and regression tables, for checking in on me in the GIS lab, for setting things in perspective when I overthink, and for offering to contract out the case studies (I’m glad it didn’t come to that). I am eternally grateful for how nurturing, affirming, and caring my loved ones have been in this process.
Table of Contents

INTRODUCTION ........................................................................................................................................... 1

THE PUZZLE .................................................................................................................................................. 1

MOTIVATION, RELEVANCE, AND PURPOSE ........................................................................................... 2

LITERATURE REVIEW ................................................................................................................................. 4

NATIONAL CRISIS ........................................................................................................................................ 4

Shock Doctrine ............................................................................................................................................. 6

ARMED NON-STATE ACTORS: DEFINITION AND SCOPE ....................................................................... 7

Politically and Financially Motivated Groups ............................................................................................. 8

ANSALife Cycles ......................................................................................................................................... 9

Emergence: “Ungoverned Spaces,” State Capacity, and Local Orders ...................................................... 10

Development: Power Accrual Mechanisms ............................................................................................... 11

Territory ....................................................................................................................................................... 12

Legitimacy ................................................................................................................................................... 14

ANSANetworks .......................................................................................................................................... 21

METHODOLOGY ....................................................................................................................................... 25

STATISTICAL MODELS .............................................................................................................................. 28

RESULTS ..................................................................................................................................................... 29

SPATIAL ANALYSIS .................................................................................................................................. 36

RESULTS ..................................................................................................................................................... 36

CASE STUDIES .......................................................................................................................................... 46

ETHIOPIA’S ONLF AND THE 2008-2011 DROUGHT .................................................................................... 46

ONLF Origins, Typology, and Aims ........................................................................................................... 48

Pre-Drought Conflict Scene ....................................................................................................................... 49

Drought Conflict Scene .............................................................................................................................. 50

Post-Drought Conflict Scene ..................................................................................................................... 52

MEXICO’S GULF CARTEL AND THE 2010 HURRICANE ALEX .................................................................. 53

Gulf Cartel Origins, Typology, and Aims .................................................................................................... 53

Pre-Hurricane Conflict Scene ................................................................................................................... 56

Hurricane Conflict Scene .......................................................................................................................... 57

Post-Hurricane Conflict Scene .................................................................................................................. 58

TURKEY’S PKK AND THE 2011 VAN EARTHQUAKE .................................................................................. 59

Group Origins, Typology, and Aims ........................................................................................................... 62

The Conflict and the Quake ...................................................................................................................... 63

DISCUSSION .............................................................................................................................................. 67

Hypothesis 1: Armed groups increase their power-seeking activities in times of national crisis .............. 67

Hypothesis 2: National crises will be associated with an increase in ANSA governance ....................... 68

Hypothesis 3: Weak groups will rely on the use of force after crises .................................................... 68

Hypothesis 4: On average, ANSAs will reduce their reliance on violence after crises ............................ 69

Hypothesis 5: National crises will prompt greater ANSA engagement with symbolic processes ............ 70

Hypothesis 6: Competition will increase between ANSAs in times of national crisis .......................... 70

Hypothesis 7: ANSA networks will experience net growth in times of national crisis .......................... 71

CONCLUSION ............................................................................................................................................. 71

APPENDIX A: CRISIS-ANSA DATASET .................................................................................................... 73

Dataset Construction ................................................................................................................................... 73
APPENDIX B: SPATIAL ANALYSIS DATASETS ............................................................................. 81

CONSTRUCTION .................................................................................................................. 81
CODEBOOKS ....................................................................................................................... 82
Event-Level 100 KM Threshold Dataset ........................................................................... 82
Event-Level 1000 KM Threshold Dataset .......................................................................... 84
Interval-Level 100 KM Threshold Dataset ......................................................................... 86
Interval-Level 1000 KM Threshold Dataset ....................................................................... 88

APPENDIX C: BIBLIOGRAPHY ................................................................................................ 90

Table of Figures and Tables

Figure 1. Theoretical diagram .............................................................................................. 26
Table 1. Summary of hypotheses .......................................................................................... 27
Figure 2. Equations for multiple linear regression models. Each of the dependent variables on the left are regressed on the right-hand formulas .......................................................................................................................... 29
Table 2. Interpretations of each major MLR models’ results .................................................. 30
Table 3. Output of ordinary least squares regression models gauging logged civilian casualties as a function of crisis indicators and controls .................................................................................................................. 32
Table 4. Output of ordinary least squares regression models gauging logged fatalities as a function of crisis indicators and controls .................................................................................................................. 33
Table 5. Output of ordinary least squares regression models gauging the one-year change in civilian casualty rate as a function of crisis indicators and controls .................................................................................. 34
Table 6. Output of ordinary least squares regression models gauging the one-year change in fatality rate as a function of crisis indicators and controls. .................................................................................. 35
Figure 3. Illustration of spatial analysis results .................................................................... 37
Figure 4. Scatterplot with Loess trendline of mean civilian casualties by 4-month intervals before and after natural disasters, within 100 geodesic kilometers ................................................................................. 38
Figure 5. Scatterplot with Loess trendline of mean civilian casualties by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers ..................................................................... 38
Table 7. Output of ordinary least squares models, regressing mean civilian casualties on time intervals before and after natural disasters .......................................................................................... 39
Figure 6. Scatterplot with Loess trendline of mean fatalities by 4-month intervals before and after natural disasters, within 100 geodesic kilometers ......................................................................... 40
Figure 7. Scatterplot with Loess trendline of mean fatalities by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers ................................................................................. 40
Table 8. Output of ordinary least squares models, regressing mean fatalities on time intervals before and after natural disasters ........................................................................................................ 41
Figure 8. Scatterplot with Loess trendline of mean logged civilian casualties by 4-month intervals before and after natural disasters, within 100 geodesic kilometers ..................................................................... 42
Figure 9. Scatterplot with Loess trendline of mean logged civilian casualties by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers ..................................................................... 42
Table 9. Output of ordinary least squares models, regressing mean logged civilian casualties on time intervals before and after natural disasters .............................................................................. 43
Figure 10. Scatterplot with Loess trendline of mean logged fatalities by 4-month intervals before and after natural disasters, within 100 geodesic kilometers ......................................................................... 44
Figure 11. Scatterplot with Loess trendline of mean logged fatalities by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers .............................................................. 44
TABLE 10. OUTPUT OF ORDINARY LEAST SQUARES MODELS, REGRESSING MEAN LOGGED FATALITIES ON TIME INTERVALS BEFORE AND AFTER NATURAL DISASTERS. ..................................................................................................................45

FIGURE 12. MAP OF ETHIOPIA, HIGHLIGHTING THE OGADEN REGION. SOURCE: UNREPRESENTED NATIONS AND PEOPLES WORKSHOP 2012. ..................................................................................................................................47

FIGURE 13. DISTRIBUTION OF CASUALTIES BY PARTIES TO THE ETHIOPIA-OGADEN CONFLICT, WITH THE 2008-2011 DROUGHT EPISODE HIGHLIGHTED. ORIGINALLY PRODUCED WITH DATA FROM UCDP. ..........................................................................51


FIGURE 15. DISTRIBUTION OF CASUALTIES BY PARTIES TO THE GULF CARTEL-MEXICAN GOVERNMENT CONFLICT, WITH THE 2010 HURRICANE ALEX HIGHLIGHTED. ORIGINALLY PRODUCED WITH DATA FROM UCDP. ..................................................................................56

FIGURE 16. DTO TERRITORIAL HOLDINGS IN MEXICO 2010. SOURCE: BBC 2018. .................................................................................................................................57

FIGURE 17. SEISMIC RISK MAP FOR TURKEY, WITH RED AREAS CORRESPONDING TO THE MOST EARTHQUAKE-VULNERABLE REGIONS. SOURCE: HÜRRIYET DAILY NEWS 2017. .........................................................................................59

FIGURE 18. MAP OF KURDISH REGION IN THE MIDDLE EAST. SOURCE: BBC 2016. .................................................................................................................................61

FIGURE 19. DISTRIBUTION OF CASUALTIES BY PARTIES TO PKK-TURKEY CONFLICT, WITH THE 2011 EARTHQUAKE EPISODE HIGHLIGHTED. ORIGINALLY PRODUCED WITH DATA FROM UCDP. ................................................................................63

TABLE 11. SUMMARY OF CASE STUDY FINDINGS. ........................................................................................................................................................................................................66

TABLE 12. REVIEW OF FINDINGS’ SUPPORT FOR HYPOTHESES. ...........................................................................................................................................................................67

TABLE 13. CODEBOOK FOR THE CRISIS ANSA DATASET. ...................................................................................................................................................................................................80

TABLE 14. CODEBOOK FOR THE EVENT-LEVEL 100 KILOMETER THRESHOLD DATASET, USED FOR LINEAR REGRESSION SPATIAL ANALYSIS MODELS. .................................................................................................................83

TABLE 15. CODEBOOK FOR THE EVENT-LEVEL 1000 KILOMETER THRESHOLD DATASET, USED FOR LINEAR REGRESSION SPATIAL ANALYSIS MODELS. ...................................................................................................................85

TABLE 16. CODEBOOK FOR THE INTERVAL-LEVEL 100 KILOMETER THRESHOLD DATASET, USED FOR LOESS TREND LINES FOR SPATIAL ANALYSIS. ..............................................................................................................87

TABLE 17. CODEBOOK FOR THE INTERVAL-LEVEL 1000 KILOMETER THRESHOLD DATASET, USED FOR LOESS TREND LINES FOR SPATIAL ANALYSIS. ...........................................................................................................89
Introduction

The Puzzle

Parallels between autocratic regimes and armed non-state actors (ANSAs) abound. Extant literature highlights how both dictators and ANSAs may use violence strategically, thwart the rule of law, and provide public services selectively. As well, many ANSAs have ties to the state, and many states rely on paramilitary organizations for purposes of security and control. Moreover, many armed groups indeed seek to assert themselves as the legitimate regime.

One particularly puzzling area of autocratic behavior that has yet to emerge in ANSA literature concerns crisis management. Scholars suggest that politically savvy autocrats tend to use moments of national crisis – ranging from natural disasters to economic downturns – to consolidate power and entrench themselves. While this topic itself deserves greater scholarly attention, some academics have made the case that illiberal regimes face perverse incentives not to provide aid to ailing populations in times of crisis. For instance, after Cyclone Nargis devastated Myanmar in 2008, the government allowed populations away from the country’s political power centers to perish while pocketing the relief money that poured into the country. Indeed, autocrats may use crises to advance their political aims, entrench their rule, and disenfranchise opposition groups. Because it is not necessarily weak capacity that threatens a regime’s livelihood but rather the exclusion of key societal factions and groups, neglecting politically insignificant communities can, perversely, aid an autocrat in consolidating power. Specifically with regard to the COVID-19 pandemic, leaders across the globe – from Israel’s Bibi Netanyahu to Hungary’s Viktor Orban – are using the associated pandemonium to pass sweeping reforms or institute states of emergency that allow for their aggrandizement.

---


5 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War; Mampilly, Rebel Rulers.


7 Bueno de Mesquita and Smith.

8 Bueno de Mesquita and Smith, 186.


At the same time, non-state armed groups do benefit from weak state capacity, state absence, and rampant corruption. These factors tend to create political vacuums that allow ANSAs to emerge and gain power. If ANSAs tend to behave similarly to authoritarian regimes in terms of operational structure, leadership style, and political stratagem, I expect them to respond similarly to national instability. In other words, do ANSAs consolidate power during national crises, and if so, how? Could the moments that dictators use to solidify their rule also offer a platform to armed groups to gain power, even if that power is used against the state?

Motivation, Relevance, and Purpose

At the onset of the COVID-19 pandemic, the Mexican government faced widespread condemnation for its neglect of the public health threat and subsequent crisis. While cases surged and President López Obrador continued to hug supporters at rallies and refuse to enact safety and economic relief protocols, drug cartels imposed lockdowns and distributed personal protective equipment and sustenance baskets across the country. At the same time, however, the national homicide rate increased significantly in the month of March 2020, despite swaths of Mexicans adhering to self-imposed stay-at-home practices, marking the country’s deadliest month on record. This dynamic is not limited to Mexican cartels, with Hezbollah creating its own pandemic response force in Lebanon, the Houthis ramping up their mobilization efforts in Yemen, Al-Qaeda portraying the virus as “Allah’s tiniest soldier” to further its anti-Western agenda, and ISIS calling on its affiliates to capitalize on governments’ public health distractions to advance its own tactical goals.

Such fluctuations in the behavior and activity of armed non-state actors (ANSAs) emerge time and again across a variety of states, particularly when the national government seems to be out of touch with its constituents. Thus, the question of whether ANSAs use moments of national crisis to consolidate power arises.

This thesis seeks to elucidate whether non-state armed groups use the imperilment of the national government to their advantage. Understanding both whether this dynamic indeed exists and, if so, what elements propel it can provide critical insights to the field of global security. Ultimately, three critical factors underscore this paper’s importance.


First, the increasing prevalence of ANSAs as effective forces in the political realm, both at the national and international levels, calls for greater examination of such groups’ operations and behavior. Notoriously, the degeneration of a state’s organizational structure and ability to govern – particularly acute in a time of crisis – opens a forum for the proliferation of ANSAs, which can in turn further delegitimize the state, breeding instability.\(^\text{16}\) In fact, most contemporary conflicts feature non-state actors,\(^\text{17}\) which add another layer of nuance to conventional warfare, where, traditionally, states or official entities comprise the conflict dyad.\(^\text{18}\) The resulting hybrid wars blur the lines between combatants and civilians as ANSAs utilize unconventional tactical approaches that involve terrorism, coercion, and criminality, gaining ground through a “shock and awe”\(^\text{19}\) factor rather than by only attacking precise targets.\(^\text{20}\) Under this rubric of so-called fourth generation warfare, an actor aims to “undermine the will of the existing state, to de-legitimize it, and to stimulate internal social breakdown.”\(^\text{21}\) Exploiting state deficiencies – especially while casting itself in a relatively positive light – buttresses such aims.\(^\text{22}\) Thus, attentiveness to when and how non-state armed groups vie for power can elucidate patterns and dynamics that will play an increasingly relevant role in study of armed conflict and political violence.

Second, ANSAs’ increasing lethality places a moral premium on academic investigations of their dynamics. Regardless of an armed actor’s ideological platform or the moral value judgments attached to a group’s broader aims or a regime’s malfeasance, armed actors are becoming increasingly lethal, which adversely implicates civilians.\(^\text{23}\) Altogether, ANSAs have also become far more powerful forces over time.\(^\text{24}\) A more robust comprehension of how armed groups gain power is especially essential with regard to national crises because such events heighten public vulnerability.

Third – and closely connected with the previous point – insights as to if, when, and how ANSAs respond to critical crisis moments can guide policy approaches to both prevent and address crises in particularly vulnerable states. Creeping crises emerge when one catastrophic gives rise to another, triggering a feedback loop of crises. ANSAs may set off such a tripwire if their power-grabbing attempts in light of national disruptions incite or deepen a humanitarian or political crisis. This line of research can help identify mechanisms to stop creeping crises from further unraveling if hijacked by armed groups. Gauging not only if but also how ANSAs respond to moments of public distress and hardship can provide information on how intervening parties can best lend protection to vulnerable populations and help prevent them from suffering twofold: once in the face of the original crisis and then again in the face of an armed group.

Ultimately, I aim to explore the parallels between autocratic leadership and armed groups in order to better understand how the latter accrue power in unprecedented times. Specifically, I investigate the apolitical crisis conditions under which ANSAs consolidate power, and I rely on quantitative and qualitative methods to uncover relevant patterns. Dayton et al. notes that “in the acute crisis response phase, emergent groups can make up for the lack of leadership from official sources.”\(^\text{25}\) To what degree do those vague “emergent groups” constitute non-state armed groups?

\(^{17}\) Nicolas Florquin and Elisabeth Warner, “Engaging Non-State Armed Groups or Listing Terrorists? Implications for the Arms Control Community,” May 1, 2008, 18.
\(^{19}\) Hoffman, 16.
\(^{24}\) Berti, “What’s in a Name?,” 2.
Ascertaining the power-seeking and crisis response trends among different kinds of violent non-state actors can supply a wealth of helpful information for matters of national and global security, for prioritizing and better understanding the direction of humanitarian relief efforts, and for expanding the overarching literature on ANSAs.

In short, this research finds that groups do try to accrue power in times of crisis, though not through service provision. Instead, they rely on force initially, and with an interaction effect between the temporal and spatial variation of their use of force – a curious finding that necessitates further investigation. As well, inter-group competition does not increase; groups instead seek to build alliances when threatened. Lastly, some groups rely on performativity sometimes – namely, politically motivated ANSAs use symbolic appeals. The duration and expansiveness of a disaster might also affect which groups make these appeals.

Having a general roadmap to help predict ANSA behaviors in this particular time of global hardship could inform concerned humanitarian entities about where to direct efforts to better protect already vulnerable populations form potentially abusive ANSAs. On the flipside of that, as several scholars point out, ANSAs might help assuage the negative reverberations of crises and could prove to be worthy points of contact for humanitarian groups that hope to help vulnerable communities in political contentious territories. The models in this study may help elucidate instances in which collaboration with armed groups provides the most utilitarian and humane outcomes.

The remainder of this text is organized as follows. In the next section, I survey the existing literature on conditions that define national crises, armed non-state actors, and determinants of ANSA power, paying particular attention to the scholarship that substantiates my operationalization of variables and attention to control conditions. Then, I provide a detailed Methodology in which I reiterate the central question, list my hypotheses, operationalize central variables, and explain how the quantitative and qualitative work together to highlight various components of ANSA power vis-à-vis moments of apolitical national distress. Subsequently, I present a section for each of the three methodological approaches, specifying each process with more nuance and sharing primary results. Thereafter, I engage a Discussion of the mixed methodologies’ key findings and how they substantiate or refute my hypotheses. I overview the findings’ implications and paths for further research in the Conclusion. The Appendices at the end of this volume contain broader methodological information and data codebooks, as well as a bibliography.

Literature Review

National Crises

The term “crisis” remains ill-defined in the literature, producing a largely subjective term associated with a number of situations with “un” prefixes – specific events that are “unwanted, unexpected, unprecedented and almost unmanageable.” As such, employing the crisis label depends on involved parties recognizing an event through that lens. Crisis events occur across an array of sectors, ranging anywhere from public health to economics, and they can emerge

---

29. Dayton et al., 167.
endogenously (from within the affected sector) or exogenously (as a negative externality of occurrences in some other area).\textsuperscript{30} Importantly, in politics many crises have exogenous roots, with the political body’s response to severe disruptions in other segments of society largely determining the emergence and profundity of a political crisis.\textsuperscript{31} The source of a crisis can also be natural or man-made.\textsuperscript{32} The latter cases result from a “loss of technological control or from identifiable human errors” as well as from “deliberate attempts to reshape the social and political fabric.”\textsuperscript{33}

Crises – whether predictable or unexpected – disrupt the norm and instill a sense of extreme, unwieldy chaos that differs from the normative levels of entropy in complex environments (namely, government).\textsuperscript{34} As a result, such events threaten the status quo of social norms, institutions, livelihoods, and reputations – especially if the trigger event emerged suddenly and surprisingly, imposing a shock factor on an unprepared population.\textsuperscript{35} These disruptions emerge from or take the form of interconnected political, social, and economic instability,\textsuperscript{36} and more deeply intertwined systems experience deeper reverberations of a crisis.\textsuperscript{37}

Notably, political instability can bring economic hardship, which in turn can produce economic crises.\textsuperscript{38} Uncertainty in the political sphere shortens the time horizons that guide politician’s decision-making, which in turn can imperil economic performance\textsuperscript{39} seeing as this political uncertainty affects the kinds of incentives in the economy.\textsuperscript{40} Indeed, unstable regimes and cabinet changes significantly decrease economic performance, particularly with regard to total factor productivity and the accumulation of human and physical capital.\textsuperscript{41} Yet, the impacts of instability are not one-directional: economic instability, social tensions, and widespread public health concerns also bring about overtly political disturbances, especially when the official channels to enact change prove futile in ameliorating or even addressing grievances.\textsuperscript{42}

When state deficiencies become obvious, a sense of public indignation might ensue, creating factors that make a violent political agenda seem more reasonable or desirable.\textsuperscript{43} Aside from revealing socioeconomic disparities and enhancing affected groups’ sense of relative deprivation and moral indignation, economic crises can generate higher unemployment rates, increasing the subset of

\begin{flushright}
\textsuperscript{31} Bueno de Mesquita and Smith, \textit{The Dictator’s Handbook: Why Bad Behavior Is Almost Always Good Politics}.
\textsuperscript{33} Rosenthal and Kouzmin, “Crises and Crisis Management,” 280. In this sense, man-made crises include civil conflicts, coups, riots, protests, revolutions, and political assassinations – all activities that largely associate with armed non-state groups.\textsuperscript{31} The Methodology section explains how I prevent this element from biasing my analysis or confounding my data.
\textsuperscript{39} Aisen and Veiga, 3.
\textsuperscript{40} Carmignani, “Political Instability, Uncertainty and Economics,” 2.
\textsuperscript{41} Aisen and Veiga, “How Does Political Instability Affect Economic Growth?,” 21, 23–25.
\textsuperscript{42} Carmignani, “Political Instability, Uncertainty and Economics,” 1.
\end{flushright}
the population that is eager for vindication, adventure, and financial security – factors that easily push individuals toward armed groups.\(^4^4\)

Environmental disasters can have similar effects given their repercussions on economic factors. Indeed, among agriculturally dependent and politically marginalized societies, droughts significantly increase the odds of conflict onset.\(^4^5\) As is the case in Somalia, livestock prices plummet during droughts, often removing the general public’s primary source of income.\(^4^6\) This resource scarcity can increase inter-group competition and thus give way to conflict – especially where illicit economies can emerge and provide an enticing opportunity for financially aggrieved individuals.

**Shock Doctrine**

The uncertainty that arises from crisis situations thus necessitates a concerted response, which can offer fruits of change for a political entity.\(^4^7\) A community can respond to a crisis with solidarity – fostering a sense of shared burden and unity – or conflict, where the trigger event incites a sense of fear, scarcity, and concern for survival rates, which prompts infighting.\(^4^8\) The latter response is far likelier when systemic differences underpin social structures, disproportionately distributing the brunt of the crisis’s repercussions.

Shock doctrine proclaims that crises offer opportunities to wipe slates clean and rebuild the affected area in more efficient ways. Yet, this view also gives rise to what Klein terms “the disaster capitalism complex,” where powerful forces use public catastrophes as opportunities for private gain.\(^4^9\) Similar to the military industrial complex, disaster capitalism involves responding to systemic shocks with the goal of maximizing profit rather than limiting or ameliorating the event’s disastrous consequences.

In a similar vein, certain factions in society can take threats and the uncertainty that crises produce in stride to further their interests:\(^5^0\) a crisis for one group can be an opportunity for another, and while, initially, the difference may appear imperceptible, over time, increases in protests, kidnappings, bombings, and environmental change demonstrate this phenomenon.\(^5^1\) Indeed, the Collier-Hoeffler hypothesis offers further explanation: people rebel and seek to remedy their grievances when there is a viable opportunity to do so: a crisis might produce such an opportunity, and the animus that ensues may in turn also don the crisis label. To echo Klein, even political incumbents may utilize moments of abnormal chaos to put forth policies that increase their odds of survival or constrain rivals.\(^5^2\) Thus, I predict that the shock doctrine theory extends beyond


\(^{4^9}\) Klein, *The Shock Doctrine*.


financially interested politicians and into a myriad of political actors, including non-state armed groups, rendering the first and broadest hypothesis:

\[ \text{H1: Armed groups increase their power-seeking activities in times of national crisis.} \]

**Armed Non-State Actors: Definition and Scope**

A universally agreed-upon definition for armed non-state actors eludes the relevant existing literature.\(^{54}\) Generally, scholars employ the term to encompass rebel groups, insurgents, and quasi-states while excluding paramilitary organizations under government control.\(^{55}\) Similarly, the humanitarian activist community defines ANSAs as “armed organizations independent of state control that use violence to achieve political ends.”\(^{56}\) Meanwhile, some scholars deem it important to consider ANSAs with all kinds of relations to the state.\(^{57}\) Prominent scholars echo that an element of political motivations distinguishes non-state armed groups from gangs of thugs or bandits.\(^{58}\) However, this view excludes organized crime groups because of their financial pretensions but neglects the fact that such groups’ operations create inherently political problems. For such reasons, other academics apply the term to any group that defies the state’s monopoly on the legitimate use of force or as a group with a permanent organizational structure that is involved in one episode of collective violence.\(^{59}\) More liberal definitions acknowledge terrorist groups, rebels, militias, gangs, vigilantes, and criminal groups as ANSAs based on their coercive monopoly.\(^{60}\)

Disagreement in the definition persists because labels matter.\(^{61}\) The typologies that fall under the “armed non-state actor” umbrella are often conflated with one another under the “terrorist” label, which can obfuscate the diverse pretensions and interests that drive different groups to sundry strategies as a means to fulfill various goals.\(^{62}\) Thus, the label employed to refer to an armed group connotes many key aspects of the group; mislabeling a group may cloud one’s assessment of it or delegitimize its aims and actions.\(^{63}\) Pragmatically, a group that receives the “terrorist” designation is more likely to use violence because the label cordons off legitimate diplomatic channels for negotiations, leaving the use of force as the only viable option to realize its goals.\(^{64}\) Importantly, what unifies armed non-state actors under a single frame of reference is their capacity to breed warlike levels of violence in states that are not formally at war, thus changing the nature of conventional warfare.\(^{65}\)

---


\(^{55}\) DCAF and Geneva Call, 7.

