LOCAL CUSTOMARY INSTITUTIONS AND CONFLICT

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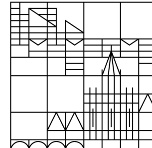

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Angst im Bureau abwechselnd mit Selbstbewußtsein. Sonst zuversichtlicher. Großer Widerwillen vor ›Verwandlung‹. Unlesbares Ende. Unvollkommen fast bis in den Grund. Es wäre viel besser geworden, wenn ich damals nicht durch die Geschäftsreise gestört worden wäre.

— Franz Kafka, Tagebücher

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port, for being my partner, with all your positivity, calm and energy, and with your love.

ABSTRACT

Customary institutions govern subnational groups around the globe. Even though institutions play a central role in conflict research, the effects of traditional institutions on intrastate conflict are rarely explored. In this dissertation, I therefore analyze the role of various customary institutions and their relationship with the state with regards to the occurrence of conflicts. I first show that just like state institutions, traditional institutions vary on multiple levels and thereby may affect conflict through various channels. Subsequently, I develop and test theories on their relation to conflict that pay attention to this variation.

The first research article, *Polygynous Neighbors, Excess Men, and Intergroup Conflict in Rural Africa*, co-authored with Carlo Koos, explores how polygyny as a family institution affects conflict between groups. Globally, marriage is not only regulated by the state, but also by religious and customary institutions. On the African continent, the prevalence of polygyny varies between ethnic groups. We argue that it leads to social imbalances, in which some men live in polygamous marriages, while many men are excluded from the marriage market.

This leads to a frustration-aggression mechanism. Because of sharp sanction mechanisms within their groups, such "excess men" target their violence against neighboring groups. Empirically, we not only find evidence for a relationship between the number of polygynous neighbors of a group and the probability that it will be attacked, but also can support our theoretical mechanism. Men that live in polygynous groups are more likely to use violence, and feel treated unfairly.

In the second research article, *Traditional Authorities, Norm Collisions, and Communal Conflict*, I develop a novel theoretical argument on the effects of the simultaneous presence of state and local customary policing and judicial authorities. I argue that this leads to "norm collision", which means that the effectiveness of either institution to punish defection and induce cooperation is diminished. I provide empirical evidence for this claim using new data, and also show that multiple norms may also have positive effects on cooperation, provided there is state-level regulation pertaining to them.

In the third research article, *Securing a State: Traditional Authorities and Strategies in Demands for Self-Determination*, co-authored with Friederike Luise Kelle, we consider how traditional authorities affect bargaining over self-determination between their groups and the state. We show that the institutions of both sides — of the group and of the state — play a role in the course of the action. The existence of a traditional authority increases the probability that the process escalates and that the group utilizes non-conventional strategies (e.g., protest, violence, or rebellion). This effect is diminished, however, insofar as the traditional authorities have internal sanction mechanisms for their leaders that create audience costs and thereby enable credible commitments and successful bargains through conventional channels.

These three articles make important contributions to the literature. Specifically, they enhance our knowledge on the relationship between traditional authorities and conflict. They show that existing theories from international relations can be applied to these actors, but also that new theoretical mechanisms need to to be developed to understand the effects of traditional authorities, their incongruence with state institutions, and the application of parallel laws on conflict.

ZUSAMMENFASSUNG

Traditionelle und gewohnheitsrechtliche Institutionen bestimmen weltweit über das Leben von subnationalen ethnischen Gruppen. Obwohl Institutionen eine große Rolle in der Konfliktforschung spielen, ist der Effekt von traditionalen Institutionen auf innerstaatliche Konflikte weitgehend unbekannt. In der vorliegenden Dissertation analysiere ich deswegen die Rolle verschiedener gewohnheitsrechtliche Gruppeninstitutionen und ihrer Beziehung zum Staat in Bezug auf das Entstehen von Konflikten. Ich zeige zunächst dass traditionelle Institutionen, ähnlich wie staatliche Institutionen, in vielerlei Hinsicht variieren. Ich entwickele und teste deswegen Theorien zu ihrer Verbindung mit Konflikt, die dieser Variation gerecht werden.

Im ersten Artikel, verfasst mit Carlo Koos, gehen wir der Frage nach, wie sich die Familieninstitution der Polygynie auf Konflikte zwischen Gruppen auswirkt. Die Ehe wird weltweit nicht nur durch den Staat, sondern auch durch religiöse und gewohnheitsrechtliche Institutionen reguliert. Auf dem afrikanischen Kontinent variiert Polygynie zwischen ethnischen Gruppen. Wir argumentieren, dass Polygynie zu einem sozialen Ungleichgewicht führt, in welchem manche Männer in polygynen Ehen leben, während viele Männer von dem Heiratsmarkt ausgeschlossen sind.

Dies nährt einen Frustrations-Aggressions-Mechanismus. Aufgrund scharfer Sanktionsmechanismen innerhalb ihrer Gruppe richten die "überschüssigen" Männer ihre Gewalt dann gegen benachbarte Gruppen. Wir finden nicht nur Evidenz für den Zusammenhang zwischen der Anzahl der polygynen Gruppen-Nachbarn einer ethnischen Gruppe und dem Risiko, dass diese angegriffen wird, sondern können unseren theoretischen Mechanismus auch empirisch unterfüttern. Männer, die in polygynen Gruppen leben, sind im Schnitt gewaltbereiter und fühlen sich ungerechter behandelt.

Im zweiten Artikel entwickele ich ein neues theoretisches Argument über den Effekt der gleichzeitigen Präsenz von staatlichen und gewohnheitsrechtlichen Polizei– und Justizinstitutionen. Ich argumentiere dass diese Koexistenz zu "Normkollisionen" führt, welche die Effektivität beider Institutionen, Delikte zu verfolgen und Kooperation herbeizuführen, verringert. Die empirische Analyse unterstützt die Theorie. Überlappende Normen können dennoch einen

positiven Effekt auf Kooperation haben, unter der Bedingung, dass der Staat traditionelles Recht inkorporiert und reguliert.

Im dritten Artikel, verfasst mit Friederike Luise Kelle, betrachten wir wie traditionelle Autoritäten Verhandlungen in Konflikten über Selbstbestimmungsrechte zwischen ihren Gruppen und dem Staat beeinflussen. Wir zeigen, dass die Institutionen auf beiden Seiten – des Staats und der Gruppe – eine Rolle in dem Verlauf der Verhandlungen spielen. Dass Vorhandensein einer traditionellen Autorität erhöht die Wahrscheinlichkeit von Verhandlungseskalation und der Verwendung unkonventionellen Strategien (z.B. Proteste, Gewalt und Rebellion) durch die Gruppe. Dieser Effekt wird jedoch abgeschwächt, sofern traditionelle Autoritäten interne Sanktionsmechanismen für ihre FührerInnen haben, die "audience costs" verursachen und damit glaubwürdige Versprechen und erfolgreiches Verhandeln im Rahmen konventioneller Kanäle ermöglichen.

Die Befunde der drei Artikel machen wichtige Beiträge zur Literatur. Insbesondere erweitern sie das bisherige Wissen zum Zusammenhang von traditionelle Gruppeninstitutionen und Konflikt und zeigen, dass bestehende Theorien der Internationalen Beziehungen auf diese Akteure angewendet werden können, aber auch, dass wir neue theoretische Mechanismen entwickeln müssen um unser Verständnis des Effekts von traditionellen Institutionen, ihrer Inkongruenz mit Staatsinstitutionen, und die Anwendung parallelen Rechts auf Konflikt besser zu verstehen.

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Part I

INTRODUCTION

1 INTRODUCTION

All societies face the problem of violence.

— North, Wallis, and Weingast (2009, p. 13)

Social and political institutions shape the everyday lives of people around the globe. They structure expectations, incentives, and interactions, and often reduce uncertainty and create order (North, 1991, p. 97). While much social science has focused on institutions on the level of the nation-state, it is an empirical reality that social and political institutions that define the "rules of the game" exist beyond the domain of the modern state.

An important type of these rules of the game are customary institutions. These are locally-rooted and often informal norms and practices, typically structured along the lines of subnational ethnic groups. Throughout the world, customary institutions, therefore, define how people interact (e.g., the Indian caste system), make decisions (e.g., in customary assemblies), plan their personal lives (e.g., when it comes to marriage), and structure political power (e.g., through clan systems). In fact, there are almost 50 countries in the world where at least 80 percent of the population lives in social structures that are in some way customary.

All of the societal groups that have such customary institutions face the "problem of violence" (North, Wallis, and Weingast, 2009, p. 13). While their institutions may be designed to create societal order within groups, their coexistence in modern states can have drastic consequences on the emergence of conflict. This dissertation puts forth theories that explain this phenomenon, and uses new global data to test them.

Specifically, while the existing literature on conflict acknowledges the importance of institutions and ethnic groups, and has begun to appreciate the existence of customary institutions (e.g., Wig, 2016; Wig and Kromrey, 2018), we lack systematic knowledge on their precise nature, their interaction with state institutions, and the ensuing conflict dynamics among various actors. How are family and gender relations structured? How do policing and judicial functions vary across groups? Which groups hold their local leaders politically accountable? And how do groups interact with state institutions? This

AXES	ARTICLE 1	ARTICLE 2	ARTICLE 3
Type of Group Institution	Social	Political	Political
Role of State		Regulatory	Bargaining Partner
Type of Conflict	Group – Group	Group – Group	Group – State

Table 1: Structure of the Dissertation.

dissertation shows how these different institutional features affect conflicts between groups and between groups and the state.

I analyze this relationship along three axes, depicted in Table 1. The first two axes—the type of group-level customary institution and the role of the state—cover the explanatory concepts. The third axis represents different levels of the outcome analyzed, conflict.

All articles focus on customary group-level institutions, but highlight different types these of institutions (first axis). The first article in Chapter 2 examines the social institutions that shape the smallest social entity: family and marriage. Customary institutions of ethnic groups differ in their type of marriage institution, monogamy or polygyny. The second and third articles in Chapter 3 and Chapter 4 scrutinize political institutions, i.e., how authorities engage in the governance of their community (Holzinger, Kern, and Kromrey, 2016).

The second article examines governance functions concerning policing: the judicative and executive institutions that enforce local norms and customary law. This article considers conflicts that emerge horizontally between groups, but brings in the state as a regulatory third party. By providing regulations and including traditional[1] governance into its polity, the state can avert norm collisions between sources of law and policing on its territory. Constitutional regulation thus moderates the conflict-inducing effect of traditional policing on communal conflict.

The third article looks at traditional authorities—the political leaders and collective institutions of a group —and how they affect strategies in self-determination movements. Therefore, the state is the relevant bargaining partner and becomes part of the conflict.

A common thread that emerges from all three analyses is that historically grown institutions, which—–at least in the past—–solved some societal problem, can have negative externalities outside their original social subsystem, which can result in violence.

1 I will use the terms "customary" and "traditional" interchangeably.

The first article shows that polygyny emerged due to skewed sex-ratios, yet has not only persisted once sex-ratios were even again but also produces "excess men" that are on average more frustrated and readier choose violence (Chapter 2). Within-group policing institutions aim to create within-group order, but can lead to more inter-group violence by inducing norm collision (Chapter 3). Finally, the customary political leaders and collective institutions of traditionally governed groups have emerged as distinct political systems to govern their populations, which today results in the escalation in conflicts that demand self-determination from host states (Chapter 4).

With regard to traditional *political* institutions (Chapter 3 and Chapter 4), a second common thread emerges: institutional incongruence. The presence of traditional political institutions with a distinct legitimacy, territory, and population within the territories of states partially departs from a Weberian (1919) notion of the monopoly of legitimate violence. Therefore, the existence of "dual polities" (Buur and Kyed, 2007)—in which political authority and the legal grounds for social interaction coexist—can result in incongruent institutions.

This incongruence, in turn, produces the named negative externalities, rather than the customary institutions in and by themselves (cf. Wilfahrt, 2018). Incongruence can be alleviated by constitutional integration, and both papers indeed find empirical evidence for this: state-level regulations moderate the conflict-inducing effect of customary institutions.

Throughout this introduction, I will pick up on these themes. First, I will define customary institutions as the norms and governance over subnational groups and territories. Then I will review the relevant literature and show the gaps this dissertation aims to fill. As one gap that emerges concerns the empirical understanding of contemporary traditional institutions, I will discuss existing datasets and the data collection upon which this dissertation is built in an additional section. Based on this, I will provide a descriptive and exploratory analysis that focuses on traditional political institutions, their persistence, and integration into their host states.

1.1 DEFINITION

What are customary institutions? Ethnic groups can be organized in various ways: They can have political parties, national interest groups, or can be represented by international NGOs. At the same time, groups can have their own institutions, customs, and entire

political systems based on their own history and heritage. In the following, I will first delineate the concept of "institutions" and then explain what is meant by "customary". This will give an idea of the variation in social and political customary institutions. Finally, I will define the level of analysis: where and to whom these institutions apply.

First, *institutions* are understood as the social and political "rules of the game" (North, 1990). More specifically, I follow North (1991, p. 97), who defines institutions as the "humanly devised constraints that structure political, economic, and social interaction." They overcome collective action problems and reduce the cost of interaction by constraining the behavior of individuals on the one hand, and through repeated interaction on the other (North, 1990, p. 37). Sometimes it is argued that they have to be valued (Huntington, 1973) and perceived as legitimate and effective by local actors (Ottaway, 2002).

This definition encompasses both formal and informal institutions that regulate the political, social, and economic "game." Although these three games cannot be neatly separated—social institutions such as marriage norms may have political causes—they describe the main spheres of institutional structures (Holzinger, Kern, and Kromrey, 2016).

Second, *customary* or *traditional* denotes the source of norms and of their legitimacy, which is associated with traditions and custom (Baldwin and Holzinger, 2019, p. 1748) and "rooted in history" (Ubink, 2008, p. 8). Traditional legitimacy is understood as locally-rooted, rather than "being the product of external importation" (Zartman, 2000, p. 7). Historical roots do not preclude that traditional institutions can be apt to changes or (re)invented (Hobsbawm and Ranger, 1983; Ranger, 1983). In particular, when it comes to political institutions, traditional institutions are not frozen in time—mirroring their precolonial predecessors—but rather traditions should be seen as "processes, which must continually change to remain salient" (Williams, 2010, p. 40, see also Vansina, 1990, p. 258).

The basis of customary institutions is customary law, which entails both substantial and procedural rules. The substantial rules regulate "internal security, land and resource allocation, public health, or matters of marriage and inheritance" (Holzinger, Kern, and Kromrey, 2016, p. 470), and can be compared to civil and criminal law in modern nation-states. Procedural rules include the regulation of processes such as succession of leadership, accountability mechanisms, and conflict management (ibid.). The latter refers to questions of political institutions. Collective institutions and political

leaders steer their communities through the rules and procedures of the traditional political system (Holzinger, Kern, and Kromrey, 2016).

Traditional systems of governance usually do not neatly fit modern state categories of separation of power into executive and judicative functions (Court, Hyden, and Mease, 2003, p. 3). For instance, dispute resolution frequently entails both judicative functions, such as customary courts, and executive functions, such as arrests (Cooper, 2018; Isser, 2011). Furthermore, both of these functions may be carried out by political leadership, such as chiefs or the house of elders.

Just like other political systems, traditional social and political institutions vary tremendously. For instance, some groups may allow for polygynous marriages, while others only practice monogamous marriages. Political accession can be based on lineage, appointment by other traditional leaders, elections, or through age-set systems (Hammond-Tooke, 1985). Some systems of traditional governance are more hierarchical in their organization, whereas other systems are more participatory, with only flat hierarchies (Kromrey, 2016). Acephalous societies only have a minimum of political centralization and specialization (Taylor, 1982, p. 33).

Third, traditional institutions are *group-* and *territory-specific*. Although traditional institutions can be connected to the state, and may even become part of the state's polity, as will be outlined below, their legitimacy is distinct from the state's.[2] They pertain to subnational ethnic groups with a common identity. The definition of ethnic groups applied throughout this dissertation covers cases where "people notice and condition their actions on ethnic distinctions in everyday life" (Fearon, 2006, p. 852). Furthermore, traditional institutions are inextricably intertwined with territory and land. In consequence, this territory is also subnational. The notion of "sons of the soil" (Fearon and Laitin, 2011; Geschiere, 2011) reflects this combination of group population and territory.

