2020

# Predicting and Mitigating Civil Conflict: Vertical Grievances and Conflict in Central Africa

Jd Walter
*Walden University*

# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Jd Walter

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Glenn Starks, Committee Chairperson,
Public Policy and Administration Faculty

Dr. Mark Gordon, Committee Member,
Public Policy and Administration Faculty

Dr. Richard DeParis, University Reviewer,
Public Policy and Administration Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2019

Abstract

Predicting and Mitigating Civil Conflict: Vertical Grievances and Conflict in Central Africa

by

Jd Walter

MPA, Walden University, 2014

MS, Capella University, 2006

BA, American Public University System, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

February 2020

Abstract

Recent conflict research has relied on proxy variables of horizontal inequality to make causal assumptions, but these do not reveal the root of deprivation in aggrieved populations. However, it is important to continue to explore the greed-grievance dichotomy to explain the persistence of violent civil conflict. The purpose of this quantitative study was to expand this line of inquiry by investigating the relationship between indicators of vertical deprivation and reported civil conflict incidents to determine whether a significant correlation exists. Relative deprivation theory provided the framework for this study, which consisted of 10,779 survey responses regarding lived experience across 7 countries experiencing a total of 890 civil conflict incidents in 2016. Although tests of multiple linear regression indicated statistically significant relationships ($p < .001$) between two of the predictor variables and reported civil conflict incidents, the availability of electricity when connected to the main made the most substantial contribution to the model in both predictability and correlation. Therefore, the findings provide insight into the type and nature of deprivations, such as those associated with access to and availability of electricity, that have the greatest potential of becoming grievances susceptible to exploitation by conflict entrepreneurs. Implications for positive social change include using this analysis to promote increased conflict inquiry among public administration scholars and to inform a more substantive role of local government managers in identifying and remediating vertical grievances, thereby mitigating civil conflict.

# Predicting and Mitigating Civil Conflict: Vertical Grievances and Conflict in Central Africa

by

Jd Walter

MPA, Walden University, 2014

MS, Capella University, 2006

BA, American Public University System, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

February 2020

Dedication

To be poor is to be invisible to your fellow human beings, and the indignity of invisibility is often worse than the lack of resources.

—Francis Fukuyama

Table of Contents

List of Tables

List of Figures

# Chapter 1: Introduction to the Study

Violent insurgency and extremism as an outcome of social, political, and economic grievances remains a challenge for society (Thyne, 2017). Though not universally accepted as a cause of conflict, grievances are increasingly articulated by a population that has come to expect fairness as a fundamental right of human dignity (Glensy, 2011). As a reflection of this expectation, vertical grievances are shaped by perceptions of deprivation that render the aggrieved susceptible to exploitation. However, researchers rely on objective indicators to predict subjective grievances, which is ineffective given the generally coercive nature of resolution tactics (Sobek, 2010). To address civil conflict, a shift must occur to "tighten the logic of causal inference" (Cederman, Gleditsch, & Buhaug, 2013, p. 17) and enable preconflict grievance remediation by revealing the causes of vertical grievances through microlevel analysis.

To promote a more universal foundation of understanding, this study was focused on testing the strength of the relationship between indicators of grievance and civil conflict to help establish a conflict causal model that enhances prediction and mitigation. With relative deprivation theory as a theoretical framework, this study suggests that individual perceptions of unfairness derived from subjective comparisons may be further categorized as grievances of either access or distribution, which is linked to civil conflict through exploitation (see Klandermans, 2015). As current research does not present a clear conclusion regarding causation of conflict based on variables of inequality (Cederman & Wucherpfennig, 2017), this study adds to the body of civil conflict knowledge by suggesting that the nature of the underlying deprivation perception is what

exposes vertical grievances to exploitation by conflict entrepreneurs (Eide, 1997). This study was also based on the delineation between conceptually and empirically defined stages of conflict to shape future research, with a focus on the formation of grievances that lead to conflict as a way to address the actions that cause conflict to occur (Bartusevicius & Gleditsch, 2019). Appropriately operationalized, these insights can inform grassroots remediation of vertical grievances rather than relying on national or international institutions to suppress horizontal conflict.

The remainder of this chapter details the problem statement, purpose of the study, research questions, and theoretical framework, as well as the scope, limitations and significance of the study. Additionally, Chapter 1 includes definitions of conflict concepts key to this study, such as conflict entrepreneurship, civil conflict and grievances that introduce more in-depth literature review within Chapter 2.

## Background

Conflict studies have been inconsistent regarding causal links between vertical grievances and civil conflict (Houle, 2016), partially because of the group nature of fighting (Rustad, 2016). More significantly, however, contemporary literature tends to focus on horizontal inequalities reflected in cross national indicators as proxy variables rather than on cognitive comparisons representing vertical grievances for predicting civil conflict (Hillesund, 2019; Sousa, 2016). Additionally, although earlier studies emphasized the greed–grievance dichotomy in positing causes of conflict (Taydas, Enia, & James, 2011), more recent research suggests that the variables are not mutually exclusive (Lindemann & Wimmer, 2018) but rather combine to create opportunities for

discord (Jazayeri, 2016). Similarly, distinctions between vertical and horizontal inequalities might also be viewed as complimentary rather than exclusionary conditions in terms of sequencing grievances and conflict.

Alternative to the dichotomous view of greed and grievance and the directional nature of inequality, this study suggests that grievances as perceptions of unfairness are the primary determinant of all conflict but that grievances themselves, whether vertical or horizontal, cannot become conflict without other aggravating factors. This argument suggests that the aggregation of vertical grievances is a deliberate act of selfish actors (Koos, 2018), seeking to maximize their material position through exploitation (Cederman & Vogt, 2017). Additionally, the presence of grievances, however subdued or even manufactured, is necessary to gain allegiance to an ideal (Bara, 2014). That is, opportunistic conflict cannot be separated from the role grievance plays in its ability to recruit, as the absence of frustration removes the opportunity for the greed-motivated actor to gain strength and power through horizontal aggregation.

Breaking down inequality into strains of deprivation—either access to or distribution of resources and representation—establishes a conceptual foundation upon which future research can deconstruct grievances and more align each with their level of exploitability as a way to predict civil conflict. Moving away from binary conceptualizations of conflict (Bara, 2014), and moving toward interdependent opportunity structures can inform local interventions and shape grassroots remediation (Wig & Tollefsen, 2016). Figure 1 presents a notional civil conflict causal model that

highlights the intersection of unremediated grievances and environmental conditions that can stimulate civil conflict.

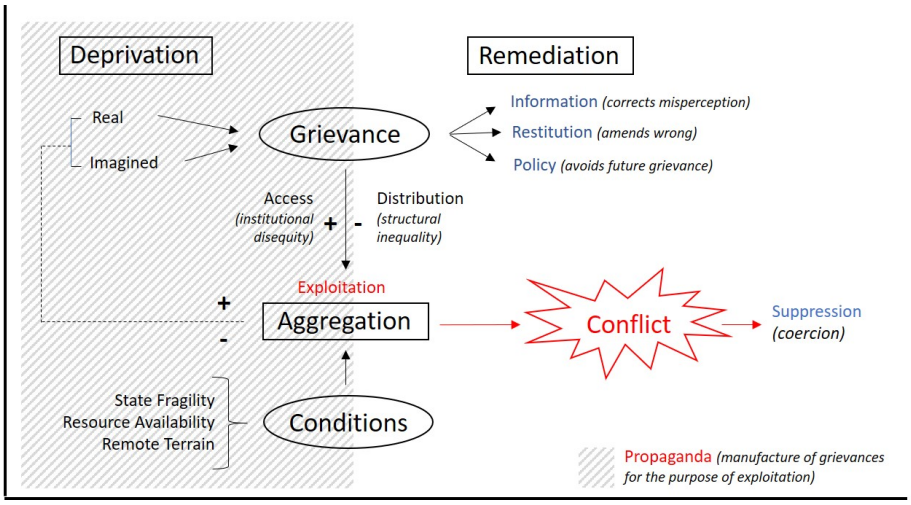


*Figure 1*. Notional civil conflict causal model.

This study addresses the gap in knowledge of how grievances are acted upon in aggregation to foster conflict, as establishing causality between horizontal inequalities and conflict is ineffective in resolving underlying frustration and orients intervention to coercive postconflict scenarios. With the goal of reframing conflict resolution as conflict mitigation through proactive grievance remediation, this study encourages developing a comprehensive causal chain by addressing whether grievance type is a substantive variable for consideration. Delineating grievances by their root deprivation (perception of injustice) and establishing individual susceptibility to exploitation can help grassroots actors, particularly local government administrators, to prioritize grievance remediation and use available resources to solve grievances before they have an opportunity to aggregate.

## Problem Statement

Civil conflict literature is inconsistent and is focused on a greed–grievance dichotomy (Koubi & Bohmelt, 2014) that suggests the desire for self-enrichment rather than demographic inequalities are the motivating factors of civil dispute. Violent conflict cannot be connected only to vertical inequalities (grievances), and opportunism (greed) alone does not predict conflict. As aggravating factors (conditions) of civil conflict are also limited to providing rough approximations of risk rather than revealing causes of conflict (Gibler, 2017), a deeper understanding of conflict requires investigation of perceptions that permit horizontal exploitation. Systematically defining causes of grievances as a product of perceived deprivation of access or distribution presents a rationalized view of the mood of the people (Davies, 1962), which results in a more distinctive causal chain from which grievance remediation and conflict mitigation may improve (Buhaug, Cederman, & Gleditsch, 2014). Thus, this study was based on the idea that conflict is *caused* by militarization, where aggregation occurs in the combination of grievances and aggravating factors (conditions), as opportunistic actors (conflict entrepreneurs) exploit grievances to foster mass mobilization by playing on individual or group fears and experiences to create the perception of risk.

Recognizing that not all inequalities manifest as grievances and not all grievances trigger conflict (Cederman et al., 2013), three fundamental challenges face practitioners seeking its resolution. First, grievances are behavioral expressions of frustration from unmet and rising expectations in the face of persistent social, political, or economic inconsistencies that when unaddressed may be exploitable (Thomson, 2016). Second,

measuring grievances directly is difficult (Davies, 1962), so evaluation tends to rely on macrolevel ethno-demographic configurations (Buhaug et al., 2014) that do not generate true conflict plausibility (Chiba & Gleditsch, 2017). Third, increasingly globalized economic trends exacerbate local frustrations, evidenced by the concurrent intensification of cross-border economic flows and incidents of emulative violent conflict (Mihalache-O'Keef, 2018).

Building on existing research, this study was intended to establish a testable relationship between grievance and conflict as a foundational element of a larger causal chain, suggesting that intervention should happen before frustrations derived from perceived deprivation of access or distribution become grievances. Causal tests likewise tend toward the aggregate, with a focus on horizontal or group-based discord rather than investigating relationships between disaggregated or individual deprivation, whether real or imagined (Rustad, 2016). Regardless of the aggregate orientation of theories of conflict causality, proxy variables do suggest distinctions of access and distribution (Hillesund, 2019), with ethnicity mattering in the context of nationalism and resources driving competition between emerging political, social, or economic units (Cederman & Wucherpfennig, 2017). Given the potential discrepancy between individual perception and reality (Koos, 2018), further limitations exist in making valid inferences between perceived conditions and objective indicators (Miodownik & Nir, 2015). However, if conflict is taken as the exploitation of grievance, the latter's validity is independent of a grievance's real or imagined origin.

## Purpose of the Study

The purpose of this multiple linear regression study was to reveal the connection between the root of grievances as expressions of frustration from perceived deprivation and their influence on incidents of civil conflict. Greater comprehension of how these perceived deprivations affect grievances not only informs the development of approaches, processes, or methodologies but also presents opportunities for more direct and deliberate grassroots remediation. These remedial actions can mitigate the risk of exploitation, thereby inhibiting the rise of civil conflict.

To address this purpose, a statistical analysis of grievances and incidents of civil conflict was conducted using a sample drawn from Central African states identified as at-risk due to high levels of food insecurity and reported conflict incidents by the African Center for Strategic Studies (2017; see Figure 2). The test variables included indicators of access deprivation (compared living conditions) and indicators of distribution deprivation (availability of clean water and electricity) captured within the Afrobarometer (2016) as the independent or predictor variables. Incidents of civil conflict drawn from the Uppsala Conflict Data Program (UCDP) Georeferenced Event Dataset Global (2017) served as the dependent variable. Regression analysis was conducted to determine the existence and strength of correlation between incidents of civil conflict, as the dependent variable, and independent variables of grievance, reflecting individual political, social, and economic conditions. Strength of correlations between indicators of access and distribution deprivation to incidents of conflict were compared to suggest whether one is more likely to result in civil conflict than the other.