\(^{56}\) Florquin and Warner, “Engaging Non-State Armed Groups or Listing Terrorists?,” 17.

\(^{57}\) Carey, Mitchell, and Lowe, “States, the Security Sector, and the Monopoly of Violence.”


\(^{59}\) Pablo Policzer, “Assistant Professor Department of Political Science University of Calgary 2500 University Drive NW Calgary, Alberta Canada T2N 1N8,” n.d., 17.


\(^{61}\) Berti, “What’s in a Name?,” 2; Policzer, “Assistant Professor Department of Political Science University of Calgary 2500 University Drive NW Calgary, Alberta Canada T2N 1N8.”

\(^{62}\) Bandura, “Mechanisms of Moral Disengagement.”


\(^{64}\) Mampilly, Rebel Radars, 46; Bandura, “Mechanisms of Moral Disengagement.”

\(^{65}\) Florquin and Warner, “Engaging Non-State Armed Groups or Listing Terrorists?”

For the purposes of this thesis, I follow Berti’s and Policzer’s definition, where groups that challenge the state’s monopoly on the legitimate use of force – including rebels, insurgents, militants, organized crime groups, gangs, vigilantes, and warlords – constitute non-state armed groups.\(^{67}\) I exclude paramilitary organizations, which serve as an extension of a regime’s security apparatus, though not groups with government ties, seeing as most ANSAs tend to have strong ties with corrupt members of their country’s government.\(^{68}\) I provide more detail regarding scope and operationalization of ANSAs in the Methodology section.

**Politically and Financially Motivated Groups**

Armed groups preponderate in areas of active conflict. Approximately 93% of terrorism fatalities occur in states experiencing civil wars.\(^{69}\) Because conflicts arise from a diversity of causes such as sectarianism, irredentism, sociopolitical tensions and greed-driven pursuits, understanding ANSA typologies can help make sense of different groups’ aims, operations, and achievements. Five (partially overlapping) dimensional rubrics help assess an ANSA and thus determine its typology: ANSAs in the arms of the state; ANSAs that are proxies of foreign states; insurgent organizations that perform a wide variety of governance functions, try to control territory, and seek public support; ANSAs that merely prey on civilians; and hybrid organizations that control and manipulate the state from within while also operating independently. Unpacking groups along these dimensions allows for more nuanced analysis. Doing so requires inquiring about their relationships to external backers, the saliences of their political and economic agendas, their degree of service provision and/or civilian predation, the size and makeup of their constituencies, and their relationship to the state.

I divide ANSAs into two conceptual camps based on a group’s primary motivation. On the one hand, overtly political ANSAs include rebels and insurgents, which always compete with the state, even if they do not seek to ultimately become the state.\(^{70}\) On the other hand, bandits, warlords, gangs, and criminals have overtly financial aims,\(^{71}\) although their operations have immediate implications on the political sphere. A broad conception of ANSAs thus continues to allow for nuanced analysis of group typologies without conflating labels. Indeed, a group’s political identity influences its “form and depth of governance,”\(^{72}\) and not only those with overtly political aims seek to govern. At the same time, not only those with overtly financial interests seek economic payoffs.

Armed groups may have activist or opportunistic general pretenses, although the two camps are by no means mutually exclusive.\(^{73}\) In fact, groups usually express aspects of both camps, and many ANSAs start off as primarily activist entities and then turn opportunistic as their membership and goals change over time. Ideology refers to how the group frames its objectives relative to a territory and population at large.\(^{74}\) Ideology – be it political, social, or religious – drives activist groups, which can generally gain traction through social resources and boast high-commitment

---

\(^{67}\) Berti, “What’s in a Name?,” 2; Policzer, “Assistant Professor Department of Political Science University of Calgary 2500 University Drive NW Calgary, Alberta Canada T2N 1N8.”


\(^{69}\) Guilain Denoeux, “Insurgency” (Class Lecture, Political Violence Seminar, Colby College, Waterville, ME, October 1, 2020).


\(^{71}\) Mampilly, *Rebel Rulers*, 28.

\(^{72}\) Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, 120.


\(^{74}\) Arjona, Kasfir, and Mampilly, *Rebel Governance in Civil War*, 154.
recruits who subscribe to the group’s ideology and norms.\textsuperscript{75} Often times, insurgents construct new identities to justify their strategies, especially with regard to their use of force.\textsuperscript{76}

Meanwhile, opportunistic groups are resource-driven, and the patronage and stipends that they offer are what largely attracts people seeking short-term gain. Still, a group’s self-interest and communal values can align in a mutually constitutive fashion.\textsuperscript{77} Felbab-Brown et al. identify two mechanisms that explicate the symbiotic relationship between opportunism and activism. Under the logic of consequence, ANSAs might provide governance, however gruesome, to foment some semblance of stability, which in turn reduces its costs of operation.\textsuperscript{78} To justify that transactional mechanism, ANSAs appeal to some form of ideology or custom, following a logic of appropriateness that contributes to their legitimation. In this manner, not only a political economy, but also a moral one, can explain rebel operations and interactions with civilians: indeed, their interpretation of values and beliefs determine how they craft local orders of power.\textsuperscript{79}

Hybrid ANSAs emerge from this crossroads of greed, grievance, ideology, and activism. Non-state armed groups operate in a liminal space that requires political savviness for the sake of longevity. Thus, even if a group’s primary aims regard profitability, it must navigate the political realm; conversely, if it vehemently advocates for a particular ideology, it must jump economic and political hurdles to make its pursuits feasible. Hybrid ANSAs are entities that have managed to coopt elements of the state to skew the playing field to benefit the armed group.

**ANSA LIFE CYCLES**

Given the political, financial, and social constraints that ANSAs face, the concept of life cycles helps understand a group’s rise, potential, and demise. Despite immense variation with regard to timelines and achievements, some patterns of development are worth mentioning. Generally, a group’s earlier strategic choices narrow and rigidify its future menu of options. What organizations do today impacts what they can do tomorrow.\textsuperscript{80} These path-dependent policy choices are imbued with history, seeing as the historical context in which a group emerges largely influences its constitution, membership, direction, and operations.\textsuperscript{81} In that vein, Mampilly identifies two initial conditions that affect how ANSAs choose to interact with civilians: the nature of the pre-conflict relationship between the state and society, plus the ethnic composition and initial insurgent strategy, together shape a group’s governance aims.\textsuperscript{82}

Because of the narrowing menu of options over time, ANSAs are more likely to fragment later in their existence, creating splinter groups.\textsuperscript{83} As well, bigger groups with more fragmented hierarchies are more likely to commit mistakes: the more complex a system, the more likely it is to fail.\textsuperscript{84} Per similar logic, success can be an ANSA’s own obstacle to sustain its operations or continue to accrue power because success expands the incentives available to a group, in turn affecting that

\textsuperscript{76} Aydin and Emrence, Zones of Rebellion, 130; Bandura, “Mechanisms of Moral Disengagement.”
\textsuperscript{77} Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 161.
\textsuperscript{78} Felbab-Brown, Trinkunas, and Hamid, Militants, Criminals, and Warlords, 16.
\textsuperscript{79} Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 161.
\textsuperscript{80} Aydin and Emrence, Zones of Rebellion, 9.
\textsuperscript{81} Aydin and Emrence, 9; Mampilly, Rebel Rulers, 15–16; Leech, The FARC, 4.
\textsuperscript{82} Mampilly, Rebel Rulers, 16.
group’s pursuit of its goals. When more economic incentives become available, an originally ideologically guided group might drift into opportunism and refocus to pursue financial incentives that draw attention away from the original activist goal.

**Emergence: “Ungoverned Spaces,” State Capacity, and Local Orders**

Referring to areas beyond the state’s reach as “black spots” or “ungoverned” overlooks the important fact that most populated territories are governed, even if not by the state. A weak or absent state allows for local orders to emerge. Insurgents, warlords, criminal groups, or the like step into power vacuum to rally support. A predatory, weak, or neglectful state makes for disenfranchised citizens who turn to alternatives in search of greater material and physical security.

Not only do such dynamics open the floodgates for the proliferation of new actors; they also bolster existing actors’ power as these groups can point to state deficiencies to justify their existence and operations in a given territory. Ultimately, rebel rulers can and often are legitimately supported without coercion. Civilian discontent can help frame ANSA emergence and dominance as the better alternative: the public might approve of the local order as the least worst – but not the best or even remotely ideal – option relative to the state. As well, geographic isolation from the state breeds local distrust of the central government, predisposing a population to support alternative orders. Furthermore, ANSAs that provide public services usually do so quite differently than the state. Thus, decreases in state legitimacy allow for increases in ANSA legitimacy, which in turn offer opportunities for these groups to consolidate power.

The vacuums that weak states create offer ANSAs an opportunity to reap benefits in the form of profits, ideological propagation, and legitimacy. Yet, groups must also put in some work to obtain these rewards: they might compete with the government where it is deficient yet present or compete with other armed groups for control of a given space. Such turf battles are often fought in the realm of governance provision. ANSAs have much to gain in areas beyond state reach, and instilling order through alternative governance bolsters that potential. Thus, ANSAs at large, whether they seek to secede, take over the capital, or build a transnational crime network, often choose to govern in some capacity, ranging from wielding violence to coerce a population into submission to providing public services to build rapport with constituents. I thus expect ANSAs to provide more services when they seek to capitalize on national crises:

86 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 16, 258.
87 Mampilly, Rebel Rulers, 53.
89 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 55.
90 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, Aydin and Emrence, Zones of Rebellion.
91 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 203.
92 Arjona, Kasfir, and Mampilly, 69–70; Felbab-Brown, Trinkunas, and Hamid, Militants, Criminals, and Warlords.
93 Leech, The FARC, 4–5.
94 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 204.
95 Arjona, Kasfir, and Mampilly, 69–70, 229, 231; Berti, ”What’s in a Name?,” 2, 5.
96 Felbab-Brown, Trinkunas, and Hamid, Militants, Criminals, and Warlords.
97 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 7.
H2: National crises will be associated with an increase in ANSA governance.

**Development: Power Accrual Mechanisms**

Scholars define ANSA power in a number of ways. With few exceptions, most attempts to operationalize the term rely on a territorial gauge but differ in the additional components that comprise the final power index. The literature highlights a variety of plausible contributors, such as a group’s decree implementation capacity, dominance of the population that lives in the secured territory, degree of legitimacy and civilian support, provision of government services like adjudicating disputes and ensuring security, and material and military resources.

Agnew views ANSA power strictly from a sovereignty framework. He extends the notion that “ungoverned territories” are, in fact, governed, just not by traditional sovereign entities, and thus deems it apt to consider effective sovereignty when gauging ANSA power: the group that holds jurisdiction and the capacity to implement policy over a tangible space is the group that effectively holds power. Florea follows this logic by distinguishing the de facto state – a separatist territory with a system of governance but lack of international legality – from the de jure state.

This differentiation, however, may be less pronounced, seeing as the gradual erosion of state sovereignty reduces its responsiveness and effectiveness, which in turn increasingly provides space for ANSAs to operate. Thus, effective sovereignty fluctuates gradually rather than dichotomously. As well, many of the components of power are subjective or difficult to gauge, particularly in areas with alternative local orders. While effective sovereignty indeed matters, ANSA power hinges on more than this concept. Departing from the commonality of territorial control, researchers expound different combinations of these factors to arrive at measures of ANSA power.

Aydin and Emrence attach civilian support to the territorial dimension of a group’s power, highlighting the importance of legitimacy in sustaining a group’s operations and longevity. For example, the Kurdistan Workers’ Party (PKK) projected violence onto local communities, dividing the Kurdish constituency and thus imperiling its chances of sustaining territorial control in key areas. Coopting locals thus makes controlling territory much easier for an armed group. Going one step further, Arjona et al. and Mampilly distinguish civilian compliance from civilian support: an ANSA imposes its power of coercive control to “induce collaboration” – the necessary precursor to the provision of governance.

---


107 Florea, *Rebel Governance in de Facto States,* 0.


109 Aydin and Emrence, *Zones of Rebellion*, 58, 63.

Others springboard from Aydin and Emrence’s consideration of legitimacy and add resource access as a contributor to group power.\textsuperscript{111} Wood views territorial control and population compliance as prerequisites for power. Once achieved, an armed group’s power is a function of its number of troops relative to those of the state. Similarly, Kye d and Gravers place a premium on tactical resources, measured through ANSA arsenals, in addition to the group’s territorial holdings and legitimacy.

On the other hand, Arjona et al. go one step further and, instead of gauging civilian support, consider a group’s engagement with governance as a vital element of power, arguing that legitimacy arises from providing security, justice adjudication, and health and education services. Meanwhile, Felbab-Brown et al. combine the notions of governance and civilian support, noting both as essential components of ANSA power.

In fact, lower military security and less territory lead to a greater use of coercion and lower institutional capacity in ANSA areas.\textsuperscript{112} For such reasons, Mampilly sees power as the combination of territory, population compliance, governance provision (in the realm of security, justice, health, and education), and, similarly to Agnew, implementation capacity. He recognizes three pressure points for armed groups (particularly, for insurgencies): from the ground, the public’s demands; from within, the risk of fragmentation and opposing strategic perspectives; and from above, the state and transnational actors’ sanctions.\textsuperscript{113} Because ANSAs must interact with all three levels, they constantly consider all interests and make ends meet to optimize their objectives. Adjustments in one dimension come with a tradeoff in the other dimensions, leading to changing ANSA power levels.

Deviating from the consideration of territory, Fjelde and Nilsson regard ANSA power as a function of military capacity and financial resources, arguing that territorial control, governance provision, and popular support are epiphenomenal to the central aspiration for and expression of military goals. While I agree with this analysis, I recognize the methodological impediments to properly operationalizing illicit groups’ military capabilities and thus the necessity to identify appropriate proxies to effectively conceptualize ANSA power. Based on the existing literature, I condense important power index components into three broad bins: territorial holdings, degree of legitimacy, and access to resources.

\textbf{TERRITORY}

Territory matters because sovereignty is largely defined by territoriality,\textsuperscript{114} and groups can undermine sovereignty by taking territory and weakening the central apparatus of governance.\textsuperscript{115} Holding territory offers a number of opportunities to ANSAs, including access to resources, a potential base for popular support, and a space for recruitment.\textsuperscript{116} Importantly, territorial control is a prerequisite for providing governance, which, as discussed below, in turn increases the group’s potential to profit, expand, and approach its goals.

Consequently, territory becomes an important component of measuring ANSA power, especially when territorial control is part of the group’s strategic objectives.\textsuperscript{117} Yet, it remains a significant indicator of power even for non-territorially interested ANSAs because territory offers a


\textsuperscript{112} Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 135.

\textsuperscript{113} Mampilly, Rebel Rulers, 65–66.

\textsuperscript{114} Agnew, “Sovereignty Regimes,” 437.

\textsuperscript{115} Agnew, 444.

\textsuperscript{116} Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 38; Mampilly, Rebel Rulers, 3.

\textsuperscript{117} Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 258.
platform to pursue broader ANSA interests. Overall, variation in territorial control destabilizes an ANSA’s ability to retain control of its trajectory toward strategic objectives.

Because territorial control preempts other components of ANSA power, I expect weakened groups to focus their energies on this element in times of crisis as a mode of mere survival, relying more heavily on the use of force. In that vein, I anticipate that groups that enter a crisis from a secure or favorable position will try to bolster their public legitimacy as opposed to protecting their territory, thus relying less on civilian predation and more on governance and symbolic processes to build their public ethos. From such considerations, these hypotheses follow:

H3: Weak groups will rely on the use of force after crises.

H4: On average, ANSAs will reduce their reliance on violence after crises.

Zones of Control

In conflicts where one end of the dyad involves the state and the other an ANSA, different territorial zones emerge based on levels of contention. Generally speaking, there are three zones: those under state control, those under ANSA control (or beyond state reach), and those under steep contention between the two factions.

Both the state and rebels approach zones with a particular tactical distribution of operations and violence. Fighting factions use force quite selectively in the areas they control because their invariable dominance of the area reduces the need to assert power through shows of force. The expanse of such zones indicates a group’s power and strength. Conversely, in areas beyond control, factions use violence indiscriminately as a means to coerce the population into submission and consequently capture their territory. Still, contested zones – areas of “multiple sovereignty” – suffer from the greatest degrees of violence as well as the greatest variety of attacks as multiple parties vie for domination.

Competition over zones indeed leads to a diversification of violence and tactics to obtain greater civilian compliance and then translate that dominance to territorial control. While groups tend to use one tactical approach in controlled zones or behind enemy lines, they employ a multitude of tactics in contested zones. Not only do ANSAs engage in military operations to gain ground, however; they also utilize non-violent strategies to win the hearts and minds of locals and thus advance their broader goals.

119 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 120.
120 Arjona, Kasfir, and Mampilly, 135.
121 Aydin and Emrence, Zones of Rebellion; Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War; Mampilly, Rebel Raiders, 59.
122 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 144; Aydin and Emrence, Zones of Rebellion, 4–6.
123 Aydin and Emrence, Zones of Rebellion, 129.
124 Aydin and Emrence, 133.
126 Aydin and Emrence, Zones of Rebellion, 133.
127 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 81.
128 Aydin and Emrence, Zones of Rebellion, 6.
129 Aydin and Emrence, 4, 51.
130 Aydin and Emrence, 6.
131 Aydin and Emrence, 129.
LEGITIMACY

McCullough defines legitimacy as civilian and political elites’ acceptance of a group’s authority, indicating that lack of legitimacy can lead to coercion and violence.\(^{132}\) Legitimacy predetermines primarily on how local expectations measure up to the perceived or actual interactions between an authoritative body and the public.\(^ {133}\)

Legitimacy matters to non-state armed groups.\(^ {134}\) It can shift ANSA dominance to governance and civilian compliance to support.\(^ {135}\) The latter of each of these options generates over time as a group demonstrates stable control of a delineated territory and “benefits the armed nonstate actor, lowering … the cost of social control and increasing access to rents in the form of ‘taxes,’ supplies, recruits, and intelligence.”\(^ {136}\) Undoubtedly, increases in legitimacy lead to an increase in resource accumulation and can buttress a group’s pursuit of power.\(^ {137}\)

Yet, legitimacy does not translate directly into ANSA power.\(^ {138}\) Indeed, groups might wield tremendous power without ruling legitimately. As well, ANSA legitimacy largely hinges on state legitimacy: the two tend to hold an inverse relationship, where weak or absent states contribute to ANSA legitimacy whereas strong, representative states reduce the appeal of such groups.\(^ {139}\)

Other factors also determine ANSA legitimacy. Beyond the state-ANSA inverse, groups might invoke ethnonationalist ideologies to motivate popular support and justify their activities and operations – a mechanism that Felbab-Brown et al. call the logic of appropriateness.\(^ {140}\) As well, ANSAs might follow a logic of consequence, where the provision of public goods and services – especially in areas where the state is deficient – comes in exchange of civilian compliance or approval, crafting a mutually beneficial, though asymmetric, arrangement between the population and the local order based on a degree of both coercion and consent.\(^ {141}\) Although ANSA relationships with civilians are largely unregulated,\(^ {142}\) ANSAs benefit from producing a predictable, reliable order.

Civilian Support

Taking both logical approaches in concert, ANSAs develop a pragmatic sensitivity to civilian attitudes. According to Wood, the “distribution of civilian loyalty potentially shapes” an ANSA’s trajectory to power.\(^ {143}\) Civilians desire predictability in the realm of security both for matters of physical integrity as well as to ensure their ability to profit and sustain their livelihoods.\(^ {144}\) For this

---

133 Felbab-Brown, Trinkunas, and Hamid, Militants, Criminals, and Warlords; McCullough, “The Legitimacy of States and Armed Non-State Actors: Topic Guide.”
135 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 26; Mampilly, Rebel Rulers, 59.
136 Felbab-Brown, Trinkunas, and Hamid, Militants, Criminals, and Warlords, 9; Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 159.
137 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 159.
139 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 69–70, 229, 231; Berti, “What’s in a Name?,” 2, 5; McCullough, “The Legitimacy of States and Armed Non-State Actors: Topic Guide.”
141 Felbab-Brown, Trinkunas, and Hamid, Militants, Criminals, and Warlords; Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War; Mampilly, Rebel Rulers, 53; McCullough, “The Legitimacy of States and Armed Non-State Actors: Topic Guide.”
144 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 39.
reason, ANSAs distribute patronage in the form of goods and services to their supporters.\textsuperscript{145} ANSAs that institute a reliable local order sustain greater civilian support; yet, unpredictability offers groups greater flexibility in their strategy, so groups attempt to balance the provision of services with the threat of coercion to maximize control.\textsuperscript{146}

Civilians will always at least partially resist an alternative local order – as is true for any legitimate government.\textsuperscript{147} Full resistance to an ANSA’s rule tends to emerge when the group hijacks and hollows out or destroys social institutions that were previously reliable and legitimate.\textsuperscript{148} Yet, the public’s ability to overpower armed groups rests on the quality of those pre-existing institutions and the degree of the group’s permeation into local daily routines and services relative to the state. Allowing dissent among civilians is useful to rebels because it softens them to cooperate rather than hardening them to reject the rebel rule.\textsuperscript{149}

ANSA orders are always subject to evaluation and never statically approved or opposed.\textsuperscript{150} Civilians shift allegiances between competing factions based on their calculus of expected benefits and maximization of personal welfare.\textsuperscript{151} Remarkably, civilians have a say when it comes to local orders: they hold stakes and interests that affect ANSA behavior.\textsuperscript{152} As a result, civilians are not totally innocent or passive in their relationship with ANSAs, seeing as they harbor these organizations, even as a result of coercion, and can reap the benefits of their patronage.\textsuperscript{153}

For groups that are weak relative to a strong state, societal alliances can shoulder and facilitate military advances.\textsuperscript{154} ANSAs thus use ideological appeals strategically, stressing the logic of appropriateness with susceptible groups but overlooking aspects of their proclaimed doctrine where doing so increases the odds of gaining compliance or support.\textsuperscript{155} Doing so generates more points of contact with a community, which can contribute to the stability of a local order.\textsuperscript{156} From the civilian perspective, the prospect of order, security, and provision of services a more enticing reason to support or accept an ANSA than the need to fight on their side for an ideological goal.\textsuperscript{157}

Yet, ANSAs of all kinds can face severe decreases in legitimacy when an attack hurts ingroup members or vulnerable outgroup members (such as women, children, or the elderly).\textsuperscript{158} Generally speaking, when an ANSA attack produces unintended consequences, such as a large number of ingroup fatalities, the group’s leadership tends not to apologize because it seeks to protect the group’s status, its “parochial interests,” and the perpetrators.\textsuperscript{159} Thus, they seek to spin the narrative to frame it in more favorable terms for the group’s broader objectives; yet, when political backlash outpaces a group’s justifications, apology is more likely. In short, the odds of apologizing for a blunder are positively associated with the number of victims of an attack, where the public discontent in controlled territory exceeds the losses associated with acknowledging wrongdoing.\textsuperscript{160}

\begin{enumerate}
\item Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 39.
\item Arjona, Kasfir, and Mampilly, 13.
\item Arjona, Kasfir, and Mampilly, 181.
\item Arjona, Kasfir, and Mampilly, 185.
\item Arjona, Kasfir, and Mampilly, 207.
\item Mampilly, \textit{Rebel Rulers}, 236.
\item Mampilly, 67.
\item Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 228.
\item Arjona, Kasfir, and Mampilly, 228.
\item Arjona, Kasfir, and Mampilly, 207.
\item Wood, “Rebel Capability and Strategic Violence against Civilians,” 603.
\item Matesan and Berger, “Blunders and Blame,” 377.
\item Matesan and Berger, 380.
\item Matesan and Berger, 377, 383–84.
\end{enumerate}
To be sure, however, the category of ANSA aims does dictate the level of positive interaction with civilians. For instance, warlords depend less on the public than do liberation movements. Still, across the gamut of ANSA motivations, civilian compliance matters in pragmatic (if not ideological) terms, and many groups have a “fear of public condemnation” because it affects their long-term strategy and viability. To best understand the ANSA-civilian relationship, assessing the norms that existed prior to the group’s emergence is essential. This civilian expectations mechanism has significant implications on a group’s prospects for legitimacy. Ultimately, while legitimacy does not equate to ANSA power, it is a large component of it.

Symbolic Processes & Mimicking the State

Many ANSAs adopt autocratic state characteristics and behaviors. Indeed, “aspiring rebel governments are not fundamentally different from conventional governments, developing the capacity to govern through societal alliances.” In The Dictator’s Handbook, Bueno de Mesquita and Smith expound how authoritarian regimes often boast leaders with cults of personality, rely on a winning coalition of easily replaceable cadres, persecute minorities, remain skeptical of younger emerging voices (who could replace an aging leader), and often seek to profit from official business. Such preoccupations extend to ANSA hierarchies: group leaders, like the PKK’s Öcalan, produce an environment of trust and cohesion yet impose high costs of defection; they worry little about active recruitment since they can wield force or provide limited services to generate the minimal margin of support; they may espouse a particular ideology and persecute the outgroup; are somewhat skeptical of subordinates’ intentions; and can shift their motivations from grievance to greed over time.