Taken together, "traditional institutions" are social and political norms and procedure based on customary law that govern subnational ethnic groups and territories. In this regard, they can be considered as polities within states.

2 This distinguishes traditional institutions discussed here from traditional monist countries, such as constitutional monarchies.

1.2 EXISTING LITERATURE AND GAPS

1.2.1 *Ethnic Groups, Customary Institutions, and Conflict*

This dissertation examines the effect of local customary institutions of ethnic groups on conflict. Ethnic groups have been analyzed to a great extent in the literature on conflict, yet their actual institutions have only recently entered the literature on conflict.

Originating from the question of whether ethnically diverse countries are less prosperous (Easterly and Levine, 1997), ethnic heterogeneity has been discussed—with varying findings—as a factor that affects civil war. While different measures for diversity were discussed (e.g., Alesina et al., 2003; Cederman and Girardin, 2007; Fearon and Laitin, 2003; Posner, 2004a), no consensus could be reached whether ethnic heterogeneity measured at the state-level influences conflict. Beyond the fractionalization of ethnic groups in countries, the idea that polarization and unequal power distributions between groups affect violence was put forth (Esteban and Ray, 1994; Horowitz, 1985).

The literature advanced when particular group features were assessed, allowing for group-level analyses of conflict. For instance, the relative power of groups (Cederman, Wimmer, and Min, 2010), their geographical concentration as a mobilization potential (Weidmann, 2009), and the existence of multiple ethnic groups in one space (Cunningham and Weidmann, 2010) have been shown to affect conflict.

Although group-level institutions, internal punishment mechanisms, and interactions with the state have been considered theoretically (e.g., Fearon and Laitin, 1996; Horowitz, 1985; Tajima, 2013, 2014), the empirical assessment of social and political institutions of ethnic groups have only recently attracted the attention of scholars.

First, quantitative political science literature has started to appreciate the importance of (gendered) customary *social* norms and institutions. For instance, by examining the effect of local inheritance norms on social inequality in Germany (Hager and Hilbig, 2019), or the effect of lineage systems—matrilineal vs. patrilineal—on public support of child marriages in Malawi (Muriaas et al., 2019).

Regarding conflict as an independent variable, Lazarev (2019) finds that armed conflict disrupted the patriarchal order in Chechnya and that as a result, women strategically choose state law over Sharia and customary law. This then further led to a backlash by the government, for instance, through the "semiformal introduction of polygamy"

(Lazarev, 2019, p. 699). Yet the effect of such norms on violent conflict has not been analyzed. The only notable exceptions are Kanazawa (2009) and its replication by Gleditsch et al. (2011) -— which led to contradictory conclusions with regard to the effect of polygyny on state-based conflict—and which will be discussed in detail in Chapter 2.

Discussions of customary *political* institutions have experienced a surge in the literature. Scholars highlight the influence of traditional authorities on outcomes such as electoral mobilization (e.g., Baldwin, 2013, 2014; Kadt and Larreguy, 2018; Krämer, 2016), development and public goods provision (e.g., Acemoglu, Reed, and Robinson, 2014; Baldwin, 2013; Díaz-Cayeros, Magaloni, and Ruiz-Euler, 2014; Michalopoulos and Papaioannou, 2013; Wilfahrt, 2018), democracy (e.g., Aagaard Seeberg, 2018; Baldwin, 2016; Baldwin and Holzinger, 2019; Kromrey, 2016), as well as violent conflict (Depetris-Chauvin, 2015; Eck, 2014; Mustasilta, 2019; Paine, 2019; Wig, 2016; Wig and Kromrey, 2018).

Wig (2016), Paine (2019), and Depetris-Chauvin (2015) all use measures on the precolonial institutionalization of ethnic groups from George Peter Murdock's seminal Ethnographic Atlas (Murdock, 1969) of Africa to predict conflict today. The data from this atlas will be further discussed and analyzed below, and it turns out that such precolonial institutions correlate only weakly (if significantly) with today's institutions. This is one justification for the use of contemporary data on traditional political institutions in this dissertation.

Finally, Wig and Kromrey (2018) are the first to provide an analysis of contemporary group-level institutions on communal conflict. They argue that traditional institutionalization of groups can serve as a commitment device that reduces uncertainty, and find that more institutionalized groups are less likely to be involved in conflicts with other groups in Africa.

Yet as already alluded to above, such systems of governance can vary immensely, and this may affect their ability to function as commitment devices, and thereby the occurrence of conflict. For instance, competitive leadership selection of chiefs plays a role in their provision of public goods (Acemoglu, Reed, and Robinson, 2014). Therefore, it is important to zoom into traditional institutions and to theorize and empirically test how their specific features affect violent conflict.

This dissertation contributes to the literature by theorizing their internal structures explicitly. Traditional institutions are a worldwide phenomenon and vary in their institutional set-up, account-

ability mechanisms, marriage institutions, and capacities to police the population. While we know how much institutional variation of states affects conflict, we have little information whether and how traditional institutions contribute both to peace and conflict. This dissertation will open-up traditional institutions and how their features affect intergroup conflict, individual perceptions of inequality and the justification of the use of violence, the prevalence of norm collisions, as well as bargaining between groups and the state.

1.2.2 *State Institutions, Incongruence, and the Integration of Customary Institutions*

A central argument put forth in this dissertation is that the interaction between group- and state-level institutions can affect conflict, especially when they are incongruent. State institutions-specifically how states include societal factions-and institutional coherence, have been another focal point in the study of conflict. Various state-level institutions have been analyzed in this context, ranging from electoral systems (e.g., Carey, 2007; Fjelde and Höglund, 2016), power-sharing institutions (e.g., Bormann et al., 2019; Hartzell and Hoddie, 2003), to regime type (e.g., Fjelde, 2010; Hegre et al., 2001), to name just a few.

With regard to such "coherence" or "consistency," it has been argued that a lack of coherent institutions brings about political instability (Huntington, 1968, p. 1). Consistent institutions are "mutually reinforcing" (Gates et al., 2006, p. 894), whereas inconsistent institutions may be contradictory. Congruent systems can contain dissidents and conflicts through institutionalized channels of accommodation (Tilly, 1978). Yet, incongruent systems may hamper coordination (Wilfahrt, 2018) and may thereby produce conflicts themselves. Institutional inconsistency, furthermore, prominently features in the research that claims anocracies—states that are not a democracy nor an autocracy—as more prone to civil war (Gates et al., 2006; Hegre et al., 2001). Mixing both democratic and autocratic features is seen as an inauspicious, incoherent combination resulting in instability (Hegre et al., 2001; Hendrix, 2010).

When traditional political institutions with their own customary law and legitimacy assume central tasks of the state, this can also cause institutional incongruence. This may be the case when parallel legal systems exist, i.e., when rival laws regulate the same situations on the basis of different norms. This "legal pluralism" has been studied by legal anthropologists and sociologists since the

1960s (Benda-Beckmann, 2002). Such a configuration has reverberating consequences on political authority and thus on who defines the law (Tamanaha, 2008).

Coordination failure and potentially competing claims to power can be another effect of incongruence. The congruence of institutions can thus be referred to as a harmonized and integrated relationship between the state and customary institutions. With clarity about jurisdictions and procedural relations, the different spheres of governance can be mutually reinforcing.[3]

Recent literature has examined incongruence between customary institutions and the state. Wilfahrt (2018) argues that historical institutional incongruence—conceived as the spatial overlap of contemporary formal state communities and precolonial centers of power—can increase the provision of public goods. In her analysis of Senegal, she finds support for that claim: when within-state boundaries overlap with precolonial centers of power, an increase in investments in public schools and health can be observed.

Similar claims can be found in the literature on internal conflict. Mustasilta (2019) finds in her analysis of sub-Saharan African states that the legal inclusion of traditional authorities has a conflict reducing effect, compared to cases where the recognition of traditional as parallel authorities (e.g., with autonomy rights) does not affect the onset of civil war. Put differently, when the state includes traditional authorities so to establish a congruent system, peace becomes more likely. Eck (2014) comes to a similar conclusion regarding communal land conflicts across West African states. When the jurisprudence in a country is harmonized, and traditional authorities do not engage in parallel justice provision, the country experiences, on average, less communal conflicts.

In this dissertation, I complement this literature by addressing the question of how state-level regulations and constitutional commitment to traditional authorities moderate the relationship between traditional institutions and conflict. A central finding of Chapter 3 and Chapter 4 is that the incongruence and negative externalities of group-level institutions can be alleviated if the state integrates traditional institutions. As the second and third articles show, this is a global pattern. These articles make an important contribution in this regard by combining information on the group and the state-level.

3 A new research stream analyzes whether customary institutions are "substitutes" or "complements" of the state (Cooper, 2018; Henn, 2018; Windt et al., 2019), disputing the claim that the reason for political authority beyond the state may be caused by "power vacuums" of the state and its authority (cf. Raleigh and Dowd, 2013).

As I will show, state institutions condition the effect of traditional institutions.

1.3 EMPIRICAL GAPS: DATA ON GROUP INSTITUTIONS AND THEIR INTERACTION WITH THE STATE

A gap that emerges from the literature is the lack of worldwide contemporary information on the existence and structure of traditional governance. This lack of data was addressed within the Reinhart Koselleck project, "Traditional Governance and Modern Statehood." In this project, Katharina Holzinger, Roos van der Haer, Axel Bayer, Daniela Behr, and I created two datasets on contemporary traditional governance —- the TradGov Group, the TradGov Populations, and the TradGov Constitutions dataset.

The TradGov Group dataset provides the first comparative data on traditional institutions and their internal structure worldwide. The TradGov Populations dataset provides state-level evidence on the share of the population that is part of groups that are traditionally organized. The TradGov Constitutions dataset codes the constitutional integration of traditional governance in all United Nations (UN) member states and thereby allows for the first worldwide assessment of contemporary interactions between states and traditional groups. Together, these datasets allow for the worldwide assessment of the prevalence, internal structure, and state-level inclusion of traditional institutions.

Whereas the coding of the data was a joint endeavor by all team members, my specific contribution is the systematic linkage of this data to the theories and empirical datasets on conflict emergence. In the following, I will review existing datasets and then describe the data collection and resulting datasets.

1.3.1 *Previous Group-Level Datasets on Traditional Governance*

Previous datasets on group-level traditional political institutions either provide information on precolonial institutions or focus only on Africa. I will first consider the strengths and weaknesses data before describing the contribution of the TradGov dataset.

1.3.1.1 *The Ethnographic Atlas*

In the 1960s, the ethnographer George Peter Murdock published the Ethnographic Atlas (*EA*), which systematically codes social, po-

litical, and cultural traits of around 1200 ethnic groups around or before European colonization. The variables have been revised by Gray (1999) and georeferenced for the African continent by Nunn and Wantchekon (2011).

Hitherto, and despite its weaknesses (see, e.g., Wilfahrt, 2018), the *EA* was the main and best data source to comparatively assess the socio-economic and political traits of ethnic groups. In consequence, it has been used to predict contemporary outcomes in a number of studies discussed above (Archibong, 2019; Michalopoulos and Papaioannou, 2013; Paine, 2019; Wig, 2016), and the first article in this dissertation (Koos and Neupert-Wentz, 2019).

The main variable that has been used in previous literature to assess the effect of political institutions of ethnic groups measures their precolonial institutionalization. The "Hierarchy Beyond the Local Community (v33)" variables measures whether political organization is only present for the local community (or village), and subsequently whether there are petty chiefdoms (one level beyond the local community), large chiefdoms (two levels), states (three levels), or large states (four levels). In consequence, a pyramid-style political structure of the precolonial political organization can be imagined.

Using measures of the *EA* to predict contemporary outcomes assumes factual persistence or at least a persistent effect of precolonial institutions (Neupert-Wentz and Müller-Crepon, 2019). While using the *EA* for questions concerning historical institutions, as well as to circumvent issues of reverse causality (as will be discussed in the first article), the assumption of persistence is very strong. Political institutions may have changed, disappeared, or been reinvented in the changing political circumstance of the colonial as well as the postcolonial era (Englebert, 2000; Hobsbawm and Ranger, 1983; Ranger, 1983). Therefore, contemporary data on the institutions and internal governance functions is necessary. A preliminary empirical assessment of institutional persistence will be presented below, and it underpins the necessity of contemporary data.

1.3.1.2 *Afrobarometer*

One source of information on contemporary attitudes and perceptions of traditional authorities is the Afrobarometer (2017). The Afrobarometer surveys attitudes of African citizens and provides questions on the influence of traditional leaders, the frequency of contact between the respondent and the chief, and whether the respondent perceives the chief as corrupt. While this is a useful measure to assess the contemporary importance of traditional authorities for in-

dividuals (e.g., Henn, 2018; Logan, 2013b), it does not allow for an assessment of the institutional structure, functions, and capacities of traditional authorities. Furthermore, these data are only available for the African continent, with no comparable information for other world regions.

1.3.1.3 *African Traditional Systems Dataset*

The first dataset on contemporary, traditional institutions of ethnic groups was compiled by Kromrey (2016). The African Traditional Systems Dataset (ATSD) is based on an expert survey for politically relevant ethnic groups that were active in 2009 (Cederman, Wimmer, and Min, 2010), and also focuses on Africa. This important advancement provides researchers with information on contemporary institutional features of traditionally organized groups and has been used to assess their internal "democraticness," compatibility with democratic state institutions, as well as their effect on communal conflict (Kromrey, 2016; Wig and Kromrey, 2018). Yet, the political relevance requirement may neglect some of the groups that have an important impact on the lives of many people. Furthermore—although the importance of traditional institutions in Africa cannot be doubted—groups are organized in customary institutions around the globe. Therefore, information on groups' customary institutions around the world was still warranted at the outset of the project and this dissertation.

1.3.2 *New Data on Traditional Governance and State-Level Integration*

1.3.2.1 *The TradGov Groups Dataset*

To address the lack of world-wide data on traditional institutions, data for the TradGov Groups dataset were collected within the aforementioned research project. One way to deal with the many challenges in data collection is to rely on the expertise of specialists on ethnic groups and their internal institutional structure. Scholars from disciplines such as Anthropology and Ethnology, as well as experts in the policy community, have considerable knowledge of single groups. However, it is uncommon in these disciplines to create comparative data (with the exemption of Murdock's Ethnographic Atlas discussed above). Through an online expert survey, however, comparative data can be generated with the help of the in-depth knowledge of experts.

To cover the important feature of internal organization, and interaction with the state, the questionnaire of the TradGov Groups dataset included items that broadly concerns three different dimensions of traditional governance. The first set of questions interrogates the institutional set-up of the customary authorities, such as which leaders and collective institutions exist, on which level they exist, how decisions are made, what kind of accountability mechanisms are in place, and how traditional leaders assume office.

The second set of questions pertains to the inner functionality of traditional authorities and asks about the formal and informal functions of traditional authorities, the capacity to provide dispute resolution and security, as well as the importance of traditional governance for the local population. The third set of questions asks about the relationship between traditional authorities and the state. For instance, whether traditional leaders have ties to politicians, and if there are formal or informal political bodies in which traditional leaders meet state politicians.

The initial universe of groups for the expert survey was based on a combination of the All Minorities at Risk (AMAR) list of socially relevant ethnic groups (Birnir et al., 2015), the Ethnic Power Relations (EPR) data on politically relevant groups (Cederman, Wimmer, and Min, 2010), as well as groups that were mentioned in the constitutions of their host states. Based on the group list, experts were searched based on (academic) publications, affiliations with ethnic groups, or NGOs that work on behalf of those groups.

As a result, over 7000 experts were contacted via email.[4] Beyond the personalized invitations for experts for groups from the initial list, experts were free to add additional groups. As a result, the raw dataset contains information from 2645 experts on 1701 different groups in 147 UN states. The overall response rate of the online survey was 35 percent.

About 60 percent of the experts who responded to the survey reported to be academics, in particular ethnologists and anthropologists who have published about the structure of the groups in our survey. Other experts (around 10 percent) reported to be members of the group they answered the survey for, to work for national and international NGOs. The rest of the experts (below 10 percent) work in the public sector or are traditional group leaders.