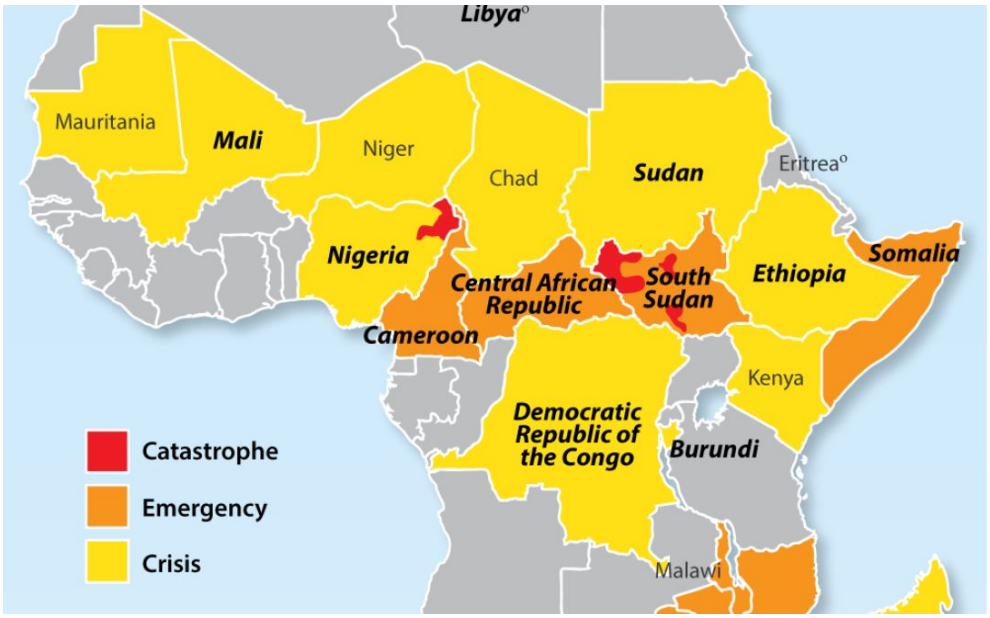


*Figure 2*. Central African states suffering high rates of food insecurity and conflict. From "Acute Food Insecurity and Conflict in Africa," by African Center for Strategic Studies, 2017 (https://africacenter.org/spotlight/acute-food-insecurity-conflict-africa/). In the public domain.

## Research Questions

This study was based on the following research question: What individual perceptions of inequality predict incidents of civil conflict in fragile Central African states. The hypotheses for this study was:

$H_0$: Grievances of compared living conditions, how often gone without clean water, and availability of electricity do not predict incidents of civil conflict in fragile Central African states.

$H_1$: Grievances of compared living conditions, how often gone without clean water, and availability of electricity do predict incidents of civil conflict in fragile Central African states.

Answering the research question allowed me to test whether indicators of deprivation of access or distribution, are more or equally correlated to conflict. With multiple linear regression, I tested variation among and between deprivations.

## Theoretical Framework

The theoretical framework for this study is relative deprivation, as derived from Stouffer and advanced into full-scale social science theory (Pettigrew, 2015). Relative deprivation stems from inequalities that create widespread discontent (Koubi & Bohmelt, 2014) and can be defined as "a judgement that one or one's ingroup is disadvantaged compared to a relative referent, and that this judgement invokes feelings of anger, resentment and entitlement" (Smith & Pettigrew, 2015, p. 2). Deprivation is either individual-based (vertical) or group-based (horizontal), but in either case requires four psychological processes: making cognitive comparisons, appraising disadvantage, valuing the disadvantage as unfair, and resenting the unfairness. This meaning of relative deprivation is important to its application to social, political, or economic grievances and their relationship with civil conflict from two perspectives. First, the theory suggests that perceptions may be stronger antecedents to conflict than absolute deprivation (Pettigrew, 2016) and second, it stipulates that individual deprivation must precede group deprivation (Osborne, Sibley, Huo, & Smith, 2018).

The implications of relative deprivation theory require moving past macro inequalities as predictors of conflict and aligning individual measures and levels of analysis (Smith et al, 2018) to capture how vertical grievances are at risk for civil conflict. In this study, relative deprivation guided the evaluation of deprivation by distinguishing type as either access or distribution as well as suggesting that grievances are not the antecedent to conflict but rather to aggregation and exploitation, which may then be elevated to conflict. Reflecting the research questions, the relative deprivation perspective of this study was that the greater the alignment of perceived deprivation (attitudinal indicators) and absolute deprivation (objective indicators), the greater the tenacity of the grievance. However, although tenacity may reflect susceptibility to exploitation, it does not necessitate imagined grievances are impervious to exploitation. A more detailed explanation of relative deprivation theory, its history, and its implications are provided in Chapter 2.

## Nature of the Study

The nature of this study was quantitative with multiple linear regression to test archival data of civil conflict incidents across seven Central African states in 2016. Data from respondents were analyzed to measure the relationship between grievances of perceived deprivation of access and distribution and civil conflict. Thus, the purpose of quantitative testing was to expose a statistical proposition as a precursor to more systematic ways of understanding grievances and civil conflict associated with the positivist tradition (see Babones, 2016; Creswell, 2014). The selection of a multiple linear regression study was appropriate to extend current research suggesting a

relationship between inequality and conflict, where inequality represents perceptions of deprivation expressed as grievances. Although correlation does not necessarily imply causation (Mertler, 2016), testing the correlation coefficient between the variables can demonstrate a strength of relationship, either positive or negative, or result in no relationship at all.

Research is needed to discover not only whether there is a relationship between grievances and civil conflict but what the magnitude and direction of that relationship might be, which can help tests of causality. As such, the test of correlation was not intended to be a precursor to suggesting potential causality between grievances and conflict but rather susceptibility to opportunity (Bara, 2014), where the stronger the grievance the more susceptible it is to exploitation. Further, distinguishing between two subvariables, deprivation of access and grievances of distribution, was intended to provide evidence that one is more strongly related to conflict and thus more exploitable. This evidence may provide a more comprehensive understanding of how human frustrations give rise to civil conflict. The methodology for this study was to leverage data of civil conflict incidents within seven Central African nations identified by the African Center for Strategic Studies (2017) as being at-risk of acute food insecurity and civil conflict. Conflict incident data were drawn from UCDP Georeferenced Event Dataset Global (2017). Indicators of deprivation were drawn from Afrobarometer Round Six (2016). Analysis of the data included Pearson *r* correlation with follow-on tests of significance.

## Definitions

In the context of civil conflict research and literature, several terms present ambiguity or conflict in application across numerous studies and practical application as noted in previous sections. Although, the various terms will be further explored in Chapter 2, this section provides key terms of civil conflict literature related to the present study.

*Causal chain:* Because universal causality is difficult to establish between variables of horizontal inequality and evidence of civil conflict, research relies on tests of correlation to establish variable relationships. However, factors generally correlated to conflict may not directly result in conflict (Gibler, 2017). Causality requires immediate adjacency between variables, but as civil conflict involves complex social processes, no concise causal map has been developed for civil conflict that accommodates the various triggers, mass mobilization methodologies, and catalysts of conflict (Temirkulov, 2014). Rather than posit an alternative binary causality, Gross (2018) argues in favor of sequencing to establish a chain that points to dynamic causality between microlevel factors in the context of multiple causal influences (Mertler, 2016). For this study, the civil conflict causal chain was conceived of as underlying, exploitable grievances, aggravating environmental conditions, and entrepreneurial aggregation to establish and sustain conflict.

*Conflict entrepreneur:* Derived from a 1994 United Nations report on minority conflict, Eide (1997) defined the role of the conflict entrepreneur as “individuals who take the necessary and deliberate steps to ignite a violent conflict . . . to gain something

through the exploitation of new power relationships" (p. 44). The concept evolves from the argument that security is best understood as a speech act (Eide, 1997), whereby an ordinary condition is translated into a security concern through manipulative and exploitative processes. Under this concept, conflict entrepreneurship involves the "greedy rebel" using grievances as an "ideological smokescreen" (Cederman & Vogt, 2017, p. 1996) to foster his or her personal agenda. In the context of this study, the notion of conflict entrepreneurship was central to conflict being the product of aggregation, where the exploitation of individual grievances, however mundane, excites a mass through identity politics (Fukuyama, 2018) to follow determined political actors into defense of group survival (Bakkan, Jakobsen, & Jakobsen, 2016). Following Eide, the art of aggregation is the cause of civil conflict, whereas the exploitable grievance is the underlying root susceptible to exploitation.

*Civil conflict:* Contemporary conflict literature distinguishes conflict in a variety of ways, from simple object-orientated civil-communal delineations (Hillesund, 2019), to compound motivation-based categorizations (Choi & Raleigh, 2015). Such literature contends with the role of coup d'état (see Thyne, 2017; Houle, 2016), the rise of political terrorism (Ozcan, 2018), and the advent of nonviolent campaigns (Gleditsch & Rivera, 2017) as legitimate forms of conflict, but no single conflict model provides definitive delineation between traditional civil war, rebellion, insurgency, militia action, or violent extremism, etc. Although the strength of the state provides substantive consideration in classification of conflict (Ghatak & Prins, 2017), direct governmental participation is prevalent in most forms (Bartusevicius & Gleditsch, 2019), where the desired end state is

generally either state power or territory. For the purposes of this study, civil conflict was taken as any of a form of contested incompatibilities that arise between multiple actors, whether individuals or groups, either governmental or nonstate.

*Grievance:* Civil conflict literature aligns grievances to horizontal inequalities that exclude groups from political or economic advantages (Raleigh, 2014), though vertical grievances have also been theorized and tested for correlational value. Grievances, whether vertical (between individuals) or horizontal (between groups), may generally result from either political inequalities restricting access to executive power or economic inequalities limiting distribution of resources (Hillesund, 2019), while the perceived gap between expectation and achievement leads to dissatisfaction (Klandermans, 2015). Although grievances may be real or imagined and formed from perceptions of relative or absolute deprivation (Ige, 2014), the aggrieved are still susceptible to exploitation by conflict actors (Harrison, 1980). In the context of this study, grievance is any perception, real or imagined, rooted in deprivation, whether relative or absolute, that stimulates individual frustrations and presents an opportunity to horizontally aggregate and serve as the precursor to civil conflict. The suggestion of grievances being rooted in access or distribution is a starting point to future development of a grievance taxonomy.

## Assumptions

This study was designed around a fundamental assumption of human psychology—that conflict among individuals and between groups is innate and thus indistinguishable from the lived experience, and that as a pervasive and a natural

expression of human psychology conflict cannot be eradicated. This suggests that all conflict is rooted in grievances that arise from perceptions of competition that may be constrained to avoid violent expression. Such conflict is healthy and necessary to biological and social evolution, but unchecked violent conflict is debilitating. Without this assumption, the postulates of grievance as the root of conflict and remediation as the core of mitigation would be irrelevant, leaving conflict suppression ambivalent to any underlying cause the only reasonable practice.

## Scope and Delimitations

This study was intended to generate a better understanding of the relationship between grievances and conflict and to suggest that civil conflict is the result of a confluence of factors. The scope of this study was chosen as a reaction to the generally mutually exclusive nature of conflict literature and toward development of a full causal chain. The study was built around cases of civil conflict in Central African nations to leverage the generally accepted difficulties of resolving conflict in that region given the many factors acting upon discord, which are detailed further in Chapter 2. I attempted to distinguish grievance type of either access or distribution from a common dataset of attitudes, perceptions, and inequalities and correlate those with incidents of observed conflict within the test states. I intended to derive correlations that expose potential relationships without limitation to extraneous variables. Future research would necessitate increased specificity of variables and quantitative tests.

The boundaries of this study were civil conflict in Central Africa, with emphasis on highly fragile states where attitudinal data (perceptions) were tested for correlational

value to conflict, independent of type or intensity. Because this study was focused on establishing an empirical relationship between grievances and conflict, rather than demonstrating causality, the test avoided delimiting extraneous variables from consideration. For example, conflict literature suggests that difficult terrain enables conflict by allowing rebels advanced opportunity to hide, or that new conflict has a higher opportunity to arise when adjacent to existing conflict (diffusion or emulation).

## Limitations

Rather than constructing an experiment or collecting original data, this study was based on what has been referred to *black box data* in addition to "computationally intensive crunching of large amounts of data" to reflect aspects of human perception (Babones, 2016, p. 457). Despite the availability of datasets representing some of the test variables, the inherent weakness of this study is external validity, or the ability to generalize results across a larger population of states given limitations in other test variable datasets. Given the high intensity of conflict in the most at-risk Central African states (Central African Republic, Democratic Republic of the Congo, South Sudan and Somalia), third party researchers are unable to conduct attitudinal surveys there. Therefore, the study limited conflict incidents to states for which attitudinal data exists. Though still at risk, these states are not at the same level of criticality as the excluded states and may therefore misrepresent the strength of any resulting correlations. Despite limitations, findings that suggest correlation present an opportunity to conduct further research to validate results by seeking consistency across new geographies.

## Significance

This research fills a research gap by establishing a baseline for the future development of a civil conflict causal chain built around grievances, environmental conditions, and the process of aggregation that leads to the exploitation of inequalities by nonstate actors. This perspective can inform practitioners in stabilization, peace building, and international relations and development to align underlying cause and observable affect and predict and mitigate frustration. Further, when facing conflict necessitating security actions, armed coalitions and their foreign policy counterparts may attain a better understanding of the root and promote interventions that at least acknowledge but do not exacerbate underlying frustrations.

In the context of public administration, this study was intended to achieve two fundamental objectives: (a) to promote more active public administration inquiry and partnership with the broader, cross-discipline community of civil conflict research, and (b) to present findings that acknowledge and promote the role of the local public administrator in resolving even violent conflict. Local communities are often subject to national, global, or nongovernmental actors and interests that attempt to resolve conflict as a component of global stability rather than addressing the root of violence as a local phenomenon impacting local durability. Therefore, promoting an increased public administration presence in both research and practice and focus on the behaviors and attitudes of local governments may help to identify and mitigate vertical frustrations before they lead to horizontal grievances and ultimately violent expression.