Effectively, rebels see and rebels do. Groups adopt state strategies of governance as a means to “cultivate legitimacy” and assert their dominion over a given populace and territory. Moreover, the historical context and membership constitution from which the group emerges impacts their procedures. For instance, groups like the National Patriotic Front of Liberia used leadership styles that largely derived from its members’ previous positions as political elites: the group remained predatory, self-interested, and corrupt – much like the government it allegedly opposed.

At its onset, a group relies on violence to assert its power and indicate its proclamations. Yet, violence and coercion unleashed upon a territory may elicit compliance at most; legitimacy, on the other hand, derives from the symbolic processes that imbue meaning into civilian action and support. Violence alone does not do enough to create the political cleavage that rebels seek to further their aims. Even groups that provide public services benefit from attaching symbolic processes to their governance as a means to draw attention and add valued weight to their

162 Matesan and Berger, “Blanders and Blame,” 381.
163 Mampilly, Rebel Rulers.
164 Mampilly, 211.
165 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 227.
166 Arjona, Kasfir, and Mampilly, 16.
167 Arjona, Kasfir, and Mampilly, 158.
168 Arjona, Kasfir, and Mampilly, 266.
169 Arjona, Kasfir, and Mampilly, 29, 84.
170 Arjona, Kasfir, and Mampilly, 84; Mampilly, Rebel Rulers, 80, 238.
171 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 76; Mampilly, Rebel Rulers, 7.
governance provision.\textsuperscript{175} Much as political elites rely on emotive rhetoric and propaganda to draw popular support or produce a façade of legitimacy, ANSAs use symbolic processes to offer a common platform for identification and thus fortify their stature.\textsuperscript{176} Referential symbols, which serve to allude to the group’s power, remind civilians of the threat of force.\textsuperscript{177} Meanwhile, condensation symbols filter broad notions of an ingroup onto a singular sign and serve the public’s desire for community. The use of both types of symbolism proves cost-effective for ANSAs because it supplements coercive compliance and boosts the group’s legitimacy.\textsuperscript{178} In other words, increased reliance on “symbolic assertions of power” reduces the need to rely on violence.\textsuperscript{179} I expect that ANSAs will buttress symbolic processes in times of crisis to maximize their power gains:

\textbf{H5: National crises will prompt greater ANSA engagement with symbolic processes.}

Indeed, performativity is essential for sovereignty, seeing as it helps create unity within the territory and provides a reference point for recognition from outside actors.\textsuperscript{180} Often, ANSAs appeal to symbols that resemble that of the state, including similar flags, rituals, and rhetoric, even if the group overtly hopes to overthrow or secede from the regime that they emulate.\textsuperscript{181} By adopting state symbols, rebel groups can reframe civilians’ perceptions of them to seem statelier and more legitimate.\textsuperscript{182} Additionally, relying on already familiar symbols and tweaking them somewhat makes the signs more accessible, recognizable, and thus more effective.\textsuperscript{183} As well, ANSAs aim for the multivocality\textsuperscript{184} of symbols to enhance their pliability – a one-size-fits-all model that proves particularly useful in demographically heterogenous areas.\textsuperscript{185} Still, ANSAs may present different symbols to different groups as a means to bridge the cleavages present in the territory they intend to control.\textsuperscript{186}

\textit{Weberian Power: Security and the Use of Force}

Violence against non-combatants can be a resource for rebels.\textsuperscript{187} The Weberian conception of power regards the monopoly on the legitimate use of force – a notion that largely applies to ANSAs, not only sovereign states.\textsuperscript{188} Groups use an initial act of violence to signal their intentions to the state and mark the beginning of their journey.\textsuperscript{189} Ultimately, the use of force by itself is not a sufficient challenge to the state: upon gaining control of a territory and its residents, ANSAs that rely on force as the only means for power struggle to obtain popular support and thus may stifle their


\textsuperscript{176} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 76.

\textsuperscript{177} Arjona, Kasfir, and Mampilly, 79, 84.

\textsuperscript{178} Arjona, Kasfir, and Mampilly, 74, 89.

\textsuperscript{179} Mampilly, \textit{Rebel Rulers}, 80.

\textsuperscript{180} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 77.

\textsuperscript{181} Arjona, Kasfir, and Mampilly, 77; Mampilly, \textit{Rebel Rulers}, 58.

\textsuperscript{182} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 158.

\textsuperscript{183} Arjona, Kasfir, and Mampilly, 85.

\textsuperscript{184} “Multivocality,” a term that Mampilly employs in \textit{Rebel Rulers} and in his chapter in \textit{Rebel Governance in Civil War}, refers to a single symbol’s expression of various signals at once. Oxford Reference notes its use in archeology with reference to artifacts that offer “contemporaneous articulation of numerous different narratives or parallel discourses.”

\textsuperscript{185} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 89.

\textsuperscript{186} Arjona, Kasfir, and Mampilly, 85.

\textsuperscript{187} Arjona, Kasfir, and Mampilly, 248; Aydin and Emrence, \textit{Zones of Rebellion}, Mampilly, \textit{Rebel Rulers}.

\textsuperscript{188} Ahram, “Armed Non-State Actors and the Challenge of 21st-Century State Building,” 35.

\textsuperscript{189} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 29.
own goals. Thereon, groups must rely on diverse methods beyond mere violence in order to sustain and expand their power. Yet, losing a credible threat of violence undermines an ANSA’s potential as a whole. In this manner, Weberian power is a necessary component of ANSA power, though not one that by itself maximizes a group’s potential.

As a result, ANSAs use violence strategically to secure military, political, and social interests. Seldom is violence used arbitrarily; however brutal or seemingly irregular, violence is an instrument in an ANSA’s toolkit to advance its interests. Groups may use terror tactics – particularly when operating from a position of relative weakness – to increase ethnic salience or cohesion, to gain an upper hand on the government regarding potential negotiations, and to gain resources. For example, the Revolutionary Armed Forces of Colombia (FARC) used ransom money from its kidnapping operations to fuel campaigns and sponsor governance, framing the ransom collection as a form of taxation and the kidnapping a punishment for alleged tax-evaders.

Similarly, a monopoly on the use of force enables ANSAs to provide security services to the civilian ingroup, which is key to legitimizing the ANSA in the eyes of the public. In fact, ANSAs, and particularly rebel groups, pay dearly when they kill civilians of their ingroup. A rebel government is most vulnerable when it cannot protect or intentionally targets civilians. Repressive or highly violent rebel groups lose legitimacy in their governance provision, especially when they become predatory, as was the case with the Revolutionary United Front in Sierra Leone and the National Patriotic Front of Liberia.

A group’s capacity partially determines the degree to which it relies on violence. The use of violence to either coerce or protect civilians induces compliance or support. Strong capacity allows for more selective repression of civilians. A security apparatus signals a group’s power to the population and underscores its Weberian sovereignty. Meanwhile, weak capacity leads to violence against civilians because groups cannot offer security benefits to entice support and therefore must coerce support.

Perpetuating discord can be a source of power. Overtly predatory (opportunistic) ANSAs use unpredictable violence and their monopoly on said violence, plus other repressive behaviors, to

190 Mampilly, Rebel Rulers, 53.
191 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War.
192 Arjona, Kasfir, and Mampilly, 31.
193 Aydin and Emrence, Zones of Rebellion, 69; Berti, “What’s in a Name?”; Wood, “Rebel Capability and Strategic Violence against Civilians.”
194 Berti, “What’s in a Name?,” 6; Wood, “Rebel Capability and Strategic Violence against Civilians.”
196 Leech, The FARC, 39.
197 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War.
198 Arjona, Kasfir, and Mampilly, 186; Matesan and Berger, “Blunders and Blame.”
199 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 7.
200 Arjona, Kasfir, and Mampilly, 66.
202 Mampilly, Rebel Rulers, 64.
sustain their patronage pyramids and reap the benefits of power at civilians’ expense.\textsuperscript{204} As a result, military and bureaucratic decline can lead an ANSA to rely more heavily on violence.\textsuperscript{205}

As well, a reputation of violence lowers the barriers to entry for a group, can increase its legitimacy, and allows it to tower over rivals.\textsuperscript{206} Indeed, “violence is a resource mobilization strategy,”\textsuperscript{207} and seemingly indiscriminate violence can help accumulate resources, incentivizing enlisting out of fear of persecution and attraction to material goods.\textsuperscript{208} At the same time, involvement in illicit trade greatly increases reliance on violence given the competition to control markets.\textsuperscript{209}

States at times use indiscriminate violence toward civilians in areas under ANSA control as a means to delegitimize the ANSA’s ability to provide security and overall power.\textsuperscript{210} Yet, a savvy armed group can use such attacks to justify their cause, using the state’s force against it — a strategy aptly described as “jujitsu politics.”\textsuperscript{211} When an ANSA provides security to civilians, the indiscriminate use of force as a counterinsurgency strategy reduces the ANSA’s need to rely on coercion or violence to retain civilian support or compliance.\textsuperscript{212} ANSAs can use state attacks on civilians as clear evidence of state abuse, thereby legitimizing the ANSA’s role with a given community and perhaps its cause as a whole.\textsuperscript{213}

\textit{Governance & Service Provision}

Like the use of violence, governance provision is always strategic.\textsuperscript{214} Mampilly outlines three categories of ANSA effectiveness vis-à-vis service provision. Ineffective governance condenses to roving banditry or mere civilian predation – situations in which an ANSA can wield its monopoly on violence to subjugate a population without providing anything remotely in return.\textsuperscript{215} Partially effective governance emerges when a group can only provide security but no other services. Successful governance surfaces when an ANSA is able to police the population and stabilize the environment enough to successfully provide more diverse and far-reaching services.

Governance thus entails more than mere security provision: it extends to broader human capacity services, like healthcare and education, as well as the adjudication of civilian disputes. ANSA governance comprises the “administration of civilian affairs,” including the regulation of social, political, and economic institutions that affect civilians.\textsuperscript{216} It facilitates an ANSA’s pursuit of legitimacy among the local population and serves as an incentive for civilians not to support government.\textsuperscript{217} An ANSA engages administratively once it secures territorial control because it recognizes service provision as an investment that will pay off in the future.\textsuperscript{218}

\begin{footnotes}{
\textsuperscript{204} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 269.
\textsuperscript{205} Aydin and Emrence, \textit{Zones of Rebellion}, 33.
\textsuperscript{206} Aydin and Emrence, 21.
\textsuperscript{207} Wood, “Rebel Capability and Strategic Violence against Civilians,” 602.
\textsuperscript{208} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 271.
\textsuperscript{210} Aydin and Emrence, \textit{Zones of Rebellion}, 85.
\textsuperscript{212} Wood, “Rebel Capability and Strategic Violence against Civilians,” 601.
\textsuperscript{215} Mampilly, \textit{Rebel Rulers}, 17.
\textsuperscript{216} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 3.
\textsuperscript{217} Arjona, Kasfir, and Mampilly, 3.
\textsuperscript{218} Felbab-Brown, Trinkunas, and Hamid, \textit{Militants, Criminals, and Warlords}, 9.
\end{footnotes}
Engaging in service provision brings political, financial, and diplomatic benefits to non-state armed groups. ANSAs can use governance as a façade to accrue power in the form of legitimacy and financial interests. façade of governance justifies an armed actor’s practices on the surface, serves as a potential platform for international recognition, and allows for the implementation of selective rules to extract resources.219

A bureaucratic apparatus serves to spread ideology, to recruit and mobilize resources, to obtain foreign support, and to frame the organization more favorably than potential competitors.220 Particularly for rebel groups, the provision of government services demonstrates a commitment to being effective leaders. For ANSAs broadly, a central apparatus creates an organized system to deploy the use of force. Overall, for many groups, service provision can be a cost-effective way of securing power for the long run.221 Yet, groups only develop a capacity to administrate effectively once they build an arsenal and secure territory; without these essential prerequisites, governance does not serve its purpose of furthering ANSA interests.222 Indeed, successful, legitimate governance can bring hefty rewards for ANSAs; weak governance in turn weakens a group’s overall capacity.223

In effect, pragmatism guides an ANSA’s decision to govern: service provision is an instrument that groups use to bolster their power—they govern enough to reap the benefits without incurring sunk costs.224 Thus, groups govern to different degrees depending largely on what civilians expect in return for their compliance or support as well as the group’s raison d’être.225 For instance, where state penetration remains low, ANSAs tend to be less involved in governance; meanwhile, high state penetration requires that ANSAs demonstrate their comparative advantage relative to the state, prompting groups to become more deeply involved in governance.226 For that same reason, providing services does not always correlate with enhanced ANSA legitimacy: groups will reap the benefits of service provision based on the cultural and historic norms and expectations of what an authority must provide.227 Curiously, over-filling state deficiencies, such as governing to a greater degree than popularly anticipated, can increase expectations and in turn decrease legitimacy, changing the relative bar to which authorities are held accountable.228 In areas where the state historically repressed or neglected the population, ANSAs gain greater legitimacy by establishing protection rackets rather than providing administrative services like health and education.229

Certain circumstances increase the profitability and therefore the odds of ANSA governance. First, in post-conflict spaces, ANSAs are likely to provide services as a means to legitimize themselves as sources of political authority.230 The presence of peacekeepers also increases the odds

219 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 279.
222 Arjona, Kasfir, and Mampilly, Rebel Governance in Civil War, 27–28.
225 Mampilly, Rebel Rulers.
226 Mampilly, 211.
of governance. Ideologically, Marxist ANSAs tend to set up centralized and far-reaching institutions in their territory as a means to provide legitimate social services. As well, ANSAs that operate among ethnic minorities tend to provide more services in ethnically diverse areas or areas in which a dominant (rather than minority) ethnic group resides. Lastly, armed groups that rely on immobile assets as their primary form of financing operations have a significant incentive to provide governance as a means to secure their territoriality and therefore their income.

Other conditions decrease the odds of ANSA governance. During conflict, involved ANSAs are less likely to provide governance than in times of peace. Relatedly, when groups have few troops or low military capacity, they prioritize their resources to that cause and therefore are unlikely to serve civilians. This dynamic ties back to the increased reliance on the use of force when a group is vulnerable, as the previous section denotes. Additionally, when groups have access to lootable, tangible resources to finance operations, they need not pay as much attention to civilian demands as they would if they relied on civilians as a key resource. In such cases, the presence of lootable resources shortens an ANSA’s time horizons: the group will likely prefer to focus on extracting resources today than on setting up a system to reign tomorrow. Likewise, highly opportunistic ANSAs will not engage in service provision when they deem the population to be “a burden rather than a resource.” Similarly, if a group seeks to use the population to incentivize or reward their fighters – as did the Islamic State when it seized Mount Sinjar in Iraq in 2014 and unleashed a campaign of pillage and rape onto the Yazidi population – it will not engage in governance but rather in extreme predation supplemented with the sheer use of force.

**ANSA Networks**

**Competition**

Armed groups not only contend with the state, they must also compete against other armed groups for the control of limited territorial, financial, and civilian resources. The presence of other groups poses obstacles to an ANSA’s material and political resource maximization potential. As well, it can delegitimize a group’s claim as the only viable option for a disenfranchised population and therefore reduce a group’s membership, which in turn hinders its bargaining leverage with the state.

Furthermore, where resources are scarce, ANSAs might reap greater benefits from devoting their energies to fighting other groups than fighting the government because the spoils of the latter would then be divided among the various contending groups rather than among only one ANSA’s constituency. Weak state capacity exacerbates the sense of scarcity and provokes greater inter-

---

234 Florea, 29.
236 Arjona, Kasfir, and Mampilly, 26; Florea, “Rebel Governance in de Facto States.”
241 Fjelde and Nilsson, “Rebels against Rebels.”
242 Fjelde and Nilsson, 608.
243 Fjelde and Nilsson, 608.
ANSA fighting as well as tensions between social groups.\textsuperscript{244} Thus, an armed group’s power exists not only relative to that of the state but also relative to that of other ANSAs.\textsuperscript{245}

Yet, a group’s power also impacts its ability to ward off other groups. A parabolic relationship exists between ANSA strength and the likelihood of fighting with other rebel groups: groups with many military resources and troops fight one another to retain their position of power (they have a lot to lose) and weak groups also fight each other as a means to generate power (they have a lot to potentially gain).\textsuperscript{246}

Curiously, although conflict tends to amalgamate around natural resource-rich areas,\textsuperscript{247} not all kinds of resources give way to greater inter-ANSA fighting.\textsuperscript{248} ANSAs fiercely compete for control of drug cultivation areas yet are more likely to collaborate with other groups where lootable gemstones abound, given that cooperation can reduce time, resource, and effort investments without significantly deteriorating profit margins for the groups involved.\textsuperscript{249}

Ultimately, several factors increase the odds of inter-ANSA violence. Violence is more likely where groups’ military capacities differ significantly, where there is weak state capacity, where an ANSA already controls the territory, where groups are driven by ethnonationalist ideologies, where groups receive foreign assistance, or, most significantly, where a group faces viable challenges to its material and political resources in times of civil war.\textsuperscript{250} I expect that national crises will exacerbate ANSA competition:

H6: Competition will increase between ANSAs in times of national crisis.

\textit{Ties to the State}

Not all state-ANSA relationships are necessarily fraught: ANSAs can actually serve as intermediaries between a local community, the government, and the international community, as is the case with warlords in Iraq and Afghanistan.\textsuperscript{251} Alternatively, pro-government militias (PGMs) serve as the government’s paramilitary organizations, furthering state’s short-term interests yet simultaneously increasing the odds of conflict onset.\textsuperscript{252} Beyond PGMs, cooperation between the government and armed groups can be mutually beneficial, especially when the state is breaking down.\textsuperscript{253}

States engage ANSAs in one of four ways (containment, collaboration, suppression, or incorporation) based on a combination of their tolerance for a group and the potential for collaboration or conflict with it.\textsuperscript{254} If the state tolerates an ANA yet recognizes the potential for conflict, the threat is contained;\textsuperscript{255} violent government responses ensue when the group surpasses the threshold of tolerance.\textsuperscript{256} When the government both tolerates and sees the potential for

---

\textsuperscript{244} Böhmel, Bove, and Gleditsch, “Blame the Victims?,” 12.
\textsuperscript{245} Aydin and Emrence, \textit{Zones of Rebellion}; Fjelde and Nilsson, “Rebels against Rebels.”
\textsuperscript{246} Fjelde and Nilsson, “Rebels against Rebels,” 612, 620.
\textsuperscript{248} Fjelde and Nilsson, “Rebels against Rebels,” 619.
\textsuperscript{249} Fjelde and Nilsson, 619.
\textsuperscript{250} Fjelde and Nilsson, 604–9.
\textsuperscript{252} Carey, Mitchell, and Lowe, “States, the Security Sector, and the Monopoly of Violence.”
\textsuperscript{253} Ahram, “Armed Non-State Actors and the Challenge of 21st-Century State Building,” 35.
\textsuperscript{254} Staniland, “Militias, Ideology, and the State,” 773.
\textsuperscript{255} Staniland, 773.
\textsuperscript{256} Staniland, 774.
collaboration with a group, the relationship gives rise to collusion.\textsuperscript{257} In such cases, the regime remains vulnerable and must make the hierarchy of power clear to the ANSA.\textsuperscript{258} On the other hand, when the regime sees the opportunity for collaboration with a group but determines a need to eliminate it, it will seek to incorporate the ANSA.\textsuperscript{259} Lastly, regimes will suppress groups for which they have no tolerance (and therefore need to eliminate) and with which they conflict.\textsuperscript{260}

Furthermore, when ANSAs do negotiate with the state, they often change their claims and goals depending on their relative power level.\textsuperscript{261} Along those lines, an ANSA can recognize its vulnerability when the government strikes deals with other groups but not it.\textsuperscript{262} Governments are more likely to negotiate and grant concessions to militarily strong groups than to weak ones; thus, failure to engage with the government can signal to a group that they pose a negligible threat to the state. This logic often drives groups to fight other ANSAs\textsuperscript{263} and to target state institutions\textsuperscript{264} in attempts to assert power.

\textit{Diplomacy}

ANSAs seek connections beyond the territory they control, operating within networks as a means for survival.\textsuperscript{265} ANSAs hold a variety of objectives yet can only realize a small subset of them through the use of force alone; hence, groups seek to foster connections with other actors Arjona et al. 110). Networks help ANSAs control civilians, provide platforms for legitimation, and grant access to illicit markets to finance operations.\textsuperscript{266}

ANSAs may connect with other armed groups within geographic proximity to reach a broader swath of civilians. Curiously, alliances do not follow strict exclusion rules.\textsuperscript{267} Unexpected alliances between ideologically distinct groups can still bolster a movement’s legitimacy because it adds strength in numbers, allowing groups to reach a critical mass to enact the change they seek.\textsuperscript{268} Such was the case in the secessionist Free Aceh Movement (GAM) in Indonesia, which united efforts with the rural ulama and urban student activists. Doing so enabled GAM to rely on the ulama as a source of legitimacy and military capacity and on the student activists’ administrative capacity and strategic analysis, even though the two groups sought the somewhat dissonant goals of Shariah and justice reforms, respectively.\textsuperscript{269} Such alliances allow for a cost-effective division of labor based on comparative advantage: while one group maximizes its productivity in a given sector (say, administration), it can rely on allies, which maximize productivity in other sectors (say, military operations or fundraising), enhancing overall organizational strength.\textsuperscript{270} These forms of collaboration mutually beneficial; they are also mutually transformative, as the unique ideologies seep into one another.\textsuperscript{271}

\begin{flushright}
\textsuperscript{257} Staniland, 773.
\textsuperscript{258} Staniland, 775.
\textsuperscript{259} Staniland, 773.
\textsuperscript{260} Staniland, 773.
\textsuperscript{261} Aydin and Emrence, \textit{Zones of Rebellion}, 130.
\textsuperscript{262} Fjelde and Nilsson, “Rebels against Rebels,” 612.
\textsuperscript{263} Fjelde and Nilsson, 612.
\textsuperscript{264} Aydin and Emrence, \textit{Zones of Rebellion}, 2.
\textsuperscript{266} Briscoe, 3.
\textsuperscript{267} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 15.
\textsuperscript{268} Arjona, Kasfir, and Mampilly, 227.
\textsuperscript{269} Arjona, Kasfir, and Mampilly, 226–45.
\textsuperscript{270} Arjona, Kasfir, and Mampilly, 233–34.
\textsuperscript{271} Arjona, Kasfir, and Mampilly, 235.
\end{flushright}
Alliances also grant groups access to a wider array of resources.\textsuperscript{272} When an ANSA controls territory and has a monopoly on violence, it has discretion over which organizations have access to the area. Humanitarian non-governmental organizations (NGOs) might seek access to particularly fraught domains to lend support to civilians, and the dominant ANSA acts as a gatekeeper.\textsuperscript{273} For the ANSA, NGO assistance can alleviate the responsibility of providing certain services, allowing the group to direct resources to other objectives while \textit{and} to take credit nonetheless for said service provision given that the ANSA granted access to the humanitarian organization.\textsuperscript{274} Similarly, ANSAs see development aid as a rent into which they can tap to distribute patronage.\textsuperscript{275} In this manner, NGO assistance can both fill state and ANSA capacity gaps while also contributing to ANSA legitimacy and subsidizing administrative operations costs.\textsuperscript{276}

Foreign ties also enhance ANSAs’ economic prospects because they offer markets to sell illicit products like drugs or looted goods.\textsuperscript{277} Support from abroad can also provide financing opportunities for ANSA operations.\textsuperscript{278}

Moreover, external ties and diplomatic capacity help legitimate groups and increase its odds of recognition as viable, contentious actors.\textsuperscript{279} ANSAs often seek outside validation and support to have a reliable third-party arbiter between them in the state.\textsuperscript{280} As well, diplomacy can supplement the use of force: failure to acknowledge an actor’s credibility can prompt it to use violence for the sake of validation and as a call to action. Indeed, many groups resort to violence when apt channels of appeal for grievances remain unavailable or when calls for justice go unheeded and perceived discrimination or repression persist.\textsuperscript{281} Successfully internationalizing an activist cause in particular can pressure the state into providing political concessions.

As well, international attention provides symbolic weight to an ANSA project: from terrorists to rebels, ANSAs that garner attention can transform that into a kind of symbolic power.\textsuperscript{282} For instance, when the Kurdish Workers’ Party’s (PKK’s) cause gained traction abroad, it sowed fear in the Turkish public because of how it drew on the historical political memory of external intervention (specifically, the Treaty of Sevres and its effect on Turkish culture).\textsuperscript{283} Striking this point of political memory made the Turkish public more aware of what was at stake \textit{vis-à-vis} the Kurdish cause.

Overall, ANSA diplomacy aids its long-term ideological goals as well as its short-term tactical objectives.\textsuperscript{284} Yet, greater transnational ties and operations tend to disconnect ANSAs from local communities, increasing the odds that a group becomes increasingly opportunistic and decreasingly activist.\textsuperscript{285} Regionalized violence can often occur as a result of this greater interconnectedness.