4 To prevent selection bias and make the survey accessible to experts with various backgrounds and for different world regions, the survey questions were available in English, French, Spanish, Portuguese, and Russian.

1.3.2.2 *The TradGov Population Dataset*

The group data is furthermore complemented by the population size of the traditionally organized groups. The measurement was done using various sources, with the preferred source being recent public censuses. Yet, frequently, the coding also relies on other secondary sources, such as encyclopedias, the UN Stats, the World Bank DataBank, or the CIA fact book.

To assess the share of the population that is governed by traditional authorities within countries, the population figures were not only collected for groups with responses in the survey, but also for groups with missing information in the survey that were categorized as "potentially" traditionally organized. The estimated population share of people who are governed by traditional authorities in one country is thus comprised of the group size for groups with traditional organization in the survey and those groups that are not covered in the survey but are deemed potentially traditionally organized (see Baldwin and Holzinger, 2019).

1.3.2.3 *The TradGov Constitutions Dataset*

The state has the means and different ways to actively deal with the parallel governance by traditional authorities on its territory. One way to generate comparative data on how states do so is to look at the formal regulations states write into their constitutions. Constitutions are the supreme legal document in a country and thereby take precedence over all other legal documents. They can be viewed as a representation of the social contract (Wallis, 2014), but also have high symbolic value. In theory, constitutional status also brings about particular protection, as constitutional clauses are usually harder to change, and if so, these changes occur rarely.

To assess how traditional authorities and their governance functions are integrated into constitutions, the constitutions of all 193 United Nations (UN) member states as of July 2014 were coded. All amendments up until this date were considered for the coding. For countries without written constitutions—for instance, the United Kingdom—the legal documents that are considered by legal experts to have constitutional status were coded. If there was no official English translations, the coding was based on the original language (e.g., French or Spanish). Together, these legal documents comprise the population of the TradGov constitutions dataset.

Although some conceptualizations of relationships between the state and traditional authorities exist -— with various levels of spec-

ification and focus on different world regions (e.g., Cuskelly, 2011; Forsyth, 2007; Goodfellow and Lindemann, 2013; Hinz, 2008; Muriaas, 2011; Ubink, 2008) -— the coding scheme of the constitutions was developed inductively. Hence, to develop the variables coded from the constitutions, they were examined for the way they integrate traditional authorities. The coding was done manually. Each constitution was coded twice by different coders, and divergent coding was reconciled by a third coder. This ensured inter-coder reliability and enabled the correct interpretation of constitutional clauses.

The resulting dataset comprises variables that capture the rights and duties of groups and traditional authorities. Traditional authorities or indigenous groups, as well as customary law, can simply be acknowledged. Beyond this, coded rights can broadly be divided into three dimensions. First, constitutions regulate the relationship between traditional governance and the state. This comprises provisions on the economic, social, and political functions that traditional authorities may assume. It also includes constraining regulations such as the provisions of collision rules between customary and state law and the prohibition for traditional leaders to engage in party politics.

Second, and related, some states move beyond regulation and give certain powers to traditional authorities, such as self-governance rights in specific policy areas. These types of regulations are considered in the second article of this dissertation that assesses traditional policing functions, norm collisions, and communal conflict. Third, the state can actively integrate traditional authorities in its polity, by reserving seats in the parliament for chiefs or establishing houses of chiefs at the state center, for example, the Ntlo ya Dikgosi in Botswana, which advises the parliament. The latter two dimensions are considered in the third article on traditional authorities and strategies in self-determination disputes.

1.3.3 *Application of the Data in this Dissertation*

In combination, the three datasets are used in this dissertation in the following way. In Chapter 3, I match the TradGov Groups data to the geo-coded version of the Ethnic Power Relations (EPR) data (Vogt et al., 2015; Wucherpfennig et al., 2011).[5] Thereby, I do not only combine the information on traditional institutions with geographical space, but also combine politically relevant groups with

5 GeoEPR 2018, available at `https://icr.ethz.ch/data/epr/geoepr/` (accessed: 01.12.2018).

socially relevant subgroups–as listed by the AMAR (Birnir et al., 2015)–and their respective traditional institutions.

In Chapter 4, the data on traditional institutions is combined with the population of self-determination groups across the world from 2005-2015. The article uses traditional authority–defined as the leaders and collective institutions of traditionally organized groups–to predict strategies in disputes over self-determination. Beyond looking at the existence of subnational traditional political leadership, the article uses an item on accountability of traditional political leaders to show how audience costs also play a role in traditional political systems.

Both, Chapter 3 and Chapter 4 use a combination of variables from the TradGov Constitutions dataset that are tailored towards the specific research questions (variables listed in Section C.4 and Section D.3 respectively). These data measure the degree of commitment by the state and congruence that it established by integrating traditional institutions.

Lastly, the TradGov Populations data is an important variable measure the prevalence of traditional institutions. This can also be interpreted as a measure of potential incongruence in the absence of constitutional regulation. Furthermore, it represents the "demand" side of constitutional integration (Holzinger et al., 2019), assuming that demand and incongruence should be driven by prevalence of traditional institutions. The variable is used as a control variable in Chapter 3 and Chapter 4.

1.4 EXPLORATORY ANALYSIS

In this section, I provide a descriptive and exploratory analysis that underpins the empirical and theoretical gaps in the literature. First, I show that we can observe systematic non-persistence of precolonial customary political institutions in modern times. Then, I provide descriptive insights into the TradGov data, with a focus on the world-wide existence and prevalence of traditional governance, and the variation in countries that choose to provide rules and regulations in their constitutions. Finally, I show the diversity of functions traditional authorities engage in, of which dispute resolution and family are the most common, which will be analyzed in the first and second articles of this dissertation.

The main goal of this exploration is not only to show the global variance and (non)persistence of traditional institutions. Rather, I argue, that in the moment where we can show on the basis of the

TradGov data, that these institutions are a widespread phenomenon in a wide range of political systems, it is of utmost scientific importance to analyze their effects on the likelihood of conflict for different mechanisms and a wide range of trad institutions.

1.4.1 *Institutional Persistence of Traditional Political Institutions*

Institutional persistence analysis is co-authored with Carl Müller-Crepon.

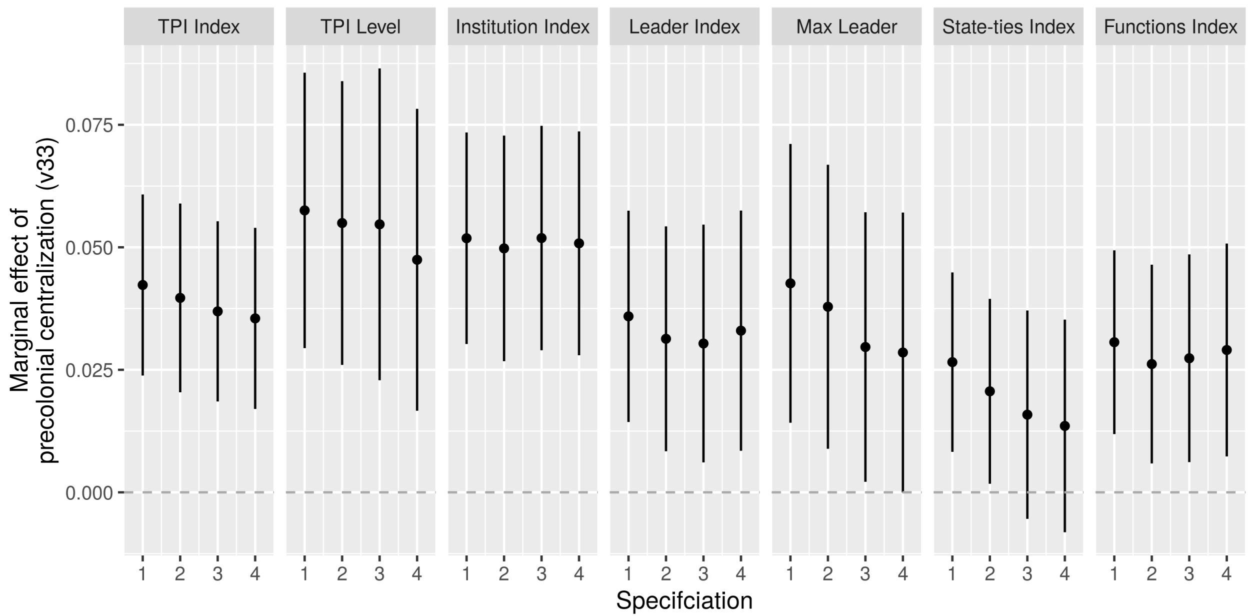
Studies that use Murdock's (1969) measure of precolonial political hierarchy either assume factual persistence or at least a persistent effect of these institutions. Yet, as defined above, traditional political institutions should not be seen as frozen in time but able to adapt to changing political circumstances. In contrast to social institutions, such as marriage patterns, political institutions that govern through traditional authorities, it may be the case that today's institutions do not mirror their precolonial predecessors. Attempts to abolish traditional institutions and the (re)invention of them could then result in a changing landscape of group-level traditional institutions (Englebert, 2002, 2005a; Hobsbawm and Ranger, 1983; Ranger, 1983, 1993).

Dalton and Leung (2014) test the persistence of polygyny, which has also been coded in Murdock's (1969) Ethnographic Atlas. They find that precolonial polygyny measured by Murdock, resemble contemporary rates of polygyny as measured by the Demographic and Health Survey (DHS) in Africa. Specifically, polygyny rates in ethnic groups that were coded as such around the 19th century are 10 percent, whereas those coded as monogamous are only at around 2 percent today (Dalton and Leung, 2014). This can be explained by the intergenerational transmission of traits (Bisin and Verdier, 2000, 2001), which should be especially pronounced when it comes to marriage and family.

To shed light on the question if traditional *political* institutions persist, I present an analysis based on my work with Carl Müller-Crepon (Neupert-Wentz and Müller-Crepon, 2019). We match Murdock's measure of precolonial centralization to today's traditional institutions as measured by the TradGov Groups data for groups in Africa (See Appendix A for a detailed description and Müller-Crepon, Pengl, and Bormann, 2019). The unit of analysis is the ethnic group "homeland" provided by the Murdock (1969) map and geocoded by Nunn and Wantchekon (2011). The independent variable, "Jurisdictional Hierarchy Beyond Local Community (v33)" is the ordinal measure described above and ranges from 0 (no level

beyond the village) to 4 (large states, four levels beyond the village). 6

We use a set of six different measures based on the TradGov Groups survey as the outcome, from which we also build the first principal component to obtain a non-redundant measure of traditional institutions today (*TPI Index*). We estimate OLS regression with three sets of controls that we subsequently add to the models: baseline, nature, and ethnic controls. The data, matching procedure, and specification is further described in Appendix Appendix A. Figure 1 displays the results.



Note: OLS models. Standard errors are clustered on the ethnic group level. Baseline controls (2) consist in groups' population, area, distance to coast, and navigable river. Nature controls (3) consist of median altitude and slope, mean annual temperature, precipitation and epotrnspiration, the ratio of the two, agricultural suitability, and soils' suitability for cash crop production. Ethnic controls (4) are the reliance on agriculture and pastoralism, as well as the intensity of agricultural activities. Regression 15 is presented in .

Figure 1: Effect of precolonial centralization (Murdock's v33) on all contemporary outcomes coded in TradGov Groups.

Across almost all specifications, precolonial centralization is positively and significantly related to today's traditional institutions in Africa. The relationship is robust to the inclusion of the different sets of controls. Ethnic groups that had centralized institutions at the turn of the 19th century still feature more diverse and more centralized institutions today. We, therefore, do observe institutional persistence.

6 See Appendix A for data description, matching procedure, specification, and analysis.

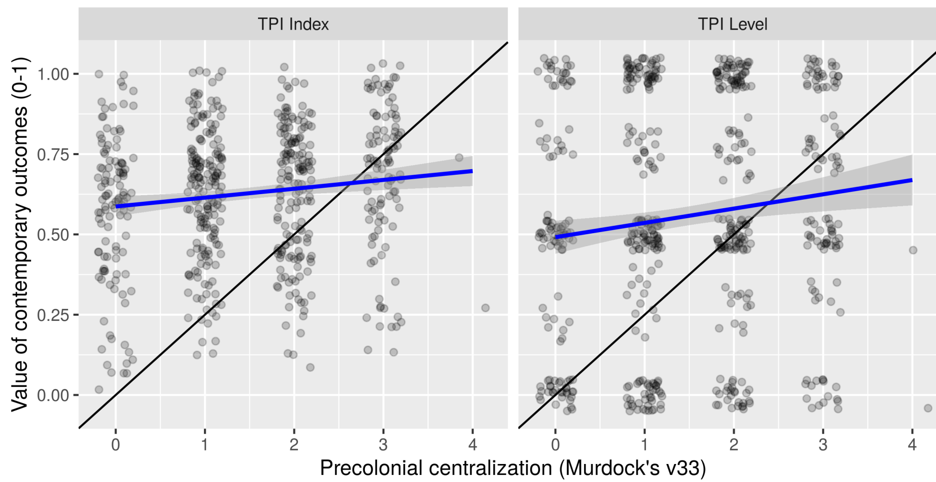


Figure 2: Correlation of precolonial centralization (Murdock's v33) with the TPI Index and the most comparable variable TPI Level.

Yet the magnitude of the effect of a one-unit increase in the levels of precolonial centralization amounts to only a fifth of a standard deviation in the TPI Index. Therefore, we also observe systematic nonpersistence. Figure 2 shows the correlation between the TPI measures and Murdock's ordinal code. The groups above the 45°line 'upgraded' since the turn of the 19th century, while groups below the 45°line 'downgraded.' Upgraded groups, for instance, were coded as having no jurisdictional level beyond the village in Murdock's *EA*, while today they feature highly institutionalized systems or paramount chiefs. Although the tendency seems to point into a direction of 'upgrading,' some groups also diminished in political complexity and the level of political organization. In summary, although there is some continuity in precolonial African traditional institutions, they are far from mirroring their precolonial predecessors.

Hence—although there may be a persistent effect of precolonial institutions—we do not observe factual persistence of traditional *political* institutions. The systematic nonpersistence in political institutions will largely be affected by the changing political circumstances on the African continent (Neupert-Wentz and Müller-Crepon, 2019). This then motivates the use of going beyond precolonial hierarchies to predict conflicts today (cf. Depetris-Chauvin, 2015; Paine, 2019; Wig, 2016) and analyze their political institutions today. Thus, in order to really understand how traditional political institutions affect violence, contemporary data on political systems is required.

Beyond the nonpersistence, the jurisdictional hierarchy measure can only grasp some aspects of traditional governance. To under-

stand the effect of traditional institutions on conflict, their variation and their their substantial and procedural rules have to be considered. Therefore, more fine-grained measures are needed. I will provide a first insight into the jurisdictional variation below.

1.4.2 *Prevalence of Traditional Institutions and Incongruence Today*

Having shown that there is a necessity of using contemporary data, I now turn to the prevalence of traditional institutions today. Figure 3 depicts the estimated distribution of the population living under traditional authority within all 193 UN member states from the TradGov Population data. The figures vary to a large degree across countries. One hundred two states have an estimated population share of 10 percent or less belonging to groups that are governed by traditional authorities. Yet only a little less than half of the UN member states host a population of 20 percent or more. In close to one in five countries (36 in total), almost the entire population belongs to ethnic groups with traditional political governing structures in place. For instance, in Somalia or Timor Leste, most people belong to groups that also have some system of traditional organization in place. Somalia is structure by clans and council of elders (Gurti) (Menkhaus, 2006). In Timor Leste, *aldeia* and *suco* as well as their councils councils continue to govern subnational communities on the basis of customary law (Wallis, 2014; Wallis, 2012).