## Summary

Civil conflict or civil war research that is intended to inform security, development, international aid, and foreign policy practitioner understanding of how conflict arises is inconsistent and suggests causality between indicators of horizontal inequality and the rise of violent civil conflict, regardless of form. By adopting a more systematic approach to building a comprehensive causal chain, this study suggests that conflict is the output of an environment of multi-directional determinants that is less linear that traditional causal research suggests. Using Central Africa as the testing point, statistical testing was conducted to expose differences in correlational strength of deprivations of access and grievances of distribution and their association with incidents of civil conflict. This study was intended to expand the traditional greed–grievance dichotomy by going beyond horizontal inequalities as proxy variables and testing interactions between perceptions and grievances and grievances and conflict while accounting for environmental conditions that exacerbate exploitation. Chapter 2 will provide a more detailed exploration of civil conflict aspects and determinants according to contemporary literature.

# Chapter 2: Literature Review

## Introduction

Prediction and mitigation of pervasive civil conflict has been based on proxy variables of horizontal inequalities (Bartusevicius, 2014), despite conflict being a localized occurrence (Rustad, Buhaug, Falch, & Gates, 2011). Therefore, conflict avoidance tends to be unsystematic and built upon assumptions of causality. Though grievances may be at the root of conflict, motivating behavior and leaving individuals vulnerable to exploitation by conflict entrepreneurs leveraging for economic or political gain (Eide, 1997), vertical grievances alone cannot stimulate mass movements (Cederman et al., 2013). There are conditions that can transition frustration into conflict; state fragility, natural resource dependency, and geography and conflict adjacency among others contribute to conflict, but collective action requires both determinants and drivers to shape and direct it to a unified cause (Bormann, Cederman, & Vogt, 2017). Thus, this study was based on the idea that a conflict causal chain can be established to shift conflict avoidance as a practice to remediation of grievances as the primary tactic of mitigation while preparing local administrators to better address frustrations at the grassroots level.

Contemporary conflict literature tends to suggest causality that is mutually exclusive rather than complimentary. For example, the role of greed is not in direct opposition to grievances as suggested by the greed-grievance dichotomy (Houle, 2016), instead it contributes to a combination of vertical frustrations that can be exploited to become civil conflict. Additionally, aggravating factors such as rough terrain or state fragility can influence conflict but alone do not cause it. But research has shown that not

all inequalities become grievances and not all grievances become conflict. Although scholarly studies decompose problems to micro-level elements to investigate behavior and impact, they must be operationalized to advance practice. Conflict has been critically typed based both on actors and intended outcomes and horizontal inequalities mapped to those most associated with conflict rise. Human psychology and sociology have contributed to behavioral understandings of deprivation and aggregation, but each needs to be drawn together empirically to link variables into a succinct causal structure. The remainder of this chapter will provide a review of literature related to this study's theoretical framework, relative deprivation theory, as well as provide a synopsis of civil conflict type, vertical grievances and horizontal inequalities, aggravating factors, and the process of aggregation that conspire to stimulate concerted conflict movements.

## Literature Search Strategy

Throughout the literature search, the Walden University digital library was used almost exclusively to identify relevant articles, and Google Scholar was used to inform search term combinations. Where Google Scholar produced specific articles of interest, a subsequent exact title search with the Walden Library was used to access the work. This process also applied to a small number of relevant articles published prior to 2014, where citation searches were conducted to identify more recent works of interest. In a single case—an article by Collier and Hoeffler (2004)—the article was not found within the Walden Library and was thus accessed through Google Scholar. Finally, in the cases of articles published in the *Journal of Peace Research*, related title searches were conducted within Sage Journals to identify complimentary articles. Sources reviewed for this study

were selected given their focus on relative deprivation theory, quantitative research methodology, and one or several of the study variables (conflict, grievances and aggravating factors). Additional articles were focused on various aspects of conflict, grievances, and aggravating factors within the study area of Central Africa. Of the total literature reviewed, eight articles were published outside the target range of 2014 to 2019, with three being seminal in nature: Davies (1962), Harrison (1980), and Collier and Hoeffler (2004).

The most prevalent literature sources were the *Journal of Peace Research*, *Conflict Management and Peace Science*, and the *Journal of Conflict Resolution*. Five books were also used as sources, with Mertler (2014), Creswell (2014), and Dietz and Kalof (2009) informing methodology and design, and Cederman et al. (2013) and Eide (1997) providing the foundational understanding of civil conflict and the roles greed and grievance play in its formulation. The preponderance of literature searches included the terms *civil* and either *conflict* or *war* in combination with amplifying terms such as *indicators*, *inequality*, *resolution*, or *grievance*. Specific theoretical searches were conducted using *relative deprivation theory*, and one author search was conducted for *Cederman*. The most prevalent authors were Cederman and Gleditsch, who also formed the most common combination of authors.

## Theoretical Foundation

### Historical Roots of Relative Deprivation Theory

Relative deprivation is a sociological theory devised by Stouffer in response to anomalies discovered within his seminal World War II *American Soldier* studies

(Pettigrew, 2015), where comparisons of satisfaction of test subjects were found to be relative rather than absolute. In one example, military police were found to compare their rate of promotion not against others in the same service but against those in similar occupations, regardless of service. Thus, referents, or points of comparison, are individual and likely to shift over time. The implication of this discovery is its universality in exposing underlying motivations of human behavior. Therefore, relative deprivation theory suggests that perceptions of deprivation, or judgements of disadvantage are more significant determinants of behavior than actual deprivation, given the nature of human referent comparison (Pettigrew, 2015). Relative deprivation is defined most generally as the "upward comparison between oneself and another member of one's ingroup" (Smith et al., 2018, p. 1186), where the gap between individual expectations and actual achievement (Koubi & Bohmelt, 2014) results in frustrations that breed anger and resentment (Smith & Pettigrew, 2015). Based on the right to human dignity that is dependent on perceptions of justice or fairness (Glensy, 2011), the absence or at least perceived absence of equitability between individuals and groups stimulates feelings of deprivation.

Critical to the theoretical conceptualization is the availability of referents upon which individuals may make comparisons, such as Stouffer's test subjects comparing their satisfaction not to others in similar situations at a distance but to those they perceived as similar in proximity. Thus, the "relative" of relative deprivation is determined by individual perception. Deprivation can also be separated into two sometimes simultaneously occurring perceptions of individual and group injustice

(Osborne et al., 2015), suggesting the relativity between individual and group deprivation may exacerbate individual reactions. Further, referents may be either fraternalistic (group) or egoistic (individual), with the latter including perceptions of both intra- and inter-personal deprivation (Asingo, 2018). Thus, perceptions of deprivation, or feelings of injustice or disadvantage, are shaped by comparisons between individuals and those they identify as most alike or in situations most akin to theirs, and the resulting frustration is further refined by the aggregation of the injustice to a larger in-group.

**Relative Deprivation and Conflict Studies**

A challenge of relative deprivation theory is the difficulty in mapping the rise of a perception and the output of behavior, with emphasis on collective action, which has led to arguments of causality despite inconsistencies in correlating grievances and conflict. Criticisms of relative deprivation generally arise from two mistakes: using aggregate data to indicate individual behavior and focusing on absolute conditions rather than perceptions (Asingo, 2018), but civil conflict does occur between groups not individuals. Although the perpetuation of the greed–grievance dichotomy in conflict research can be attributed to the difficulties in mapping frustrations to behavior, evidence of those who seek to improve their position can help explain political violence better than focusing on grievances (Rustad, 2016). Despite the criticisms, the application of deprivation theory to rebellion is important to understanding that relative deprivation and individual responses to such perceptions—"namely anger, psychological strain, discontent and grievances - are necessary conditions for civil conflict" (Taydas et al., 2011, p. 2631; see also Bartusevicius, 2014). Such perspectives suggest that both greed and grievance are

necessary for civil conflict to arise, but that the underlying perception of deprivation is essential to conflict intentions being realized.

Numerous studies have addressed the link between grievances and conflict, focusing on absolute inequalities as proxy variables for assumptions of perceived injustice (Braithwaite, Dasandi, & Hudson, 2016; Koubi & Bohmelt, 2014; Thomson, 2016). But increasingly research is acknowledging that feelings of being cheated can trigger emotions that are closely linked to a desire to punish (Herreros & Domenech, 2018), thereby enhancing the exploitability of grievances. Relative deprivation does not indicate what a deprived individual might do with their perceptions, but it is important to acknowledge the role human emotion plays in shaping perceptions of reality and thus influencing behaviors, including the willingness to join mass movements or rebellious groups.

**Applicability to this Study**

Relative deprivation provided the fundamental underpinning of this study that grievances are the root of the causal chain but not the direct cause of civil conflict. Deprivation leads to frustration, which can become grievances exploitable by conflict entrepreneurs, and whether real or imagined, relative or absolute, intra- or inter-personal, or individual or group based, micro-level data that reflect the viewpoints of those in unstable situations are important to establishing a causal chain leading to civil conflict (Davies, 1962). That is, despite conflict's group nature, mass movements start with individual perceptions that lead to motivation to participate in a conflict that fosters collective action. Building upon the notion of deprivation, Cederman and Wucherpfennig

(2017) posit two parts of a conflict causal path: the emergence of grievances and their transformation to violent action. Aggregated grievances can be reframed as group incompatibilities (Chiba & Gleditsch, 2017), which may form the first stage of conflict (origination) upon which militarization occurs (Bartusevicius & Gleditsch, 2019). This study intended to expose correlations of grievance and conflict by using micro-level data to expose deprivation type and their relationship to conflict. The research questions are rooted in relative deprivation and presented as a starting point to expose not only relative and absolute deprivation but that of imagined and actual injustice.

## Literature Review Related to Key Concepts

### Civil Conflict

Civil conflict reflects a general catalog of inter- and intra-state discord, many forms of multi-party and nonstate aggression, and multiple methods of nonviolent protest. Under the umbrella of political violence, civil conflict may present as guerilla, urban or irregular warfare, civil war, and terrorism and insurgency, with classic delineations informed by intensity (high and low), territoriality, and identity. Further, citing an emerging new war thesis, Raleigh (2014, p. 92) distinguished revolutionary and separatist civil wars from communal and livelihood violence sparked by environmental change and warlord violence characterized by criminal activity and violence against civilians. Increasingly, however, distinctions between conflict classification, typology, and categorization are becoming ambiguous (Matsumoto, 2014), though all civil conflict can refer to purposefully executed phenomena between groups rather than randomly exercised belligerence between individuals (Rustad, 2016). This group distinction is

critical to separating causality from manifestation to study the chain of consequence that forms the connection of grievance, exploitation, and aggravating factors.

Literature on conflict has shifted over time. Following World War II and a general decline in interstate warfare, conflict studies turned to civil war, and recently to more diffuse political violence alternatives (Choi & Raleigh, 2015). With the end of Cold War, these emerging forms of political violence reflected contextual factors rather than root causes, and their study began to emphasize the politics of labeling conflict phenomenon. Current conflict literature is challenging assumptions that conflict is a constructed dyad (Mosinger, 2018), suggesting that it is more likely a composite of competing actors and aggravating conditions motivating civilian mobilization (Ottmann, 2017). However, the shift away from a binary narrative does not mean that grievances do not have an impact on conflict, as they reflect the onset of incompatibilities but not necessarily the formation of violence. Further, other researchers have focused more on disaggregating conflict in more meaningful ways, distinguishing conflict as ethnic or nonethnic and territorial or governmental to link type of grievance to type of resulting conflict (Bartusevicius, 2016). Civil conflict research is moving toward more precise alignment of incompatibility type and conflict specificity, regardless of the typology of the resulting violence.

Further complicating the concept of civil conflict is that in many ways, the term *civil war* remains a catch-all for any manner of political violence, despite clear distinctions. For example, Cederman and Vogt (2017) generally defined civil war as "armed combat within a sovereign state between an incumbent government and a nonstate challenger" (p. 1993), where the most fundamental delineation of conflict type is

the presence and role of the state. Bartusevicius and Gleditsch (2019) amplified this definition: “Civil conflict [is] an incompatibility over government and/or territory between two or more politically organized actors, one of which is a state government, that takes place primarily within the borders of one state and involves extra-institutional means of contention” (p. 228). Civil wars can be further defined by their systematic and sustained use of armed force, duration or intensity, where high-intensity conflict results in increased cost to the state and casualties that surpass postulated thresholds (Thyne, 2017). Again, civil war is generally distinguished by state participation in the conflict as a resistor to nonstate aggression. However, as with any form of political violence, such clear delineations may have error.

A subset of civil war, ethnic conflict, encompasses communal violence and riots as well as ethnic cleansing and genocide and generally follows a *Sons of the Soil* postulate (Cederman & Wucherpfennig, 2017). The latter derives from Weiner’s study of nativist movements in India but have subsequently been applied to ethnic discord globally. Ethnicity-motivated conflict to some degree resists legacy conceptualizations of state-based warfare, where conflict “transcends national boundaries and insurgent groups mobilize resources in transnational communities” (Gleditsch & Rivera, 2017, p. 1122). Most conflict classified as civil war fought between the conclusion of World War II and the mid-2000s was ethnic in nature and reflected tensions formed of increased economic, political, and territorial competition due to exacerbated immigration (Cote & Mitchell, 2017). To some degree this misappropriates ethnicity as a driver of civil conflict and suggests rather ethnicity as an aggregating factor resulting as a “spontaneous

consequence of intergroup economic disparity" (Kustov, 2017, p. 662). To that end terrorism reflects a subclass of ethnicity driven conflict, wherein the mobilization of forces is itself disaggregated and reflects an inability of conflict entrepreneurs to generate popular support (Ghatak & Prins, 2017). State strength and the governmental effectiveness (Ozcan, 2018) shapes the expression of violence as strong states encourage terrorism given the inability of nonstate actors to generate forces for traditional civil conflict, while weak states promote civil wars given the ease with which insurgents can engage fragile state forces.