\textsuperscript{272} Arjona, Kasfir, and Mampilly, 228.
\textsuperscript{273} Gal, “Territorial Control by Armed Groups and the Regulation of Access to Humanitarian Assistance.”
\textsuperscript{274} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 113; Gal, “Territorial Control by Armed Groups and the Regulation of Access to Humanitarian Assistance.”
\textsuperscript{275} Ahram, “Armed Non-State Actors and the Challenge of 21st-Century State Building,” 38.
\textsuperscript{276} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 112.
\textsuperscript{277} Arjona, Kasfir, and Mampilly, 108.
\textsuperscript{278} Mampilly, \textit{Rebel Rulers}, 89–90.
\textsuperscript{279} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 99.
\textsuperscript{280} Arjona, Kasfir, and Mampilly, 9.
\textsuperscript{282} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 69–89.
\textsuperscript{283} Aynin and Emrence, \textit{Zones of Rebellion}, 96.
\textsuperscript{284} Arjona, Kasfir, and Mampilly, \textit{Rebel Governance in Civil War}, 115.
Because ANSAs tend to rely on networks for a diversity of opportunities, I expect groups to try to cast wider nets or create more points of connection when attempting to extend their power – including in times of disruption:

H7: ANSA networks will experience net growth in times of national crisis.

Methodology

My methodology rests on three distinct approaches to ascertain the crisis conditions under which ANSAs accrue power: a series of linear regression models, a spatial analysis component, and three case studies on ANSAs in times of apolitical crisis. This mixed methodological approach allows the numbers to elucidate trends and the cases to substantiate their validity. I proxy the central variables differently in each methodological approach for two reasons. First, a standard proxy is unavailable across all three approaches. Second, different proxies allow me to interpret the different components of ANSA power and thereafter corroborate the output from all three methods. In this section, I first operationalize my central variables of interest and their primary components at large, then list my hypotheses, and finally explain each of the three methodological processes and how they fit into the broader model. Subsequent sections provide more detail for and results from each of the three methodological approaches.

The dependent variable of utmost interest is ANSA power. As noted in the preceding section, the literature fails to systematically operationalize this notion yet reveals that territory, legitimacy, and access to resources largely determine an armed group’s ability to make progress toward its goals. I thus operationalize ANSA power as an index of those three components. Specific factors that contribute to a group’s legitimacy include the provision of governance, security, and the ANSA’s monopoly on violence. An ANSA’s military capacity, financial liquidity and support, and diplomatic ties reflect its access to resources. The qualitative portion of this research aims to capture these three central components and how they vary in light of national crises. The quantitative aspect pays particular focus to armed groups’ use of violence and their targeting of civilians, seeking to highlight fluctuations in patterns of violence that might associate with the presence of an apolitical crisis. I use civilian casualties and overall attack fatalities to proxy a group’s projection of violence, relying on data from UCDP’s Georeferenced Events Dataset (GED) supplies the data for ANSA attacks and associated deaths.
The primary independent variable is the presence of one or multiple apolitical national crises, which I operationalize as catastrophic events that shock a country in a given year. I focus primarily on environmental disasters but also lend attention to economic crises. The latter encompasses natural disasters, technological (man-made) disasters, public health crises, and complex events (where one environmental crisis prompts another, such as an earthquake triggering a tsunami). The EM-DAT dataset provides these cases. Meanwhile, economic crises constitute currency, systemic, and inflation shocks, as defined in the Global Crisis Dataset, which provides data on financial systems, analyzed at the country-year level.

Importantly, I exclude political crises because of the dangers of conflation between the independent and dependent variables. Many scholars and available datasets that summarize political crises tend to include ANSA attacks and operations as well as internal war (in which ANSAs have
played a more prominent role over time), which creates a confounder for analysis.\footnote{Berti, “What’s in a Name?”; Hoffman, “Conflict in the 21st Century: The Rise of Hybrid Wars”; Florquin and Warner, “Engaging Non-State Armed Groups or Listing Terrorists?”} Thus, to ensure a rigorous investigation of the causality and connection between national crises and ANSA power, I narrowed the independent variable’s scope to exclude all political crises.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Testing Method</th>
<th>Supported?</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Armed groups increase their power-seeking activities in times of national crisis.</td>
<td>Case Studies</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Spatial Analysis (expect post-hoc decrease in lethality rates, especially closer to epicenter)</td>
<td>Increases in lethality (Spatial Analysis)</td>
</tr>
<tr>
<td></td>
<td>Statistical Analysis (expect negative relationship between crisis components and lethality rates)</td>
<td>Attempts to bolster legitimacy (ONLF &amp; PKK)</td>
</tr>
<tr>
<td>H2: National crises will be associated with an increase in ANSA governance.</td>
<td>Case Studies</td>
<td>No</td>
</tr>
<tr>
<td>H3: Weak groups will rely on the use of force after crises.</td>
<td>Case Studies</td>
<td>No direct causation, but weak ANSAs do appeal to the disaster to help justify the use of force in the short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ONLF &amp; PKK</td>
</tr>
<tr>
<td>H4: On average, ANSAs will reduce their reliance on violence after crises.</td>
<td>Case Studies</td>
<td>No; violence tends to increase</td>
</tr>
<tr>
<td></td>
<td>Spatial Analysis (expect post-hoc decrease in lethality rates, especially closer to epicenter)</td>
<td>- Within 100 km, in 0-8 months</td>
</tr>
<tr>
<td></td>
<td>Statistical Analysis (expect negative relationship between crisis components and lethality rates)</td>
<td>- Within 1000 km, after 16-20 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ONLF &amp; PKK increased attacks</td>
</tr>
<tr>
<td>H5: National crises will prompt greater ANSA engagement with symbolic processes.</td>
<td>Case Studies</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ONLF &amp; PKK</td>
</tr>
<tr>
<td>H6: Competition will increase between ANSAs in times of national crisis.</td>
<td>Case Studies</td>
<td>No</td>
</tr>
<tr>
<td>H7: ANSA networks will experience net growth in times of national crisis.</td>
<td>Case Studies</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ONLF &amp; Gulf Cartel (latter sought alliances responding to its most pressing crisis, though not the national disaster)</td>
</tr>
</tbody>
</table>

Table 1. Summary of hypotheses.

As well, I restrict the analysis to armed \textit{non-state} actors, excluding domestic state-sanctioned violence. To achieve this elimination technically in the datasets, I removed cases of one-sided violence with a government as “Side A” and civilians as “Side B.” I also delimit the scope of this investigation to attacks and crises occurring after 1989, the earliest year for which the primary ANSA dataset has records. This time period aligns neatly with the end of the Cold War and the emerging patterns we have seen since in hybrid warfare and greater ANSA activity.\footnote{Hoffman, “Conflict in the 21st Century: The Rise of Hybrid Wars”; Florquin and Warner, “Engaging Non-State Armed Groups or Listing Terrorists?”}
Generally, I expect actors’ responses to apolitical national crises to determine whether ANSAs can use the shock to accrue power. I anticipate that ANSAs utilize crisis moments to bolster their legitimacy by providing services when the population is most vulnerable and by reducing the number of attacks they propagate, especially those that bring on civilian casualties. As well, government responses will meter ANSA power-accrual mechanisms, as they will likely block resources to exacerbate the crisis’s effects on an armed group. Lastly, NGO responses in the affected territory will play a role in ANSA endurance. If the group can claim responsibility for the influx of aid, the ANSA will gain legitimacy. If the government blocks humanitarian responses, it can further imperil the ANSA may suffer resource losses. Figure 1 diagrams this theory. From this general model, I derive several hypotheses, summarizing each statement, how I test for it, and my findings in Table 1.

**Statistical Models**

The quantitative approach zeroes in on group’s capacity to project its strength as a function of its monopoly on violence, using the lethality of attacks and the number of civilian deaths as a proxy for an ANSA’s hold on power. The unit of analysis is the country-group-year; in other words, each line of observation regards a summary of an ANSA’s attacks within a country in a given year. Because ANSAs more readily rely on their coercive capacity when other sources of power are threatened, I use the lethality of attacks as a proxy for ANSA power, with less lethal years representing a group’s ability to nurture other power components as opposed to focusing efforts on mere survival. This approach allows me to test for H1 and H4, expecting a negative relationship between crisis components and lethality rates.

This approach is far from perfect, seeing as a group may opt for violence even from a position of power. As well, this proxy obfuscates the starting power stance for a group when a crisis arises: whether the group enters a shock period from a position of power will largely affect its ability to navigate the catastrophe. These models assume that groups enter crises from a position of power, not weakness, where attack increases indicate its concern with its monopoly on violence – a first priority component of an armed group’s power. Despite these setbacks, the models produce a description of overall trends, which the other methodological approaches can corroborate.

I utilize information on ANSA attacks from Uppsala Conflict Data Program’s Georeferenced Event Dataset, environmental catastrophes from EM-DAT, economic crises from the Global Crisis Dataset, and country-year population and territory size metrics from The World Bank’s DataBank to compose a 41-variable Crisis-ANSA Dataset. This finalized dataset contains 6,712 country-group-year observations occurring across all global regions between 1989 and 2019, importantly including the conflict dyad to which the attack pertains; the number of casualties (for each warring party and for civilians); the number of economic, environmental, and total crises present in a given country-year; and other control variables. Appendix A contains the codebook for the Crisis-ANSA Dataset as well as more information on its compilation.

I run a total of 32 ordinary least squares multiple linear regression (MLR) models, divided into two types (contemporaneous and lagged), each type with two sets (civilian casualty rate and overall fatality rate), each set with four foci (crisis presence, crisis tally, economic crises, and natural disasters), and each focus run with and without regional controls. The non-lagged models, presented in Table 3 and Table 4, consider attack lethality rates within the same country-group-year; meanwhile, the lagged models, presented in Table 5 and Table 6, consider the 1-year change between those lethality rates. I gauge lethality rates – the number of deaths by country-group-year per 100,000 inhabitants – through the narrower civilian casualty rates as well as the overall fatality
rate (which includes civilian plus combatant deaths). Each model focus uses an explanatory variable that serves to isolate crisis components to which have the most significant effects on attack lethality rates. Crisis presence models use a binary central independent variable for whether that country-year featured a crisis or not; crisis tally models use a count of the number of crises present in a country-year; economic crisis models use the number of macroeconomic catastrophes; and natural disaster models use the number of environmental disasters that occur.

The resulting models’ equations are as follows:

\[
\begin{align*}
\text{log} \left( \frac{\text{fatalities}}{\text{population}} \right) &= \beta_0 + \beta_1 \text{Binary} + \beta_2 \text{Year} \\
&\quad + \beta_3 \text{Logged Country Size} \\
&\quad + \beta_4 \text{Conflict Presence} \\
&\quad + \beta_5 \text{Region} \\
\text{log} \left( \frac{\text{civilian casualties}}{\text{population}} \right) &= \beta_0 + \beta_1 \text{Binary} + \beta_2 \text{Year} \\
&\quad + \beta_3 \text{Logged Country Size} \\
&\quad + \beta_4 \text{Conflict Presence} \\
&\quad + \beta_5 \text{Region} \\
\frac{\text{fatalities}}{\text{population}} - \left( \frac{\text{fatalities}}{\text{population}} \right)_{t-1} &= \beta_0 + \beta_1 \text{Economic Crisis} + \beta_2 \text{Year} \\
&\quad + \beta_3 \text{Logged Country Size} \\
&\quad + \beta_4 \text{Conflict Presence} \\
&\quad + \beta_5 \text{Region} \\
\frac{\text{civilian casualties}}{\text{population}} - \left( \frac{\text{civilian casualties}}{\text{population}} \right)_{t-1} &= \beta_0 + \beta_1 \text{Natural Disaster} + \beta_2 \text{Year} \\
&\quad + \beta_3 \text{Logged Country Size} \\
&\quad + \beta_4 \text{Conflict Presence} \\
&\quad + \beta_5 \text{Region}
\end{align*}
\]

Figure 2. Equations for multiple linear regression models. Each of the dependent variables on the left are regressed on the right-hand formulas.

Results

In the contemporaneous models, all crisis components (presence, count, economic crises, natural disasters) significantly impact the dependent variables in the hypothesized directions. At the country-group-year level, the presence of an apolitical national crisis on average reduces civilian casualty rates specifically (Table 3) and fatality rates broadly (Table 4). More crises in a given country year also correlate with lower civilian casualty and overall fatality rates. Economic crises and natural disasters each also seem to reduce both outcomes. This evidence supports the hypothesis that armed groups reduce their use of violence in times of crisis.

The controls involved in these non-lagged models also offer significant results. Namely, when accounting for crisis components over time, civilian casualty and overall fatality rates trend
downwards, which counters the overarching trend of increasing ANSA lethality. Additionally, larger national territories (logged) correspond to fewer civilian casualty and fatality rates. As well, relative to the African baseline, America and the Middle East have significantly lower fatality rates. Active conflict in a given country-year contributes to significantly higher civilian casualty and fatality rates – the only positive coefficients in the contemporaneous models.

The lagged models call attention to two curious trends. First, essentially the only lagged indicator that remains significant is the presence of a crisis; the number of crises and their typology have null effects on the change in civilian casualty and fatality rates. This pattern indicate that the nuance related to the crisis loses salience over time, and the mere record of a shock versus not contributes to changes in an ANSA’s ability or disposition to project violence.

Second, even though the non-lagged models indicate that crises temper ANSA attack lethality contemporaneously, the lagged models suggest that the year after a crisis there will be a relative increase in both civilian casualty and fatality rates. This increase from one year to the next might merely indicate a return to that country-group’s pre-crisis norm or it could indicate a surpassing of said norm after the initial catastrophe’s shock wears off. A potential explanation for this trend lies in the capacity for crises to affect all actors across the board: if a shock in a previous year tremendously weakens a group, it might draw focus thereafter around its monopoly on violence in order to protect its strongholds, territories, or operations. Increase in lethality from one country-group-year to the next may showcase an ANSA’s survival mechanisms put to use.

With the exception on active conflict conditions, control variables failed to render consistent results in the lagged models. Country-group-years with active conflict tend to see significant decreases in fatality rates – though not civilian casualty rates – if the preceding year featured a crisis, whereas the contemporaneous models show a positive impact of conflict on lethality. Resource scarcity during wartime may play a role on the change between positive contemporaneous effects and negative lagged effects: with limited resources in time of strife, an added shock might prompt already beleaguered actors to rush to protect their power interests, relying on violence. The impact of such a rush in lethality might thereafter imperil a group’s legitimacy and access to resources,

---

inviting a subsequent reduction in the use of force. While riveting, this trend should be interpreted with caution, seeing as the models do not control for conflict onset, relapse, or continuity between one year and the next.

The MLR models point research in a productive direction, yet they simultaneously elucidate the need for more research involving greater nuance, especially in the modeling process. Understandably, the R-squared values indicate that most models account for only 10% of variability (with the exception of the logged fatalities models, which account for about 20% of variability). Indeed, these models focus on a group’s ability to project violence as a proxy for one component of ANSA power. Incorporating other aspects of ANSA power into the models and finding more succinct, direct proxies for their monopolies on violence would indubitably improve the models’ ability to capture these particularities with greater accuracy.
## Logged Civilian Casualty Rates as a Function of Crises

Dependent Variable:Logged Civilian Casualty Rate

<table>
<thead>
<tr>
<th>Model Focus</th>
<th>Crisis Presence</th>
<th>Crisis Count</th>
<th>Economic Crisis</th>
<th>Natural Disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Crisis Presence</td>
<td>-0.046***</td>
<td>-0.059***</td>
<td>-0.001**</td>
<td>-0.002***</td>
</tr>
<tr>
<td>Crisis Count</td>
<td></td>
<td></td>
<td>-0.012*</td>
<td>-0.017**</td>
</tr>
<tr>
<td>Economic Crisis</td>
<td></td>
<td></td>
<td>-0.012*</td>
<td>-0.017**</td>
</tr>
<tr>
<td>Natural Disaster</td>
<td></td>
<td></td>
<td></td>
<td>-0.001**</td>
</tr>
<tr>
<td>Year</td>
<td>-0.001**</td>
<td>-0.001*</td>
<td>-0.001**</td>
<td>-0.001**</td>
</tr>
<tr>
<td>Logged Territory</td>
<td>-0.049***</td>
<td>-0.047***</td>
<td>-0.050***</td>
<td>-0.043***</td>
</tr>
<tr>
<td>America</td>
<td>-0.071***</td>
<td>-0.075***</td>
<td>-0.071***</td>
<td>-0.075***</td>
</tr>
<tr>
<td>Asia</td>
<td>-0.094***</td>
<td>-0.093***</td>
<td>-0.099***</td>
<td>-0.093***</td>
</tr>
<tr>
<td>Europe</td>
<td>-0.025</td>
<td>-0.015</td>
<td>-0.014</td>
<td>-0.015</td>
</tr>
<tr>
<td>Middle East</td>
<td>-0.075***</td>
<td>-0.070***</td>
<td>-0.070***</td>
<td>-0.070***</td>
</tr>
<tr>
<td>Active Conflict</td>
<td>0.161***</td>
<td>0.167***</td>
<td>0.161***</td>
<td>0.163***</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.734***</td>
<td>-4.411***</td>
<td>-3.662***</td>
<td>-3.977***</td>
</tr>
</tbody>
</table>

|                      | (5)             | (6)          | (7)             | (8)              |
|                      | Economic Crisis | Natural Disaster |                 |                  |
|                      | -0.012*         | -0.017**     | -0.001**        | -0.002***        |

Observations 6,712

R² 0.093

Adjusted R² 0.092

Residual Std. Error 0.376 (df = 6703)

F Statistic 86.342*** (df = 8; 150.436*** (df = 4)

Note: *p<0.1; **p<0.05; ***p<0.01

Table 3. Output of ordinary least squares regression models gauging logged civilian casualties as a function of crisis indicators and controls.
Logged Fatality Rates as a Function of Crises

<table>
<thead>
<tr>
<th>Model Focus</th>
<th>Crisis Presence (1)</th>
<th>Crisis Count (2)</th>
<th>Economic Crisis (3)</th>
<th>Natural Disaster (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisis Presence</td>
<td>-0.062***</td>
<td>-0.084***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crisis Count</td>
<td></td>
<td>-0.005***</td>
<td>-0.008***</td>
<td></td>
</tr>
<tr>
<td>Economic Crisis</td>
<td></td>
<td>-0.036***</td>
<td>-0.041***</td>
<td></td>
</tr>
<tr>
<td>Natural Disaster</td>
<td>-0.005***</td>
<td>-0.007***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year</td>
<td>-0.009***</td>
<td>-0.008***</td>
<td>-0.009***</td>
<td>-0.010***</td>
</tr>
<tr>
<td>Logged Territory</td>
<td>-0.116***</td>
<td>-0.113***</td>
<td>-0.102***</td>
<td>-0.092***</td>
</tr>
<tr>
<td>America</td>
<td>-0.095***</td>
<td>-0.098***</td>
<td>-0.088***</td>
<td>-0.100***</td>
</tr>
<tr>
<td>Asia</td>
<td>-0.189***</td>
<td>-0.136***</td>
<td>-0.195***</td>
<td>-0.138***</td>
</tr>
<tr>
<td>Europe</td>
<td>-0.081**</td>
<td>-0.078**</td>
<td>-0.067*</td>
<td>-0.077**</td>
</tr>
<tr>
<td>Middle East</td>
<td>-0.123***</td>
<td>-0.104***</td>
<td>-0.114***</td>
<td>-0.105***</td>
</tr>
<tr>
<td>Active Conflict</td>
<td>0.483***</td>
<td>0.495***</td>
<td>0.475***</td>
<td>0.479***</td>
</tr>
<tr>
<td>Constant</td>
<td>12.386***</td>
<td>10.807***</td>
<td>13.088***</td>
<td>12.358***</td>
</tr>
</tbody>
</table>

| Observations    | 6,712               | 6,712            | 6,712               | 6,712                |
| R²              | 0.209               | 0.196            | 0.212               | 0.206                |
| Adjusted R²     | 0.208               | 0.196            | 0.211               | 0.206                |
| Residual Std. Error | 0.628 (df = 6703) | 0.633 (df = 6707) | 0.627 (df = 6703) | 0.629 (df = 6707) |
|                 | 221.533***          | 409.687***       | 225.869***          | 435.882***           |
| F Statistic     | (df = 8; 6703)      | (df = 4; 6707)   | (df = 8; 6703)      | (df = 4; 6707)       |
|                 | 221.405***          | 407.431***       | 225.474***          | 434.595***           |

Note: *p<0.1; **p<0.05; ***p<0.01

Table 4. Output of ordinary least squares regression models gauging logged fatalities as a function of crisis indicators and controls.
## Change in Civilian Casualty Rate as a Function of Crises

**Dependent Variable:** 1-Year Change in Civilian Casualty Rate

<table>
<thead>
<tr>
<th>Model Focus</th>
<th>Crisis Presence</th>
<th>Crisis Count</th>
<th>Economic Crisis</th>
<th>Natural Disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>0.001***</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>(2)</td>
<td>0.001***</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>(3)</td>
<td>0.00001</td>
<td>0.00000</td>
<td>0.0001</td>
<td>0.00000</td>
</tr>
<tr>
<td>(4)</td>
<td>0.00001**</td>
<td>0.00001***</td>
<td>0.0001**</td>
<td>0.0001**</td>
</tr>
<tr>
<td>(5)</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>(6)</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>(7)</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td>(8)</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

| Crisis Presence | 0.001*** | 0.00001 |
| Crisis Count   | 0.0001   | 0.00000 |
| Economic Crisis| 0.0001   | 0.0001  |
| Natural Disaster| 0.0001  | 0.00000 |
| Year           | -0.00001| -0.00001* |
| Logged Territory| 0.00000| 0.00001** |
| America        | -0.00005| 0.00004  |
| Asia           | -0.0001 | 0.00001 |
| Europe         | 0.0002  | 0.0001  |
| Middle East    | -0.001***| -0.001*** |
| Active Conflict| -0.0001 | -0.00003 |
| Constant       | 0.022   | 0.027   |

| R²             | 0.010  | 0.006   | 0.007  | 0.002  | 0.007  | 0.002  | 0.007  | 0.002  |
| Adjusted R²    | 0.008  | 0.005   | 0.005  | 0.001  | 0.005  | 0.001  | 0.005  | 0.001  |
| Residual Std. Error | 0.005 (df = 3926) | 0.000 (df = 3930) | 0.005 (df = 3926) | 0.005 (df = 3930) | 0.005 (df = 3926) | 0.005 (df = 3930) | 0.005 (df = 3926) | 0.005 (df = 3930) |
| F Statistic    | 4.922*** (d = 8, 3926) | 5.977*** (d = 4, 3930) | 3.269*** (d = 8, 3926) | 3.244*** (d = 4, 3930) | 3.263*** (d = 8, 3926) | 3.270*** (d = 4, 3930) | 3.258*** (d = 8, 3926) | 3.239*** (d = 4, 3930) |

*Note:* *p<0.1; **p<0.05; ***p<0.01

*Table 5. Output of ordinary least squares regression models gauging the one-year change in civilian casualty rate as a function of crisis indicators and controls.*
### Change in Fatality Rate as a Function of Crises

<table>
<thead>
<tr>
<th>Model Focus</th>
<th>Crisis Presence</th>
<th>Crisis Count</th>
<th>Economic Crisis</th>
<th>Natural Disaster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Crisis Presence</td>
<td>0.002**</td>
<td>0.002**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Crisis Count</td>
<td></td>
<td>0.0001*</td>
<td>-0.0001</td>
<td>-0.0001</td>
</tr>
<tr>
<td>Economic Crisis</td>
<td></td>
<td></td>
<td>-0.0001</td>
<td>-0.0001</td>
</tr>
<tr>
<td>Natural Disaster</td>
<td></td>
<td></td>
<td>-0.0001</td>
<td>-0.0001</td>
</tr>
<tr>
<td>Year</td>
<td>-0.0001**</td>
<td>-0.0001**</td>
<td>-0.0001*</td>
<td>-0.0001*</td>
</tr>
<tr>
<td>Logged Territory</td>
<td>0.0001</td>
<td>0.001***</td>
<td>-0.00002</td>
<td>0.0001***</td>
</tr>
<tr>
<td>America</td>
<td>-0.0003</td>
<td>-0.0002</td>
<td>-0.0001</td>
<td>-0.0002</td>
</tr>
<tr>
<td>Asia</td>
<td>-0.002***</td>
<td>-0.002***</td>
<td>-0.002***</td>
<td>-0.002***</td>
</tr>
<tr>
<td>Europe</td>
<td>-0.0003</td>
<td>-0.0004</td>
<td>-0.001</td>
<td>-0.0004</td>
</tr>
<tr>
<td>Middle East</td>
<td>-0.007***</td>
<td>-0.007***</td>
<td>-0.007***</td>
<td>-0.007***</td>
</tr>
<tr>
<td>Active Conflict</td>
<td>-0.001**</td>
<td>-0.001**</td>
<td>-0.001**</td>
<td>-0.001**</td>
</tr>
<tr>
<td>Constant</td>
<td>0.124**</td>
<td>0.129**</td>
<td>0.113*</td>
<td>0.129**</td>
</tr>
</tbody>
</table>

R²           | 0.020 | 0.008 | 0.019 | 0.006 | 0.018 | 0.006 | 0.019 | 0.006 |
Adjusted R²  | 0.018 | 0.007 | 0.017 | 0.005 | 0.016 | 0.005 | 0.017 | 0.005 |
Residual Std. Error | 0.017 (df = 3926) | 0.017 (df = 3930) | 0.017 (df = 3926) | 0.017 (df = 3930) | 0.017 (df = 3926) | 0.017 (df = 3930) | 0.017 (df = 3926) | 0.017 (df = 3930) |
F Statistic  | 9.891*** (d = 3926) | 7.462*** (d = 3930) | 5.982*** (d = 3926) | 5.948*** (d = 3930) | 9.105*** (d = 3926) | 5.915*** (d = 3930) | 9.591*** (d = 3926) | 5.952*** (d = 3930) |

**Note:** *p<0.1; **p<0.05; ***p<0.01

*Table 6. Output of ordinary least squares regression models gauging the one-year change in fatality rate as a function of crisis indicators and controls.*
Spatial Analysis

Aydin and Emrence contend that “spatial and temporal variation in violence is a function of combatants’ relations with resources.”\(^{289}\) This analytical approach aims to ascertain that variation vis-à-vis crises. I parse data from EM-DAT and UCDP GED in R (Version 4.0.0) and ArcGIS Pro to identify natural disasters between 1989 and 2019 and the ANSA attacks that occur within 100, and 1,000 geodesic kilometers and within three years (segmented into 4-month intervals) of the crisis. The unit of analysis is the spatial and temporal zone of a natural disaster, with attacks aggregated by four-month intervals within both distance thresholds. Given the available georeferenced data, this component does not focus on economic crises at the national level but rather only looks at public health, technological, and natural catastrophes that occur across the globe between 1989 and 2019. I expect groups to reduce the lethality of their attacks closer in time and space to the onset of a natural disaster because they will seek to use the event to bolster their legitimacy among the public, using this approach to test for H1 and H4.