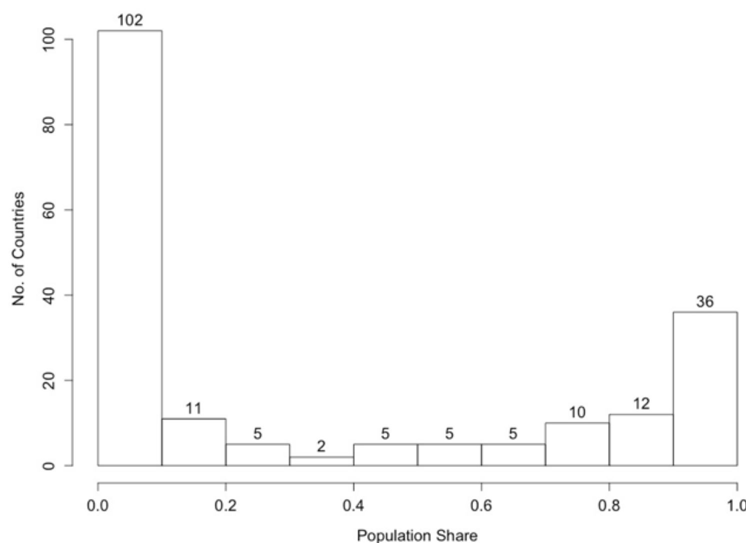


Figure 3: Estimated Population Share of Traditionally Organized People across Countries.

This is a strong indicator of the worldwide prevalence of customary institutions. The result are evidence for the existence of "dual polities" (Buur and Kyed, 2007), which can result in incongruent institutions. As will be shown in this dissertation, some of the negative effects of incongruence on peace can be alleviated by formal regulations provided by states. Therefore, Figure 4 displays the above distribution of population shares governed by traditional institutions and also indicates whether the country acknowledges traditional governance in their constitutions.

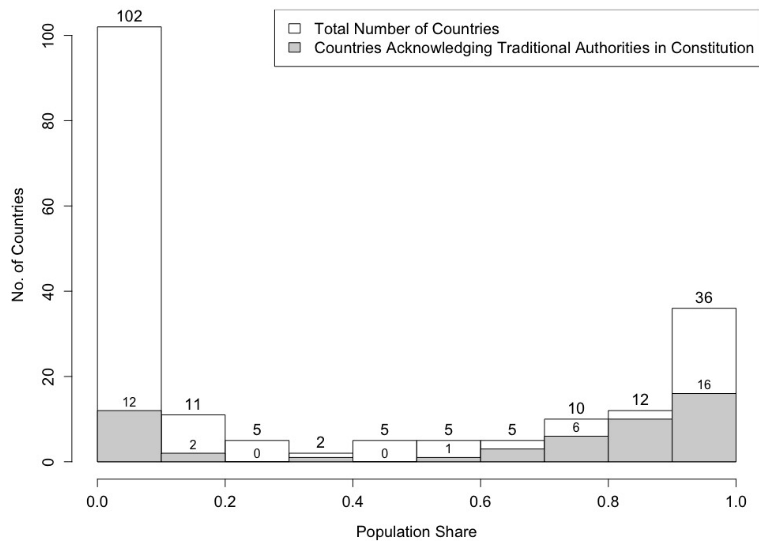


Figure 4: Estimated Population Share of Traditionally Organized People across Countries and Constitutional Acknowledgment

Constitutional acknowledgment is the broadest form of recognition in constitutions and measure whether the constitutions simply mentions traditional authorities that govern over a part of the population.[7] Giving constitutional rank to traditional authorities may bestow them with some legitimacy, yet such clauses do not necessarily include precise regulation. More specific forms of regulations include the provision of collision rules, recognition of customary law, and representation within state institutions. Figure 4 shows that there is variation as to whether constitutions build in clauses into constitutions that somehow mention the traditional authorities. Although there is a strong relative increase in acknowledgment with increasing population shares, still less than half of the countries in which more than 90 percent of the population is governed by tra-

7 Codebook question: "Does the constitution mention any traditional political bodies and/or leaders?"

ditional authorities have a reference to them in their constitutions. Such countries include the Senegal or Laos.

Such discrepancies between prevalence and constitutional mentioning are an indicator of incongruence. In Chapter 3, I investigate this by considering regulations that harmonize the relationship between customary institutions and the state. As I will show, this averts norm collisions and the resulting conflict between groups. In Chapter 4, the constitutional regulations are analyzed as previous commitments by the state, which solve information problems and thereby allow for conventional bargaining between the group and the state.

1.4.3 *Functions of Traditional Authorities Today*

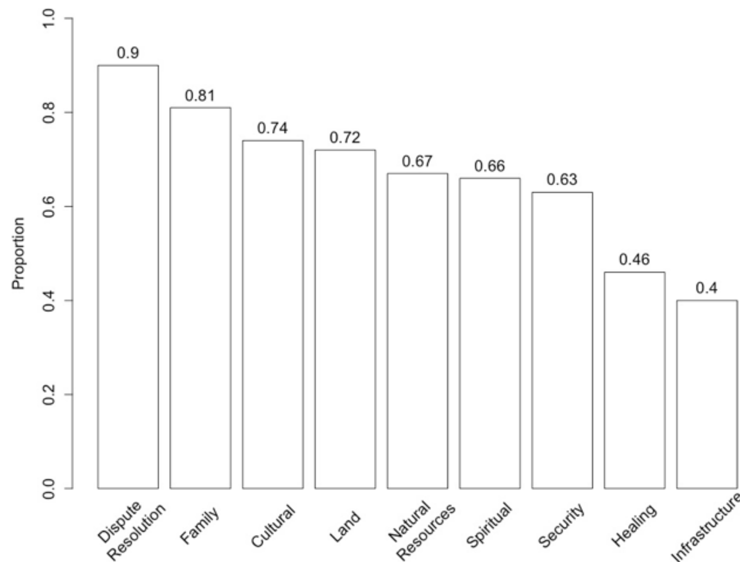
Another gap that emerges from the literature is that the variation in traditional institutions has not been sufficiently considered. As I will argue and empirically show, the internal rules and capacities need to be theorized and investigated. This section provides an overview of the diversity of functions that traditional institutions engage in around the world.

Figure 5 plots the proportion of groups that assume certain official and unofficial functions across the pooled sample of observed traditionally governed groups (N=1184) in the TradGov groups data. The functions most commonly exercised by traditional authorities are dispute resolution (90 percent) and family functions (81 percent). Both these main functions are the focus of the ensuing Chapter 2 and Chapter 3.

The fact that dispute resolution is the most commonly assumed task indicates the importance of traditional governance beyond their role as identity-building, cultural relicts. Security functions—closely related to dispute resolution—are practiced by comparatively less traditional authorities, but still more than 60 percent. Dispute resolution and security functions ensure law-enforcement and the generation of predictability, the topics of the second article. Furthermore, they are fundamental to the idea of the monopoly of violence (Weber, 1919) and thus the exercise of authority: those in power define the rules the society adheres to and exercise executive functions to ensure that these are upheld. This is also evidence for the performance of basic state functions by traditional authorities.

The second most common function concerns the family—the focus of the first article in this dissertation. Matters concerning personal status and marriage relate to the family as the smallest social

unit (Weber, [1922] 1980, p. XVII). Family and marriage norms are frequently regulated in a dual fashion: by the state and by traditional and religious groups. For example, most Christians are wedded in the court or city hall, as well as in church. In particular, marriage norms do not only seem to be "sticky" or persistent as discussed above (Bisin and Verdier, 2000; Dalton and Leung, 2014; Fenske, 2015); the family also serves important economic and social functions, especially in the rural context.



Note: Survey item: "What are the official and unofficial functions of the organization (leaders, bodies, and rules) of the group X? Please tick all boxes that apply." Sorted by relative, grouped frequency N=1184.

Figure 5: Distribution of Functions across Traditionally Organized Groups.

I will highlight a few more functions here. Issues concerning land take a prominent role for traditional authorities. First, land is a defining feature of authority and inextricably intertwined with the notion of traditional authority. As defined above, traditionally governed groups are closely linked to the concept of autochthony, similar to the idea of the "sons of the soil" (Geschiere, 2011). As a result, a "chief without land" (Behr, Haer, and Kromrey, 2015) can be regarded as stripped of her authority. Second and relatedly, land—and the extraction of its resources—is subject to many conflicts that concern traditional authority (Eck, 2014) as well as their interaction with other state or nonstate actors, such as herders or international companies that require land.

"Healing"—health—and infrastructure take the least prominent role in the functions of traditional authorities at the far right of fig-

ure 5. About 40 percent of traditional authorities engage in related activities. This could be explained by the need for large investments in material and education as well as coordination. The health sector, as well as large infrastructure projects, are usually run or funded by the state. Although traditional authorities have been shown to be able to contribute to the provision of public goods, this should most commonly be the case if they coordinate with states or companies (Baldwin, 2016).

In summary, figure 5 shows the diversity of tasks and jurisdictions of traditional authorities. Beyond the question of mere institutionalization of ethnic groups, this points to the diversity of political tasks they perform and implement, which also translates into variation of their political significance at the local level.

1.5 OUTLOOK

The literature and data review, as well as the exploratory analysis, all point to the global prevalence of traditional institutions. Although they govern the social and political lives of subnational ethnic groups around the world, we still lack a thorough understanding of how they affect conflict. In the three articles that follow, I will shed some light on these questions.

In all three articles, I analyze the implications of customary institutions on conflicts between groups and between groups and the state. As a result, all articles concern questions of the institutions of groups on specific territories. Polygyny is an institution that applies to subnational groups and territories and has negative consequences for neighboring ethnic groups. Men that live in polygynous societies have decreased chances of fulfilling central life goals, feel more frustrated, and are readier to violence. In consequence, neighboring ethnic groups will be at a higher risk of being attacked. Policing institutions of traditional authorities—although designed to generate order—induce norm collisions, which leads to an increased likelihood of violence between groups on their territories. Finally, traditional authorities are more likely to use nonconventional and violent strategies in contestations about self-determination, which, in essence, are territorial conflicts.

The findings of the three articles have implications for how we conceive of customary subnational institutions. Beyond their prevalence and their importance for the structure of social and political life around the world, they are institutions that vary and, therefore, affect conflict in varying ways. Their empirical diversity should,

therefore, be matched with theories and analyses that do justice to this variation. The articles show that existing theories such as relative deprivation (Gurr, 1970) or bargaining and audience costs (Fearon, 1994, 1995, 1997) can be applied to the subnational context. Yet, there is also a need for new theories that help elicit how the parallel existence of contemporary, traditional institutions, leadership, and customary law translates into the outcomes we observe.

Part II

RESEARCH ARTICLES

2

POLYGYNOUS NEIGHBORS, EXCESS MEN, AND INTERGROUP CONFLICT IN RURAL AFRICA

Co-authored with Carlo Koos. See Part v for author's contribution.

Forthcoming at the Journal of Conflict Resolution.

We argue that polygyny creates a social imbalance where few, economically well-off men marry many wives, and many poor men marry late or never. By definition, polygyny produces what we refer to as "excess men." In order to gain material wealth, excess men are likely to raid, plunder, and rob neighboring ethnic groups. We test this hypothesis with georeferenced data on polygyny and intergroup conflict in rural Africa and find strong support. Drawing on Afrobarometer survey data, we explore the underlying mechanisms and find that young men who belong to polygynous groups feel that they are treated more unequally and are readier to use violence in comparison to those belonging to monogamous groups. Our article makes an important contribution to the peace, conflict, and development literature by emphasizing a fundamental aspect of human life: marriage and family.

2.1 INTRODUCTION

Social institutions have long been a focal point in the analysis and explanation of intrastate peace and conflict. While state institutions have been studied to a large extent in this context, the internal norms, traditional institutions, and customary laws of ethnic groups have not yet received much attention. Key institutions that influence the social order of ethnic groups are marriage and family. In most societies, the family is the smallest social entity that shapes the everyday life of people (Weber, [1922] 1980). The family typically fulfills reproductive, social, economic, and prestige functions (Becker, 1993; Hudson and Matfess, 2017; Murdock, 1949).

We argue in this article that the type of marriage institution practiced by an ethnic group, monogamy or polygyny, affects the likelihood of members of that group attacking neighboring groups. By definition, polygyny creates a social imbalance: while some men marry several wives, rear many children, and have large families, other men marry late in life or not at all. A common pattern is that

marriage is confined to economically well-off men in the highest tiers of society, leaving economically deprived men unwed (Irons, 1983; McDermott, 2018; Mesquida and Wiener, 1999). We refer to the latter as excess men. In traditional rural societies where social norms make a man's reputation dependent on, among other things, the size of his family, excess men fail to meet basic criteria for attaining social prestige (Henrich, Boyd, and Richerson, 2012, p. 657, Hudson and Matfess, 2017, p. 12).

However, in our understanding, excess men will not accept the fate of remaining bachelors. According to Hans Morgenthau, propagation is one of the main drivers of any political action ([1948] 1985, p. 39). Since economic resources are key to getting married and starting a family, excess men have incentives to acquire these resources. When legitimate sources of income are unavailable or insufficient, excess men become "risk-takers" (Barash, 2016, p. 30): crime, theft, violence, and raids become viable options. Excess men in rural areas who strive to conform to the social norms that derive from marriage and family, therefore, have two basic choices: to steal from, plunder, and raid one's own group or to do the same to another group.

Since ethnic groups often function as extended families and have established mechanisms to monitor and sanction misbehavior (cf. Fearon and Laitin, 1996), excess men will be more likely to raid other groups than their own. Following this reasoning, we expect that polygyny does not necessarily increase intragroup violence but rather heightens the risk of violence for neighboring ethnic groups.

In our analysis, we examine whether the extent of borders shared with polygynous ethnic groups increases a group's risk of experiencing intergroup violence. Specifically, we create a risk profile for each ethnic group that measures the percentage of the total border shared with polygynous neighbors. Building on the growing literature that analyses the long-term effect of historical institutions and politics (e.g., De Juan and Koos, 2019; Michalopoulos and Papaioannou, 2016; Nunn, 2008; Nunn and Wantchekon, 2011; Wig, 2016), we rely on precolonial data on ethnic groups' mode of marriage—which has been shown to correlate with current polygyny rates (Dalton and Leung, 2014)—to predict contemporary violent conflict events between ethnic groups in rural Africa. Using a set of pretreatment exogenous geographical and historical variables that could have affected both the prevalence of polygyny and intergroup conflict (e.g., ancient wars, slave trade, and malaria prevalence), we show robust evidence that for groups with higher percentages of shared boundaries with polygynous groups, the number of violent

events increases substantively, a finding which supports our hypothesis.

In a second step, we employ a pooled sample of Afrobarometer survey data to understand the underlying mechanisms of this relationship better. We are able to demonstrate that childless young men who belong to polygynous ethnic groups feel that they are treated more unequally and regard violence more frequently as a justified means to achieve their goals in comparison to their peers in monogamous groups. This lends support for our proposed mechanism, which suggests that excess men are the linkage between polygyny and intergroup violence.

In addition to our contribution to the literature on the long-term effects of historical institutions, we provide a substantially refined theoretical argument and improved empirical test to the literature on family institutions and violent conflict, an aspect that has not received adequate attention. Additionally, we complement the literature on local-level and communal conflicts (Eck, 2014; Fearon and Laitin, 2000; Fjelde and Uexkull, 2012; Tajima, 2013; Varshney, 2003).

2.2 POLYGYNY AND CONFLICT: CONCEPTS AND GAPS

We argue in this article that polygyny is a group-specific institution, which should affect violent conflict between ethnic groups. To justify our approach, we discuss the literature on polygyny and conflict, identify critical shortcomings, and in the process, describe how we address them in this article.

The only two existing quantitative studies on polygyny and armed conflict have focused on state-based violence, which has led to contradictory findings. While Kanazawa (2009) finds that higher rates of polygyny measured at the state level increase the risk of large-scale civil wars, Gleditsch et al. (2011) cannot replicate this finding either at the state or the group level. We see two major reasons for the nonreplicability of Kanazawa's (2009) finding, one relates to the theory and mechanisms and the other to the data sources used to operationalize polygyny.[1]

1 Gleditsch et al. (2011) furthermore substantiate the nonreplicability by arguing that misogyny, rather than polygyny, is the mechanism driving political violence, which they test at the state level. Although a broader set of gender-based discrimination may be a source of political violence (see, e.g., Hudson et al., 2010; Melander, 2005), we do not believe that polygyny—which can be regarded as part of misogynistic practices—and a general concept of misogyny adhere to the same underlying mechanism with regard to local conflict. In other words, misogyny and polygyny cannot be seen as competing hypotheses when studying intergroup conflicts at the local level.