Although it is premature to dismiss legacy forms of interstate war (Cederman, Gleditsch, & Wucherpfennig, 2017), it is also inappropriate to ignore new forms of nonstate conflict, such as riots. Regardless of how it is typed or categorized civil conflict threatens human security (Greig, 2015), and shifts from high-intensity to low-intensity conflict more accurately reflects conflict cycles, rather than linear trends. And although conflict research remains inconclusive in terms of causality, it has exposed factors that contribute to vertical grievances and promote militarization. Further, conflict type choice can be taken as a result of environmental conditions more than a reflection of the underlying grievance or incompatibility.

**Grievances**

Grievances are frustrations resulting from disparities between expectations and outcomes, where the aggrieved experiences feelings of being cheated (Herreros, & Domenech, 2018). These perceptions may be rooted in either subjective societal structures (Corcoran, Pettinicchio, & Young, 2015) or objective social differentiations

that are culturally defined (Scarcelli, 2014). But because “perceptions of inequality do not always correspond to the observed reality” (Miodownik & Nir, 2015, p. 23), and because many marginalized groups never engage in political violence (Lindemann & Wimmer, 2018), a causal relationship between grievances and conflict cannot be proven (Basedau, Fox, Pierskalla, Struver, and Vullers, 2017).

Collier and Hoeffler (2002) proposed a grievance–rebellion model built on an understanding of protest movements. The authors suggest rebellion is not an intentional end state, rather an outcome of a protest’s failure to become a mass movement. Despite the rebellion’s inability to maximize community participation, the underlying grievance does create an insensitivity to government resistance and punitive action. The authors suggest, “The cause of initial conflict is not an economic calculus but rather a protest generated by objective grievances: ethnic or religious hatreds, inequality, oppression, or historical vengeance” (Collier & Hoeffler, 2002, p. 14). This suggests that greed-based conflict is a transformation of grievance-based protest or rebellion due to the lack of resources. Therefore, grievance and greed become linear expressions of conflict rather than opposing root causes. The greed–grievance dichotomy that follows dominates conflict literature, with grievances being both dismissed and likewise validated (Bormann, & Hammond, 2016) as causes of conflict. Although conflict literature has not produced consistent opinion on the causal role of grievances in the formation of civil conflict, there is consensus that some manner of social, political or economic incompatibilities contribute to fostering environments conducive to civil conflict.

Further, the relationship between grievances and conflict tends to be measured through horizontal inequalities that reflect aggregate, cross-national conditions rather than individual perceptions of injustice. As Hillesund (2019, p. 530) notes, for horizontal inequalities "to be considered an explanation of civil conflict, [they] must be able to account for all defining aspects of such conflict." Therefore, because inequalities do not automatically become grievances, they can only indicate an opportunity for grievances to arise. Given the subjective nature of human perceptions and the lack of evidence linking perceived and absolute deprivation, inequalities are more appropriate for predicting environments within which grievances may be exploited. Additionally, cross-national inequality coefficients do not distinguish between social classes or groups, rather only between individuals and households (Houle, 2016). Since grievances are vertical (individual) and conflict is horizontal (collective), it remains difficult to capture how the grievance is aggregated and realized as a collective action. Thus, the maxim not all inequalities foster grievances and not all grievances trigger conflict requires a deeper examination of the many factors that increase the likelihood of conflict.

**Aggravating Factors**

Aggravating factors are those conditions that allow conflict entrepreneurs to not only exploit aggrieved populations but gain advantage when state defenses are either too remote or too weak to resist insurgent challenges. Although aggravating factors are significant conflict variables, they are only one side of the conflict coin (Bartusevicius & Gleditsch, 2019), where the first side being the evidence of inequalities, whether real or perceived, and the resulting grievances that are exploited. The second side however is the

environmental conditions that create opportunities for conflict to occur. Exploitation of grievances by conflict entrepreneurs is deliberate but is not enough to generate warfare; the conditions must be right to recruit fighters and clash with established state forces (Cunningham, 2016). Conflict studies incorrectly assume binary relationships that over focus on structural conditions, such as mountainous terrain, economic inequalities, quality of governance, and ethnic divisions that may increase the likelihood of conflict, but fail to "predict or explain the dynamics of specific events and the triggers of conflict" (Gibler, 2017, p. 28).

Fragility is the most significant aggravating factor because it provides insurgents the opportunity to directly challenge weakened authority (Gibler & Miller, 2014; Tollefsen & Buhaug, 2015), and restricts fragile states from accessing physically, socially, or culturally remote populations. Conflict prediction based on state weakness however is confounded because the existence of conflict itself is used as an indicator of fragility (Howard, & Morris, 2014), therefore the contention of susceptibility to conflict is self-fulfilling. Thus, aggravating factors are those environmental conditions that while they may increase opportunity for aggregation of grievances, more importantly assist the progression toward collective action suitable for launching an offensive.

**Aggregation**

Aggregation is the transformation of vertical grievances—those perceived between individuals or households into horizontal grievances—those perceived between groups. Although literature suggests transformation is organic, it may instead follow a construed opportunity logic wherein conflict is the product of deliberate exploitation by

greedy rebels using grievances as "ideological smoke screen[s]" (Cederman & Vogt, 2017, p. 1996) to recruit participants. This does not discount grievances, specifically at the vertical level, rather it suggests the opportunity to exploit is critical to the establishment of horizontal discord given the necessity of group participation in conflict. Although coercive aggregation also occurs, it is distinctly a secondary act to increase fighter reserves (Ottmann, 2017) rather than an initial mechanism to establish rebellion. Aggregation therefore informs the organization of war (Van Leeuwen, & Van Der Haar, 2016) where conflict actors exploit grievances, while taking advantage of environmental conditions and availability of resources to promulgate rebellion. Little research exists that focuses specifically on the processes of aggregation within the conflict dynamic, though research regarding the methodologies of exploitation is more common. Further investigation of each however is critical to forming a comprehensive conflict causal chain upon which prediction and mitigation interventions can be based.

**Civil Conflict in Africa**

African nations feature prominently in civil conflict studies because of the pervasiveness and intensity of social and political unrest throughout the 19th and 20th Centuries that can be taken as a byproduct of the complications and negative consequences of aggressive colonialization and imperialism, as well as extreme competition for natural resources and political influence (Ekwealor, 2017). The root of this unrest is attributed to both internal and external factors, where the former are those of social, political and economic disparities among tribes, ethnicities and political elites, and the latter are deliberate interference by foreign actors. Africa's landscape, average state

size, and highly inaccessible terrain reflects a rural disposition in conflict with socio-demographic realities, inter-ethnic migration, and a reliance on natural resources to generate local, regional, and national economies (Boone, 2017; Raleigh, 2014; Sterzel et al., 2014) that are further compromised by high diversity, local and cross-border flows, and political topographies limiting economic distribution (Koos, 2018; Rudolfsen, 2017). Therefore, amplified and highly distributed competition across a multitude of African nations for limited, but internationally desirable resources stimulates diffusion (Sousa, 2016) and undermines security (Wig & Tollefsen, 2016). Degraded defensive capabilities due to competing security priorities thus opens the door for increased international participation by civil society organizations (Koko, 2016) whose inconsistent distribution of aid further degrades stability by exacerbating ethno-economic grievances (Detges, 2016; Mudasiru & Moshood, 2017). Africa therefore presents the perfect storm of potential grievances, environmental conditions, and socio-political realities that perpetuate a landscape of conflict, which may appear, and is often represented in popular literature as unsolvable. However, building upon legacy and contemporary conflict literature, Africa as a locus of study presents the most appropriate environment for decomposing conflict and disconnecting its variables to establish a succinct causal model to address pervasive catastrophic violence and remedy tenuous discord.

## Summary and Conclusion

Binary approaches to investigating civil conflict, regardless of typology, rest on incentive and opportunity explanations but often provide little new knowledge regarding how they interact to form conflict. Given that civil conflict is not an inevitable

manifestation of frustration, instead a reflection of the interplay between opportunity and aggravating factors, equal focus must be brought to the behavioral aspects of conflict as well as how conflict is organized. Adopting theoretically grounded indicators of prediction requires a comprehensive approach to causality that supports the relationships of real and imagined inequalities, perceived and absolute deprivation, vertical and horizontal grievances, as well as the susceptibility of those grievances to exploitation, and the aggravating conditions necessary to foster conflict. Following notions of the conflict tree, individual variables must therefore be disaggregated to determine independent cause and effect to mitigate the risk of inaccurate conclusions of causality. Overly simplified explanations do not acknowledge the highly diffuse and interdependent nature of conflict, where aggravating factors are more likely complimentary than mutually exclusive, greed and grievance more likely cohabit, and conflict opportunity is equally important as actor incentive to prediction and thus mitigation.

Conflict typology lacks clear delineation as the decline of state-based warfare has given way to state-focused insurgencies of multiple belligerents, and decentralized ideological networks exacting violence on populations of unarmed civilians rather than states. Limited research has attempted to address the formation of different types of conflict based on conditions and opportunity, though the underlying nature of conflict bears two fundamental truths: conflict is always local, despite national or international narratives, and conflict is a group effort rooted in a competition for perceived to be scarce resources. Although unequal distribution may foster frustrations that grow into grievances, only rational actors seeking to improve their political or economic position

can incite collective violence. Conflict entrepreneurship plays as significant a role in civil or political violence as does the presence of grievances, but the alignment of the two must avoid overstepping causal bounds. That is, inequalities may explain grievances and grievances may pose opportunity to exploit, but structural inequalities do not cause conflict.

This study builds on proposed ideas of incremental causality and focuses its investigation on whether a more universal distinction of deprivation of either access to or distribution of resources, might suggest exploitability. I contend deprivations of access are rooted in perceptions of disequity, wherein institutional factors deliberately deprive individuals or groups from fair opportunity. This is most significantly evidenced in ethnic conflicts wherein the state government gives preferential treatment to a dominant ethnicity, while simultaneously excluding the outgroups. Conversely, deprivations of distribution reflect structural conditions that foster incidental inequality. Land distribution can prove an example in cases where no legal restriction is placed on ownership, despite land cost and availability limiting purchase. In this study I argued that grievances, typed as deprivations of either access or distribution will prove better predictors of civil conflict than aggregate indicators or inequality, and that conflict literature is insufficient in explaining how grievances are acted upon by conflict entrepreneurs. By testing and comparing the significance of the relationship between deprivation and incidents of conflict this study can inform future assessments of exploitability.

# Chapter 3: Research Method

## Introduction

The purpose of this quantitative study was to test for a relationship between indicators of deprivation of access and distribution and incidents of civil conflict, which can help develop a conflict causal model. This study was not designed to predict causality between test variables but rather expose a relationship between deprivation type and civil conflict. Although conflict literature relies on cross national indicators of inequality to posit causality, the true cause of conflict may be exploitation of grievances and taking advantage of environmental conditions such as rural density or state fragility. Thus, exploring the relationship between deprivation type and conflict incidents may indicate a grievance's susceptibility to exploitation, though this does not establish causality. Using empirical, publicly available datasets common to contemporary conflict studies allows for ease of replication of this study to test outputs and establish greater strength of generalizability across not only the larger collective of African states but across the global population of states. The following sections of this chapter will provide overview of study variables, data sources, target population, and data analysis.

## Research Design and Rationale

Conflict researchers generally conduct quantitative analysis of independent variables of inequality, grievance, or aggravating factor against incidents of conflict to establish causal relationships (Cederman, Weidmann, & Bormann, 2015). Although much of the literature has shown inconsistent findings while suggesting causality, I agreed that the methodological approach of multiple linear regression is appropriate

given the spectrum of conflict localities and myriad indicators available for study. Because sociological research can be limited more by researchers than by statistics (Babones, 2016), this study followed generally acceptable methods of collection and statistical analysis.

The variables for this study were drawn from publicly available datasets commonly used in contemporary conflict studies and applicable to the selected Central African states (Burundi, Cameroon, Kenya, Mali, Niger, Nigeria, and Sudan) for 2016. The data were derived from the African Center for Strategic Studies' (2017) assessment of acute food insecurity and conflict in Africa. The choice of Central African nations was consistent with recent conflict studies given that a large share of global conflict and political violence occurs on the continent (Hillesund, 2019). Thus, the variables of study were:

- Predictors: Indicators of deprivation constructed from Afrobarometer (2016) survey responses to questions coded to reflect deprivation of either access (compared living conditions) or distribution (availability of clean water and electricity).
- Dependent: Number of incidents of civil conflict as captured within the UCDP Georeferenced Event Dataset Global version 18.1 (2017) for the year 2016.

Table 1 provides a breakdown of the variables related to the indicators, measures, and codes.

Table 1

*Study Variables Depicting the Dependent Variable and Predictors*

| Variable | Indicator | Measure | Code |
|---|---|---|---|
| Predictors | Q8b. Over the past year, how often, if ever, have you or anyone in your family gone without enough clean water for home use. | Ordinal | Distribution |
| | Q94. Do you have an electric connection to your home the mains. [If yes,] How often is electricity actually available. | Ordinal | Distribution |
| | Q5. In general, how do you rate your living conditions compared to those of other [ nationality ]. | Ordinal | Access |
| Dependent variable | Number of reported incidents of civil conflict. | Ratio | NA |

The predictor variables reflected responses to questions gathered through structured one-on-one interviews with citizens within Central African states. The coding of deprivation type into grievances of access or distribution is original to this study and independent of source data collection and analysis by Afrobarometer. The dependent variable reflects reported incidents of civil conflict regardless of fatalities as detailed through a variety of open information sharing, to include global newswires, global media monitoring activities and secondary sources such as field reports from nongovernmental organizations (UCDP, 2017).