I use mean civilian casualties and fatalities, as well as mean logged civilian casualties and fatalities, as the dependent variables to proxy armed groups’ reliance on the use of force. I create scatterplots with Loess trendlines to visualize temporal and spatial patterns, presented in Figure 4 to Figure 11. In these figures, each tick mark represents the end of the 4-month interval, and the point captures the aggregation of deaths within that distance threshold within that interval. I also run MLR models with a squared interval term to gauge the curvilinear trends’ significance, displaying results in Table 7 and Table 10.

Results

As anticipated, the periods prior to natural disasters show random scatters; after the crisis moment, however, most temporal and spatial thresholds present compelling trends. After natural disasters, two distinct trends stand out. First, within 100 kilometers, both average civilian casualties and average fatalities spike within the first eight months since a disaster and then experience a tapering effect (see Figure 4 and Figure 6). After the first eight months, mean civilian casualties (Figure 4) seem to return to their pre-crisis norm, while mean fatalities (Figure 6) decrease but not to their original levels.

Second, that initial spike does not appear in the larger distance threshold. Instead, within a 1,000-kilometer buffer of a disaster site, the four-month intervals after the event on average see an almost consistent increase in mean civilian casualties and mean fatalities (see Figure 5 and Figure 7). These results suggest that a broader area around a disaster site has a higher potential for attack lethality increases than areas closer to the epicenter. The reasoning behind this trend may be consistent with my hypotheses: closer to the event location, groups may seek to legitimize themselves in the eyes of a highly affected population; meanwhile, farther away, groups may be able to use their monopoly on violence to safeguard territorial dominance with less backlash from already aggrieved populations.

The MLR models reiterate this trend: within 100 kilometers, mean civilian casualties (Table 7) significantly increase 0-4 months and 4-8 months after a natural disaster, relative to the baseline of 0-4 months prior to the event. These initial intervals remain insignificant in the 1,000-kilometer models, but every interval after 16-20 months reports significant increases in civilian casualties. This

---

289 Aydin and Emrence, _Zones of Rebellion_, 133.
pattern is similar in the mean fatalities models (Table 8) but the significance periods in each distance threshold hold a briefer duration: only the 0-4-month interval sees a significant increase in mean fatalities within 100 kilometers of natural disasters, while for the 1,000-kilometer buffer, only the intervals after 24-28 months offer significant increases in mean fatalities. Thus, we can conclude that soon after a natural disaster, areas closer to the epicenter see an increase in violence; meanwhile, as time passes, violence levels taper within 100 kilometers of the event site but increase within 1,000 kilometers.

Similar to the statistical models discussed above, the spatial analysis component speaks to a limited part of ANSA power, and the models reflect that. Accounting for minimal variability, the models produce significant results in the variables of interest and even more so in some of the controls. Especially, the type of natural disaster significantly impacts violence levels. Relative to the earthquake baseline, volcanic activity and storms each have significant negative effects in all models except in the one that regresses 100-kilometer mean fatality on intervals and disaster types. In other words, storms and volcanic events decrease the mean civilian casualties, mean logged civilian casualties, and mean logged fatalities at all distance thresholds, as well as the mean fatalities within 1,000 kilometers. Furthermore, floods have a significant negative impact on all dependent variables at 1,000 kilometers but a positive impact on mean civilian casualties and mean logged civilian casualties at 100 kilometers. Landslides also have positive and significant effects on mean logged civilian casualties at both distance thresholds, meaning they impose a more lethal threat in terms of mean logged civilian casualties.

Disasters’ spatial reach and impact on lethality thus varies based on the type of disaster. First, the severity of an event might have implications on the window of opportunity that it presents for interested actors in the area. As well, the expansiveness of the disaster could elucidate the spatial variation that these models present. For that reason, having polygonal as opposed to point data could offer tremendous insights to this research. More intense events necessitate greater humanitarian assistance and cause deeper and wider economic and political reverberations. As a result, intensity affects the incentive structures that frame a potential intervening party’s – be it the government, NGOs, or ANSAs – decision to address or interact with the catastrophe.
Figure 4. Scatterplot with Loess trendline of mean civilian casualties by 4-month intervals before and after natural disasters, within 100 geodesic kilometers.

Figure 5. Scatterplot with Loess trendline of mean civilian casualties by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers.
# Mean Civilian Casualties as a Function of Time Intervals

<table>
<thead>
<tr>
<th>Interval</th>
<th>Continuous</th>
<th>Ordinal</th>
<th>Continuous</th>
<th>Ordinal</th>
</tr>
</thead>
<tbody>
<tr>
<td>32-36 Months Before</td>
<td>0.170</td>
<td></td>
<td>2.014***</td>
<td></td>
</tr>
<tr>
<td>28-32 Months Before</td>
<td>-0.115</td>
<td>0.484***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-28 Months Before</td>
<td>-1.689</td>
<td>40.466*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24 Months Before</td>
<td>-3.563</td>
<td>10.741</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20 Months Before</td>
<td>-2.228</td>
<td>17.630</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-16 Months Before</td>
<td>16.183</td>
<td>22.842</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-12 Months Before</td>
<td>-4.367</td>
<td>20.784</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-8 Months Before</td>
<td>-6.106</td>
<td>31.758</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-4 Months After</td>
<td>27.009**</td>
<td>25.916</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-8 Months After</td>
<td>25.652**</td>
<td>13.058</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-12 Months After</td>
<td>-0.598</td>
<td>20.433</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-16 Months After</td>
<td>0.765</td>
<td>24.233</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20 Months After</td>
<td>-0.300</td>
<td>40.168*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24 Months After</td>
<td>-1.740</td>
<td>40.010*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-28 Months After</td>
<td>-0.569</td>
<td>45.797*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28-32 Months After</td>
<td>-0.186</td>
<td>38.078</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-36 Months After</td>
<td>0.526</td>
<td>101.139***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landslide</td>
<td>4.293</td>
<td>3.353</td>
<td>46.807</td>
<td>47.080</td>
</tr>
<tr>
<td>Volcanic activity</td>
<td>-2.003</td>
<td>-1.923</td>
<td>-112.063***</td>
<td>-111.918***</td>
</tr>
<tr>
<td>Constant</td>
<td>12.177***</td>
<td>6.319</td>
<td>162.604***</td>
<td>148.433***</td>
</tr>
</tbody>
</table>

| Observations | 5,449 | 5,449 | 22,712 | 22,712 |
| R²           | 0.003 | 0.007 | 0.004  | 0.005  |
| Adjusted R²  | 0.002 | 0.004 | 0.004  | 0.004  |
| Residual Std. Error | 140.850 (df = 5442) | 140.760 (df = 5427) | 610.253 (df = 22705) | 610.333 (df = 22690) |
| F Statistic  | 3.140*** (df = 6; 5442) | 1.944*** (df = 21; 5427) | 16.586*** (df = 6; 22705) | 5.166*** (df = 21; 22690) |

*Note:* *p<0.1; **p<0.05; ***p<0.01

Table 7: Output of ordinary least squares models, regressing mean civilian casualties on time intervals before and after natural disasters.
Figure 6. Scatterplot with Loess trendline of mean fatalities by 4-month intervals before and after natural disasters, within 100 geodesic kilometers.

Figure 7. Scatterplot with Loess trendline of mean fatalities by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers.
<table>
<thead>
<tr>
<th>Interval</th>
<th>Within 100 km</th>
<th>Within 1000 km</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous</td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interval</td>
<td>1.692**</td>
<td>12.731***</td>
</tr>
<tr>
<td>Interval$^2$</td>
<td>-0.162</td>
<td>1.680***</td>
</tr>
<tr>
<td>32-36 Months Before</td>
<td>-14.640</td>
<td>46.580</td>
</tr>
<tr>
<td>28-32 Months Before</td>
<td>-13.347</td>
<td>3.793</td>
</tr>
<tr>
<td>24-28 Months Before</td>
<td>-28.328</td>
<td>-59.145</td>
</tr>
<tr>
<td>20-24 Months Before</td>
<td>-3.915</td>
<td>5.859</td>
</tr>
<tr>
<td>16-20 Months Before</td>
<td>5.236</td>
<td>18.774</td>
</tr>
<tr>
<td>12-16 Months Before</td>
<td>-33.437</td>
<td>30.710</td>
</tr>
<tr>
<td>8-12 Months Before</td>
<td>-7.405</td>
<td>9.983</td>
</tr>
<tr>
<td>4-8 Months Before</td>
<td>0.955</td>
<td>-16.622</td>
</tr>
<tr>
<td>0-4 Months After</td>
<td>38.057</td>
<td>35.132</td>
</tr>
<tr>
<td>4-8 Months After</td>
<td>46.542*</td>
<td>59.584</td>
</tr>
<tr>
<td>8-12 Months After</td>
<td>-13.337</td>
<td>15.756</td>
</tr>
<tr>
<td>12-16 Months After</td>
<td>2.280</td>
<td>61.854</td>
</tr>
<tr>
<td>16-20 Months After</td>
<td>8.798</td>
<td>141.298</td>
</tr>
<tr>
<td>20-24 Months After</td>
<td>-4.343</td>
<td>126.719</td>
</tr>
<tr>
<td>24-28 Months After</td>
<td>5.535</td>
<td>192.818**</td>
</tr>
<tr>
<td>28-32 Months After</td>
<td>3.681</td>
<td>181.526**</td>
</tr>
<tr>
<td>32-36 Months After</td>
<td>20.004</td>
<td>313.593***</td>
</tr>
<tr>
<td>Flood</td>
<td>14.180</td>
<td>13.863</td>
</tr>
<tr>
<td></td>
<td>-250.131***</td>
<td>-250.008***</td>
</tr>
<tr>
<td>Landslide</td>
<td>6.145</td>
<td>4.154</td>
</tr>
<tr>
<td></td>
<td>-186.148</td>
<td>-186.473</td>
</tr>
<tr>
<td>Storm</td>
<td>-72.248***</td>
<td>-73.050***</td>
</tr>
<tr>
<td></td>
<td>-922.769***</td>
<td>-922.329***</td>
</tr>
<tr>
<td>Volcanic activity</td>
<td>-51.051**</td>
<td>-50.545**</td>
</tr>
<tr>
<td></td>
<td>-766.930***</td>
<td>-766.955***</td>
</tr>
<tr>
<td>Constant</td>
<td>88.249***</td>
<td>82.825***</td>
</tr>
<tr>
<td></td>
<td>1,026.731***</td>
<td>1,015.018***</td>
</tr>
<tr>
<td>Observations</td>
<td>5,449</td>
<td>5,449</td>
</tr>
<tr>
<td></td>
<td>22,712</td>
<td>22,712</td>
</tr>
<tr>
<td>R$^2$</td>
<td>0.005</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>0.012</td>
<td>0.012</td>
</tr>
<tr>
<td>Adjusted R$^2$</td>
<td>0.004</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>0.012</td>
<td>0.011</td>
</tr>
<tr>
<td>Residual Std. Error</td>
<td>330.052 (df = 5442)</td>
<td>330.109 (df = 5427)</td>
</tr>
<tr>
<td>F Statistic</td>
<td>4.655*** (df = 6; 5442)</td>
<td>1.953*** (df = 21; 5427)</td>
</tr>
</tbody>
</table>

Note: *p<0.1; **p<0.05; ***p<0.01

Table 8. Output of ordinary least squares models, regressing mean fatalities on time intervals before and after natural disasters.
Figure 8. Scatterplot with Loess trendline of mean logged civilian casualties by 4-month intervals before and after natural disasters, within 100 geodesic kilometers.

Figure 9. Scatterplot with Loess trendline of mean logged civilian casualties by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers.
### Mean Logged Civilian Casualties as a Function of Time Intervals

**Dependent Variable:** Mean Logged Civilian Casualties

<table>
<thead>
<tr>
<th>Interval</th>
<th>Within 100 km</th>
<th>Within 1000 km</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Continuous</td>
<td>Ordinal</td>
</tr>
<tr>
<td>Interval</td>
<td>-0.004</td>
<td>0.005</td>
</tr>
<tr>
<td>Interval²</td>
<td>-0.001</td>
<td>0.002</td>
</tr>
<tr>
<td>32-36 Months Before</td>
<td>0.195</td>
<td>0.225</td>
</tr>
<tr>
<td>28-32 Months Before</td>
<td>0.450</td>
<td>0.092</td>
</tr>
<tr>
<td>24-28 Months Before</td>
<td>0.190</td>
<td>-0.258</td>
</tr>
<tr>
<td>20-24 Months Before</td>
<td>0.757</td>
<td>0.171</td>
</tr>
<tr>
<td>16-20 Months Before</td>
<td>0.769</td>
<td>0.020</td>
</tr>
<tr>
<td>12-16 Months Before</td>
<td>0.402</td>
<td>-0.127</td>
</tr>
<tr>
<td>8-12 Months Before</td>
<td>0.425</td>
<td>0.098</td>
</tr>
<tr>
<td>4-8 Months Before</td>
<td>0.617</td>
<td>-0.124</td>
</tr>
<tr>
<td>0-4 Months After</td>
<td>0.697</td>
<td>0.016</td>
</tr>
<tr>
<td>4-8 Months After</td>
<td>0.477</td>
<td>-0.115</td>
</tr>
<tr>
<td>8-12 Months After</td>
<td>0.433</td>
<td>-0.018</td>
</tr>
<tr>
<td>12-16 Months After</td>
<td>0.485</td>
<td>-0.204</td>
</tr>
<tr>
<td>16-20 Months After</td>
<td>0.443</td>
<td>0.333</td>
</tr>
<tr>
<td>20-24 Months After</td>
<td>-0.279</td>
<td>0.142</td>
</tr>
<tr>
<td>24-28 Months After</td>
<td>0.089</td>
<td>0.411</td>
</tr>
<tr>
<td>28-32 Months After</td>
<td>0.517</td>
<td>0.349</td>
</tr>
<tr>
<td>32-36 Months After</td>
<td>0.699</td>
<td>-0.275</td>
</tr>
<tr>
<td>Flood</td>
<td>1.748***</td>
<td>1.749***</td>
</tr>
<tr>
<td>Landslide</td>
<td>4.583***</td>
<td>4.578***</td>
</tr>
<tr>
<td>Storm</td>
<td>-4.267***</td>
<td>-4.275***</td>
</tr>
<tr>
<td>Volcanic activity</td>
<td>-0.819*</td>
<td>-0.825*</td>
</tr>
<tr>
<td>Constant</td>
<td>-6.850***</td>
<td>-7.289***</td>
</tr>
</tbody>
</table>

| Observations      | 5,449         | 5,449          | 22,712       | 22,712    |
| R²                | 0.031         | 0.033          | 0.029        | 0.030     |
| Adjusted R²       | 0.030         | 0.029          | 0.029        | 0.029     |
| Residual Std. Error | 7.774 (df = 5442) | 7.781 (df = 5427) | 7.022 (df = 22705) | 7.022 (df = 22690) |
| F Statistic       | 29.415*** (df = 6; 5442) | 8.692*** (df = 21; 5427) | 114.118*** (df = 6; 22705) | 33.398*** (df = 21; 22690) |

**Note:**

*p<0.1; **p<0.05; ***p<0.01

Table 9. Output of ordinary least squares models, regressing mean logged civilian casualties on time intervals before and after natural disasters.
Figure 10. Scatterplot with Loess trendline of mean logged fatalities by 4-month intervals before and after natural disasters, within 100 geodesic kilometers.

Figure 11. Scatterplot with Loess trendline of mean logged fatalities by 4-month intervals before and after natural disasters, within 1000 geodesic kilometers.
# Mean Logged Fatalities as a Function of Time Intervals

<table>
<thead>
<tr>
<th>Interval</th>
<th>Continuous</th>
<th>Ordinal</th>
<th>Continuous</th>
<th>Ordinal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 100 km</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interval</td>
<td>0.009</td>
<td>0.002</td>
<td>0.002</td>
<td>0.001</td>
</tr>
<tr>
<td>Interval²</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-36 Months Before</td>
<td>-0.201</td>
<td>0.169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28-32 Months Before</td>
<td>-0.026</td>
<td>0.073</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-28 Months Before</td>
<td>-0.333</td>
<td>0.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24 Months Before</td>
<td>-0.205</td>
<td>0.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20 Months Before</td>
<td>0.253</td>
<td>0.182*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-16 Months Before</td>
<td>0.105</td>
<td>0.055</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-12 Months Before</td>
<td>-0.201</td>
<td>0.058</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-8 Months Before</td>
<td>-0.114</td>
<td>-0.070</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-4 Months After</td>
<td>-0.058</td>
<td>0.072</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-8 Months After</td>
<td>0.126</td>
<td>0.116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-12 Months After</td>
<td>0.111</td>
<td>0.054</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-16 Months After</td>
<td>-0.123</td>
<td>0.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-20 Months After</td>
<td>0.092</td>
<td>0.095</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-24 Months After</td>
<td>-0.137</td>
<td>0.176</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-28 Months After</td>
<td>0.309</td>
<td>0.186*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28-32 Months After</td>
<td>-0.027</td>
<td>0.156</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-36 Months After</td>
<td>0.149</td>
<td>0.023</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flood</td>
<td>-0.124</td>
<td>-0.125</td>
<td>-0.467***</td>
<td>-0.467***</td>
</tr>
<tr>
<td>Landslide</td>
<td>0.037</td>
<td>0.026</td>
<td>-0.346</td>
<td>-0.344</td>
</tr>
<tr>
<td>Storm</td>
<td>-0.935***</td>
<td>-0.940***</td>
<td>-1.569***</td>
<td>-1.568***</td>
</tr>
<tr>
<td>Volcanic activity</td>
<td>-0.730***</td>
<td>-0.730***</td>
<td>-0.750***</td>
<td>-0.750***</td>
</tr>
<tr>
<td>Constant</td>
<td>2.301***</td>
<td>2.328***</td>
<td>5.163***</td>
<td>5.116***</td>
</tr>
<tr>
<td>Observations</td>
<td>5,449</td>
<td>5,449</td>
<td>22,712</td>
<td>22,712</td>
</tr>
<tr>
<td>R²</td>
<td>0.005</td>
<td>0.007</td>
<td>0.017</td>
<td>0.017</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.004</td>
<td>0.003</td>
<td>0.017</td>
<td>0.016</td>
</tr>
<tr>
<td>Residual Std. Error</td>
<td>3.405 (df = 5442)</td>
<td>3.406 (df = 5427)</td>
<td>2.769 (df = 22705)</td>
<td>2.769 (df = 22690)</td>
</tr>
<tr>
<td>F Statistic</td>
<td>4.251*** (df = 6; 5442)</td>
<td>1.760** (df = 21; 5427)</td>
<td>64.643*** (df = 6; 22705)</td>
<td>19.046*** (df = 21; 22690)</td>
</tr>
</tbody>
</table>

Note: *p<0.1; **p<0.05; ***p<0.01

Table 10. Output of ordinary least squares models, regressing mean logged fatalities on time intervals before and after natural disasters.
Case Studies

This project hones in on three ANSAs’ responses to environmental crises. The selection process involved first sub-setting the environmental catastrophe data (from the EM-DAT dataset) to cases that affected more than 30,000 civilians, where the term “affected” is the aggregate of individuals who suffered death, injury, displacement, or loss of property as a result of the event. I stratified the remaining 23,765 cases by region. For each region, I randomly selected a case using a random number generator and then cross-referenced the event year and location with the ANSA dataset. If the dataset had attack information for a group in that area in that year, I selected the case. If not, I repeated the process until there was overlap.

With one case for each world region (Africa; Americas; Asia; Europe; Middle East and North Africa), I then opted to focus on the Americas (where my language skills offer an advantage), Africa, and the Middle East. The final gamut of cases is as follows:

- Ethiopia’s Ogaden National Liberation Front (ONLF) and the 2008-2011 drought
- Mexico’s Gulf Cartel and the 2010 Hurricane Alex
- Turkey’s Kurdistan Workers’ Party (PKK) and the 2011 Earthquake

The qualitative approach enables a more holistic analysis of the determinants of ANSA power than its quantitative counterpart. For each case, I provide a brief group description of its history, typology, and general aims. I then assess groups’ territorial holdings, service provision level, level of monopoly on violence, and access to resources before, during, and after a crisis event. As well, I provide charts that plot each ANSA’s attacks over time, highlighting the crisis moment to better identify a change in activity around the particular event. Did the group become more or less active? Did it change its tactical or strategic approach to its goals? How did it interact with the crisis-affected populations? What did the state do vis-à-vis the crisis, and how did the ANSA’s operations compare or contrast with those of the state? These questions drive the case studies and help test all stated hypotheses.

Ethiopia’s ONLF and the 2008-2011 Drought

This case study investigates the Ogaden National Liberation Front’s response to the drought that settled over Ogaden in 2008, finding that the Ethiopian government’s counterinsurgency operations aggravated the crisis and prompted a swift and violent ANSA response. This case elucidates how other actors’ crisis responses impact an ANSA’s power accrual potential. As well, it suggests that disaster type and duration affect an ANSA’s willingness and ability to interact with the event.

Ethiopia’s Ogaden region (also called Somali Region) borders Somalia and hosts approximately 4 million inhabitants, 97% of whom identify as ethnic Somali and practice Islam. Socioeconomic structures rest on nomadism, pastoralism, and agro-pastoralism, with livestock trade as the primary source of income in the desert region. The Somali shilling is the dominant regional

---

currency, and there is a higher volume of economic interactions between Ogaden and Somalia than with the rest of Ethiopia.\textsuperscript{292} Clans comprise Somali Region’s social makeup, with the Ogaadeeni clan representing nearly half of Ethiopian Somalis.\textsuperscript{293} Clan divides and non-Ogaadeeni concerns with disproportionate Ogaadeeni power tend to undergird political tensions within the region. Inter-clan competition over resources and territory, especially as pastoralist groups transition to agro-pastoralism and exacerbated by climatological phenomena, also aggravate political tensions.

The Ogaden is culturally and environmentally distinct from the Ethiopian highlands, where much of the country’s political power rests. Given their history at the cultural, social, geographic, and economic margins of the country, a deep distrust of and animosity toward the highlanders permeates across Somali Region.\textsuperscript{294} As a result of its sharp contrasts with the highlands, it remains Ethiopia’s least developed state.\textsuperscript{295} Repression and exclusion from the central government compound on the limited infrastructure, weak administrative capacity, and pervasive corruption that stifle the local governments in Somali Region.\textsuperscript{296}

Somali Region receives an average annual rainfall of 300 millimeters, rendering it highly susceptible to severe and extreme droughts.\textsuperscript{297} Ogaden has experienced six such episodes in the years 1972-1975, 1980-1982, 1990-1992, 1999-2000, 2003-2004, and 2008-2011. The drought of 1980 was the most acute and caused widespread famine in Ethiopia; that of 2008 was similarly extreme as well as the most prolonged in recent history. It originated from poor rainfall, and in Somali Region, this drought episode proved most severe between January 2009 and August 2010 and caused a region-wide food shortage.\textsuperscript{298} Per EM-DAT records, this natural disaster affected over 6.2 million people.

Frequent drought and overgrazing make Somali pastoralists particularly vulnerable to famine.\textsuperscript{299} Weak state capacity also exacerbates the resulting famines: often, food insecurity

\textsuperscript{292} Adow, “Changing Fortunes in Ethiopia’s Ogaden.”
\textsuperscript{293} “Collective Punishment.”
\textsuperscript{294} “Collective Punishment.”
\textsuperscript{295} Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
\textsuperscript{299} Adow, “Changing Fortunes in Ethiopia’s Ogaden.”
predicates on weak distribution mechanisms as opposed to insufficient supply. Indeed, private firms capitalize on food and water insecurity and deliver these services at prohibitive prices. Overall, droughts produce the highest conflict potential of all natural disasters, particularly if the event affects agriculturally dependent groups and especially if they are marginalized and in poor countries, as is the case with Somali Region. In neighboring Somalia, precipitation anomalies, temperature anomalies, and drought length all significantly increase conflict incidence. Significantly, pastoralist groups tend to destock their cattle to manage the associated food and water insecurity threats; when swaths of people do so, they shock the supply of livestock and thus drive prices down, collectively contributing to individual financial hardship, which in turn serves as a driver for grievance-turned-greed-based conflict. Patterns in Ogaden seem to mimic that trend.