The first concern relates to the theoretical foundation behind the type of violence chosen as well as the level of analysis. Both articles analyze the effect of polygyny on conflicts in which one party represents the state. However, it remains unclear how polygyny features in these kinds of conflicts—that is, why the state would be the appropriate target of organized violence by excess men. In fact, the only evidence we find suggests that polygyny—or a skewed sex ratio toward young single males—increases nonpolitical violence such as homicides (Wilson and Daly, 1985), violent crime and property crime (Edlund et al., 2007a), societal violence (Hudson and Den Boer, 2002), or violence against women (McDermott and Cowden, 2018). Therefore, we do not expect polygyny to affect large-scale mobilization against the state.

In this vein, we also suggest an analysis that takes this variation at the meso-level into account instead of aggregating to the state level. Our understanding of polygyny is that of a group-specific institution, with local effects on conflict. Marriage, throughout the world, is frequently regulated not only by state law but also by customary law and local social norms and practices. Especially in Africa, the mode of marriage is essentially group-specific since many ethnic groups have their own set of customary law and traditional institutions (Holzinger, Kern, and Kromrey, 2016; Holzinger et al., 2019). The ethnic group, therefore, lends itself as a natural unit of observation with which to study the effect of polygyny on conflict in Africa.

This notion is underpinned by anthropological, archaeological, and psychological research suggesting that polygyny may rather be associated with intergroup violence than with civil wars. Henrich, Boyd, and Richerson (2012) argue that due to the negative effects of polygyny, such as crime and violence, polygyny creates a comparative disadvantage in intergroup competition leading to intergroup clashes. In his study of the Yanomamö tribes in southern Venezuela and northern Brazil, Chagnon (1988) finds that more successful warriors are married to more wives than their less successful counterparts, providing a link between polygyny and violent raids of other communities. Raffield, Price, and Collard (2017) use archaeological evidence to show how intergroup Viking raids in Scandinavia during the Late Iron Age were related to an increase in unmarried men, which was caused by polygyny, concubinage, and increasing social inequality. Using three case studies, Hudson and Matfess (2017) identify polygyny, alongside inflationary brideprices, as a marriage market barrier "predisposing young men to become involved in organized group violence" (2017, p. 8). While

these findings come from diverse disciplines, they support our claim that the subnational variance in marital institutions between ethnic groups should rather play out locally and affect conflicts between groups rather than between groups and the state.

The second issue with the existing research concerns the data and the potential of reverse causality. Although most of the—qualitative and quantitative—studies hypothesize that polygyny is a cause of violence, it may be the case that the relationship runs the other way. This is due to explanations as to why polygyny emerged in the first place. One widely accepted explanation is demographic: polygyny is likely to be the result of actual skewed sex ratios tipped toward women, due to external influences that change the gender ratio (White and Burton, 1988).[2] Changes in this ratio can have many causes such as labor migration, slave trade (Dalton and Leung, 2014), and male fatalities during wars, leading to excess women (Gleditsch et al., 2011, p. 267, Goldstein, 2001, p. 226, White and Burton, 1988). It follows that polygyny could also be caused by deadly conflict. This would lead polygyny to at least partially fluctuate over generations in response to demographic changes and war. However, with contemporary measures of polygyny as coded by Kanazawa and Still (1999) and replicated by Gleditsch et al. (2011), this potential reverse causal direction cannot be accounted for (see Appendix Section B.1 for data validity and persistence).

To address this problem, we argue that historical evidence on marriage institutions helps to circumvent concerns about reverse causality. Albeit possible time variance and societal changes, there is reason to believe that polygyny as a family institution stays intact once sex ratios are even again, that is, a generation after warfare has ceased. First, theories on institutional path dependence and the so-called stickiness of institutions (cf. Fukuyama, 2011, p. 450) claim that institutions are change-resistant.

Pierson, 2000, p. 252 formalizes this claim by arguing that "relative benefits of the current activity compared with other possible options increase over time," which increases the probability of institutional persistence. Institutions, such as polygyny, can then be described as endogenous in themselves. Second, socialization processes through cultural transmission can amplify path dependence when it comes to family institutions (Bisin and Verdier, 2000). In their theoretical model, Bisin and Verdier (2000) show that the in-

2 Another explanation of the emergence of polygyny is economical, that is, as the result of income inequality and female subsistence contributions (see White and Burton, 1988, 872, for an overview).

tergenerational transmission of traits—and thereby the adaption of patterns by children—is especially resilient for ethnic and religious minorities. Anthropological research underpins this theory, showing that polygyny as a marital institution is "self-sustaining" (Dalton and Leung, 2014, p. 607). Furthermore, McDermott and Cowden (2018) argue that the persistence of polygyny is sustained by those who practice it, as these are beneficiaries of the system, for instance, through male kin networks (see also Hudson, 2018).

There is also empirical evidence that polygyny persists. Dalton and Leung, 2014, p. 613 test the persistence of polygyny as coded in George Peter Murdock's (1969) Ethnographic Atlas (EA). The EA systematically codes the socio-cultural traits of more than 386 ethnic groups in Africa at the time before their first encounter with Europeans, including the dominant mode of marriage. Dalton and Leung (2014) use a pooled sample of 238,075 respondents from recent Demographic and Health Survey (DHS) data in Africa and find that contemporary polygyny rates are five times as high in ethnic groups that were coded as polygynous (10 percent practiced polygyny) in the EA relative to those coded monogamous (2 percent practiced polygyny).[3] This lends strong support to the idea that polygyny is indeed persistent over time and can be conceptualized as a "sticky" institution.

Furthermore, Fenske, 2015, p. 72 analyzes the effect of colonial education in comparison to current expansion of education in Africa and finds that "ethnic institutions are shaped by history." We also compare specific groups. For instance, the Bashi in South Kivu, DR Congo, are categorized by Murdock as a polygynous group. According to a representative household survey conducted in March 2017 by one of the authors, 13 percent of Bashi men reported having more than one wife. If these 13 percent of polygynous men marry only two wives, they marry 26 percent of the potential brides and thereby leave 13 percent of the excess men without prospects of marrying. Again, this evidence supports the idea that polygyny exhibits a substantial degree of continuity over long periods of time.

The long-term effect of social institutions has furthermore been documented in numerous studies (e.g., Alesina, Giuliano, and Nunn, 2013; Michalopoulos and Papaioannou, 2013, 2016; Nunn, 2008; Wig, 2016). Given the potential endogeneity of polygyny and conflict, we

3 Dalton and Leung (2014) arrive at their results by analyzing forty-five DHS surveys in twenty-five African countries between 1990 and 2010. They use a question that asks married female respondents whether they have a co-wife to calculate current polygyny rates at the ethnic group level specified by Nunn and Wantchekon (2011) EA map.

believe that employing historical data such as the EA is more appropriate to the study of the effect of polygyny on conflict. By that, it is possible to circumvent the problem of reverse causality and rely on those family institutions that are deeply entrenched.

The literature reviewed here highlights the conceptual and empirical gaps in the research on polygyny and violent conflict. Most of the findings of these diverse studies show that polygyny most likely results in violence between individuals and groups, not with the state. We, therefore, present a new theoretical account, which points out how the group-internal norms and geographical dimensions of polygyny affect intergroup conflict, rather than state-based conflict. We suggest departing from civil war definitions of conflict and turning to more local forms of violence. That said, we expect polygyny to have a geographical effect: excess men—the product of polygyny—should be more likely to attack neighboring groups, not government forces. We thus believe that our article is more sensitive—theoretically and empirically—to the dynamics on the ground.

2.3 THEORIZING THE LINK BETWEEN POLYGYNY AND INTERGROUP CONFLICT

We argue that the practice of polygynous marriage within ethnic groups leads to an increased likelihood of conflict between neighboring ethnic groups. We start by discussing why marriage and family are valuable objectives for males to achieve, particularly in developing countries. We then make the case that polygyny, by definition, creates a social imbalance that produces young, frustrated, poor, unintegrated men who become a risk—not so much for their own groups but for neighboring ethnic groups.

2.3.1 *The Benefits of Marriage and the Value of Family in Africa*

The family is the smallest social unit shaping the everyday lives of most humans (Weber, [1922] 1980). In many societies, the family is defined by the institution of marriage, the purpose of which is to have and bring up children (Becker, 1993; Borgia, 1980). Being married—and thus secured reproduction—is, therefore, one of the most prevalent social norms, which brings about the fulfillment of basic needs. Not only is the family the natural unit for the feeling of belonging for many people, but being married is usually thought to bring about social and economic benefits. On the one hand, being

married and having children leads to social standing and acceptance within a community (Mealey, 1985; Wilson and Daly, 1985, p. 61). For instance, Levinson (1996, p. 5) states that "childlessness is one of the most serious misfortunes imaginable" for many people in Africa.

On the other hand, starting a family and with it a common household is tied to economic benefits. These can stem from official support for family unions, such as tax relief and access to social benefits in functioning states with a social welfare system, but they are especially pronounced in the context of rural communities without welfare systems that apply the principle of compensation. In such contexts, a family and children can compensate for the absence of the welfare state by providing social benefits such as retirement provisions (e.g., Shanas, 1979). In sum, for men—particularly in Africa—the value of having a family, especially a large family, is immense.'

2.3.2 *Polygyny Deprives Young, Poor Men of the Benefits of Marriage*

The social standing and economic prospects related to marriage apply equally to females and males. However, in a community where polygyny is practiced, women's chances of marrying remain unchanged, whereas men's chances decrease.[4] By definition, polygyny creates a social imbalance among males: a few men marry several women, and some men cannot marry or marry late in life.

The ability to marry is tied to preexisting social and economic status. As Mesquida and Wiener note, "there should be an association between a man's socioeconomic status and his reproductive success" (1999, p. 182). When polygyny is practiced within a community, the ability to marry several wives will thus be "confined to higher-status males" (Irons, 1983, p. 196).[5] With reference to Dalton and Leung's (2014) finding of an average of 10 percent polygyny rates in polygynous groups, a simple example shows that a stark social imbalance can result from polygyny: a society in which 10 percent of the highest-status men live in polygynous marriages with only one second wife each and 10 percent of the male population remains unmarried. Under these conditions, a society with a generation of 10,000 young males would be expected to produce

4 This does not mean that these marriages are voluntary unions. For a discussion on female choice in polygynous societies, see the third and fourth chapter of Barash (2016).

5 For a comparative assessment of socioeconomic inequality, hierarchy, and polygyny, see Betzig (1986).

1,000 excess men. We can suspect that excess men are, therefore, torn between the societal expectations of starting a family and their perceived inability to live up to these norms.

Polygyny can therefore be understood as "the functional equivalent of a high sex ratio" (Hudson and Den Boer, 2002, p. 25) tipped toward young males. It reduces the prospect of marriage drastically among those who do not belong to the top tier of society. This, in turn, creates competition within the cohort of young males of marriageable age to acquire the resources necessary to marry, start a family, and form a household (Yair and Miodownik, 2016, p. 26).

We argue that this nurtures a frustration–aggression mechanism among those with poor chances of marrying due to a perception of relative deprivation (Gurr, 1970, p. 24, Dollard et al., 1939)). These individuals perceive a gap between the values to which they "believe they are rightfully entitled" and what "they think they are capable of getting and keeping" (Gurr, 1970, p. 24). This relative deprivation can then lead to increased frustration, which can turn into aggression and a readiness to exert violence in an attempt to achieve the goals they feel deprived of (Homer-Dixon, 1999, p. 136).

2.3.3 *Excess Men and the Risk of Intergroup Conflict*

Since polygyny acts as a barrier to fulfilling the desire and expectation to marry, young males will opt for alternative strategies to attain the resources that enable them to reach their societal and economic goals. Anthropological research suggests that polygyny-induced reproductive competition will lead to conflicts between groups (e.g., Borgia, 1980; Henrich, Boyd, and Richerson, 2012; Raffield, Price, and Collard, 2017). We, therefore, expect theft and raids to take place in neighboring communities and not in excess men's own groups. Hence, we argue that polygyny makes local forms of intergroup violent conflict more likely.

Our intuition is that the institutions of ethnic groups, as well as the dense social networks within groups, should deter young males from opting to use violence against members of their own group to obtain critical resources that would allow them to marry. Fearon and Laitin (1996) show that intragroup punishment and a high likelihood of detection prevent group members from disturbing the peace within their communities. Hence, we do not expect raids to take place within young males' own ethnic communities but rather outside in neighboring ethnic groups where the identification and punishment of perpetrators is less likely. Gaining access

to resources in this way is less costly as the violence is directed toward another group, and group-internal reputation and prestige are not jeopardized, perhaps even rewarded.

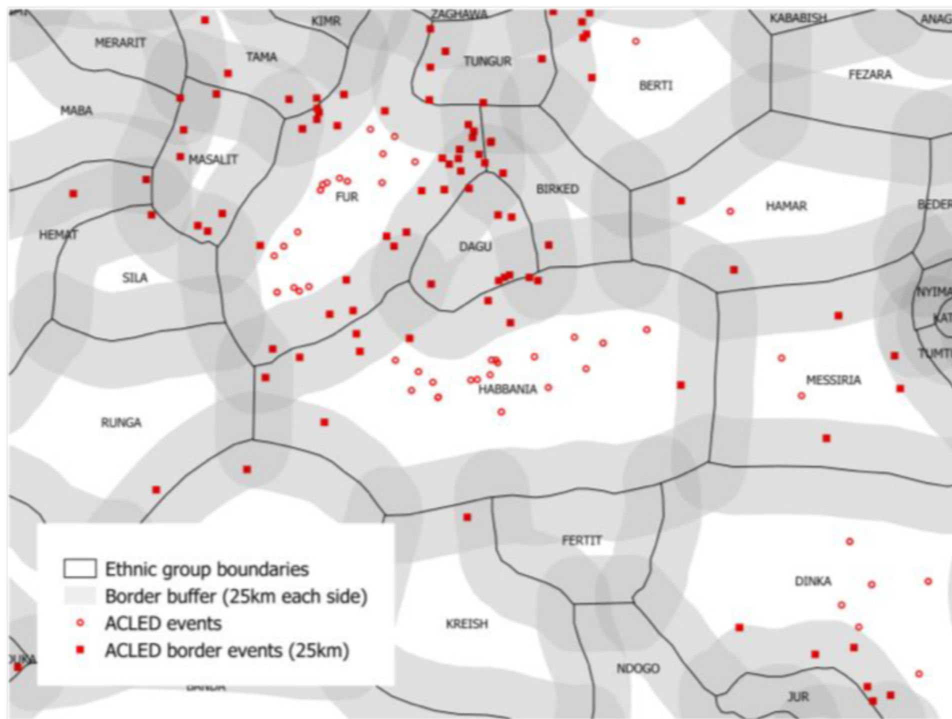
We further hold that violence intended to secure access to resources in order to marry is largely spontaneous, individualistic, and local. Hence, in comparison to political violence against the state, it does not require sophisticated mobilization strategies that involve ideology, elite leadership, and resource mobilization (Fjelde and Uexkull, 2012, p. 446, Fearon and Laitin, 1996). The raiding of another community by individuals or groups may then result in further violence between the groups (Fearon and Laitin, 1996). Due to the feasibility of the violence and small-scale mobilization, we expect raids to have a geographical dimension: they are most likely to take place within close proximity of the raiding group.

To derive our hypothesis, we conceptualize a risk profile for each ethnic group, which expresses the percentage of their border shared with polygynous neighboring groups. Hence, ethnic groups—independent of their own marriage institutions—that are surrounded by polygynous neighboring groups—and thus, excess men—should be at greater risk of being attacked. When groups share a higher percentage of their borders with polygynous groups, there is a larger pool of excess men likely to attack the respective community.

HYPOTHESIS 1A: The greater an ethnic group's share of common borders with polygynous neighboring groups, the higher their risk of intergroup conflict.

We furthermore hold that the risk of intergroup conflict should be higher in border regions, particularly when the homelands of ethnic groups are large. The argument is straightforward: raiding is a costly and risky endeavor. Geographical distance should, therefore, play a role in the opportunity structure that leads excess men to choose to raid neighboring ethnic groups. Excess men will refrain from intruding deeply into the territory of other ethnic groups and instead choose villages close to the border regions for tactical reasons. We, therefore, expect that the effect of our explanatory variable, the share of common borders with polygynous neighboring groups, to be stronger for intergroup conflict events close to group borders. Figure 6 illustrates this conceptualization.