The choice of study design is consistent with contemporary conflict studies and was chosen to expose strength variability of the relationship between deprivation type and incidents of conflict. Additionally, establishing plausibility may lead to deliberate testing of causality given that “the circumstances under which causation can be inferred

from correlation with non-experimental data are more complex" (Dietz & Kalof, 2009, p. 186). This study was purposefully designed as an antecedent to more precise description of indicators of deprivation type drawn from multiple datasets and correlated against conflict incidents occurring across a larger compliment of years and a wider dispersion of study states.

## Methodology

As stated previously in this chapter, the target population was derived from seven Central African states suffering acute food insecurity and conflict for which deprivation indicators were captured in the Afrobarometer dataset. This study did not test significance between deprivation and individual incidents of conflict, but rather the number of reported incidents of armed conflict within each state during 2016. As each dataset is publicly available, no permissions were required beyond necessary reference, nor procedures necessary for obtaining the data files beyond accessing public websites and downloading the appropriate files locally.

Data analysis was conducted within SPSS and included tests of multiple linear regression to predict the net impact of the predictors on the dependent variable to signal the statistical significance of the relationship and generate a correlation coefficient to signal the extent or degree of the relationship between the variables. For the study $a$ = .05, which is standard for social science research, and stipulates the probability of falsely rejecting the null hypothesis. Findings were interpreted for confidence, variance and significance. As Type I or II errors degrade the precision of regression coefficients, results were tested for normal distribution, linearity between the variables, and

homoscedasticity across all levels of independent variables. Findings of strong correlation between test variables would suggest a positive relationship between the evidence of grievances and the potential rise of civil conflict, while deviation in strength of correlation between deprivations of access or distribution and civil conflict would suggest grievance type matters in predicting conflict. Such findings would suggest deprivation of access pose a greater risk of exploitation by conflict entrepreneurs.

As a precursor, datasets were scrubbed of irrelevant parts, thus limiting the independent variable set to only the seven selected Central African states, and the dependent variable set to only those incidents occurring within those states for the test year. The resulting extracts were merged into the Afrobarometer dataset by creating a new conflict incidents variable aligned to respondent cases.

This quantitative study of the relationship between vertical grievances and civil conflict was based on the research question: What individual perceptions of inequality predict incidents of civil conflict in fragile Central African states? Answering the research question allowed this study to test whether indicators of deprivation of access or distribution were more or equally correlated to conflict. As a multiple linear regression, the study tested variation among and between deprivation type. The null hypothesis for this study was: Grievances of compared living conditions, how often gone without clean water, and availability of electricity do not predict incidents of civil conflict in fragile Central African states.

## Threats to Validity

Threats to internal validity compromise confidence in the tested relationship between variables given evidence of extraneous variables. For this study, the rise of civil conflict is the product of numerous variables that can interact both independently and concurrently on incidents of political violence and likely not a strictly linear manner. That is, grievances pulse rather than rise and fall, and conflict is the output of a longitudinal chain of circumstances and manipulations for which it can be assumed dependent variable behaviors should lag predictor presence. As such conflict should be expected to manifest after deprivations are experienced, but to what extent has not been demonstrated. Given the absence of data to suggest appropriate lag, I constrained study variables to the same time period, observation year 2016. Should the null hypothesis not be rejected, subsequent studies might allocate arbitrary lag and retest for evidence of correlation.

Threats to external validity suggest the degree to which study findings may be applied or generalized across a larger population of states or conflict incidents. Controls for external threats include experiment design and sample selection. While the latter is not random, the sample was selected from a validated population of states suffering extreme hardship and stratified solely based on the availability of predictor variable data. Threats to reliability on the other hand compromise the consistency of measurement, and as test variables for this study were extracted from well recognized and accepted secondary datasets, test data was assumed to have been collected in a valid and reliable

manner. Finally, testing for reliability was conducted among the various combination of predictors, to expose deviation between deprivation of access and those of distribution.

## Ethical Concerns

Use of referenced datasets by the researcher complied with all copyright requirements of the producing organizations. As publicly accessible archival data, the datasets used for this study each abided international standards of collection and address concerns of respondent privacy through original collection and analysis. As such, individual respondent information is unavailable to the researcher via the downloaded datasets. The UCDP dataset of conflict incidents does provide group names associated with specific conflict incidents, though not individual participants associated with identified groups. Although the groups are generally known and publicly named through the distribution of the dataset, this study did not conduct analysis based on group affiliation nor presented findings suggestive of a specific group's involvement in reported incidents. It was the intention of this study to present findings that were highly generic regarding incident participation, limiting findings to state level aggregates and reflecting only the statistical outcomes of tests between number of incidents and response to deprivation questions. Downloaded source data, the resulting study dataset and results were each restricted to use by the researcher and shared only through the publication of this study through official Walden University portals and only in fulfillment of its doctoral program requirements. All associated files, records and notes were stored locally on a computer requiring authentication to access.

## Summary

For this quantitative study a multiple linear regression of grievances and civil conflict was conducted. The predictor variables of deprivation represent potential grievances of access or distribution that were tested against incidents of violent conflict within the sample population of seven Central African states presently suffering acute food insecurity and high rates of political violence. Drawing data from empirically credible archival sources frequently used in contemporary conflict studies, this study posited a strong correlation between grievances associated with deprivation of access to incidents of civil conflict. Chapter 4 will detail the results of statistical testing between the variables and further detail the treatment of the datasets in preparation for testing.

# Chapter 4: Results

## Introduction

The purpose of this quantitative study was to investigate the relationship between incidents of civil conflict and indicators of potential grievances as a predictive mechanism for identifying and mitigation such conflict. Multiple linear regression testing with IBM SPSS Statistics 24 was used to answer the research question: What individual perceptions of inequality predict incidents of civil conflict in fragile Central African states? The null hypothesis was that grievances of compared living conditions, how often gone without clean water, and availability of electricity do not predict incidents of civil conflict in fragile Central African states. The remainder of Chapter 4 includes a detailed overview of the data collection and treatment processes, representation of the findings, and an analysis of whether the statistical assumptions were met.

## Data Collection

For this study secondary data were retrieved from the 2016 Afrobarometer survey of individual respondents representing the seven countries (Burundi, Cameroon, Kenya, Mali, Niger, Nigeria, and Sudan) identified by the African Center for Strategic Studies as at risk due to high food insecurity and conflict. The dependent variable number of reported incidents of civil conflict was drawn from the UCDP Georeferenced Event Dataset Global version 18.1, filtered for the test year 2016. Following institutional review board approval (approval no. 07-19-19-0113548), the open source data were downloaded from the respective websites. The countries were drawn from a list of 17 total Central African states identified as at risk by the African Center for Strategic Studies and

represents a convenience sample of locations in that only seven of the countries were surveyed by Afrobarometer for the test year. Filtering the Afrobarometer for the test countries and year resulted in a total of 10,779 respondents across the three predictor variable questions, though test *n* values are reduced when missing and nonresponses were removed. The predictor variable survey response questions were:

1. Q5. In general, how do you rate your living conditions compared to those of other [nationality].
2. Q8b. Over the past year, how often, if ever, have you or anyone in your family: Gone without enough clean water for home use.
3. Q94. Do you have an electric connection to your home from the mains [If yes,] How often is electricity actually available.

A fourth predictor variable (Q88a. How often are [ethnic group] treated unfairly by the government), was intended to be included and annotated in the initial study design but was eliminated from testing due to it having not been collected for all seven test countries via the Afrobarometer survey.

Filtering the UCDP for the test countries and year resulted in a total of 890 incidents of violent conflict. An incidents of violent conflict variable was created within the Afrobarometer dataset in SPSS and the country score (total incidents of violent conflict reported through the UCDP) was added to each case by country. UCDP generally classifies violent civil conflict as events resulting in at least 25 fatalities; however, for this study a total count of reported incidents of civil conflict, regardless of fatalities or injuries, were included because I was not interested in testing grievances against the

intensity of conflict, rather only its occurrence. Once the data were prepared, a series of multiple linear regression tests were run in SPSS. A variety of treatments were initially tested to include creating dummy variables coded 0, 1 reflecting either positive or negative satisfaction with the independent variable conditions, however coding bias was determined to be too great to accurately reflect significance or strength of potential variable relationships.

The resulting dataset had many limitations given the inability to match a specific incident of violent conflict with an individual survey response, though the rate of incident of violent when compared to the general conditions of respondents was expected to return a suggestion of relationship. As it has been argued throughout this study, the nature of proxy variables poses significant challenges in prediction because they reflect trends or group conditions rather than the motivations of specific individuals and their participation in violent conflict. Thus, in many ways the dataset used for this study reflects the imperfect relationship between the lived experience of respondents and purposeful conflict. A more accurate dataset would align a given incident of violence with the attitudes and or perceptions of individuals directly experiencing such an incident and then attempt to correlate their lived experience with their acceptance or rejection of that specific conflict. An even more appropriate, albeit difficult to obtain, dataset would include perceptions of deprivation collected directly from violent conflict participants to acutely expose the tenacity of grievances and subsequent transformation to violent expression.

# Results

## Statistical Assumptions

A multiple linear regression analysis was conducted to examine the relationship between compared living conditions, availability of clean water, availability of electricity when connected to the main, and incidents of civil conflict in fragile Central African states. The assumptions of multicollinearity, outliers, linearity, normality, homoscedasticity and independence of residuals were assessed. Assumptions were made related to the research design and selection of variables prior to conducting any tests, whereas the remaining are suggestive of the fit of the variables within the statistical model (Laerd Statistics, 2015), evidenced by the multiple linear regression outputs in SPSS. The first assumption is that the dependent variable is continuous, represented within SPSS as a scale variable for which any value can occur within a given range. For this study, the dependent variable was a continuous or scale variable in that incidents can be measured on a scale of 0 to infinity. The second assumption requires the presence of two or more predictor variables that are either continuous or nominal. Each of the three predictors used in this study are nominal, as they have no numerical value that is suggestive of the distance between respondent choices. Regarding fit of the variables within the model, the SPSS coefficients for each of the predictor variables reflects a tolerance above .9 and a variable inflation factor of less than 1.1, suggesting no multicollinearity. Assumptions of linearity reflect the existence of a liner relationship between the dependent and predictor variables demonstrated by the distribution of data.

A review of the normal probability plot (Figure 3) and the scatterplot (Figure 4) suggests that there were violations of the assumptions of normality and heteroscedasticity, respectively. Within Figure 3, the distribution of data from bottom left to top right skews from normality, and the residuals decline systematically from left to right within Figure 4. To address the violations of the assumptions, bootstrapping with 1,000 samples was performed at a 95% confidence interval (CI). The bootstrapping outputs are reported as appropriate.

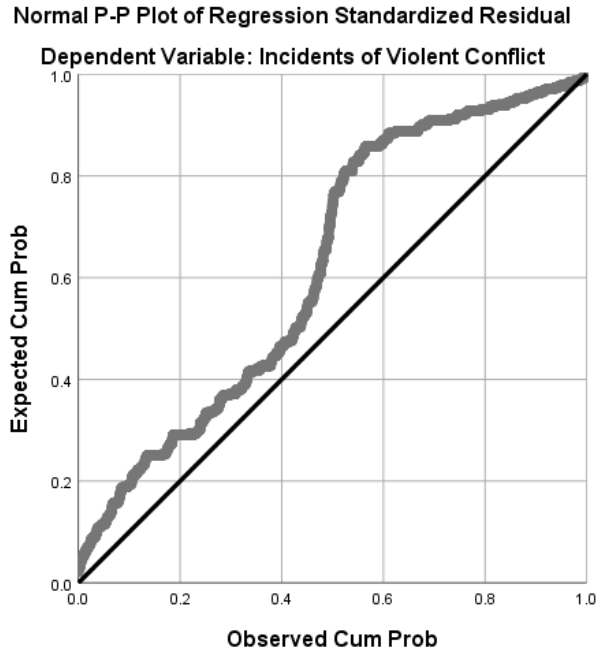


*Figure 3*. Normal p-plot of the regression standardization residuals depicting deviation from normality.

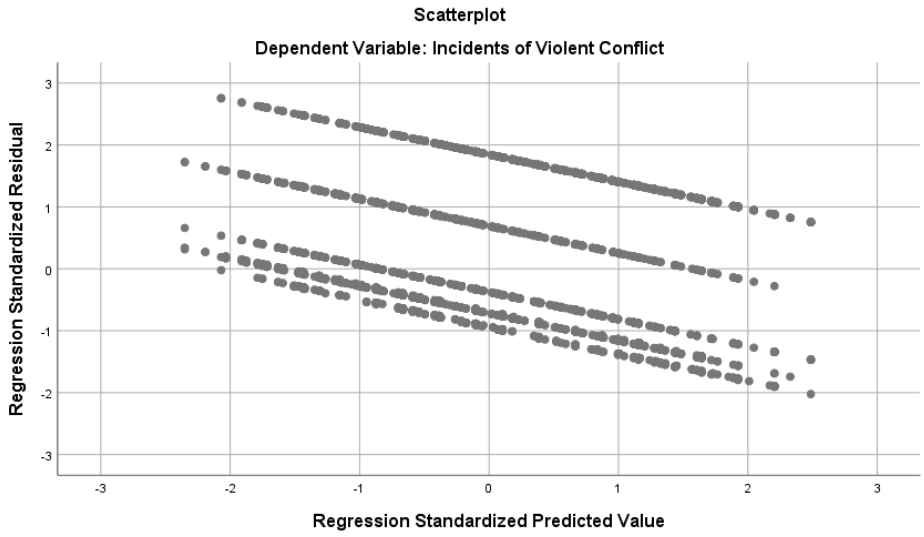


*Figure 4*. Scatterplot of the residuals depicting violation of the assumption of homoscedasticity.