**ONLF Origins, Typology, and Aims**

As early as 1899, ethnic Somalis mounted insurgencies against British, Italian, and Ethiopian colonial impositions. Italy’s 1936 incursion in Abyssinia (the former name of present-day Ethiopia) included a takeover of Ogaden; after an Allied liberation, it briefly enjoyed unity with fellow Somali territories. Yet, post-World War II colonial settlements gifted Ogaden to Ethiopia as opposed to retaining it with greater Somalia under British administration. The 1960 independence of Somalia reanimated the Somali liberation struggle in Ogaden, which now enjoyed backing from a sovereign and culturally familiar neighbor. Ethiopian Emperor Haile Selassie imposed martial law in response to insurgent agitation, writing the playbook of abuse and repression that his successors would later employ. Counterinsurgency campaigns ensued, briefly pacifying the region.

Selassie fell in a 1974 military coup that gave way to Mengistu Haile Mariam’s Derg regime, Somali President Siad Barre’s attempts to accrue regional power produced the Western Somalia Liberation Front (WSLF), staffed with disgruntled Ogaadeenis in Somali Region who conducted guerrilla attacks on Ethiopian structures. Seeking greater success, Barre launched an invasion of the Ogaden in 1977 that enjoyed early successes but Soviet and Cuban support for Mengistu quickly shifted the tides, defeating Somalia by early 1978. Despite the formal end of the Ogaden War, Ogaadeeni insurgents continued operations at smaller scales. In 1984, the Ogaden National Liberation Front splintered from the WSLF, yet remained relatively quiet until the Ethiopian People’s Revolutionary Democratic Front (EPRDF) overthrew the Derg in 1991, instituting a new system of ethnic federalism.

At this time, the ONLF engaged actively with the shifting political landscape to help secure greater regional autonomy for the Ogaden. Namely, it functioned as a political party, winning 60% of the regional parliamentary seats and thus naming the regional president and vice president. It

---

301 “Ogaden: Corruption Aggravates Drought.”
302 von Uexkull et al., “Civil Conflict Sensitivity to Growing-Season Drought.”
303 von Uexkull et al.
304 Maystadt and Ecker, “Extreme Weather and Civil War.”
306 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
307 “Collective Punishment.”
309 “Collective Punishment”; Abdullahi, “The Ogaden National Liberation Front (ONLF).”
310 “Collective Punishment”; Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
claimed to represent ethnic Somalis at large, but in practice its agenda catered more limitedly to its Ogaadeeni base – which the “Ogaden” component of the group’s name reflects – stoking fears of single-clan dominance among non-Ogaadeenis. From its position of power, the ONLF pushed the envelope of self-determination, which failed to resonate with non-Ogaadeeni clans. The EPRDF met the secessionist threat with crackdowns that featured political assassinations and imprisonment of ONLF leaders as well as support for non-Ogaadeeni elders, ultimately weakening the organization. The state indeed maintains an interest in Somali Region because it holds some of Ethiopia’s largest oil and gas reserves.

By 1994 an EPRDF-backed coalition of non-Ogaadeeni-aligned parties replaced the ONLF as the region’s major political player. Within a year, the ONLF had split into legal accommodationist and radical secessionist factions: the former evolved into the Somali People’s Democratic Party (SPDP) and fostered close ties with the EPRDF while the latter obtained rebel status. The irredentist ONLF calls for Somali self-determination and secession from Ethiopia to allow for the region’s reunification with greater Somalia. Clashes between the ONLF and the government began as early as 1995 and became more constant and lethal between 2005 and 2010.

**PRE-DROUGHT CONFLICT SCENE**

The EPRDF sustains tremendous reach in Ogaden; yet, it uses that domain not to provide services or governance but rather to exert control of the population and implement repressive tactics. Several structures enable government of Somali Region. First, security committees – which constitute SPDP leaders, military officers, and EPRDF administrative officials – gather intelligence at district and local levels. Its officers investigate village affairs and the slightest departures from quotidian norms in the area, instilling a sense of constant surveillance and scrutiny among the public. In 2005, the EPRDF permanently stationed two military divisions composed of non-Somali officers in the region, casting a language and culture divide to prevent military defections. Additionally, the government deployed five more military divisions to Ogaden at various moments between 2005 and 2007. As a result of this invasive surveillance, security forces’ abuses of power, and the region’s longstanding history of marginalization and oppression by the state, most civilians in Somali Region harbor a deep resentment of the EPRDF.

The EPRDF’s control of the security apparatus in Ogaden enables it to enforce its political will in the region. Despite the ethnic federalist system, the EPRDF maintains significant control of regional politics through its appointment of federal advisors and oft-used discretionary removal of regional presidents. Similarly, the central government arbitrarily imprisons and detains politicians

---

312 “Collective Punishment.”
313 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
315 “Collective Punishment.”
316 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
320 “Collective Punishment.”
322 “Collective Punishment.”
323 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden”; “Collective Punishment.”
324 “Collective Punishment.”
and prominent Somali figures to preclude individuals from obtaining too much social capital and political influence at the EPRDF’s expense. Electorally, the EPRDF rigs regional races, which produce only pre-vetted candidates as the winners.\textsuperscript{323}

Internal tensions emerged within the ONLF in 2006 after the group’s chairman dismissed fifteen central committee members in what they alleged violated the group’s constitution and regulatory code.\textsuperscript{324} The subsequent leadership struggle triggered the defection of powerful militants who surrendered to the EPRDF, gifting the state a victory in its conflict in Ogaden. Soon after these rifts, the ONLF, the Oromo Liberation Front (OLF) and the Coalition of Union of Democracy banded together under the New Alliance for Freedom and Democracy (AFD), an alleged platform for peaceful opposition to the EPRDF. These political shifts concerning the ONLF demonstrate that the organization was in a vulnerable position in the mid 2000s as a result of its internal fragmentation. Looking to compensate for its power losses, it struck an alliance with non-secessionist groups, sacrificing central ideological commitments as a means to remain a viable player and formidable opponent.

In 2006, Ethiopia intervened in Somalia to overthrow the Islamic Courts Union (ICU), which stoked Somali Region’s animosity toward the Ethiopian government. The ICU’s coercive apparatus, which later became known as Al Shabaab, had stamped out the warlords that had ruled Somalia for over a decade.\textsuperscript{325} The ONLF allegedly held ties with the ICU, and Eritrea provided sanctuary and support to both groups.\textsuperscript{326} Thereafter, ONLF attacks grew more frequent and severe.\textsuperscript{327} The group gained notoriety after it attacked a Chinese oil installation in 2007, killing 82, the vast majority of whom were Chinese.\textsuperscript{328} In response, the EPRDF moved more forcefully and poignantly against the rebel movement. Military reprisals to ONLF attacks often targeted civilians as a form of preemptive punishment for supporting the rebel group.\textsuperscript{329} Figure 13 reflects this increment in civilian casualties and attack lethality, the peak of which overlaps with the height of the drought.

**Drought Conflict Scene**

As the drought began to take hold in 2007, the state formally launched a counterinsurgency operation in Ogaden to stamp out the ONLF. This campaign rested on mainly three illiberal and abusive pillars: forced displacement, trade blockades, and control of aid distribution.\textsuperscript{330} The state evidently burnt down large portions of at least five villages where it presumed the ONLF held significant power. Forcibly relocating locals in attempts to root out the insurgency, the army would return to grazed villages and assassinate, rape, or torture individuals who refused to leave.\textsuperscript{331}

\textsuperscript{323} Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden,” 20.
\textsuperscript{324} Abdullahi, “The Ogaden National Liberation Front (ONLF),” 558–59.
\textsuperscript{326} Abdullahi, “The Ogaden National Liberation Front (ONLF)”; “MMP”; “Collective Punishment.”
\textsuperscript{331} Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden,” 23; “Ethiopia: Government Denies Looming Humanitarian Crisis in Somali Region”; “Ethiopia.”
Government trade blockades aimed to preclude material goods from reaching the ONLF\textsuperscript{332} and ultimately reduced incoming goods in Ogaden by 80\% to 90\%.\textsuperscript{333} This tactic also precluded pastoralists’ ability to trade and thus barred them from their financial livelihoods. At the same time, the blockade of primary trade routes increased food prices by 95\%. With rebel attacks further disrupting supply chains, and the extreme drought settling in, grain prices doubled while livestock prices halved.\textsuperscript{334} Altogether, the climate, ONLF attacks, and government blockades all compounded on each other, delivering a weakened economy, a tremendous food shortage, and a security crisis.

The ensuing tumult called for humanitarian aid, which the EPRDF promptly withheld from Ogaden.\textsuperscript{335} The military registers and distributes all food stocks entering the country, and it blocked shipments to Somali Region as a means to stifle the ONLF’s access to food, consequently barring the region from access to much-needed food aid. As well, the government barred non-governmental organizations (NGOs) such as Médecines Sans Frontières from operating in Ogaden.\textsuperscript{336} It removed groups already present in the region, like the Red Cross, with the pretext that its operations supported the ONLF.\textsuperscript{337} Certainly, these declinations further derailed civilian livelihood. The ONLF accused the government of weaponizing food and water aid on numerous occasions, yet to no avail.\textsuperscript{338} Beyond withholding humanitarian assistance, the state continued to intimidate, persecute, and abuse Ethiopian Somalis.

![Deaths by Group in ONLF-Related Attacks, 1994-2018](image)

**Figure 13.** Distribution of casualties by parties to the Ethiopia-Ogaden conflict, with the 2008-2011 drought episode highlighted. Originally produced with data from UCDP.

\textsuperscript{332} Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden,” 25; “Child Hunger ‘crisis’ in Ogaden.”

\textsuperscript{335} Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden,” 26.


\textsuperscript{338} “Ogaden: Corruption Aggravates Drought”; “Ethiopia: Government Denies Looming Humanitarian Crisis in Somali Region.”
The government’s counterinsurgency strategy weakened the ONLF, but it did not generate support for the state. Militarily, the ONLF had no might against the Ethiopian army. Socially, the ONLF did not enjoy resounding legitimacy among Ethiopian Somalis and even less so among non-Ogaadeeni clans. However, extrajudicial killings, arbitrary detention, torture, and displacement of people thought to have ties with the ONLF fostered a deep animosity toward the state among Somali civilians. The sense of disenfranchisement extended to non-Ogaadeeni Somalis.

In 2009, the government replaced the security apparatus in Ogaden with the Liyu (Special) Police force as a response to widespread condemnation of state abuses in the region. Yet, Liyu essentially operated thereafter as a paramilitary unit, perpetuating the same human rights abuses as its predecessor. At the same time, the EPRDF passed the Anti-Terrorism Proclamation, a policy that enabled the state to preemptively arrest figures it considers as enablers of or perpetrators of terrorism. It also released a list of terrorist groups, which included the ONLF as well as center-seeking groups in other regions of Ethiopia. This decree gave the state carte blanche to arbitrarily arrest individuals with little more than alleged connections to those groups. The regime invoked the Proclamation liberally. In 2011 alone, military forces arrested 108 political opposition leaders nationwide under this rubric.

By 2010, the ONLF fissured into two factions, both of which claimed to represent the true ONLF. The side under Salahddin Maow’s leadership signed a peace deal with the government, slating the faction to become a political party and to obtain amnesty for its members. The other faction continued to wage its insurgency in the name of Somali self-determination.

**POST-DROUGHT CONFLICT SCENE**

After the drought, the belligerent ONLF continued its practice of calling for increased humanitarian assistance alongside United Nations investigations of state abuses in Ogaden. At the same time, it continued attacks on the government, remaining the most active rebel movement in the country by 2011. Thereafter, attacks tapered. By 2013, the group announced its willingness to engage in peace talks with the EPRDF.

Despite maintaining tight reins on aid distribution vis-à-vis Ogaden, the government did shift its strategy near the end of the drought, launching development projects in Jijiga, the capital of Somali Region, as a means to win the hearts and minds of the Somali people. Development projects in Jijiga did not extend far beyond the regional capital, which was the most peaceful area of

---

339 Abdullahi, “The Ogaden National Liberation Front (ONLF).”
340 Abdullahi.
341 Abdullahi; “Collective Punishment.”
342 “Collective Punishment.”
344 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
346 “Ethiopia: Rebel Group to Become Legal Political Party”; “Ethiopia: Somali Party Urges Factions to Choose Peace over War.”
348 “Ethiopian Ogaden-Somalis Face Deportation from Djibouti.”
350 Adow, “Changing Fortunes in Ethiopia’s Ogaden.”
Ogaden prior to state involvement. As well, these advancements merely added, rather than replaced, its historical strategy of repression and civilian intimidation. The state continued to hijack aid distribution to limit resources entering Somali Region as a form of punishment for harboring ONLF; yet, this occurred with decreasing frequency, and despite remaining restrictions, humanitarian assistance improved overall.

Still, state abuse arguably became increasingly pervasive. The Liyu force continued to “close,” or forcibly displace, villages across Somali Region under the pretense of improving service provision and administrative reach for civilian benefit. Widespread abuse, torture, rape, and pillage defined these relocations. Additionally, arbitrary detentions, lack of due process, and harsh prison environments prevailed despite the decrease in ONLF-EPRDF clashes. Women and girls became the most vulnerable population segment in Ogaden. To exemplify, a Liyu divisional commander reported witnessing between 1,200 and 1,500 counts of rape in Ogaden prior to his defection from the force. Indeed, the paramilitary group overtly and instructionally weaponized rape, making it the primary tool in its repertoire of abuses.

In sum, the ONLF emerged from the drought in a weaker position because of tensions within its internal political composition as well as the EPRDF’s aggressive counterinsurgency strategy. Although the drought did not deliver the government’s gains, it did facilitate them. After the natural disaster subsided, the EPRDF continued its repressive tactics to retain those gains, eventually rendering the ONLF threat mute.

**Mexico’s Gulf Cartel and the 2010 Hurricane Alex**

This case examines the Gulf Cartel’s null response to Hurricane Alex in 2010, finding no evidence that the crisis affected the group nor that the group utilized it in any way to accrue power. As a result, this examination elucidates how ANSA type may play a role in determining crisis response patterns. As well, it draws attention to the crisis conditions that call for ANSA attention, such as the catastrophe’s the severity, duration, expanse, and impact.

**Gulf Cartel Origins, Typology, and Aims**

During the United States’ prohibition period, liquor smugglers in northeast Mexico banded together to form the Gulf Cartel to smuggle alcohol to thirsty consumers across the border. Over time, it adapted operations to the changing transnational demand for illicit products. By 1984, the Gulf Cartel was at the forefront of Mexico’s drug trade. Its financial success inspired groups that served as couriers for Colombian cartels to take over wholesale operations. Drug cartels in Mexico

---

353 Peebles, “State Terrorism in Ethiopia’s Ogaden Region.”
354 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden,” 33; Adow, “Changing Fortunes in Ethiopia’s Ogaden.”
356 Alarfaj et al., “Seeking Self-Determination: Practical Implications for Ogaden.”
357 Peebles, “State Terrorism in Ethiopia’s Ogaden Region.”
emerged in that decade, after drug trade routes shifted from the Caribbean to the continent, stoking demand for drug trafficking organization (DTO) operations.\textsuperscript{361} Six distinct groups consolidated and clashed with one another for control of major trade routes and distribution centers. Based out of Matamoros, Tamaulipas, the Gulf Cartel quickly asserted its dominance over the northeastern border with the United States.\textsuperscript{362}

In response to DTO fighting in early 1990s, the Partido Revolucionario Institucional (Institutional Revolutionary Party, PRI), which commanded the increasingly decentralized one-party state, struck profit-sharing agreements and protection rackets with the cartels: so long as they paid rents to key government officials and left civilians to their own devices, the government would permit their operation of the illicit economy.\textsuperscript{363} The Gulf Cartel became quite adept at navigating protection rackets and striking profit-sharing agreements, buttressing its control of the state and thus substantiating its political power.\textsuperscript{364}

From that vast network of collusion, the Gulf Cartel recruited some 20 to 30 military executives and Mexican Special Forces officers to staff a special coercive apparatus within the larger cartel.\textsuperscript{365} From its inception in 1998, this militia – dubbed “Los Zetas” because of their military uniform’s “zeta” shade of blue – proved excessively sanguinary.\textsuperscript{366} They thus set the precedent for

\textsuperscript{364} “Gulf Cartel.”
what later became standard cartel violence and torture, used to induce civilian and government compliance.\(^{367}\)

With Mexico’s 2000 transition to democracy welcoming the Partido Acción Nacional (National Action Party, PAN), the political landscape shifted and dismantled the PRI’s decades’ old arrangements, prompting a disturbance in national stability.\(^{368}\) Cartel clashes and attacks on government forces quickly ensued. PAN candidate Felipe Calderón assumed the presidency in 2006 and, within ten days, launched a drug war to eliminate the cartel threat through the use of force.\(^{369}\) The most prominent organization at the time was the Gulf Cartel, with operations in the entire Gulf of Mexico coastal region, highlighted blue in Figure 14.\(^{370}\)

Calderón’s main strategy involved a capture-or-kill order for 40 senior cartel members across the country.\(^{371}\) This decapitation approach led to cartel fragmentation: having begun his presidency with six distinct cartel threats, Felipe Calderón left office six years later with over 200 active DTO cells operating across the country in a complex network of collusion, collaboration, and conflict.\(^{372}\)

By 2009, violent standoffs between military forces and DTOs became common, as did overt cartel predation on civilians. The Gulf Cartel, through Los Zetas, shepherded this morbid voracity for violence.\(^{373}\) A greed-driven ANSA, the Gulf Cartel’s power rests predominantly on its territorial control of trade routes and distribution sites; still, its monopoly on violence. Its monopoly on and liberal use of violence enables the DTO to induce civilian compliance as well as to coopt the state, thus buttressing its ability to control lucrative areas.

---


368 Schedler, “The Criminal Subversion of Mexican Democracy.”


370 “Mexican Drug Cartels.”


The Gulf Cartel was not immune to the preponderant splintering phenomenon. In early 2010, Los Zetas broke off from the Gulf Cartel, immediately posing a formidable threat to the country’s most established DTOs. The Gulf Cartel lost much of its territory—which spanned 11 states—to its former enforcer (see Figure 16 compared to Figure 14), receding to its historical strongholds in Matamoros, Reynosa, and Tampico, all in the northeastern state of Tamaulipas. Los Zetas were able to make such significant headway because of its indiscriminate and excessive use of violence toward civilians. In order to counter the nascent Zeta competition, the Gulf, Sinaloa, and Familia Michoacana cartels—each of which dominated a corner of the country—briefly allied under the designation “Nueva Federación [New Federation].” By June 2010, this coalition had made significant strides to overrun Zetas territory, particularly in Mexico’s northeastern states and border cities.

Figure 15. Distribution of casualties by parties to the Gulf Cartel-Mexican Government conflict, with the 2010 Hurricane Alex highlighted. Originally produced with data from UCDP.

376 Stewart; “Mexican Drug Cartels.”
Hurricane Conflict Scene

Mexico’s Gulf coast region experienced a high volume of attention-demanding events in the summer of 2010. In the first week of July, Hurricane Alex traversed from Mexico’s south toward the northeast, where it gained a second wind. It was the first tropical cyclone of the season, and it entered a mountainous region that usually incapacitates hurricanes. Yet, Hurricane Alex triumphed over the rugged topography: with over 60 consecutive hours of torrential downpouring, it caused power outages, flash floods, disappearances, and deaths in the northeastern states of Tamaulipas and Nuevo León – the precise sites of contention between the Gulf Cartel and Los Zetas. The storm affected approximately 170,000 civilians and caused over $2 billion U.S. dollars in damage. State governments in Nuevo León and Tamaulipas, the two most affluent and keen to provide public services, were quick to respond to the natural disaster, providing affected households with food and clothing relief during and immediately after the storm. While affected groups appreciated the promptness of the relief effort, they lamented its brevity and haphazard distribution plans. Beyond the state’s response, communities rallied to support affected households, supplying home-cooked meals and helping restore damaged houses.

DTO developments did not stall during the storm or the ensuing reconstruction efforts. As Alex approached Tamaulipas on 30 June 2010, a criminal organization corralled and assassinated a PRI gubernatorial candidate for that state. Neither Los Zetas nor the Gulf Cartel claimed responsibility, the former going to great efforts with media sources to overtly deny any involvement. That same day, in Mexico’s southern state of Michoacán, state forces captured Familia Michoacana’s leader, debilitating the New Federation’s most violence-prone member. As

---

377 “Huracán Alex En Nuevo León, La Memoria: Riesgos, Testimonios y Acción Social” (Monterrey, México: Secretaría de Desarrollo Social - Unidad de Planeación, December 2010).
378 Guha-Sapir, “EM-DAT”; “Huracán Alex En Nuevo León, La Memoria: Riesgos, Testimonios y Acción Social.”
379 Guha-Sapir, “EM-DAT.”
381 “Huracán Alex En Nuevo León, La Memoria: Riesgos, Testimonios y Acción Social.”
383 García, “Los Zetas Niegan Su Participación En El Asesinato Del Candidato El PRI.”
the storm waned on 8 July, the government also arrested Los Zetas’ leader. Twenty days later, it captured the Sinaloa Cartel’s third-in-command.

**POST-HURRICANE CONFLICT SCENE**

The state’s encroachment on both the Sinaloa Cartel’s and Familia Michoacana’s leaderships prompted these DTOs to shift their efforts away from their alliance with the Gulf Cartel and back to their respective original territories, disabling the New Federation. As a result, the Gulf Cartel did not retake much territory from its former militia. Yet, returning to its historical strongholds enabled the group to continue its most profitable operations. In November 2010, the state killed one of the Gulf Cartel’s co-leaders, Antonio Ezequiel Cárdenas Guillén, alias “Tony Tormenta.” Beyond his alias being the Spanish word for “storm,” there is no connection between his fate and the preceding summer’s hurricane. The DTO’s leadership structure enabled it to weather that torrent, continuing operations in a smaller yet highly lucrative and constant territory.

Ultimately, the DTO did not seem to benefit or lose from the hurricane. The state responded effectively to the environmental threat while continuing military operations against the cartels. Perhaps the state’s greater service provision capacity in Mexico’s north (relative to other regions) metered the potential for cartels to use the crisis to their advantage. As well, the storm’s relative temporal compactness might have precluded DTOs from mounting a legitimacy-building campaign surrounding the disaster. A third alternative to the perceived null effect of this crisis on ANSA power could lie in the group’s typology and salient power contributors: because the Gulf Cartel’s power rests on territory and potential for violence, not on public support, responding to the crisis would not help further its overtly financial agenda. Furthermore, the hurricane did not hamper Gulf Cartel operations, resources, or tactical options, opening a future line of inquiry. Altogether, these considerations give way to a future line of inquiry: under what conditions do national crises threaten ANSAs?

---


386 Stewart, “Mexico and the Cartel Wars in 2010.”

387 Stewart.
Turkey’s PKK and the 2011 Van Earthquake

This case study investigates whether the ethnically motivated Kurdistan Workers’ Party (PKK) utilized the 2011 earthquake to bolster its center-seeking rebel agenda. The organization did not change its trajectory after the catastrophe but did employ the event symbolically to vilify the government.

Turkey’s Anatolian peninsula has a history of severe earthquakes, with a “seismic storm” of concentrated and significant shakes in the 20th century. Figure 17 helps visualize seismic risk across the Anatolian plate. Between 1990 and 2011 alone, the country experienced ten earthquakes with a magnitude of six or greater. Notoriously, in 1999 a 7.6 magnitude quake claimed 17,000 lives in the Izmit region of northwestern Turkey, inciting national political turbulence as it revealed the central government’s major faults. Government corruption and construction zoning code violations exacerbated the catastrophe’s damage, and a weak state response compounded on the devastation. As well, the state neglected to prosecute figures whose corrupt dealings had allowed for shoddy construction projects, adding to the public’s indignation. This slippage reverberated in the 2002 elections, when the Justice and Development Party (AKP) overhauled all of the parties, including those in the opposition, that came to power in the previous election cycle, months before the Izmit earthquake.

The turn of the century and subsequent leadership change brought a recommitment to disaster relief systems. When a 7.2 magnitude earthquake shook Van, a city in southeastern Turkey, on 23 October 2011, the government was better prepared to respond with emergency operations. The event claimed 604 lives and affected 32,938 individuals, per EM-DAT records, a significant improvement from the previous major disaster a decade earlier. Still, the government refused external aid and sought to resolve the humanitarian aftershocks independently.