Based on this notion, we derive our second hypothesis:



Note: This figure shows an illustrative section of the borders of ethnic group homelands in Chad, Sudan, the Central African Republic, and South Sudan, according to Murdock's Ethnographic Atlas. The black lines indicate the borders of ethnic group homelands, the shaded buffers around these border lines extend twenty-five kilometers into each side. The small squares indicate intergroup violent events of the African Conflict Location and Event Data Project (ACLED) within the twenty-five kilometer buffer along the border, and the small circles indicate violence deeper within-group territory. For Hypothesis 1a, we use all of these events and for Hypothesis 1b only the subset of violent events near the border regions.

Figure 6: Example of Border Proximity and Conflict Events.

HYPOTHESIS 1B: The risk of intergroup conflict should be higher in the border regions between polygynous groups and their neighbors.

2.4 DATA

We examine our hypothesis in the context of Africa. Africa is well suited for studying this question because it is home to thousands of ethnic groups that practice monogamy or polygyny. Since our analysis examines the relationship between polygyny and contemporary intergroup violence between neighboring groups, we rely on spatial information. Nunn and Wantchekon (2011) provide a georeferenced map of the ethnic groups identified in Murdock's (1969) EA. This map covers 815 groups, which serve as our unit of analysis. The EA documents more than eight socio-cultural, political, and economic

features of ethnic groups in Africa before their first contact with Europeans (Fenske, 2013; Michalopoulos and Papaioannou, 2013). While Murdock's EA surely does not measure all group features accurately, something which Murdock (1969, p. 3) himself admits, it is the most comprehensive and coherent source on the socio-cultural characteristics of ethnic groups in Africa and is explicitly meant to facilitate comparative, cross-cultural research. For our purposes, the EA is superior to other data—for instance, the Encyclopedia of World Cultures (*EWC*; Levinson, 1996) used by Kanazawa (2009) and in the subsequent response by Gleditsch et al. (2011)—for three reasons. First, the *EWC* only covers 91 ethnic groups, as compared to the 837 covered in the EA. Second, the EA provides a complete and systematic coding of polygyny, while the *EWC* only sporadically provides information on marriage patterns for better-documented groups, not for all groups. Third, as discussed above, by utilizing historical data, we can circumvent the problem of reverse causality.

Our cautious confidence in Murdock's *EA* is further supported by a number of already-seminal studies which examine the long-term effects of precolonial traditional institutions, agriculture, the slave trade, and colonial borders on contemporary political and economic development (e.g., Alesina, Giuliano, and Nunn, 2013; Fenske, 2013; Michalopoulos and Papaioannou, 2013, 2016; Nunn, 2008; Nunn and Wantchekon, 2011; Wig, 2016). Our initial sample is composed of 815 ethnic groups on mainland Africa and Madagascar georeferenced by Nunn and Wantchekon (2011). Of these 815, we lose nine groups for which no polygyny data are available and one duplicate entry, leaving us with 805 ethnic groups in our sample.[6]

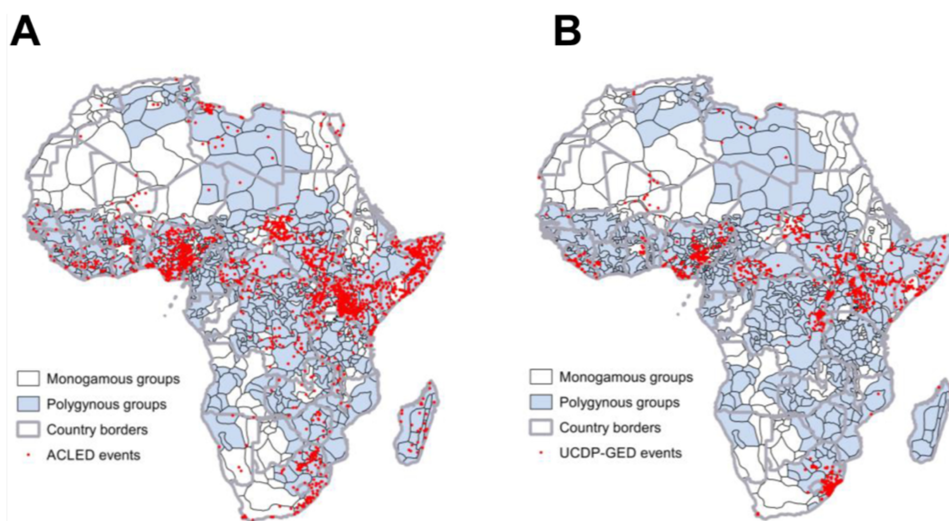
2.4.1 *Explanatory Variable: Polygynous Neighbors*

To operationalize our explanatory variable, we rely on the variable family organization of the EA. This variable documents the prevailing form of domestic and familial organization of an ethnic group. It can take up to sixteen different values and indicates not only monogamy or polygyny but also the living arrangements of extended families. We recode all ethnic groups according to Murdock's coding scheme to create a variable that distinguishes between "monogamy" (44 groups), "limited or occasional polygyny" (118 groups), and "general polygyny" (643 groups; Murdock, 1969,

6 For the Kisama and Bomvana, there are two entries (name=KISAMA and v107=BOMVANA).

p. 47).[7] Since Murdock does not provide information about when groups are considered "limited or occasionally polygynous," we focus on the effect of general polygyny.[8] This corresponds to our theoretical argument because it will be general polygyny that produces a critical mass of excess men and increases competition for brides among males.

Panels (A) and (B) in Figure 7 show the spatial distribution of polygyny among ethnic groups in Africa.[9] We can see that in all regions of Africa, both monogamous and polygynous groups exist. However, there is a certain degree of clustering, which we take into account with country fixed effects in the statistical analysis and a quasi-experimental matching approach in the robustness checks.



Note: (A): ACLED events. (B): UCDP-GED events.

Figure 7: Ethnic groups, Polygyny, and Intergroup Conflict Events.

According to our argument, the social pressure that polygyny creates for unmarried men has little effect on violent conflict within a group but rather affects violence toward other neighboring groups independent of whether these are monogamous or polygynous. We use the QGIS software version 3.4 to calculate the percentage of the border that is shared with neighboring polygynous groups (polygynous neighbors) for each observed group.[10] This measure of relative

7 For a description of the coding of the variable, see Appendix Section B.2

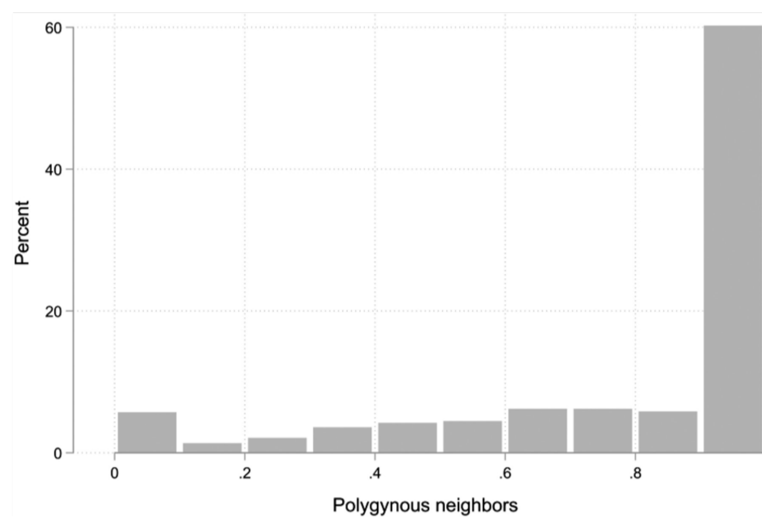
8 We provide robustness checks using the three-scale variable (monogamy, limited polygyny, and general polygyny) in Table A4 in the Appendix. The results are robust.

9 To produce the maps, we used the georeferenced group borders used in Nunn and Wantchekon (2011). These are available at `http://scholar.harvard.edu/files/nunn/files/murdock_shapefile.zip`.

10 If a group borders the sea, a lake, or uninhabited territory (i.e., West Saharan Desert, Libyan Desert), we exclude these border segments from the denominator.

exposure to polygynous neighboring ethnic groups ranges from 0 to 100 percent.

For instance, if a group has a total border length of hundred kilometers and fifty kilometers thereof are shared with polygynous groups, and the remaining fifty kilometers are shared with monogamous groups, the explanatory variable polygynous neighbors has a value of 0.5. Figure 8 shows the density of this variable. We can observe that about 60 percent of groups are completely surrounded by polygynous groups (value 1), which represents the highest risk profile according to our hypothesis. The remaining 40 percent are evenly distributed between no polygynous neighbors at all (value 0) and are largely surrounded by polygynous neighbors (value 0.9).



Note: Percentage of shared border with neighboring polygynous groups.

Figure 8: Distribution of Explanatory Variable.

In addition to our main explanatory variable polygynous neighbors, we include a binary measure that captures whether the observed group itself practices polygyny. While our theoretical argument is silent about the risk other polygynous groups pose, we believe it is important to control for potential group-internal confounding effects of polygyny.

2.4.2 *Outcome Variables: Intergroup Conflict*

Our outcome is intergroup conflict. Intergroup conflicts refer to violent conflict events between members of ethnic groups, including armed civilians and ethnic militias. We draw our conflict data for Africa from the Armed Conflict Location and Event Data (ACLED, version 7, 1997–2016) project (Raleigh et al., 2010) and the Upp-

sala Conflict Data Program (UCDP) Georeferenced Event Dataset (UCDP-GED, version 17.1, 1989–2016; Croicu and Sundberg, 2017; Sundberg and Melander, 2013). As both data sets have their merits, we use ACLED and UCDP-GED as separate samples to assess our hypotheses.[11] We project violent events of the respective data sets onto the map of the ethnic homelands (see panels (A) and (B) in Figure 2).

We theorize that polygyny pushes men into criminal or violent activities. Since men won't turn against their own group, they will direct violence against other groups, most likely neighboring groups, to accumulate assets and—at times—women and children. We, therefore, restrict our analysis to intergroup violent events within an ethnic group's territory and exclude any events of political violence that include state actors.[12] We assume that the institution of polygyny is most "sticky" in rural areas where modernization processes are slower to occur, and traditional norms and practices can withstand the influence of market economies, education, and modernization processes. Therefore, we exclude events of urban violence by placing a buffer of twenty kilometers around urban centers (population >100,000) and excluding events that fall within these boundaries. This leaves our ACLED sample with 4,919 events from 1997 to 2016 and our UCDP-GED sample with 2,933 events from 1989 to 2016. We are left with events of intergroup violence in rural areas and explicitly exclude urban ethnic violence (e.g., the ethnic post-election clashes in Nairobi in 2008). We rely on this outcome measure to examine Hypothesis 1a. To test Hypothesis 1b, we add a fifty kilometer buffer zone to all group boundaries (twenty-five

11 One favorable feature of ACLED is that its categories—in particular, communal militia activity—resonate well with our hypothesized effect on local intergroup violence. Relatedly, ACLED also includes nonlethal violent events, which also speaks to our theory. Adversely, ACLED has been criticized for incorporating an urban bias (Eck, 2012, p. 132), a problem we can address as we exclude events in urban areas. Conversely, UCDP-GED is argued to be superior to ACLED because the media sources of UCDP-GED are more consistent by focusing on major international media outlets.

12 Specifically, for the ACLED sample, we use the INTERACTION variable, which classifies each event according to prespecified actor interactions. We are interested only in those events which involve ethnic militias but exclude any political or rebel-based organizations. We use only the following interaction values: 40—sole communal militia action, 44—communal militia versus communal militia, 47—communal militia versus civilians. Furthermore, we restrict our sample to events where (1) the spatial location quality (GEO_PRECIS) is exact or (2) part of a region. We exclude (3) less precise events. From the UCDP-GED, we include only events which have been categorized as nonstate conflict (type_of_violence = 2) and events whose location (where_precise) was either (1) exactly identified or (2) identified within a twenty-five kilometer radius ["region" = "Africa" AND "type_of_violence" = 2 AND ("where_precise" = 1 OR "where_precise" = 2)].

kilometers into each group's territory, see Figure 1) and then count only those violent events from our specification that have occurred within this buffer zone inside an ethnic group's territory. This reduces the ACLED sample to 3,724 events and the UCDP-GED sample to 2,134 events.

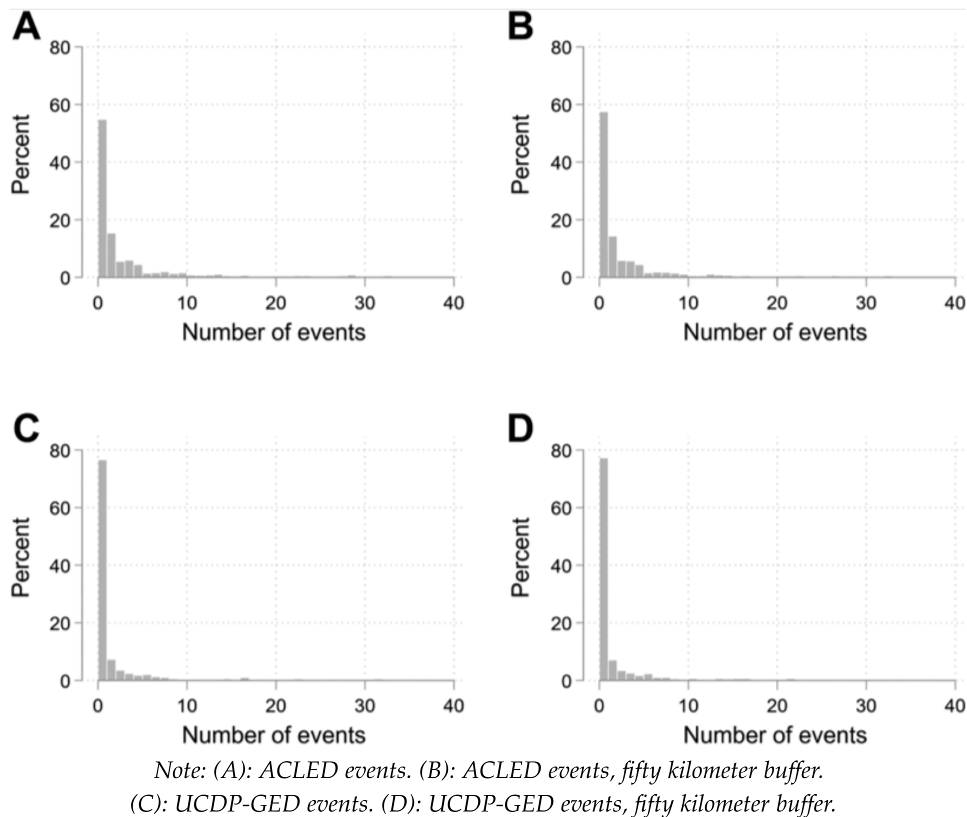
Figure 9 shows the density plots of these two outcome variables for the ACLED sample (panels [A] and [B]) and the UCDP-GED sample (panels [C] and [D]). All variables show a negative binomial distribution—that is, almost 60 and more than 70 percent of ethnic groups have not experienced intergroup conflict in their territory according to ACLED and UCDP-GED, respectively. We want to emphasize here that ACLED and UCDP-GED reflect certain biases. First, there are no data for violent events before 1996 in ACLED and 1989 for UCDP-GED. Second, since ACLED and UCDP rely on news reports, reporting bias is at work. Media bias is likely to particularly underestimate rural and nonlethal violent events, which are less likely to be covered by international media outlets than urban and large-scale violence (cf. Weidmann, 2016). Nevertheless, these are the most established subnational violent-event data sets that span dozens of countries and are therefore appropriate for cross-country analysis.

2.4.3 *Control Variables*

As shown by Dalton and Leung (2014), the social institution of polygyny, as coded by Murdock's *EA* has persisted over time and is highly correlated with contemporary levels of polygyny in Africa. Since our main goal is to estimate a causal relationship and not primarily to explain as much variance in our outcome as possible, our conditioning strategy and the selection of control variables aim to block the backdoor paths, meaning noncausal associations, between our explanatory variable polygyny—the shared border with polygynous neighbors—and intergroup conflict (Morgan and Winship, 2014, Part III, Pearl, 2009).