**Descriptive Statistics**

Table 2 indicates the descriptive statistics for the dependent variable, number of reported incidents of civil conflict for the study year 2016 across the seven test Central African countries. For the each of the predictor variables the mean reflects respondent living conditions that are *about the same* compared to others, their having gone without enough clean water for their family *just once or twice*, and when connected to the electric mains, having gone without electricity *about half of the time*. For the bootstrapped regression model incident calculations resulted in a mean of 150.12 and a standard deviation of 154.967.

Table 2

*Means and Standard Deviation*

| Variable | *M* | *SD* | *M* 95% Bootstrap *CI* | *SD* 95% Bootstrap *CI* |
|---|---|---|---|---|
| Q5. Living Conditions Compared to Others | 3.06 | 1.274 | [3.04, 3.09] | [1.237, 1.308] |
| Q8b. How Often Gone Without Clean Water | 1.10 | 1.386 | [1.07, 1.12] | [1.361, 1.409] |
| Q94. Availability of Electricity | 1.86 | 1.919 | [1.82. 1.89] | [1.900, 1.937] |
| Incidents of Civil Conflict | 150.12 | 154.967 | [147.28, 152.96] | [153.431, 156.403] |

*Note. N* = 1,000

Table 3 depicts the regression summary for the predictor variables, wherein the standardized beta (β) demonstrates the availability of electricity when connected to the electric mains as having the strongest relationship with the number of reported incidents of civil conflict with a significance of $p = .001$.

Table 3

*Regression Analysis Summary for Predictor Variable*

| Variable | *B* | *SE B* | β | *t* | *p* | B95% Bootstrap *CI* |
|---|---|---|---|---|---|---|
| Q5. Living Conditions Compared to Others | 4.882 | 1.223 | .040 | 4.301 | .001 | [2.549, 7.280] |
| Q8b. How Often Gone Without Clean Water | 1.053 | .988 | .009 | 1.016 | .275 | [-.912, 2.983] |
| Q94. Availability of Electricity | 24.304 | .672 | .301 | 32.274 | .001 | [22.982, 25.630] |

*Note. N* = 1,000

**Statistical Analysis**

Multiple linear regression testing was conducted to determine the relationship between the predictor variables of living conditions compared to others, how often gone

without clean water, availability of electricity, and reported incidents of civil conflict. This approach addressed the research question of what individual perceptions of inequality predict incidents of civil conflict in fragile Central African states. Reviewing the standardized coefficients, *Beta*, as shown in Table 3, availability of electricity makes the strongest unique contribution to explaining incidents of civil conflict. The results of the test were significant $F(3, 10775) = 378.876$, $p < .001$, $R^2 = .095$, indicating that 9.5% of the variance in the dependent variable is explained by the model. The null hypothesis that stated grievances of living conditions compared to others, how often respondents had gone without clean water, and availability of electricity when connected to the main do not predict incidents of civil conflict in fragile Central African states was rejected. The alternative hypothesis that stated grievances of living conditions compared to others, how often respondents had gone without clean water, and availability of electricity when connected to the electric mains do predict incidents of civil conflict in fragile Central African states was accepted. In the final model, availability of electricity when connected to the electric mains and living conditions compared to others contributed significantly to the model, with availability of electricity when connected to the electric mains providing the strongest predictability ($B = 24.304$, $t = 32.274$, $p = .001$), followed by living conditions compared to others ($B = 4.882$, $t = 4.301$, $p = .001$). How often a respondent or their family had gone without clean water was not a significant contributor to the model.

As multiple linear regression is interested in specifically commenting on the level of relationship between variables tested within the model, correlations provide the most insightful reflection of the model's outputs by presenting not only the statistical

contribution of each of the independent variables upon the dependent, but also in presenting the corollary value between the predictor variables necessitating multiple linear rather than bivariate regression. Assessing the bootstrap correlation outputs, as shown in Table 5, only one independent variable—Q94. How Often is Electricity Actually Available—had a significant relationship with the dependent variable number of reported incidents of civil conflict, expressed as a value above .3 (see Pallant 2016, p. 159). This is consistent with the coefficient outputs as well as the mean values associated with the availability of electricity independent variable.

Table 4

*Correlations of Predictors and Dependent Variable*

| | Incidents | Q5 | Q8b | Q94 |
|---|---|---|---|---|
| Incidents of Civil Conflict | 1.000 | .087 | -.029 | .306 |
| Q5. Living Conditions Compared to Others | .087 | 1.000 | -.117 | .160 |
| Q8b. How Often Gone Without Clean Water | -.029 | -.117 | 1.000 | -.112 |
| Q94. Availability of Electricity | .306 | .160 | -.112 | 1.000 |

## Summary

Based on the bootstrapped multiple linear regression testing considering the variables detailed within this chapter, the study's null hypothesis is rejected as the predictor variables of compared living conditions and availability of electricity demonstrate statistically significant contributions to the model. The results detailed in this chapter suggest that although there is a relationship between certain lived conditions that might reflect grievances and reported incidents of civil conflict, not all grievances or conditions of deprivation appear to be the same in terms of their impact or influence on

conflict. This study supports my argument against using national level proxy variables to predict conflict but does not provide any clear distinction between individual deprivations of access or distribution. The outputs of the statistical testing detailed within this chapter suggest that despite test design flaws there is a relationship between certain indicators of deprivation among respondents and incidents of civil conflict. This relationship and its implications for mapping a more comprehensive conflict causal chain will be explored in Chapter 5. I will also discuss in greater detail the limitations of this study and propose methods and or means to conducting increasingly precise future studies based on the findings presenting in this chapter. Lastly, in Chapter 5 I will argue for the increased inclusion and proactive participation of local government administrators in the remediation of grievances as the most appropriate and effective means of mitigating violent civil conflict.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Introduction

The purpose of this multiple linear regression study was to test the relationship between incidents of civil conflict in at-risk Central African countries and variables indicating deprivation of resources among residents for 2016. Research has not been consistent in correlations between indicators of grievance and the rise and duration of civil conflict, making it difficult to predict and mitigate this type of conflict. Additionally, proxy variables, generally tabulated at the national level, do not accurately or consistently suggest why or when conflict will arise. Further, based on the "social organization of violence" (Eide, 1997, p. 45), this study suggests that there is a conflict causal chain that can help predict incidents by shifting from a focus on conflict as the outcome of deprivation to the exploitation of grievances by conflict entrepreneurs as the trigger or 'cause' of conflict. This approach can better suggest interdependent nature of conflict, where deprivation indicates grievances, which may make the aggrieved population susceptible to exploitation and aggregation that in turn is militarized as violent mass movement. From a public administration perspective, the orientation toward grievance remediation as the primary strategy for mitigating exploitation by conflict entrepreneurs can provide local government managers and officials an opportunity to become more involved in conflict prevention by addressing issues of perceived injustice, whether based on relative or absolute deprivation, at inception rather than deferring to nationally oriented repression interventions only after conflict manifests.

The results of this test were not conclusive in demonstrating relational strength among all variables; however, evidence did suggest a more elaborated conflict causal chain is at least on the right track. No significant contribution was made to the causal model by the availability of clean water variable, but those of compared living conditions and availability of electricity did. Further, the correlation strengths of availability of electricity and incidents of civil conflict demonstrated significance based on the results of multiple linear regression. This result may reflect society's increasing goods and services dependency on electricity above all other resources for operability (Molinder, Karlsson, & Enflo, 2019). That is, electricity is vital to information sharing, preserving and extending the shelf life of foodstuffs and medicines, providing cooking and heating fuel, and powering facilities for around clock operations such as water purification. Electricity is also a significant enabler of security, collaboration, and coordination locally, nationally, and internationally. Therefore, deprivation of electricity may indicate a higher occurrence of grievance that may in turn pose a greater influence on conflict than currently anticipated.

Considering relative deprivation's focus on unfairness of observed comparisons rather than absolute quality of distribution, the lack of an operable electric grid may be perceived as an injustice, even more so than degraded hours of daily availability once connection to a public grid is established. Of the 10,779 respondents to the Afrobarometer survey, only 43% of respondents indicated that they had access to the public electricity supply at their homes. To support this result, a second regression test was conducted introducing a new variable from the Afrobarometer dataset—the presence

of an electricity grid in the respondents' area. Though this variable was based on interviewers' observations of the local conditions when interviewing local respondents, making it even more of a proxy variable, the results of the regression are significant. Like the correlation value of $r$ = -.306 for electricity availability when connected to the main, the presence of an electricity grid returned a correlation value of $r$ = .326. Further, the secondary regression included two additional alternative predictor variables, the presence of a health clinic and presence of police, both of which were less significantly related to incidents of civil conflict. Thus, the presence and availability of electricity exhibits a stronger relationship to conflict than any other predictors tested as part of this study.

## Interpretation of Findings

This study attempted to show a relationship between three variables of individual deprivation as indicators of vertical grievances and incidents of civil conflict in at-risk Central African countries. No substantive relationship was found among two of the variables (living conditions compared to others, and availability of water); however, the third variable of availability of electricity did show significance in the relationship. To further test the results, a secondary series of predictor variables were tested against incidents of civil conflict. These variables do not reflect respondent attitudes or perceptions but rather observations made by the interviewer. Table 5 provides a comparison of the electricity related predictors' correlation to the incidents of civil conflict.

Table 5

*Compared Electricity Predictor Correlations to Dependent Variable*

| | Incidents |
|---|---|
| Q94. How often is electricity actually available. | .306 |
| EA-SVC-A. Electricity grid in PSU/EA. | .326 |

Acknowledging the proxy-like quality of the secondary predictor variables, a multiple linear regression showed similar results to the primary test. Variables indicating the presence of health clinics and police did not produce strong relationships ($r$ = .204 and .264, respectively), whereas the presence of an electricity grid in the area of the respondent (though not necessarily available to the respondent) was found to be significant. As noted previously in this chapter, such findings are not suggestive of causality, nor do they prove anything more than a statistical relationship. However, finding that the only two tested predictors variables both relate to the presence and availability of electricity is notable.

Relative deprivation theory suggests that grievances arise from individuals' perceptions of disequity or unfairness relative to themselves (Osborne et al., 2015), though the predictor variables tested in this study were only meant to establish conditions of respondents' lived experiences. Of the two sets of predictor variables tested in this study, both variables concerned with the availability of electricity exhibited the strongest association with the incident of civil conflict. Although there was no statistical significance to suggest correlation between the variables, electricity may be an important indicator of conflict. Given that many of what are deemed to be quality of life necessities (e.g., cellular communication, radio and television, refrigeration, etc.) are dependent on

available, consistently delivered energy (Bridge, Adhikari, & Fontela, 2014), electricity availability may be worth investigating further. Even as a proxy variable similar to national income distribution, it may help in mapping the conflict causal chain. However, predicting conflict necessitates greater proficiency with identifying and remediating grassroots grievances given their susceptibility to exploitation by conflict entrepreneurs.

It is hard to find research to compare with the results of the current study because of the tendency to focus on aggregated variables such as income distribution, ethnic representation in government, and control of natural resources (Rustad et al., 2011). Considering income distribution, Buhaug et al. (2014, p. 420) noted that "the most prominent studies of civil war find no evidence of a link between economic inequality and conflict." Meanwhile, natural resources generally show up in grievance literature as indicators of economic prosperity rather than those of vertical deprivation (Detges, 2016). To that end, research regarding vertical grievances, or deprivation at the individual or household level, is limited in relation to civil conflict. Literature searches regarding electricity and civil conflict, for example, result in no direct research matches, however do return studies of the development of power generation facilities in postconflict and fragile states, or the control of natural resources (Koos, 2018), which present variables at a horizontal, proxy level. However, the findings of this study indicate that the presence and quality availability of electricity can be instrumental in fostering perceptions of inequity that may lead to grievances.

Beyond suppositions of the increasing dependence upon electricity for household electrification and its positive impact on individual quality of life, the impacts of

developed electricity grids go well beyond direct, individual consumption (Molinder et al., 2019). Modernized electricity grids and consistency of supply impacts the individual lived experience indirectly as well, even through increased productivity of the agriculture and manufacturing sectors (Molinder et al., 2019). Increases in agricultural production may lead to decreased cost and increased accessibility to vital foodstuffs, while sustained manufacturing provides both increased availability of goods but also expands the labor market, offering increased opportunities for disadvantaged actors to gain access of direct income. Therefore, electricity availability may be valuable to explore more as a potential indicator of deprivation and potential grievance, as well as a predictor of civil conflict.

## Limitations of the Study

The purpose of this study was to investigate the relationship between indicators of deprivation to address the reliance of national, regional and international actors on proxy variables of horizontal inequality for predicting violent civil conflict. However, predictor variable data, given its mechanism of collection does not necessarily reflect individual perceptions of deprivation, or injustice, rather respondent opinions on current conditions within their Central African country. Blindly accepting the data outputs as indicative of deprivation fails to acknowledge that not all inequalities or even injustices rise to the level of grievances, and thus are not exploitable by conflict entrepreneurs (Taydas et al., 2011).