Turkey rests tectonic and ethnic fault lines, the Anatolian peninsula has been a predominantly Muslim area since the Seljuk Empire’s reign between 1050 and 1300 AD. In the late nineteenth century, Russian persecution of Muslims in the North Caucasus and the Ottoman Empire’s retreat from the Balkans drove waves of Muslim migration to Anatolia. As a result, the

---

391 Hirschler, “‘Seismic Storm’ Makes Turkey Earthquake Savvy”; Onur, “Van Earthquake Exposes Turkey’s Ethnic Fault Lines.”
392 Hirschler, “‘Seismic Storm’ Makes Turkey Earthquake Savvy.”
393 Guha-Sapir, “EM-DAT.”
394 Onur, “Van Earthquake Exposes Turkey’s Ethnic Fault Lines”; Hirschler, “‘Seismic Storm’ Makes Turkey Earthquake Savvy.”
peninsula’s demographic composition remained predominantly Muslim while gaining ethnic heterogeneity. At the time, the Ottoman Empire’s designated administrative regions and political appointments based on religion. Representation in this millet system thus hinged on religion, not ethnicity. Consequently, the formation of the Turkish state considered “all members of the previous Muslim millet as members of the Turkish nation,” prompting ethnic homogenization. Thus, many non-Turks adopted the Turkish identity; yet, religiously distinct groups, such as the Christian Armenians, and ethnically distinct groups, such as the Kurds, resisted this change. To address the Armenian question, the embryonic Turkish state resorted to genocide, with many Kurdish communities complicit in the process. After largely expunging Armenian’s presence from Eastern Anatolia, the state moved to persecute Kurds.

The 1920 Treaty of Sevres between the Ottoman Empire and World War I Allied powers provided for the creation of an autonomous Kurdistan; however, Mustafa Kemal Atatürk’s independence movement instead crafted a sovereign Turkish state in Anatolia, including the predominantly Kurdish southeastern region, which the 1923 Treaty of Lausanne ratified. Atatürk founded his nascent state on the principles of nationalism, secularism, and republicanism. He aimed to imbue the public with a deep sense of Turkish identity and to have that identity override ethnic, linguistic, and religious associations in order to inoculate the country from internal divisions and therefore strengthen it against potential external incursions. To achieve homogeneity, Atatürk expected individuals to suppress their primary ethnic identities and adopt the Turkish identity – only such buy-in allotted individuals in Turkey citizenship rights. Moreover, he forced minorities to assimilate. For the Kurds, this meant banning the Kurdish language, forcing Kurdish parents to assign Turkish names to their newborns, and renaming Kurdish towns in Turkish. These inchoate ethnic tensions perdured throughout the rest of the 20th Century. Kurds constitute about 20% of Turkey’s population, and although there are Kurdish communities across Anatolia, there is a greater concentration of Kurds closer to the Syrian, Iraqi, and Iranian borders (refer to Figure 18). Large swaths of the Kurdish population in Turkey fostered frustrations toward the central state, which largely neglects the mountainous southeastern regions relative to

---

400 Cornell, “The Kurdish Question in Turkish Politics.”
402 Cornell, “The Kurdish Question in Turkish Politics.”
404 Kemal Can, “Nationalism in Turkey.”
areas where Kurds do not predominate.\textsuperscript{405} This part of the country thus lags behind other regions in terms of economic development. Not only does Ankara’s distance produce these circumstances; Kurdish tribal leaders also have a perverse incentive to perpetuate underdevelopment in the region because rapid development threatens the sociopolitical structures that empower them.\textsuperscript{406} Consequently, economic and political disenfranchisement compound on Kurdish cultural marginalization and oppression.\textsuperscript{407} Whenever these frustrations meet an opportunity for revolt, the Turkish state brutally suppresses any uprisings.\textsuperscript{408}

Despite the historical and ongoing repression of Kurds in Turkey, the ethnic group retains an incommensurate level of representation in national politics, with three of Turkey’s seven presidents and more than 20\% of members of parliament coming from Kurdish backgrounds.\textsuperscript{409} Indeed, assimilation (though eroding a cultural identity) entitles Kurds to full Turkish citizenship rights without further discrimination. Quotidian tensions between Kurds and Turks boast less social salience; the fissure emerges militarily and politically with regard to violent Kurdish irredentist campaigns. In such situations, the state falls back on its founding pillar of nationalism to justify repressive responses and seek to prevent future uprisings. As well, the social divide becomes more salient in times of crisis, as the Van earthquake will later illustrate.\textsuperscript{410}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure18.png}
\caption{Map of Kurdish region in the Middle East. Source: BBC 2016.}
\end{figure}

\textsuperscript{406}Tezcür, “Kurdish Nationalism and Identity in Turkey.”
\textsuperscript{407}Tezcür.
\textsuperscript{408}Kemal Can, “Nationalism in Turkey”; Tezcür, “Kurdish Nationalism and Identity in Turkey”; Cornell, “The Kurdish Question in Turkish Politics.”
\textsuperscript{409}Cornell, “The Kurdish Question in Turkish Politics.”
The nascent AKP government temporarily improved Kurdish rights as it began to dominate the political scene in the early 2000s. Turkey’s repression of Kurds poses an obstacle for the country’s European Union membership bid. As a condition for consideration, Brussels requires greater efforts at democratizing the state in an inclusive and orderly fashion—including extending minority rights to Kurds.411 President Recep Tayyip Erdogan thus extended greater rights to this community, including lifting Kurdish language restrictions, granting parliament (with more than 20% Kurdish representation) military budget oversight, and investing in economic and cultural developments in Kurdish communities.412 Still, freedom of expression remained limited, and by 2011, despite initial improvements, Erdogan’s regime backslid significantly in terms of democracy, rights, and governance—a trend that continues to this day.

GROUP ORIGINS, TYPOLOGY, AND AIDS

Kurdish university students founded the Kurdistan Workers’ Party (PKK) in 1978 with the goal of creating an independent Kurdistan.413 The organization is an activist rebel ANSA that pivoted from a secessionist to a center-seeking standpoint, all throughout appealing to Kurdish nationalism as a platform for mobilization.

A military coup in 1980 heralded a ban on political parties, essentially criminalizing the leftist PKK. Yet, the group remained committed to its irredentist agenda, launching an armed campaign under Abdullah Öcalan’s leadership in 1984. The initial strategy involved raiding Kurdish villages to gather resources and recruits, later pivoting its guerrilla tactics to the Turkish community.414 Up until 1990, this approach helped the PKK secure predominantly Kurdish territory.

Between 1991 and 1999, the second phase of the conflict involved more government-PKK clashes in contested zones. This period presented the height of the conflict and provided a boost to PKK military capacity. At the time, the PKK provided Turkey’s greatest source of political instability, and the Turkish military responded with fierce counterinsurgency operations.415 Increasing levels of violence prompted the United States, Europe, and Turkey to designate the PKK as a terrorist group.416 Still, the organization garnered financial support from Kurdish communities abroad—especially in Europe. As well, it took advantage of the porous and unregulated Iraqi border, setting up bases and training camps in Iraq, away from Turkey’s military reach. Altogether, in this decade, the group faced significant challenges but also nurtured its overall power.

The tides turned for the PKK in 1999, when Turkish operatives captured Öcalan in Kenya.417 His subsequent imprisonment severely hampered the PKK’s agenda because he had


412 Cleveland and Bunton, A History of the Modern Middle East, 492.

413 Aydin and Emrence, Zones of Rebellion, 2.

414 Aydin and Emrence, 5.

415 Gunter, “The Continuing Kurdish Problem in Turkey after Öcalan’s Capture.”


organized the group around his centralized directorship. Absent an effective, identifiable commander, the group lost its momentum and was unable to sustain itself as a formidable threat to the government. Instead of scaling up its reliance on violence, the PKK declared a unilateral five-year ceasefire to undergo restructuring, seeing as it had lost its decision-making apparatus. Simultaneously, the group called for greater inclusion in Turkish politics as well as the extension of Kurdish minority rights. At this point, the PKK pivoted its attention to urban spaces in predominantly Turkish areas. In these distant, non-Kurdish zones, the PKK used more aggressive and indiscriminate violence; meanwhile it conducted fewer and less personalistic attacks in Kurdish zones (i.e., using improvised explosive devices (IEDs) as opposed to suicide bombers). At the same time, it emphasized its activism for Kurdish rights over its militant secessionist animus.

THE CONFLICT AND THE QUAKE

In 2003, the PKK’s hiatus from violence ended. In 2006, the Turkish state began conducting secret negotiations with the PKK, seeking to establish a modus vivendi. Despite talks, the group continued to launch more and increasingly deadly attacks. The sudden decline in PKK-

Figure 19. Distribution of casualties by parties to PKK-Turkey conflict, with the 2011 earthquake episode highlighted. Originally produced with data from UCDP.


418 “Who Are Kurdis h Workers’ Party (PKK) Rebels?”

419 Guha-Sapir, “EM-DAT”; “Timel ine.”

related fatalities in 2009 (depicted in Figure 19) corresponds to a reinvigoration of the talks, moving the covert negotiations to Oslo.\(^{422}\)

By this point, the PKK had become adept at adjusting its aims (and benchmarks for success) based on the fluctuating limitations that the states’ operations imposed while always maintaining the Kurdish nationalist spirit (or, at least, rhetoric). In light of the changing circumstances, the PKK redefined its conflict aims (yet again) in 2010: it now sought to build a Kurdistan within the Turkish state, using state resources to fund this “democratic decentralization project.”\(^{423}\)

After a brief yearlong pause in attacks, the PKK animated violence in the summer of 2011.\(^{424}\) In July, PKK fighters killed thirteen Turkish soldiers.\(^{425}\) In response, the Turkish state broke off the Oslo negotiations.\(^{426}\) Attacks and clashes escalated thereafter.

On 18 October, a PKK attack south of Van killed 24 Turkish soldiers, causing public uproar.\(^{427}\) A week later, the city of Van suffered the major 7.2 magnitude earthquake. News reports of the catastrophe consistently pointed to the geospatial overlap between the disaster site and prevalent PKK presence, noting that quake-affected civilians were already dealing with the security threat that the ANSA posed.\(^{428}\) Many anticipated that the post-hoc sense of communal solidarity would bridge the divide between Kurds and Turks; however, the catastrophe proved more divisive than unifying.\(^{429}\) One newspaper satirized the PKK’s nimble agenda, suggesting that the disgruntled PKK supporters condone violence against government forces yet supplicate for relief when natural disaster strikes.\(^{430}\) In a similar vein, President Erdogan protested that armed groups made their presences known at all times except then – delegitimizing groups like the PKK for their civil absence in times of apolitical crisis. Anecdotally, some Turks claimed that there was no need to collectively mourn the earthquake’s devastation because the country did not take pause at the prior week’s attacks on Turkish soldiers.\(^{431}\)

Meanwhile, the PKK made agitated and controversial symbolic and diplomatic appeals. First, it claimed that the AKP government denied relief to and actively neglected to unbury Kurds at the earthquake’s epicenter.\(^{432}\) As well, the group called on fellow Kurds to protest – a sign that the PKK tried to translate raw emotive responses to the disaster into political potential energy. Still, the group did not contribute to relief efforts. Other actors, such as religious elements of civil society and faith-based NGOs, already had intricate networks that allowed for the efficient distribution of aid and

---

422 “Who Are Kurdistan Workers’ Party (PKK) Rebels?”
423 Aydin and Emrence, Zones of Rebellion, 48.
424 “Timeline”; Guha-Sapir, “EM-DAT.”
425 “Timeline.”
426 “Who Are Kurdistan Workers’ Party (PKK) Rebels?”
430 Shafak, “After the Earthquake in Van, Turks and Kurds Could Work to Reach Peace.”
432 Onur, “Van Earthquake Exposes Turkey’s Ethnic Fault Lines.”
relief, outpacing any potential PKK attempts to provide services at this time. Moreover, the ANSA’s criminal status hampered its ability openly delivering aid while in the government’s presence. Altogether, civil society actors seemed more legitimate and reliable than the PKK for Kurds after the disaster, overall damaging the ANSA’s reputation. Still, the PKK used the disaster as a rhetorical device to attempt to curate its image of a righteous movement. At the same time, in terms of its reliance on the use of force, the PKK did not miss a beat. Indeed, within a week of the disaster, the PKK launched a series of attacks that first targeted state police forces and then AKP offices.

After the shock, the PKK ramped up its attacks, sustaining them well into the following year. This escalation barred the potential for negotiations with Ankara. Meanwhile, Erdogan’s Administration used an anti-terrorism law to crack down on Kurdish politicians, journalists, and intellectuals, fueling Kurdish disaffection with the center and thus legitimating the PKK’s armed struggle for some sections of the Kurdish public. 2012 thus became the most lethal year for PKK-related attacks since the group’s 21st century decline.

Early in 2013, Öcalan called for a ceasefire from his prison cell. He instructed PKK fighters to retract from Turkey and into Iraq, vociferating that the PKK would be willing to agree to a long-term peace settlement if Ankara agreed to a prisoner swap and elaborated minority rights for Kurds in Turkey. Erdogan welcomed the message and endorsed the PKK’s withdrawal from Anatolia, marking the first time that the two leaders engaged in open dialogue. Indeed, the two sides sustained the ceasefire for two years; yet, as of 2015 it fell apart.

Still, the briefer window around the Van earthquake contributes important insights to this project. The PKK mounted a surge campaign prior to the earthquake and did not let the disaster interrupt its activities. When the tremor struck, the group instrumentalized it to cast the government in a negative light and to stoke Kurdish nationalist spirit – all while recognizing its capacity limitations, especially relative to other actors that were more able to provide services. After this escalation, the PKK reached a position of power from which it could negotiate a ceasefire on more favorable terms. Certainly, its surge strategy constituted the primary power-accrual mechanism; yet when the opportunity presented itself, the PKK indeed appealed to the disaster as a means to contribute to its rhetorical legitimacy.

---

433 Cagaptay, “The Political Consequences of Turkey’s Earthquake.”
434 Onur, “Van Earthquake Exposes Turkey’s Ethnic Fault Lines.”
437 Watson and Comert, “Report Says Turkey’s Kurdish Conflict Has Turned More Violent.”
441 Letsch, “Kurdish Leader Abdullah Ocalan Declares Ceasefire with Turkey.”
Table 11 summarizes case studies’ results as well as the quantitative findings that each corroborates and hypotheses that each supports. There is some overlap between the two rebel cases. Together, these two cases provide insights for most hypotheses. They support the first hypothesis that national crises prompt increases in power-seeking activities, they help me reject the notion that ANSAs rely less on violence during crises and show that weak groups appeal to the disaster to enhance their legitimacy and justify their use of violence.

Meanwhile, the Gulf Cartel was largely unaffected by the hurricane. It proceeded with business as usual, facing more pressing challenges from its former coercive apparatus, which splintered off earlier in 2010. This internal cartel crisis did prompt the group to strike alliances with other cartels, tepidly providing tangential support for the theory that undergirds my last hypothesis. Overall, however, this case provided null findings, which highlights the importance of assessing ANSA type.
Discussion

The above methodological approaches rendered complex and somewhat inconsistent results. Each methodology rests on different units of analysis, with the spatial component observing mean lethality levels within spatial and temporal zones and the MLR models observing lethality rates associated with a specific group within a country in a given year, thus adding a layer of complexity and requiring caution to draw comparisons. Still, the results elucidate curious trends for each hypothesis, especially H1 and H4, which concern ANSA’s reliance on the use of force as a central pillar for power in times of crisis. In this section, I gauge the above results against each hypothesis.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Supported?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Armed groups increase their power-seeking activities in times of national crisis.</td>
<td>Yes</td>
<td>- Increases in lethality (Spatial Analysis) - Attempts to bolster legitimacy (ONLF &amp; PKK)</td>
</tr>
<tr>
<td>H2: National crises will be associated with an increase in ANSA governance.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H3: Weak groups will rely on the use of force after crises.</td>
<td>No direct causation, but weak ANSAs do appeal to the disaster to help justify the use of force in the short term - ONLF &amp; PKK</td>
<td></td>
</tr>
<tr>
<td>H4: On average, ANSAs will reduce their reliance on violence after crises.</td>
<td>No; violence tends to increase - Within 100 km, in 0-8 months - Within 1000 km, after 16-20 months - ONLF &amp; PKK increased attacks</td>
<td></td>
</tr>
<tr>
<td>H5: National crises will prompt greater ANSA engagement with symbolic processes.</td>
<td>Yes</td>
<td>- ONLF &amp; PKK</td>
</tr>
<tr>
<td>H6: Competition will increase between ANSAs in times of national crisis.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>H7: ANSA networks will experience net growth in times of national crisis.</td>
<td>Yes</td>
<td>- ONLF &amp; Gulf Cartel (latter sought alliances responding to its most pressing crisis, though not the national disaster)</td>
</tr>
</tbody>
</table>

Table 12. Review of findings’ support for hypotheses.

HYPOTHESIS 1: Armed groups increase their power-seeking activities in times of national crisis

The first hypothesis captures the central essence of this project, and other hypothesis tests relate to this initial and broader assertion. Generally, it seems that ANSAs indeed seek to maximize power during times of crisis; however, such an impetus might simply result from the group’s consistent desire to accrue power or from its need to compensate for crisis-induced operational weaknesses. The case studies can substantiate both interpretations. On one hand, the ONLF indeed responded to the crisis with power-maximizing efforts that specifically referenced the drought: it decried the government’s blockade as a weaponization of the crisis, called on the international community for support, and struck alliances with other Ethiopian rebel groups. The PKK acted similarly, casting the government’s response negatively. On the other hand, Hurricane Alex seemed to pass almost imperceptibly by the Gulf Cartel: the group continued its activities without overt or
subtle reference to the crisis, yet those activities involved striking alliances with other cartels and launching attacks on its rivals.

In the latter case, it seems that external cartel politics produced more of a crisis for the Gulf Cartel than did the hurricane. These insights underscore the need to gauge the salience of the crisis for each group based on its effects on group performativity and tactical opportunities. Where the crisis aligns with the group’s performativity, it can use the event to push a legitimation agenda; where it affects tactical outlooks, the group might become weakened and thus forced to reconstruct its modus operandi; where the crisis achieves neither, groups will likely continue business as usual.

The spatial analysis component offers interesting insights in this regard. Close to the crisis site, groups on average increase their projection of violence; within eight months they return civilian casualty levels to their norm but maintain fatality levels higher than the pre-crisis norm (albeit lower than the initial post-conflict spike). This pattern might indicate that groups rush to secure their monopoly on power and territorial holdings when the initial shock threatens it most, and thereafter might wane those efforts to instead focus on public legitimacy, continuing their attacks and clashes with other groups or government forces, but instrumentally decreasing civilian predation rates.

However, at a greater distance from the catastrophe (1,000-kilometer threshold), ANSAs increase their use of force exponentially after the crisis. Similarly, the lagged MLR models demonstrate a significant positive trend between crisis presence and lethality rates in the subsequent year. Together, these findings suggest that greater degrees of temporal and spatial separation from a crisis give way to greater ANSA violence. This finding could speak to the crisis’ weakening effects on groups, prompting them to protect their primary interests through the use of violence, which is one of the more readily available power accrual mechanisms.

Ultimately, this research supports the first hypothesis, with caveats. Namely, ANSA typology, crisis salience relative to the ANSA in question, and spatial-temporal distance from the event severely sway the group’s ability and disposition to capitalize on crisis.

**HYPOTHESIS 2: National crises will be associated with an increase in ANSA governance**

The case studies test for this second hypothesis and offer null results. ANSAs did not increase their service provision in any of the crisis events. The reasoning here might be rooted in power accrual mechanism prioritization: governance is always a last-order concern for ANSAs – even activist and secessionist groups – because of its resource intensity. Groups must secure other power components to enable themselves to then provide governance. Catastrophes affect ANSA capacity, not just that of governments or civilians, so affected armed groups’ priorities understandably lie in securing territory first and foremost and service provision last. Governance serves as an instrument to build long-term public support. In crisis times, the use of force can induce civilian compliance with greater ease and lower costs. Thus, the null effect of crises on ANSA governance makes sense and does not come as a surprise.

**HYPOTHESIS 3: Weak groups will rely on the use of force after crises**

The ONLF case provides support for H3. The group, entering the drought from a debilitated position, used the catastrophe to animate its activist efforts. In particular after the government instituted blockades and counterterrorism strategies that severely diminished civilian livelihood and compounded on the droughts’ adverse effects, the ONLF revived its operations and relied heavily on its militant apparatus, launching attacks against the state and its supporters.

Because Hurricane Alex did not pose a severe threat to the Gulf Cartel, gauging its reliance on force does not provide insights for apolitical crises’ effects on armed groups. Yet, it did enter its adversarial campaign against Los Zetas from its weakest position and indeed relied on the use of
force as an attempt to neutralize the threat. Perhaps relevant apolitical crises would render similar results as did this inherently political and organizational threat for the Gulf Cartel.

**HYPOTHESIS 4: On average, ANSAs will reduce their reliance on violence after crises**

All methodological approaches tested for the fourth hypothesis. The MLR models suggest that crisis components (crisis presence, number of crises, economic crises, and natural disasters) significantly decrease country-group-year lethality rates at large. This trend might indicate, as expected, that armed groups focus energies on legitimacy as opposed to their monopolies on violence during times of crisis. Yet, a one-year lag changes the influence of these components, with crisis presence significantly increasing the subsequent country-group-year’s lethality rates, suggesting that after an initial shock that meters the projection of violence, groups recoup and restart violent activities.

The spatial analysis approach to this quandary demonstrates that, within 100 kilometers of a natural disaster, mean lethality levels spike significantly up to 8 months after the catastrophe and then taper. This trend seems incompatible with the MLR discoveries: whereas lethality rates decrease and then increase based on the MLR models, the spatial models propose that mean lethality levels increase and then return to their norm (in the case of mean civilian casualties) or reduce but remain above the pre-disaster norm (in the case of mean fatalities). Yet, this trend might capture the slopes (pictured in Figure 4 and Figure 6) that turn downward between eight and twenty months after a crisis, within 100 kilometers of the event.

Meanwhile, within the broader 1,000-kilometer threshold, there is a consistent and somewhat exponential increase in mean lethality levels as time since the disaster elapses. This pattern, again, remains incompatible with the contemporaneous MLR results but corroborates the lagged models. Nonetheless, greater distance from a disaster site might associate with a lower practical and public relations impediments to ANSA violence, hence rendering increased lethality levels. Terrain, infrastructure, and civilian livelihood 1,000 kilometers away from a disaster’s epicenter will likely experience less turbulence after the event, especially after it loses salience over time.

These quantitative inconsistencies might arise from the spatial and temporal controls present in the spatial models but not the MLR models. Whereas the spatial models observe mean lethality levels at precise time intervals relative to the crisis, the MLR models observe crises at the year level, obfuscating the precision that four-month intervals afford. As well, the spatial models consider a narrower conception of crisis, only looking at natural disasters; the MLR models include economic crisis observations, and their natural disaster observations also comprise a more diverse, non-georeferenced set of events, such as public health crises. These differences might reliably inform the negative association between crisis components and lethality rates, indicating that a wider array of crises produce different patterns than do natural disasters with a geo-referenceable epicenter.

The case studies offer some additional insights vis-à-vis the fourth hypothesis. While the Gulf Cartel did not significantly change its projection of violence following Hurricane Alex, the ONLF did see an increase in clashes with the government during the drought, particularly at its peak. These differences suggest that both the ANSA typology as well as the type of crisis might impact whether a group resorts to heightened levels of violence after a crisis. More importantly, state capacity in the affected area plays a tremendous role: where the state can respond effectively and proactively to ameliorate the hardship that a crisis imposes on civilians, as was the case in Mexico’s northern states after Hurricane Alex, ANSAs might have less of an incentive to resort to violence. Where the state actively aggravates the crisis for civilians, as did the EPRDF during Somali Region’s 2008-2011 drought, activist ANSAs might have a greater motivation to respond violently, especially if the government’s imposition severely diminishes civilian livelihood. Doing so allows the activist
ANSAs both to legitimize itself in the eyes of the public it seeks to represent as well as to mount a viable military challenge on the state.

The PKK’s increasing reliance on the use of force seems to be exogenous to the earthquake, given that its attack surge commenced prior to the disaster and continued its initial trends after the event. However, its continuation of violence despite the catastrophe suggests that crises do not serve to temper ANSAs’ use of force.

In sum, I reject H4: the available evidence, with the exception of the contemporaneous MLR models, suggests that ANSAs actually increase their reliance on the use of force in times of apolitical national crisis. Specifically, groups significantly increase their violence projection immediately after and near the crisis site as well as directly related to the time elapsed since the crisis and the distance from the crisis site.

HYPOTHESIS 5: National crises will prompt greater ANSA engagement with symbolic processes

Threatened groups indeed buttress symbolic processes as a means to heighten legitimacy and in turn accrue or protect power. Eminently, the ONLF appealed to the international community to condemn the Ehtiopian state’s trade and aid blockade in Somali Region during the drought. Similarly, the PKK accused the government of neglecting Kurdish earthquake victims. Although their reverberations were unsubstantial, the groups’ rhetorical appeals demonstrate an attempt to generate external support and garner momentum for their respective causes.

The Gulf Cartel’s silence on the matter may arise from either the crisis’ null impact on the group or the cartel’s non-ideological essence. On the one hand, the DTO might not need to cast the government in a negative light or instrumentalize the disaster to further an agenda vis-à-vis civilian support (in fact, perpetuating weak governance and political disenfranchisement empowers Mexican cartels). On the other hand, the disaster did not threaten the ANSAs’ assets. Had the storm debilitated the cartel’s business operations, it might have had a greater incentive to respond to the event directly.