Since Murdock's coding of polygyny relates to the time before colonialization, we need to consider only those factors that may have contributed to the emergence of polygyny in the first place and may affect our outcome intergroup conflict through mechanisms other than polygyny.

Using the most parsimonious setup, we control for the size of the territory of an ethnic group (log of land area) and the group size (log of population). Furthermore, there are several geographic con-



Note: (A): ACLED events. (B): ACLED events, fifty kilometer buffer. (C): UCDP-GED events. (D): UCDP-GED events, fifty kilometer buffer.

Figure 9: Distribution of Outcome Variable.

ditions that can confound the relationship between polygyny and conflict. High agricultural fertility, value of land, and intensive agriculture may have resulted in more economic prosperity and affected social class stratification, thereby allowing wealthier men to marry more women (Fenske, 2013). Furthermore, there may be a connection between peasant violence and marriage institutions (Mokuwa et al., 2011). At the same time, valuable land may have led to more competition and cycles of conflict between groups over time, independent of polygyny. We, therefore, include measures that express land value, including distance to coast, mean elevation, agricultural suitability, and a malaria stability index.

Apart from these geographic features, several historical pretreatment conditions could have similarly affected both our explanatory and outcome variables through backdoor paths. Therefore, we further include an indicator for distance to empires, the nearest precolonial conflict, and a dummy for the existence of ancient cities (Besley and Reynal-Querol, 2014).

We also control for slave exports, as the extraction and death of men may well contribute to the emergence of polygyny and, independent of that, keep fueling contestation and conflict between

groups over time. We draw the above control variables from a data set by Michalopoulos and Papaioannou (2013). Lastly, we include a variable, which measures the share of Muslims per country since the Koran allows marrying several wives (Pew Research Center, 2011).

Broadly speaking, our model specification is consistent with other works that examine the long-term effects of historical institutions (e.g., Alesina, Giuliano, and Nunn, 2013; Michalopoulos and Papaioannou, 2013; Nunn and Wantchekon, 2011). We provide the descriptive summary statistics for all variables in Table A1 of the Appendix.

2.5 ANALYSIS

Our outcome variable counts the number of intergroup conflict events per total ethnic group territory (Hypothesis 1a) and those within a twenty-five kilometer buffer along the group's border to its neighboring group (Hypothesis 1b). As Figure 4 has shown, these count variables are overdispersed. Therefore, we use a negative binomial model with robust standard errors clustered at the country level, and we include country fixed effects to account for unobserved heterogeneity.

In Table 2, we test Hypothesis 1a using both ACLED and UCDP-GED. We focus first on the discussion of the main variables and then highlight some control variables. Columns 1 and 3 show the parsimonious models, including our main explanatory variable polygynous neighbors, the polygyny status of the observed group, and land area and population size of the ethnic group. As expected by Hypothesis 1a, a higher share of common borders with polygynous neighbors has a positive and statistically significant effect on the likelihood of intergroup conflict. Columns 2 and 4 show our main specification, in which we control for pretreatment exogenous geographic and historical variables. Essentially, the effect of polygynous neighbors remains robust to the parsimonious model. These results lend support to Hypothesis 1a, which suggests that a higher percentage of shared borders with polygynous groups increase an observed group's conflict risk.

To assess Hypothesis 1b, Table 3 shows the results when we limit our outcome variable to conflicts within a twenty-five kilometer distance from group boundaries. We argue that excess men on raids have a tactical advantage in villages in the outer regions of neighboring groups' territories, which lie closer to their own homelands. As in Table 2, columns 1 and 3 show the parsimonious models and

Table 2: Polygynous Neighboring Groups and Intergroup Conflict Events

	(1) ACLED	(2) ACLED	(3) UCDP-GED	(4) UCDP-GED
Polygynous neighbors	1.55**	1.66***	1.65+	1.80**
	(0.56)	(0.34)	(0.96)	(0.66)
Observed group: polygynous	-0.76*	-0.72**	-0.42	-0.25
	(0.38)	(0.26)	(0.44)	(0.42)
Land area (log)	0.45***	0.41***	0.48*	0.51***
	(0.11)	(0.06)	(0.24)	(0.12)
Population (log)	0.43***	0.56***	0.42+	0.59***
	(0.09)	(0.06)	(0.22)	(0.13)
Precolonial conflict		0.31		0.15
		(0.55)		(1.22)
Distance to coast		0.00+		0.00*
		(0.00)		(0.00)
Mean elevation		-0.24		-0.01
		(0.63)		(0.77)
Agricultural suitability		0.28		1.34
		(0.62)		(0.87)
Malaria stability index		-0.54		-2.16*
		(0.73)		(1.05)
Precolonial kingdom		-0.59**		-1.31***
		(0.20)		(0.27)
Distance to empires		0.35		-0.19
		(0.60)		(0.94)
Major city in AD 1400		-0.64*		-0.65
		(0.28)		(0.61)
Slave exports by land (log)		-0.10**		-0.10
		(0.04)		(0.07)
Muslims (%)		0.21***		-0.54**
		(0.04)		(0.20)
Intense agriculture		-0.42**		-0.46*
		(0.15)		(0.22)
Country FE	Yes	Yes	Yes	Yes
Pseudo R^2	0.146	0.164	0.158	0.189
AIC	2966.20	2923.44	1851.33	1781.38
BIC	3008.42	3012.57	2015.51	1936.18
Observations	805	805	805	805

Note: Outcome variable: number of conflict events per ethnic group territory. Robust standard errors clustered by country.

$^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

columns 3 and 4 our main specification. We see an essentially similar pattern at work: sharing more borders with polygynous neighboring groups increases the number of conflicts for an observed group. While the results are supportive of our general theoretical argument, the regression coefficients of polygynous neighbors are similar to Table 2. We examine the substantive effects below.

Apart from our main variable, a few other variables are noteworthy. For instance, in all models using the ACLED sample, we see that when an observed group is polygynous, the effect is negative and statistically significant. Monogamous groups are, therefore, more likely than polygynous groups to experience violent events on their territories. We did not formulate prior expectations on the effect of an observed group's mode of marriage and can, therefore, only propose a tentative explanation. As an addition to our main theoretical argument, an observed group's mode of marriage may proxy a target selection mechanism. Excess men that result from polygynous groups are easily mobilized for offensive acts but should also increase defensive capabilities of their group. However, monogamous groups should not produce excess men, and thereby the pool of mobilized defenders should be smaller. These fighting capabilities may matter greatly for excess men's strategic considerations of whom to attack. When the pool of defenders in monogamous groups is smaller than in polygynous ones, attacking excess men should rationally choose the easier target: monogamous groups. Consequently, monogamous groups should be attacked more often and thus experience higher levels of violence. Nevertheless, we believe that this aspect requires more in-depth research to be understood more comprehensively.

The other control variables have the expected effect direction and significance. Land area and population size increase the number of conflict events. The indicator for slave exports has a consistent negative effect in the ACLED sample, which reflects previous findings arguing that areas affected by the slave trade and the resulting reduction of men in these societies reduced the pressure on the marriage market (Dalton and Leung, 2014).

Apart from the statistical significance, the results of our main models 2 and 4 in Table 2 and Table 3 are substantively meaningful. We use these four models to compute the predicted number of events by varying the values of our explanatory variable polygynous neighbors from its minimum 0 to its maximum 1. Each of the panels in Figure 10 shows that an increase in shared borders with polygynous groups increases the predicted number of intergroup

Table 3: Polygynous Neighboring Groups and Intergroup Conflict Events in 50km-Buffer Zone

	(1) ACLED 50km buffer	(2) ACLED 50km buffer	(3) UCDP-GED 50km buffer	(4) UCDP-GED 50km buffer
Polygynous neighbors	1.50**	1.59***	1.78+	1.84**
	(0.57)	(0.34)	(0.98)	(0.66)
Observed group: polygynous	-0.81*	-0.79***	-0.54	-0.36
	(0.34)	(0.23)	(0.43)	(0.44)
Land area (log)	0.27*	0.23***	0.35	0.39**
	(0.11)	(0.07)	(0.24)	(0.14)
Population (log)	0.48***	0.61***	0.42+	0.59***
	(0.10)	(0.07)	(0.23)	(0.13)
Precolonial conflict		0.27		0.21
		(0.59)		(1.16)
Distance to coast		0.00+		0.00*
		(0.00)		(0.00)
Mean elevation		-0.32		-0.10
		(0.65)		(0.73)
Agricultural suitability		0.24		1.33
		(0.62)		(0.82)
Malaria stability index		-0.37		-2.18*
		(0.73)		(1.02)
Precolonial kingdom		-0.58**		-1.30***
		(0.18)		(0.27)
Distance to empires		0.48		-0.28
		(0.69)		(0.93)
Major city in AD 1400		-0.53+		-0.60
		(0.29)		(0.60)
Slave exports by land (log)		-0.11**		-0.08
		(0.04)		(0.07)
Muslims (%)		0.09**		-0.07
		(0.03)		(0.20)
Intense agriculture		-0.40**		-0.44+
		(0.14)		(0.23)
Country FE	Yes	Yes	Yes	Yes
Pseudo R^2	0.141	0.158	0.150	0.181
AIC	2790.47	2752.80	1787.75	1718.82
BIC	2837.38	2841.93	1956.62	1873.61
Observations	805	805	805	805

Note: Outcome variable: number of conflict events per ethnic group territory.
Robust standard errors clustered by country.

$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

conflict events significantly. Moving from 0 percent to 100 percent shared border with polygynous groups increases the predicted number of intergroup conflict events by about 300% from less than two events to almost eight in panel (A). The pattern is similar in the other three panels, albeit the effect strength is somewhat smaller, in particular when using the UCDP-GED data.

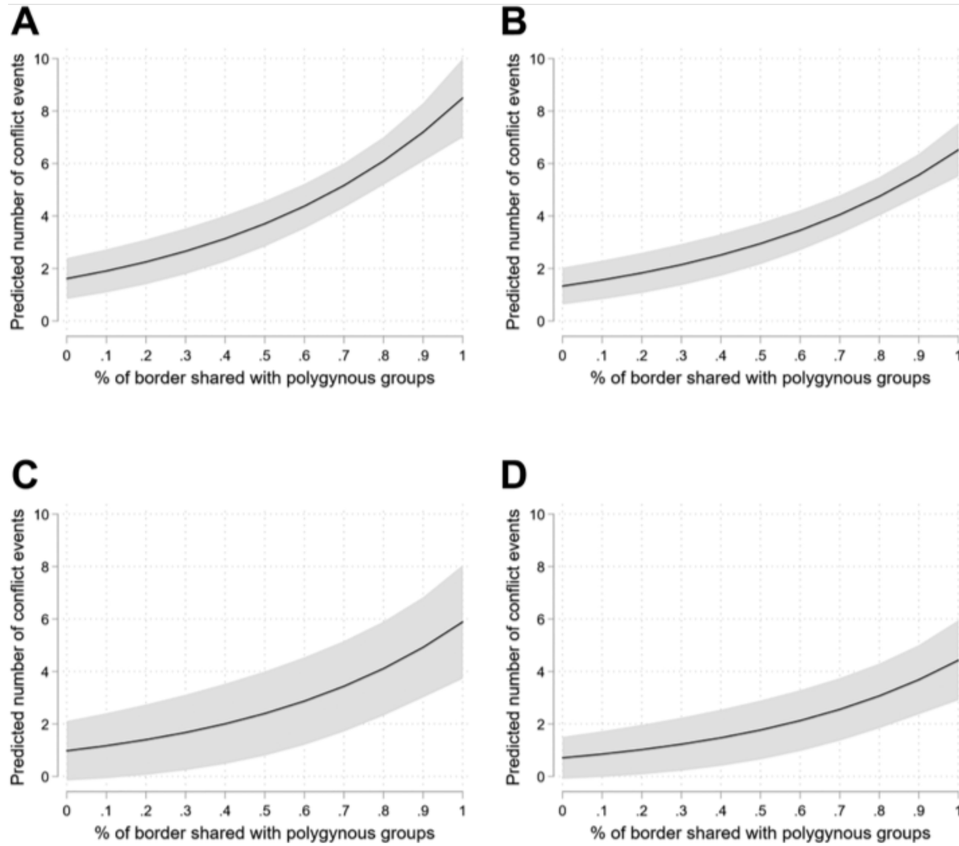
While the pattern holds for conflicts in border regions (Hypothesis 1b), we do not find a stronger effect and thus do not find support for Hypothesis 1b. Although the absolute number of predicted events appears small, the effects are massive in magnitude for both hypotheses. Remember that violent-event data, particularly for rural areas—not so much for cities—typically suffer from underreporting bias (cf. Eck, 2012; Weidmann, 2016). We, therefore, assume to underestimate the effect. It is furthermore important to note that the substantive effect occurs not only when we compare the extremes of having no (0) to only (1) polygynous neighbors but also with more moderate in-between ranges.

In sum, we find robust support for Hypothesis 1a, which suggests that a larger share of polygynous neighbors increases the number of conflict events between ethnic groups. The effect of polygynous neighbors on conflicts in the border regions (Hypothesis 1b) is of comparable magnitude, but not stronger. Bringing this result back to our research question, we can say that polygyny is associated with higher levels of intergroup conflict.

2.6 robustness tests

Next, we perform a number of robustness checks to minimize the risk of model and specification dependence. All tables are presented in Section B.4 of the Appendix. First, we exchange country-level fixed effects against region-level fixed effects and add spatial lags of the outcome variable on the left-hand side of the model. This model reflects our main intuition that states (i.e., country fixed effects) can be conceptualized as posttreatment variables (see King, Keohane, and Verba, 1994, p. 182). Table 17 in shows that the results remain almost identical. Importantly, our explanatory variable polygynous neighbors retains its positive effect and is highly significant both in the UCDP-GED and in the ACLED sample.

Second, we take a closer look at our outcome variable and exclude events that could potentially reflect *intragroup* fighting and not intergroup conflict. To do so, we manually exclude UCDP-GED events in which ethnic subgroups are mentioned to fight against each other.



Note: (The black line represents the predicted number of conflict events based on varying percentages of the border shared with polygynous neighboring groups. The gray shaded areas indicate a 95 percent confidence interval. The predictions are based on models 2 (panel A) and 4 (panel C) of Table 2 and models 2 (panel B) and 4 (panel D) of Table 3. (A): ACLED events. (B): ACLED events, 50 km buffer. (C): UCDP-GED events. (D): UCDP-GED events, 50 km buffer.

Figure 10: Predicted Number of Conflict Events.

The number of UCDP-GED events decreases by 111 from 3,085 to 2,974. In the ACLED sample, we excluded 378 events in which both conflict actors have the same name. This reduced the number of events from 4,985 to 4,607 events. We employ the same specification as in the main results presented above. The coefficient of the polygynous neighbors variable remains robust in both samples UCDP-GED and ACLED (Table 18 in Section B.4).

Third, we use different specifications for our explanatory variable. In a first step, we rely on the *EA*'s initial coding of the polygyny variable, which includes an intermediate category for "limited or occasional polygyny." Table 19 in the Appendix Section B.4 shows the results when using the ACLED data (model 1) and the UCDP-GED data (model 2). There are now two border variables. The variable polygynous neighbors: limited expresses the percentage of the border shared with groups that practice "limited or occasional" polyg-

yny. The variable polygynous neighbors: general is identical to the one used in the main analysis. Model 1 shows that while the limited polygyny variable is positive and insignificant, the general polygyny variable has a stronger effect on the number of conflict events than in the main model. Model 2 uses the UCDP-GED data and shows a similar pattern. This result supports our suspicion that it is general and widely practiced polygyny that results in intergroup conflict.

Fourth, in Table 20 in Appendix Section B.4, we use state-based conflict events on the group's territory as the outcome variable. We include these two models to demonstrate that polygyny is not related to state-based conflict, as argued in our theory. We exclude the polygynous neighbors variable since this measure has no theoretical relationship or conceptual relevance to violence between an ethnic group and the state. If anything, in the spirit of Kanazawa (2009) and Gleditsch et al.'s (2011) work, we believe that polygyny can additionally create youth bulges that serve as a recruitment pool for rebel groups or government forces in civil wars. However, this does not seem to be the case since the variable observed group: polygynous is not significant.