The limitations of this study related to data availability, sample selection, variable availability and lag. Data availability relates to the lack of open source datasets directly addressing and acutely scoring levels of deprivation and the intensity of resulting

grievances, which in turn can be tested for relational strength with active support for conflict rather than incidents of conflict. Given the preference for national level indicators of inequality, data has not been routinely collected for the purposes of conflict studies, although data may exist as classified products of international development sampling or international security operations. Future studies may request access to such datasets, and once appropriately scrubbed and cleaned, utilized for regression testing similar to this study. The selection of countries from which to draw respondent data poses a limitation in that of the selected 17 countries identified as at-risk by the African Center for Strategic Studies, and for which incidents of violence reported through UCDP, the predictor variables were only collected in seven countries by Afrobarometer given the highly tenuous environments and relative lack of safety for survey collectors. Here, the selection of countries may have been expanded to include those not identified as at-risk though incidents of civil conflict would have been limited. Again, given security concerns for both interviewers and respondents, several questions within the Afrobarometer were not asked in select countries, particularly those wherein ethnic identity is highly contentious. As such certain predictor variables were not able to be selected for testing given they were not collected in each of the seven sample countries. Lastly, the notion of lag can be concluded a limitation to the study given that both dependent and predictor variables reflect a single test year.

Despite the limitations identified above the findings of this study are valid and generalizable to the specific conditions annotated in the findings, and not to the availability or presence of other resources. The findings of this study based on indicators

of specific deprivations, within a highly volatile sample of countries suffering from high food instability and political conflict are thus not generalizable to countries outside the Central African belt. Further, the findings of this study were based on a single test year and did not accommodate lag, and as such are not generalizable to other years of observation. However, the findings are meaningful to the theory of relative deprivation and the greed-grievance dichotomy pervasive in conflict literature. Further, the results should prove meaningful to informing the construction and testing of a comprehensive conflict causal model that accounts for not only grievances arising from deprivation, but aggregation of grievances horizontally, and their subsequent exploitation by conflict entrepreneurs.

## Recommendations

For this study I utilized publicly available, open-source data, which is highly beneficial to not only the repurposing of originally collected data, but also to the larger field of civil conflict study to conduct more research more efficiently. Defaulting to easily accessible datasets however is not a valid strategy for conducting any type of empirical research. Establishing baselines of collection, definition, and counting though may prove beneficial to the larger grievance and conflict research community to validate or invalidate existing collection mechanisms and methodologies. That said, the data used in this study are far from perfect and while there are numerous means for counting, aggregating and assessing conflict occurrence and intensity it does not follow any established protocols for the determination of what should and shouldn't be considered conflict in the civil realm. UCDP generally assesses categorization of an event as conflict

past a threshold of fatalities, and while this is a fair mechanism for measuring intensity of violence it does not provide an effective rubric for cataloging conflict as an outgrowth of grievances leading to a more generalized social discord. Further, while the Afrobarometer, like UCDP has a positive representation equally for its outputs and its methodological rigor and enjoys high acceptance among academics and development researchers and practitioners, a certain deliberateness to question making is required when studying and commenting on personal attitudes and behaviors, particularly those associated with grievances. This is a tenuous contention at best, the very psychological nature of human perception rests on respondent subjectivity and troubles even the most rigorous routinization of scales. This subjectivity is exacerbated when contending with perceptions of deprivation and thus statistically measuring feelings of unfairness more acutely necessitates lines of question making that move exponentially toward increasingly valid indicators and a general discounting of proxy variables. Understandably proxy variables are the starting point to initiating a given line of empirical investigation, however, their relevance degrades through subsequent generations of replication and reinvestigation. Thus, the first recommendation of this study is to generate original data that more overtly captures actual individual perceptions of deprivation and the associated conditions experienced by the respondent to provide both the what, as well as the why behind grievance.

Obviously any instrumentation generated through this means will require repeated and systematic deployment for its own validation. As well, the establishment of a more precise mechanism of collecting discrete perceptions will position regression testing to

further establish relational value between this actual perception data and what would become true proxies (the why behind the what). That is, without empirical evidence of high strength correlations between perception data and indicators, such as the presence of electricity supplies, the confidence in those proxies is generally limited. This may further help to overcome the gross inconsistencies in conflict research in terms of establishing valid causality, let alone corollary value.

Secondarily, because of this study I recommend a more comprehensive approach to establishing a validated conflict causal chain or model, wherein cross-discipline researchers (i.e. public administration, political science, international relations, foreign policy, etc.) embark on a longitudinal effort to construct and test causal models that overtly link perceptions of deprivation to vertical grievances, vertical grievances to aggregation, and aggregation to exploitation and its eventual expression as violent civil conflict. In addition to more precise perception of deprivation-focused data collection through quantitative surveys, and alignment to proxy variables focused on presence and availability of critical resources and infrastructure, focus must be paid to the processes of aggregation in order to establish susceptibility scores for aggrieved populations to better understand the risk of exploitation. As such, any resulting conflict study model must accommodate qualitative data that contextualize statistical findings.

## Implications

As demonstrated in Chapter 2 current research is in no way deficient in its attention to civil conflict and its myriad potential antecedents. However, this research tends to be primarily the output of international studies, political science and

peacebuilding disciplines, and more often focuses on informing international development and foreign policy interventions. But as conflict arising from grievances derives from basic human behavior (psychology) and the governments that provide for the people are an institution of society (sociology), the consideration of the role local government managers play and the politics brought to bear pose significant influence over what is generally a national or even international effort to predict and resolve violent civil conflict without considering its very local nature (Rustad et al., 2011). That is, although the purpose of this study was to comment on the statistical significance of relationship between and among indicators of the lived condition and the outcomes of violent civil conflict, fostering increased interest and attention of the public administration discipline toward advancing the body of grievance and conflict knowledge from a decidedly local government management perspective is its greater intentionality.

Historically and academically, local government management studies tend toward more bureaucratic activities such as budget formulation and planning, and infrastructure management, despite local officials increasingly recognizing and actively playing roles in overcoming increasingly intense challenges to community resilience and sustainability considering increasingly contentious environmental changes. Focusing greater intellectual attention on contextualizing larger socioeconomic issues is however critical for public administration as at its core is the responsibility for mediating stakeholder interests (Raadschelders, 2019, p. 93). As such, a more active local government management role, both practical and scholarly, through a more deliberate exploration and commentary regarding identifying and remediating vertical grievances to mitigate

aggregation and thus thwart exploitation as a conflict trigger should be a discipline-wide imperative.

Civil conflict is neither a new phenomenon, nor a new interest of scholarly research. Many lines of inquiry have attempted to contend with conflict typologies, causalities, and the numerous and empirically tenuous aggravating conditions of fragile states, as well as the resource access and distribution incompatibilities that ultimately fuel competition, breed injustice, and result unfavorably most often for the most innocent of actors. However, the gap in knowledge is not complete ignorance of factors, rather an incomplete representation of the highly interdependent state of often erratic and unstable variables reflecting human perceptions of the lived experience. This study attempted to present a baseline for establishing and evidencing an empirical argument for increased public administration investigation into grievances and conflict, cross discipline sharing, and ultimately preparing local government managers to take substantive and direct action among their immediate populations to address what Bart and Gleditsch (2019) identified as conflict origination and militarization.

## Conclusion

It is difficult to contend this study proves anything, however its merits are in its attempt to overtly levy the responsibility of predicting and remediating the highly contentious and often violent civil conflicts that are increasingly arising throughout human society squarely on the shoulders of the public administration discipline, and to challenge local government managers to lead grievance resolution, rather than default to external parties, civil society, or the larger international peacebuilding community to

solve what are ultimately, decidedly, and only local problems. This study's examination of the relationship between variables at least loosely associated with suppositions of grievance did not expose overwhelmingly statistically significant findings to confirm its stated hypothesis, nor validate contentions that deprivation of access would pose a greater influence on grievances than those of distribution. In fact, quite the opposite might be argued given shadows of corollary strength between a single variable electricity and incidents of civil conflict. That stated, this study does support the need for more active public administration participation in the cross-discipline investigation and management of conflict at the grassroots level.

With the intention of contributing to the larger body of civil conflict knowledge and suggesting at least an alternative perspective on the alignment of highly interdependent factors necessitating a comprehensive causal chain, the results of this study remain highly inconclusive. However, as the first in what is intended to be a line of study, a baseline of questioning has been established wherein the absence of definite correlation among the study variables itself is a significant finding.

# References

African Center for Strategic Studies. (2017). *Acute food insecurity and conflict in Africa.* Retrieved from https://africacenter.org/spotlight/acute-food-insecurity-conflict-africa/

Afrobarometer. (2016). *Afrobarometer round six* [Data file]. Retrieved from http://www.afrobarometer.org

Asingo, P. O. (2018). Relative deprivation, protests and voting in Kenya. *Commonwealth & Comparative Politics, 53*(1), 65-83. doi:10.1080/14662043.2017.1351071

Babones, S. (2016). Interpretive quantitative methods for social sciences. *Sociology, 50(*3), 453-469. doi:10.177/0038038515583637

Bakkan, H. A., Jakobsen, T. G., & Jakobsen, J. (2016). Unpacking ethnicity: Exploring the underlying mechanisms linking ethic fractionalism and civil conflict. *Peace and Conflict: Journal of Peace Psychology, 22*(4), 413-416. doi:10.1037/pac0000192

Bara, C. (2014). Incentives and opportunities: A complexity-oriented explanation of violent extreme conflict. *Journal of Peace Research, 51*(6), 696-710. doi:10.1177/0022343314534458

Bartusevicius, H. (2014). The inequality-conflict nexus re-examined: Income, education and popular rebellion. *Journal of Peace Research, 51*(1), 35-50. doi:10.1177/0022343313503179

Bartusevicius, H. (2016). Introducing the Categorically Disaggregated Conflict (CDC) dataset. *Conflict Management and Peace Science, 33*(1), 89-110.

doi:10.1177/0738894215570423

Bartusevicius, H., & Gleditsch, K. S. (2019). A two-stage approach to civil conflict: Contested incompatibilities and armed violence. *International Organization, 73*(1), 225-248. doi:10.1017/S0020818318000425

Basedau, M., Fox, J., Pierskalla, J. H., Struver, G., & Vullers, J. (2017). Does discrimination breed grievances and do grievances breed violence: New evidence from an analysis of religious minorities in developing countries. *Conflict Management and Peace Studies, 34*(3), 217-239. doi:10.1177/0738894215581329

Boone, C. (2017). Sons of the soil conflict in Africa: Institutional determinants of ethnic conflict over land. *World Development, 96*, 276-293. doi:10.1016/j.worlddev.2017.03.012

Bormann, N., & Hammon, J. (2016). A slippery slope: The domestic diffusion of ethnic civil conflict. *International Studies Quarterly, 60*, 587-598. doi:10.1093/isq/sqw031

Bormann, N., Cederman, L, & Vogt, M. (2017). Language, religion and ethnic civil war. *Journal of Conflict Resolution, 61*(4), 744-771. doi:10.1177/0022002715600755

Braithwaite, A., Dasandi, N., & Hudson, D. (2016). Does poverty cause conflict: Isolating the causal origins of the conflict trap. *Conflict Management and Peace Studies, 33*(1), 45-66. doi:10.1177/0738894214559673

Bridge, B. A., Adhikari, D., & Fontela, M. (2015). Electricity, income and quality of life. *The Social Science Journal*, *53*, 33-39. doi:10.1016/j.soscij.2014.12.2009

Buhaug, H., Cederman, L., & Gleditsch, K. S. (2014). Square pegs in round holes:

Inequalities, grievances and civil war. *International Studies Quarterly, 58*, 418-431. doi:10.1111/isqu.12068

Cederman, L., Gleditsch, K. S., & Buhaug, H. (2013). *Inequality, grievances and civil war*. New York, NY: Cambridge University Press.

Cederman, L., Gleditsch, K. S., & Wucherpfennig, J. (2017). Predicting the decline of ethnic civil war: Was Gurr right and for the right reasons. *Journal of Peace Research, 54*(2), 262-274. doi:10.1177/0022343316684191

Cederman, L., & Vogt, M. (2017). Dynamics and logics of civil war. *Journal of Conflict Resolution, 61*(9), 1992-2016. doi:10.1177/0022002717721385

Cederman, L., Weidmann, N. B., & Bormann, N. (2015). Triangulating horizontal inequality: Toward improved conflict analysis. *Journal of Peace Research, 52*(6), 806-821. doi:10.1177/0022343315597969

Cederman, L., & Wucherpfennig, J. (2017). Inequalities between ethnic groups, conflict, and political organizations. *Ethnopolitics, 16*(1), 21-27. doi:10.1080/17449057.2016.123534

Chiba, D., & Gleditsch, K. S. (2017). The shape of things to come: Expanding the inequality and grievance model for civil war forecasts with event data. *Journal of Peace Research, 45*(2), 275-297. doi:10.1177/0022343316684192

Choi, H. J., & Raleigh, C. (2015). Dominant forms of conflict in changing political systems. *International Studies Quarterly, 59*, 158-171. doi:10.1111/isqu.12157

Collier, P., & Hoeffler, A. (2004). Greed and grievance in civil war. *Oxford Economic Papers, 56*(4), 563-595. doi:10.1093/oep/gpf064

Corcoran, K. E., Pettinicchio, D., & Young, J. T. (2015). Perceptions of structural injustice and efficacy: Participation in low/moderate/high-cost forms of collective action. *Sociological Inquiry, 85*(3), 429-461. doi:10.1111/soin.12082

Cote, I., & Mitchell, M. I. (2017). Deciphering sons of the soil conflicts: A critical survey of the literature. *Ethnopolitics, 16*(4), 333-351. doi:10.1080/17449057.2015.1089050

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Los Angeles, CA: Sage.