To illustrate, cartels have actively responded to the COVID-19 crisis because lockdowns pose obstacles in global supply chains, which implicate DTO businesses.\(^{442}\) As well, by overstating the pandemic’s threat, they imply a supply shortage and thus manage to manipulate markets and inflate prices. These dynamics underscore how different crises pose different threats to armed groups and thus offer varying incentives for action. For groups with activist aims, merely recognizing public plight or state deficiencies can readily serve their ideological agendas, predisposing such groups more so than their greed-driven counterparts to instrumentalize moments of upheaval.

HYPOTHESIS 6: Competition will increase between ANSAs in times of national crisis

The Gulf Cartel case best serves to assess this hypothesis and prompt me to reject it. Hurricane Alex produced a negligible threat to this cartel and failed to impact the group’s adversarial relationship with Los Zetas. The ONLF case substantiates this notion: even when the ONLF splintered at the end of the drought, the two factions did not compete violently, nor did the group clash with other activist groups in Ogaden. Recalling that inter-ANSA hostilities are most prevalent

between weak groups and between powerful groups,\textsuperscript{443} crisis situations might reduce ANSA capacity to that middle ground where competition ebbs.

**HYPOTHESIS 7: ANSA networks will experience net growth in times of national crisis**

Instead, the case studies offer support for H7. Groups bolstered their diplomatic appeals and interactions to in turn accrue power in times of crisis. At the height of its weakness during the drought, the ONLF struck alliances with other Ethiopian armed groups as a means to decrease the government’s power and in turn relatively increase its own potential. As well, it called for international humanitarian assistance to assuage the drought’s effects and ensuing famine.

Again, the hurricane did not affect the Gulf Cartel in the slightest. Yet, the group partnered with other national DTOs when Los Zetas emerged as a formidable threat. At the time, Los Zetas’ splintering produced the gravest crisis for the Gulf Cartel – albeit an inherently political one. Still, its allegiant response to this situation gives reason to believe that this type of ANSA would respond similarly to an apolitical and pertinent threat.

**Conclusion**

This project demonstrates that ANSAs navigate crises in self-serving ways – be it to survive as an organization or to capitalize on the catastrophe as an opportunity to accrue power. Most insightfully, groups tend to respond to moments of national distress with surges in the projection of violence, allowing time and distance from the event to compound these increases in hostilities. A crisis might generate animus for violence because of how it disrupts the status quo and in turn makes actors more acutely aware of the stakes they hold in the political environment – and how the crisis threatens them.

These ANSA responses matter because they add to an armed group’s potential to wreak havoc. Already, ANSAs across the globe pose a greater threat to political stability and civilian livelihood today than they did forty years ago. This research illustrates that ANSAs’ crisis response mechanisms involve increasing reliance on the use of force, too. Together, all indicators point toward a net exacerbation of ANSA violence over time. With such violent responses, ANSAs also harbor a greater potential to trigger reinforcing crisis feedback loops, where their violent response to apolitical events produces domestic political crises, which in turn can give way to more domestic instability and more political crises – all with tremendous economic, political, and humanitarian tolls.

The quantitative results point to the important role that disaster types play in lethality modulations. Indeed, different crisis types affect lethality levels uniquely and significantly. Disaggregating the disaster type in the MLR models rather than just the spatial analysis models could offer more information on the matter. As well, adding crisis duration controls could serve to understand the salience of a crisis’ temporal component with regard to ANSA power. Similarly, crisis severity controls could help elucidate the threshold at which ANSAs are more likely to respond to catastrophes. Spatially, the next steps would involve expanding the array of events to include droughts, public health disasters, technological disasters, and economic strife, as well as geocoding the events’ severity to in polygonal as opposed to point formats.

This descriptively rich project still falls short of several goals. First, distinguishing between ANSA types would offer a more nuanced understanding of patterns of violence and crisis response.

\textsuperscript{443} Fjelde and Nilsson, “Rebels against Rebels,” 612, 620.
mechanisms. Similarly, conceptualizing where a group lies in its life cycle – and particularly from what relative power stance it enters a crisis – could provide a more reliable explanation of ANSA response mechanisms. Understanding how purported group ideologies play a role in crisis response patterns could also help parse more meaning to these results. Such explorations would likely necessitate a qualitatively heavy approach in order to flesh out these multiple dimensions in a nuanced manner. Without the availability of more particular and holistic data, the remaining quandaries may not lend themselves to a parsimonious quantitative investigation.

In this vein, if time and resources allowed, I would ideally create a power index, with components as diverse as group finance records, number of diplomatic ties, territorial holdings size, military capacity, and public support measures. From there, the spatial and statistical analyses would be more comparable and reliable, and their pertinent models would elucidate more than just lethality patterns as a proxy for a group’s monopoly on violence as a component of ANSA power; instead, it would speak to all three primary components and help gauge changes in resource devotion from one pillar to another after a moment of crisis. These steps would likely increase the models’ R-squared values, which indicate that the statistical analysis approach as of now is unable to explain much of the variation in the models. This criticism indicates that there are other important indicators that elude the models presented here; further research thus necessitates as a more robust exploration of potential explanatory variables.

Despite numerous potential next steps, this project provides a descriptive platform for ANSA power accrual mechanisms in times of apolitical crises, highlighting the most important paths for more elaborate investigations. Additionally, gleaning these ANSA patterns provides important policy reminders. First, donor states should ensure that governments allow humanitarian aid to reach the most affected areas in order to temper subsequent lethality level surges – especially if those areas fall beyond the state’s margin of interest. Similarly, when a state with active conflict experiences an apolitical crisis, the international community should be aware of the humanitarian costs that will ensue. At this point, the weakening crisis effects might produce an opening for peace negotiations, as was the case with the ONLF, despite the increases in lethality. Policymakers should prepare to nurture these peace-building opportunities. As well, conditioning economic relief packages on a government’s willingness to diplomatically engage an armed actor could reduce lethality rates in times of economic crisis.

Surely, this research does not provide a panacea for apolitical crisis management, much less for ANSA violence. Yet, it offers a descriptive overarching view of important conflict crossroads between armed actors and perilous, unpredictable, chaotic events. Comprehending the connections between the two can elaborate our understanding of hybrid warfare and armed challengers more broadly.
Appendix A: Crisis-ANSA Dataset

Dataset Construction

1. Load EM-DAT and set a singular scale and operationalization for each variable (especially ensure accordance among geocoordinate measures and notations).
2. Add a count column, populated with 1, and then group by year and country and summarize count to produce a sum of the number of natural disasters in a given country year.
3. Load GCD, omitting NAs and retaining only crisis dummy variables.
4. Subset to cases in or after 1989.
5. Pivot to a long format to then summarize the dummy variables into an economic crisis count under a new variable econcrisis.
6. Select desired WDI countries, territory size, and population size, and download CSV file.
7. Load WDI CSV and pivot to long format.
8. Load GED and remove cases where type_of_violence == 3 (i.e., one-sided violence) AND side_a includes “Government” (i.e., the perpetrator of the attack was the state and not an ANSA).
10. Join WDI controls by year and country.
11. Join GED events by year and country.
12. Create crisis count variable by aggregating the number of crises present (the sum of econcrisis and natural).
13. Create a binary dummy variable for the presence (1) or absence (0) of an apolitical national crisis in a given country-year.
14. Create perpetrator and non-perpetrator variables and death counts.
15. Create civilian casualties and fatalities lag variables.
16. Create fatality rate and civilian casualty rate variables.
## Codebook

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>NAs</th>
<th>Min</th>
<th>Median</th>
<th>Mean</th>
<th>Max</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>cyg</td>
<td>Country-year-group string</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>isoyear</td>
<td>ISO code and year string</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>country</td>
<td>Country of observation</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>region</td>
<td>Global region to which the country pertains</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>year</td>
<td>Year of observation</td>
<td>Integer</td>
<td>0</td>
<td>1989</td>
<td>2006</td>
<td>2006</td>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>countryyear</td>
<td>Country-year string</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>econcrisis</td>
<td>Tally of active economic crises in a country-year of observation</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.2405</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>econcrisis.x</td>
<td>$1/econcrisis$</td>
<td>Continuous</td>
<td>0</td>
<td>0.2</td>
<td>Inf</td>
<td>Inf</td>
<td>Inf</td>
<td></td>
</tr>
<tr>
<td>count</td>
<td>Tally of overall crises active in a country-year of observation</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>8.805</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Type</td>
<td>Min</td>
<td>Mean</td>
<td>Std Dev</td>
<td>Max</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>-----</td>
<td>------------</td>
<td>---------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>count.log</code></td>
<td>Log of <code>count</code> + 0.001</td>
<td>Continuous</td>
<td>0</td>
<td>-6.90775</td>
<td>1.60964</td>
<td>-0.01268</td>
<td>4.15890</td>
<td></td>
</tr>
<tr>
<td><code>binary</code></td>
<td>Dummy variable to code for the presence of a crisis (1) or not (0) in a country-year</td>
<td>Binary</td>
<td>0</td>
<td>-6.90775</td>
<td>1.38654</td>
<td>-0.08296</td>
<td>4.15890</td>
<td></td>
</tr>
<tr>
<td><code>natural</code></td>
<td>Tally of natural disasters in a country-year of observation</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>8.565</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td><code>natural.log</code></td>
<td>Log of <code>natural</code> + 0.001</td>
<td>Continuous</td>
<td>0</td>
<td>-6.90775</td>
<td>1.38654</td>
<td>-0.08296</td>
<td>4.15890</td>
<td></td>
</tr>
<tr>
<td><code>side_a</code></td>
<td>One side of a conflict dyad; if the government is involved in the dyad, <code>side_a</code> is always the government</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><code>side_b</code></td>
<td>Second side of the dyad; in one-sided violence, <code>side_b</code> is always civilians</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Data Type</td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>active_year</td>
<td>Dummy variable coding for whether the country-year experienced conflict (1) or not (0)</td>
<td>Binary</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0.6332</td>
<td></td>
<td></td>
</tr>
<tr>
<td>type_of_violence</td>
<td>Type of UCDP conflict: 1) state-based conflict; 2) non-state conflict; 3) one-sided violence</td>
<td>Ordinal</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1.785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>perpetrator</td>
<td>If side_a is a government, side_b is considered the perpetrator of the attack; if side_a is not a government, side_a is considered the perpetrator.</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>population</td>
<td>Total population count for a given country-year. Data from WDI.</td>
<td>Continuous</td>
<td>3.3x10^5</td>
<td>4.205x10^7</td>
<td>1.510x10^9</td>
<td>1.386x10^9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>logpop</td>
<td>Log of population</td>
<td>Continuous</td>
<td>12.71</td>
<td>17.55</td>
<td>17.56</td>
<td>21.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Type</td>
<td>Min</td>
<td>1st Quartile</td>
<td>Median</td>
<td>3rd Quartile</td>
<td>Max</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------</td>
<td>-----</td>
<td>--------------</td>
<td>--------</td>
<td>--------------</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>sqkm</td>
<td>Country territory in square kilometers</td>
<td>Continuous</td>
<td>0</td>
<td>320</td>
<td>676,590</td>
<td>1,457,712</td>
<td>17,098,250</td>
<td></td>
</tr>
<tr>
<td>sqkm.log</td>
<td>Log of sqkm</td>
<td>Continuous</td>
<td>0</td>
<td>5.768</td>
<td>13.425</td>
<td>13.370</td>
<td>16.654</td>
<td></td>
</tr>
<tr>
<td>cyg_fatalities</td>
<td>Sum of overall fatalities associated with a country-group-year</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>285.6</td>
<td>61,725</td>
<td></td>
</tr>
<tr>
<td>cyg_fatalities.log</td>
<td>Log of cyg_fatalities + 0.001</td>
<td>Continuous</td>
<td>0</td>
<td>-6.908</td>
<td>3.401</td>
<td>3.180</td>
<td>11.030</td>
<td></td>
</tr>
<tr>
<td>cyg_civ</td>
<td>Sum of all civilian casualties associated with a country-group-year</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>52.98</td>
<td>30,110</td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Type</td>
<td>Min</td>
<td>Max</td>
<td>Mean</td>
<td>Count</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cyg_civ.log</td>
<td>Log of $cyg_{civ}$ + 0.001</td>
<td>Continuous</td>
<td>-6.908</td>
<td>0.001</td>
<td>-1.929</td>
<td>10.313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>perpdeaths</td>
<td>Sum of perpetrator deaths associated with a country-group-year</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>91.76</td>
<td>22,798</td>
<td></td>
</tr>
<tr>
<td>perpdeaths.log</td>
<td>Log of $perpdeaths$ + 0.001</td>
<td>Continuous</td>
<td>-6.908</td>
<td>0.001</td>
<td>-1.828</td>
<td>10.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nonperpdeaths</td>
<td>Sum of side_a deaths if perpetrator is side_b, sum of side_b deaths otherwise</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>67.95</td>
<td>30,072</td>
<td></td>
</tr>
<tr>
<td>nonperpdeaths.log</td>
<td>Log of $nonperpdeaths$ + 0.001</td>
<td>Continuous</td>
<td>-6.908</td>
<td>0.001</td>
<td>-2.092</td>
<td>10.311</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Type</td>
<td>Coefficients</td>
<td>P-values</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>--------------</td>
<td>----------------</td>
<td>----------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>deaths_unknown</td>
<td>Number of deaths of unidentifiable conflict parties associated with a country-group-year</td>
<td></td>
<td>0</td>
<td>0</td>
<td>72.92 48,183</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>deaths_unknown_log</td>
<td>Log of deaths_unknown + 0.001</td>
<td>Continuous</td>
<td>0</td>
<td>-6.908</td>
<td>-2.219 10.783</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>deaths_a</td>
<td>Side_a deaths associated with a country-group-year</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>67.81 30,072</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>deaths_b</td>
<td>Side_b deaths associated with a country-group-year</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>91.9 22,798</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fat_pop</td>
<td>Fatality rate per 100,000 inhabitants, obtained by dividing cyg_fatilities over population times 100 for each country-group-year</td>
<td>Continuous</td>
<td>0</td>
<td>0.0000658</td>
<td>0.0017823 0.7677644</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Distribution</td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Median</td>
<td>10th Percentile</td>
<td>90th Percentile</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>------</td>
<td>--------------------</td>
<td>--------</td>
<td>-----------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>fat_pop.log</td>
<td>Log of fat_pop + 0.001</td>
<td>Continuous</td>
<td>0</td>
<td>-6.908</td>
<td>-6.844</td>
<td>-6.555</td>
<td>-0.263</td>
<td></td>
</tr>
<tr>
<td>civcas_pop</td>
<td>Civilian casualty rate per 100,000 inhabitants, obtained by dividing cyg_civ over population times 100 for each country-group-year</td>
<td>Continuous</td>
<td>0</td>
<td>6.1x10^-7</td>
<td>4.257x10^-4</td>
<td>2.181x10^-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>civcas_pop.log</td>
<td>Log of civas_pop + 0.001</td>
<td>Continuous</td>
<td>0</td>
<td>-6.908</td>
<td>-6.907</td>
<td>-6.791</td>
<td>-1.518</td>
<td></td>
</tr>
<tr>
<td>fatalities_lag</td>
<td>fat_pop minus a 1-year lag of fat_pop, rendering the difference in fatality rates from one year to the next for each country-group-year</td>
<td>Continuous</td>
<td>2777</td>
<td>-0.3140</td>
<td>0</td>
<td>-0.0013</td>
<td>0.3463</td>
<td></td>
</tr>
<tr>
<td>civcas_lag</td>
<td>civas_pop minus 1-year lag of civas_lag, rendering the difference in civilian casualty rates from one year to the next for each country-group-year</td>
<td>Continuous</td>
<td>2777</td>
<td>-0.0707</td>
<td>0</td>
<td>-0.0002</td>
<td>0.0952</td>
<td></td>
</tr>
</tbody>
</table>

Table 13. Codebook for the Crisis ANZA Dataset.
Appendix B: Spatial Analysis Datasets

Construction

1. Subset EM-DAT to geolocated cases in or after 1989.
2. Create a CSV of cases in each year of the dataset.
3. Load year subset CSVs and ANSA dataset to ArcGIS, convert tables to points.
4. Create spatial joins of all ANSA attack points within 100 and 1,000 geodesic kilometers of each natural disaster per year. Each observation will constitute a natural disaster and an ANSA attack that occurred within the distance threshold from that disaster.
5. Export spatial joins as CSVs.
6. In R, bind together all year subsets within each distance threshold.
7. Create a column that measures the timespan between a natural disaster and the associated ANSA attack.
8. Subset to attacks that occurred within three years of a natural disaster.
9. Create 4-month interval sequences in both temporal directions from natural disasters. Each event thus has an observation for each interval, rendering the event-level dataset for each distance threshold.
10. Group by interval and aggregate, then average, the number of civilian casualties, fatalities, logged civilian casualties, and logged fatalities for each, creating the interval-level dataset for each distance threshold.
## Codebooks

### Event-Level 100 KM Threshold Dataset

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>NAs</th>
<th>Min</th>
<th>Median</th>
<th>Mean</th>
<th>Max</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>event_id</td>
<td>Identification code for a natural disaster.</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interval</td>
<td>4-month intervals within a total of 36 months before and after each natural disaster. Scale from -9 to 9, with each integer times 4 rendering the end of the interval (e.g., -9 * 4 = -36, with -9 thus representing 32-36 months before the natural disaster). Reference level is -1.</td>
<td>Integer</td>
<td>0</td>
<td>-9</td>
<td>-1</td>
<td>-0.2426</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>interval.f</td>
<td>Ordinal measure of <code>interval</code>. Reference level -1.</td>
<td>Ordinal</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DisasterType</td>
<td>The type of natural disaster event: earthquake (baseline), landslide, flood, storm.</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Type</td>
<td>Min</td>
<td>Mean</td>
<td>Median</td>
<td>Max</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----</td>
<td>-------</td>
<td>--------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fatalities</td>
<td>Fatality count from an attack within 100 kilometers of the event.</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fatalitieslog</td>
<td>Log of fatalitieslog + 0.000001</td>
<td>Continuous</td>
<td>0</td>
<td>-13.816</td>
<td>2.485</td>
<td>2.183</td>
<td>9.069</td>
<td></td>
</tr>
<tr>
<td>civcas</td>
<td>Civilian casualty count from an attack within 100 kilometers of the event.</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>civcaslog</td>
<td>Log of civcas + 0.000001</td>
<td>Continuous</td>
<td>0</td>
<td>-13.816</td>
<td>-13.816</td>
<td>-6.125</td>
<td>8.676</td>
<td></td>
</tr>
</tbody>
</table>

Table 14. Codebook for the Event-Level 100 Kilometer Threshold Dataset, used for linear regression spatial analysis models.
**Event-Level 1000 KM Threshold Dataset**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>NAs</th>
<th>Min</th>
<th>Median</th>
<th>Mean</th>
<th>Max</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>event_id</td>
<td>Identification code for a natural disaster.</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>interval</td>
<td>4-month intervals within a total of 36 months before and after each natural disaster. Scale from -9 to 9, with each integer times 4 rendering the end of the interval (e.g., -9 * 4 = -36, with -9 thus representing 32-36 months before the natural disaster). Reference level is -1.</td>
<td>Integer</td>
<td>0</td>
<td>-9</td>
<td>-1</td>
<td>-0.08229</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>interval.f</td>
<td>Ordinal measure of interval. Reference level -1.</td>
<td>Ordinal</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DisasterType</td>
<td>The type of natural disaster event: earthquake (baseline), landslide, flood, storm.</td>
<td>Character</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>fatalities</td>
<td>Fatality count from an attack within 1000 kilometers of the event.</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>165</td>
<td>888.4</td>
<td>39,841</td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Type</td>
<td>Min</td>
<td>Mean</td>
<td>SD</td>
<td>Max</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>----------</td>
<td>-----</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fatalitieslog</td>
<td>Log of fatalitieslog + 0.000001</td>
<td>Continuous</td>
<td>0</td>
<td>-13.816</td>
<td>5.106</td>
<td>4.876</td>
<td>10.593</td>
<td></td>
</tr>
<tr>
<td>civcas</td>
<td>Civilian casualty count from an attack within 1000 kilometers of the event.</td>
<td>Integer</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>155.8</td>
<td>33,016</td>
<td></td>
</tr>
<tr>
<td>civcaslog</td>
<td>Log of civcas + 0.000001</td>
<td>Continuous</td>
<td>0</td>
<td>-13.8155</td>
<td>2.9957</td>
<td>0.2242</td>
<td>10.4047</td>
<td></td>
</tr>
</tbody>
</table>

*Table 15. Codebook for the Event-Level 1000 Kilometer Threshold Dataset, used for linear regression spatial analysis models.*
## Interval-Level 100 KM Threshold Dataset

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>NAs</th>
<th>Min</th>
<th>Median</th>
<th>Mean</th>
<th>Max</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>interval</td>
<td>4-month intervals within a total of 36 months before and after each natural disaster. Scale from -9 to 9, with each integer times 4 rendering the end of the interval (e.g., (-9 \times 4 = -36), with -9 thus representing 32-36 months before the natural disaster). Reference level is -1.</td>
<td>Integer</td>
<td>0</td>
<td>-9</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td><img src="https://via.placeholder.com/400" alt="Histogram of interval" /></td>
</tr>
<tr>
<td>xfat</td>
<td>Mean fatalities within 100 km of natural disaster events per interval.</td>
<td>Continuous</td>
<td>0</td>
<td>50.24</td>
<td>85.04</td>
<td>85.15</td>
<td>131.32</td>
<td><img src="https://via.placeholder.com/400" alt="Histogram of xfat" /></td>
</tr>
<tr>
<td>xfatlog</td>
<td>Log of xfat.</td>
<td>Continuous</td>
<td>0</td>
<td>1.852</td>
<td>2.179</td>
<td>2.187</td>
<td>2.501</td>
<td><img src="https://via.placeholder.com/400" alt="Histogram of xfatlog" /></td>
</tr>
<tr>
<td>xcivcas</td>
<td>Mean civilian casualties within 100 km of natural disaster events per interval.</td>
<td>Continuous</td>
<td>0</td>
<td>6.761</td>
<td>12.820</td>
<td>15.786</td>
<td>40.415</td>
<td><img src="https://via.placeholder.com/400" alt="Histogram of xcivcas" /></td>
</tr>
</tbody>
</table>
Table 16. Codebook for the Interval-Level 100 Kilometer Threshold Dataset, used for Loess trend lines for spatial analysis.

<table>
<thead>
<tr>
<th>xcivcaslog</th>
<th>Log of xcivcas</th>
<th>Continuous</th>
<th>0</th>
<th>-6.785</th>
<th>-6.111</th>
<th>-6.127</th>
<th>-5.736</th>
</tr>
</thead>
</table>

Chart showing the distribution of xcivcas values.
### INTERVAL-LEVEL 1000 KM THRESHOLD DATASET

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Data Type</th>
<th>NAs</th>
<th>Min</th>
<th>Median</th>
<th>Mean</th>
<th>Max</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>interval</td>
<td>4-month intervals within a total of 36 months before and after each natural disaster. Scale from -9 to 9, with each integer times 4 rendering the end of the interval (e.g., -9 * 4 = -36, with -9 thus representing 32-36 months before the natural disaster). Reference level is -1.</td>
<td>Integer</td>
<td>0</td>
<td>-9</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td><img src="image1.png" alt="Histogram" /></td>
</tr>
<tr>
<td>xfat</td>
<td>Mean fatalities within 1000 km of natural disaster events per interval.</td>
<td>Continuous</td>
<td>0</td>
<td>760.5</td>
<td>861.2</td>
<td>890.3</td>
<td>1138.1</td>
<td><img src="image2.png" alt="Histogram" /></td>
</tr>
<tr>
<td>xfatlog</td>
<td>Log of xfat.</td>
<td>Continuous</td>
<td>0</td>
<td>4.735</td>
<td>4.859</td>
<td>4.877</td>
<td>4.992</td>
<td><img src="image3.png" alt="Histogram" /></td>
</tr>
<tr>
<td>xcivcas</td>
<td>Mean civilian casualties within 1000 km of natural disaster events per interval.</td>
<td>Continuous</td>
<td>0</td>
<td>127.1</td>
<td>150.8</td>
<td>156.2</td>
<td>166.3</td>
<td><img src="image4.png" alt="Histogram" /></td>
</tr>
<tr>
<td>xcivcaslog</td>
<td>Log of xcivcas</td>
<td>Continuous</td>
<td>0</td>
<td>-0.11021</td>
<td>0.21096</td>
<td>0.22639</td>
<td>0.60985</td>
<td></td>
</tr>
</tbody>
</table>

Table 17. Codebook for the Interval-Level 1000 Kilometer Threshold Dataset, used for Loess trend lines for spatial analysis.
Appendix C: Bibliography


infobae. “De socios a enemigos: el lazo que hubo entre el CJNG y el Cártel de Sinaloa,” August 29, 2020. /america/mexico/2020/08/30/de-socios-a-enemigos-el-lazo-que-hubo-entre-el-cjng-y-el-cartel-de-sinaloa/.


“Delincuencia Organizada Transnacional En Centroamérica y El Caribe: Una Evaluación de Las Amenazas.” Viena: Oficina de las Naciones Unidas contra la DROGA y el Delito (UNODC), September 2012.


Policzer, Pablo. “Assistant Professor Department of Political Science University of Calgary 2500 University Drive NW Calgary, Alberta Canada T2N 1N8,” n.d., 17.