Cunningham, D. E. (2016). Preventing civil war: How the potential for international intervention can deter conflict onset. *World Politics, 68*(2), 307-340. doi:10.1017/S0043887115000404

Davies, J. C. (1962). Toward a theory of revolution. *American Sociological Review, 27*(1), 5-19. doi:10.2307/2089714

Dietz, T., & Kalof, L. (2009). *Introduction to social statistics*. West Sussex, England: Wiley-Blackwell.

Detges, A. (2016). Local conditions of drought-related violence in sub-Saharan Africa: The role of road and water infrastructures. *Journal of Peace Research, 53*(5), 696-710. doi:10.1177/0022343316651922

Eide, E. B. (1997). Conflict entrepreneurship: On the art of waging civil war. In A. McDermott (Ed.), *Humanitarian force* (pp. 41-69). Oslo, Norway: Peace Research Institute Oslo.

Ekwealor, C. T. (2017). The art of conflict transformation in Africa. *Peace Review: A*

*Journal of Social Justice, 29*, 341-349. doi:10.1080/10402659.2017.1344534

Fox, J. (2015). *Applied regression analysis and generalized linear models* (3rd ed.). Los Angeles, CA: Sage.

Fund for Peace. (2016). *Fragile States Index* [Data file and codebook]. Retrieved from http://fundforpeace.org/fsi/

Fukuyama, F. (2018). *Identity: The demand for dignity and the politics of resentment.* New York, NY: Farrar, Straus and Giroux.

Ghatak, S., & Prins, B.C. (2017). The homegrown threat: State strength, grievance and domestic terrorism. *International Interactions, 43*(2), 217-247. doi:10.1080/03050629.2016.1128431

Gibler, D. M. (2017). Combining behavioral and structural predictors of violent civil conflict: Getting scholars and policymakers to talk to each other. *International Studies Quarterly, 61*, 28-37. doi:10.1093/isq/sqw030

Gibler, D. M., & Miller, S. V. (2014). External territorial threat, state capacity, and civil war. *Journal of Peace Research, 51*(5), 634-646. doi:10.1177/0022343314531003

Gleditsch, K. S., & Rivera, M. (2017). The diffusion of nonviolent campaigns. *Journal of Conflict Resolution, 61(*5), 1120-1145. doi:10.1177/0022002715603101

Glensy, R. (2011). The right to dignity. *Columbia Human Rights Law Review, 43*(1), 65-142. Retrieved from https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=edslex&AN=edslex8CD7E6F1&site=eds-live&scope=site

Greig, J. M. (2015). Nipping them in the bud: The onset of mediation in low-intensity

civil conflicts. *Journal of Conflict Resolution, 59*(2), 336-361. doi:10.1177/0022002713503807

Gross, N. (2018). The structure of causal chains. *Sociological Theory, 36*(4), 343-367. doi:10.1177/0735275118811377

Harrison, F. (1980). A conceptual model of organizational conflict. *Business and Society (Pre-1986), 19, 20*(2), 30-40. Retrieved from https://ezp.waldenulibrary.org/login?qurl=https%3A%2F%2Fsearch.proquest.com%2Fdocview%2F233314055%3Faccountid%3D14872

Herroros, F., & Domenech, J. (2018). Pre-war grievances and violence against citizens in civil wars: Evidence from the Spanish Civil War in Catalonia. International *Journal of Conflict and Violence, 12*(1), 1-20. doi:10.4119/UNIBI/ijcv.584

Hillesund, S. (2019). Choosing whom to target: Horizontal inequality and the risk of civil and communal violence. *Journal of Conflict Resolution, 63*(2), 528-554. doi:10.1122/0022002717734286

Houle, C. (2016). Why class inequality breeds coups but not civil wars. *Journal of Peace Research, 53*(5), 680-695. doi:10.1177/0022343316652187

Howard, T., & Morris, B. (2014). Pathways to state failure: Greed or grievance. *International Journal of Terrorism and Political Hot Spots, 9*(1), 1-19. Retrieved from https://search-ebscohost-come.ezp.waldenulibrary.org/login.aspx?direct=true&db=poh&AN=99666358&site=eds-live&scope=site

Ige, K. D. (2014). The absolute – relative deprivation dichotomy in estimating variations

in reaction to inequality: Comparing antecedents of collective action among disadvantaged groups. *Journal of Social Science, 39*(1), 87-101. Retrieved from https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=sih&AN=108589645&site=eds-live&scope=site

Jazayeri, K. B. (2016). Identity-based political inequality and protest: The dynamic relationship between political power and protest in the Middle East and North Africa. *Conflict Management and Peace Science, 33*(4), 400-422. doi:10.1177/0738894215570426

Klandermans, B. (2015). Grievance formation in times of transition: South Africa 1994-2000. *Social Justice Research, 28*, 123-142. doi:10.1007/s11211-014-0232-4

Koko, S. (2016). The role of civil society in conflict resolution in the Democratic Republic of the Congo, 1998-2006: An appraisal. *African Journal of Conflict Resolution, 16*(1), 111-137. Retrieved from https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=poh&AN=118318563&site=eds-live&scope=site

Koos, C. (2018). Which grievances make people support violence against the state: Survey of evidence from the Niger Delta. *International Interactions, 4*(3), 437-462. doi:10.1080/03050629.2017.1369411

Koubi, V., & Bohmelt, T. (2014). Grievances, economic wealth and civil conflict. *Journal of Peace Research, 1*(1), 19-33. doi:10.1177/0022343313500501

Kustov, A. (2017). How ethnic structure affects civil conflict: A model of endogenous

grievance. *Conflict Management and Peace Science, 34*(6), 660-679. doi:10.1177/0738894215613035

Laerd Statistics (2015). *Multiple regression using SPSS Statistics*. Statistical tutorials and software guides. Retrieved from https://statistics.laerd.com/

Lindemann, S., & Wimmer, A. (2018). Repression and refuge: Why only some politically excluded ethnic groups rebel. *Journal of Peace Research, 55*(3), 305-319. doi:10.1177/0022343317747337

Matsumoto, M. (2016). Three strands of explanations on root causes of civil war in low-income and weak states in Sub-Sharan Africa: Implications for education. *International Journal of Educational Development, 49*, 1-10. doi:10.1016/j.ijedudev.2016.01.006

Mertler, C. A. (2016). *Introduction to educational research.* Los Angeles, CA: Sage.

Mihalache-O'Keef, A. S. (2018). Whose greed, whose grievance and whose opportunity: Effects of foreign direct investment (FDI) on internal conflict. *World Development, 106*, 187-206. doi:10.1016/j.worlddev.2018.01.012

Miodownik, D., & Nir, L. (2015). Receptivity to violence in ethnically divided societies: A micro-level mechanism of perceived horizontal inequalities. *Studies in Conflict and Terrorism, 39*, 22-45. doi:10.1080/1057610X.2015.1084162

Molinder, J., Karlsson, T., & Enflo, K. (2019). More power to the people: Electricity adoption, technological change and social conflict. *Lund Papers in Economic History* (206), 1-33. Retrieved from http://lup.lub.lu.se/record/c79983f8-fb51-43a0-b9ff-065d870836e3

Mosinger, E. S. (2018). Brothers or others in arms: Civilian constituencies and rebel fragmentation in civil war. *Journal of Peace Research, 55*(1), 62-77. doi:10.1177/0022343316675907

Mudasiru, S., & Moshood, A. B. (2017). The role of civil society groups in conflict resolution in Nigeria. *Ubuntu: Journal of Conflict and Social Transformation, 6*(1), 59-81. Retrieved from https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=sih&AN=123713070&site=eds-live&scope=site

Osborne, D., Sibley, C. G., Huo, Y. J., & Smith, H. (2018). Doubling down on relative deprivation: Using latent profile analysis to evaluate an age-old assumption in relative deprivation theory. *European Journal of Social Psychology, 45*, 482-495. doi:10.1002/ejsp.2099

Ottmann, M. (2017). Rebel constituencies and rebel violence against civilians in civil conflicts. *Conflict Management and Peace Science, 34*(1), 27-51. doi:10.1177/0738894215570428

Ozcan, N. A. (2018). Is terrorism becoming an effective strategy to achieve political aims. *All Azmuth: Journal of Foreign Policy and Peace, 7*(2), 93-100. Retrieved from https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=poh&AN=130232829&site=eds-live&scope=site

Pallant, J. (2016). *SPSS Survival Manual* (6th ed.). Sydney, Australia: Allen and Unwin.

Pettigrew, T. F. (2015). Samuel Stouffer and relative deprivation. *Social Psychology*

*Quarterly,78*(1), 7-24. doi:10.1177/0190272514566793

Pettigrew, T. F. (2016). In pursuit of three theories: Authoritarianism, relative deprivation, and intergroup contact. *Annual Review of Psychology, 67*, 1-21. doi:10.1146/annurev-psych-122414-033327

Raadschelders, J. C. (2019). The state of theory in the study of public administration in the United States: Balancing evidence-based, usable knowledge, and conceptual understanding. *Administration Theory and Praxis, 41*, 79-98. doi:10.1080/10841806.2018.1526517

Raleigh, C. (2014). Political hierarchies and landscapes of conflict across Africa. *Political Geography, 42*, 92-103. doi:10.1016/j.polgeo.2014.07.002

Rudolfsen, I. (2017). State capacity, inequality and inter-group violence in Sub-Saharan Africa 1989-2011. *Civil Wars, 19*(2), 118-145. doi:10.1080/13698249.2017.1345541

Rustad, S. A. (2016). Socioeconomic inequalities and attitudes toward violence: A test with new survey data in the Niger Delta. *International Interactions, 42*(1), 106-139. doi:10.1080/03050629.2015.1048856

Rustad, S. A., Buhaug, H., Falch, A., & Gates, S. (2011). All conflict is local. *Conflict Management and Peace Science, 28*(1), 15-40. doi:10.1177/0738894210388122

Scarcelli, M. (2014). Social cleavages and civil war onset. *Ethnopolitics, 13*(2), 181-202. doi:10.1080/17449057.2013.835516

Smith, H. J., & Pettigrew, T. F. (2015). Advances in relative deprivation theory and research. *Social Justice Research, 28*, 1-6. doi:10.1007/s11211-014-0231-5

Smith, H. J, Ryan, D. A., Jaurique, A., Pettigrew, T. F., Jetten, J., Ariyanto, A., . . . Wohl, M. (2018). Cultural values moderate the impact of relative deprivation. *Journal of Cross-Cultural Psychology, 49*(8), 1183-1218. doi:10.1177/0022022118784213

Sobek, D. (2010). Masters of their domains: The role of state capacity in civil wars. *Journal of Peace Research, 47*(3), 267-271. doi:10.1177/0022343310362295

Sousa, R. R. (2016). Greed, grievance, leadership and external interventions in the initiation and intensification of civil war in Angola. *Janus.Net: E-Journal of International Relations*, *7*(1), 73–95. Retrieved from https://search-ebscohost-com.ezp.waldenulibrary.org/login.aspx?direct=true&db=a9h&AN=118979628&site=eds-live&scope=site

Sterzel, T., Ludeke, M., Kok, M., Walther, C., Sietz, D., de Soysa, I., . . . Janssen, P. (2014). Armed conflict distribution in global drylands through the lens of a typology of socio-ecological vulnerability. *Regional Environmental Change, 14*(4), 1419-1435. doi:10.1007/s10113-013-0553-0

Taydas, Z., Enia, J., & James, P. (2011). Why do civil wars occur: Another look at the theoretical dichotomy of opportunity versus grievance. *Review of International Studies, 37*, 2627-2650. doi:10.1017/S026021051100012X

Temirkulov, A. (2014). The conflict volcano: Methodological proposition for conflict analysis. *Journal of Aggression, 6*(2), 99-115. doi:10.1108/JACPR-08-2013-0017

Thomson, H. (2016). Rural grievances, landholding inequality and civil conflict. *International Studies Quarterly, 60*, 511-519. doi:10.1093/isq/sqw023

Thyne, C. (2017). The impact of coup d'etat on civil war duration. *Conflict Management*

*and Peace Studies, 34*(3), 287-307. doi:10.1177/0738894215570431

Tollefsen, A. F., & Buhaug, H. (2015). Insurgency and inaccessibility. *International Studies Review, 17*, 6-25. doi:10.1111/misr.12202

Uppsala Conflict Data Program. (2017). *UCDP Georeferenced Event Dataset Global version 18.1* [Data file and codebook]. Retrieved from https://ucdp.uu.se/

Van Holt, T., Johnson, J., Moates, S., & Carley, K. M. (2016). The role of datasets on scientific influence within conflict research. *PLoS One, 11*(4), 1-14. doi:10.1371/journal.pone.0154148

Van Leeuwen, M., & Van Der Haar, G. (2016). Theorizing the land-violent conflict nexus. *World Development, 78*, 94-104, doi:10.1016/j.worlddev.2015.10.011

Wig, T., & Tollefsen, A. F. (2016). Local institutional quality and conflict violence in Africa. *Political Geography, 53*, 30-42. doi:10.1016.j.polgeo.2016.01.003