Fifth, we additionally test political (polity level and change) and economic variables (GDP growth) used in standard civil war models as well as measures for legal polygamy, polygamy provisions in customary law, and a women's rights indicator from the data used by Gleditsch et al. (2011) on the basis of the WomanStats Project (Caprioli et al., 2009). In Table 21, Section B.4, we present the results which show that our explanatory variable polygynous neighbors remains statistically significant. Note that our sample is reduced from 805 to 761 observations due to missing data. These tests demonstrate that even with the inclusion of posttreatment political, economic, and legal variables, our hypothesis holds.

Sixth, we use the number of polygynous neighboring groups instead of the percentage of shared border with polygynous neighboring groups as an explanatory variable. The number of polygynous neighbors ranges from 0 to 19, with a mean value of 4.2 and a standard deviation of 2.5. Table A8 reports the results in the same regression setup as in the main table. The results strongly support our previous findings. The number of polygynous neighbors is statistically significant at 1 percent and 5 percent (models 1 and 2) and 1 percent (models 3 and 4), respectively. The other variables retain their effect direction and statistical significance.

Finally, we preprocess the data with the coarsened exact matching (CEM) algorithm to remove observations without common empiri-

cal support. Blackwell et al. (2009) have shown that CEM reduces model and specification dependence and thereby improves causal inference. The detailed approach of applying the CEM procedure is described in the Appendix Section B.4.1 before the presentation of the results in Table 23. The results confirm our main findings, although the CEM procedure significantly reduces our sample size. The effect of our explanatory variable polygynous neighbors is statistically significant at 1 percent.

2.7 MECHANISM: FRUSTRATION AND AGGRESSION AMONG EXCESS MEN

In the previous section, we have performed an analysis at the ethnic group level and established a link between polygyny and intergroup conflict. Next, we provide evidence on the suggested mechanism linking polygyny and conflict between ethnic groups: the role of excess men. Specifically, we rely on individual-level evidence from a pooled sample of Afrobarometer surveys, which we matched with our polygyny measure.

We have argued that polygyny produces excess men who are disadvantaged in competing as viable partners on the marriage "market," largely because they lack the financial means to compete with better-off men. We further argued that this inability leads to frustration because the expectations and social pressure on men to start a family and produce offspring are supposedly particularly high in such traditional polygynous social environments. We should, therefore, observe that young men without family in polygynous ethnic groups perceive more inequality than their peers in monogamous ethnic groups where the competition on the marriage market is, by definition, much less fierce.

Since gaining resources through stealing, raiding, and plundering in neighboring ethnic groups allows excess men to increase the financial competitiveness on the marriage "market," we should also observe that men in polygynous societies are somewhat more inclined to accept violence as a legitimate means. We test the mechanism using data from the 2005 Afrobarometer. In this version of the Afrobarometer, Nunn and Wantchekon (2011) have matched the ethnic group names of Murdock's EA with those respondents reported in the Afrobarometer. We match our polygyny dummy variable to the ethnic groups to distinguish between respondents who belong to monogamous or polygynous ethnic groups.

The fully merged sample of the Afrobarometer includes 25,397 respondents from eighteen countries. These countries reflect a bias in the sense that these are rather stable countries (e.g., Benin, Botswana, Ghana, Kenya, Mozambique) and exclude African conflict hotspots such as the DR Congo, Sudan, South Sudan, or Chad. However, we believe that traces of our mechanisms should be independent of the political context. In order to test our assumptions, we limit the Afrobarometer sample to those we believe are most severely affected, young men below 40 years without children (excess men).[13] Furthermore, we employed placebo tests on two further samples where we would not expect a similar effect: (a) for men above 40 years and (b) for women.

We have identified two questions in the Afrobarometer that tap into aspects that we believe are indicative of a frustration–aggression mechanism, which we propose to link to polygyny and conflict. These questions reflect perceptions of inequality and a justification to use violence.

In Figure 11, we show the predicted values for the two questions depending on whether a respondent belongs to a polygynous group (1) or not (0).[14] The underlying regression models are presented in Table 24 in Appendix Section B.5.[15] The left panels show the results for men below 40 years without children (excess men), the central panels for men above 40 years, and the right panels for women. The upper row shows the predicted values for the degree to which people feel treated unequally under the law (Q53D).[16] Higher values indicate higher perceptions of inequality. Young childless men in polygynous societies are significantly more likely to report higher perceived inequality than their peers belonging to monogamous groups. For men above 40 years, we do not find this effect. Women in polygynous groups also report perceptions of inequality, which we believe resonates with the notion of gender inequality associated with polygyny (cf. Hudson et al., 2010; McDermott and Cowden, 2018).

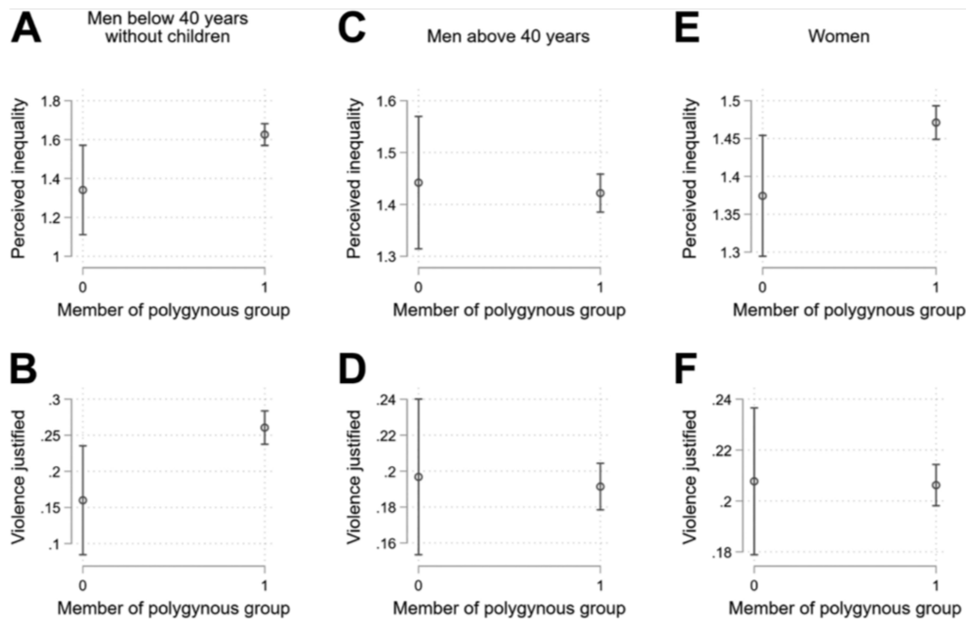
The lower row shows the results for the question of whether people see the use of violence as a justified means for their cause (Q51),

13 Unfortunately, these Afrobarometer surveys do not include questions on whether a respondent is married, but we believe that having no children is a reasonable indicator of being married or not in many African societies.

14 Figure 23 in Section B.5 shows the first differences between members of polygynous and monogamous groups, and the results are robust to those in Figure 11.

15 We use a linear model with robust standard errors and control for age, age2, education, assets, and a dummy for urban/rural residence.

16 Afrobarometer Merged Round 3 Codebook, 2005, http://www.afrobarometer.org/data/merged-round-3-codebook-18-countries-2005.



Note: Bars indicate 95 percent confidence intervals. The regression model controls for age, age^2, education level, assets, and an urban/rural dummy with robust standard errors. The regression table underlying these predicted responses is available in Table 24 in Section B.5. Figure 23 in the Appendix shows the first differences of these estimates, which are robust to the results. (A) and (B) denote men below 40 years without children. (C) and (D) denote men above 40 years. (E) and (F) denote women.

Figure 11: Individual-Level Evidence from Matched Afrobarometer Surveys.

where higher values indicate agreement. While young men below 40 years without children (excess men) are significantly more likely to view violence as justified, our placebo groups of men above 40 years, and women do not share this perspective. This result supports our initial argument that excess men are an important link between polygyny and conflict and not a broader societal disposition toward violence.

For males above the age of 40, we do not find any statistically significant difference in the two survey items between polygynous and monogamous groups. Next to other possible explanations, such as age, this could be argued to add to the self-sustainability of polygyny as a sticky institution. Thereby, one could speculate that polygynous males will likely be more supportive of transmitting the marriage institution of polygyny to the next generation (Hudson, 2018; McDermott and Cowden, 2018).

In sum, the results provide individual-level evidence that excess men hold views compatible with a disposition to theft, crime, and raids. These results provide suggestive support for our mechanisms that young, childless men in polygynous societies are under social pressure to perform. They perceive this pressure as unequal and un-

fair and that, more broadly, they evince a greater readiness to exert to violence than their peers in monogamous groups. We acknowledge that these questions are very general and do not really point toward violence against neighboring ethnic groups. However, given the data constraints and the usual noise in survey data, we believe these findings lend additional powerful evidence to our theoretical argument that polygyny produces excess men, which in turn contribute to intergroup violence experienced between neighboring ethnic groups.

2.8 conclusion

We have argued that, by definition, polygyny creates a social imbalance where a few, usually well-off, men marry many wives, and many, usually poor, men marry late or never. Polygyny, therefore, systematically creates a surplus of young, poor, unmarried men: excess men. Since marriage, family, and offspring are often the social metrics according to which the value of a man is assessed in traditional societies, excess men seek alternatives to become viable mates. In traditional and particularly rural settings, the ethnic group is perceived as the extended family, which leads excess men to abstain from turning against their kin; however, they have an incentive to pursue violent economic ventures (e.g., theft, crime, raids) in neighboring groups. From a security perspective, polygyny is not a problem for the polygynous group itself but rather for its neighbors. Being surrounded by many polygynous groups increases the risk of intergroup violence.

To examine this theory, we have applied georeferenced data on polygyny for more than 800 African ethnic groups and combined these with violent-event data. We have used a set of exogenous geographic and precolonial controls and report a strong effect of polygyny on conflict—that is, we find robust support for this theory. By exploiting Afrobarometer survey data, we find additional individual-level evidence for our proposed underlying mechanism that respondents who belong to polygynous ethnic groups hold more problematic views on perceived fairness, the obedience to the rule of law, and the readiness to use violence.

Our article contributes to several research strands and should, therefore, be of interest to a wide audience of scholars. First of all, it emphasizes the importance of the institutions of marriage and family and their role in social order, peace, and conflict. Our study substantially improves the only two existing quantitative studies with

conflicting findings on polygyny and conflict in several ways. We view polygyny as a local dynamic that affects local violence. We also use more coherent, expansive, and reliable data and engage in elaborate reliability tests using alternative data sources. We provide a more sensible model specification, taking into account the geographic and historical determinants that have affected the emergence of polygyny in the first place.

Second, our article contributes to the small but growing literature on low-intensity community-level conflict (Eck, 2014; Fjelde and Uexkull, 2012; Raleigh, 2010; Varshney, 2003). This research strand has significantly increased our understanding of conflict processes worldwide, also because local violent events frequently spur larger conflicts (Brass, 1997). Due to this, we stress that the type of conflict analyzed should be carefully chosen on the basis of theoretical considerations. We disagree, for instance, that large-scale civil wars are driven by polygyny as a "first law" (Kanazawa, 2009).

Third, this study contributes to the literature on the long-term effects of historical institutions. As we have theorized and demonstrated, polygyny can be understood as a "sticky" institution that is still at work in today's societies in Africa (Dalton and Leung, 2014). In this sense, our article adheres to the spirit of recent seminal studies examining the long-term effects of traditional institutions (Michalopoulos and Papaioannou, 2013; Wig, 2016), precolonial nation-states (De Juan and Koos, 2019), the slave trade (Nunn, 2008; Nunn and Wantchekon, 2011), the Berlin Conference (Michalopoulos and Papaioannou, 2016), and ancient wars (Besley and Reynal-Querol, 2014).

With regard to its practical relevance, our article provides insights for humanitarian and development agencies. We are aware that polygyny does not explain all conflicts, but we believe that our study provides systematic support for anecdotal examples where polygyny and conflict are widespread—for instance, in South Sudan, DR Congo (Verweijen, 2017), Nigeria, and even Western countries (Rauch, 2006). While our analysis focuses on Africa, we believe that the operating principles and societal implications of polygyny are—with few exceptions—universally problematic as they create a cohort of society that has always been associated with trouble around the world: excess men.

3

TRADITIONAL AUTHORITIES, NORM COLLISIONS, AND COMMUNAL CONFLICT

In this article, I examine the policing and dispute resolution capacity of traditional authorities and its effect on communal conflict. Traditional authorities of ethnic groups coexist with national norms, resulting in parallel institutional systems. I argue that this generates uncertainties about behavioral norms, which affects the likelihood of violence between communities on the territories of the groups. However, the presence of multiple norms is not bound to lead to more violence: state-level rules on norm collisions can lead to a system of co-production and less violence. To investigate these claims, I use new global data on different levels of analysis. On the group-level, I use geo-referenced expert survey data on ethnic groups and their internal organization and match this information with event data on communal conflict. On the state-level, I employ data measuring the constitutional regulation of traditional governance. The results support the hypothesis that communal policing of ethnic groups has an adverse effect on communal peace. The number of subgroups of the group, state-level regulation, and state-level political inclusion moderate this relationship.

3.1 INTRODUCTION

The key to the survival of any political community is to maintain internal order and security, and to defend the community from external threats. While the state has been put at the center of the provision of security (Hobbes, 1651; Locke, 1689; Weber, 1919), order, and security is frequently also achieved by communities below the state-level (e.g., Brass, 1997; Tajima, 2013, 2014). Thus, despite the general assumption that the state is the primary and sole provider of the "rules of the game" (Migdal, 1988, p. 14), the parallelism of political institutions is an empirical reality around the globe.

This parallelism frequently stems from the presence of traditional governance in ethnic groups. Traditionally governed communities can be defined as polities within states, exerting state-like functions following their own set of rules. These systems of governance commonly have a rule of law system, with institutions that apply

customary law, and engage in conflict resolution (Plunkett, 2005, pp. 78–79), with the aim of preserving order within their communities.

However, by definition, the existence of subnational governance by traditional authorities creates jurisdictional parallelism—both between different groups as well as these groups and the state. I argue in this article that the parallelism of policing institutions can have adverse effects on communal relations. When policing institutions coexist, they generate uncertainty about behavioral norms. As customary law and its enforcement are organized around groups, these can invoke intergroup tensions, which increases the likelihood of violence between communities.[1]

Yet, appropriate constitutional design or political inclusion of relevant groups may reverse this relationship. States deal very differently with the existence of traditional governance. In some countries, constitutions regulate the parallelism between traditional governance and the state, whereas, in others, no regulations are constitutionalized (Holzinger et al., 2019). This regulation can take different forms: sometimes, traditional governance and customary law are simply recognized, but traditional institutions can also be given official jurisdiction. The latter arrangements could then actually lead to less conflict, compared with the complete absence of traditional institutions, as these are bestowed with local legitimacy.

To this date, we lack theoretical and empirical knowledge that yields a more in-depth insight into how traditional governance, the state, and their mutual relationship shape security-outcomes, particularly conflicts between groups. Ethnic groups are a focal point in the study of conflicts after the end of the Cold War. Many contributions that have concentrated on social conflicts involving ethnic groups have focused on the direct relationship of groups to the state (e.g., Cederman, Wimmer, and Min, 2010; Hartzell and Hoddie, 2003), the mobilization potential of groups (e.g., Fearon, 2006; Tilly, 1978), and their geographical configurations (Buhaug and Gates, 2002; Buhaug, Gates, and Lujala, 2009; Cunningham and Weidmann, 2010; Raleigh and Hegre, 2009; Weidmann, 2009). Although some scholars have taken the variance in institutions of ethnic groups into account theoretically (e.g., Fearon and Laitin, 1996; Tajima, 2014), they have not explicitly analyzed them empirically.

1 Communal conflict is defined as violent events that occur between groups that "define themselves along identity lines" (Sundberg, Eck, and Kreutz, 2012, p. 353), and do not involve the state.

The empirical contributions that analyze the effect of traditional institutions on conflict come to differing conclusions. While some report that they reduce violent conflict (Depetris-Chauvin, 2015; Wig, 2016; Wig and Kromrey, 2018), others argue that they can have a conflict-inducing effect (Eck, 2014; Paine, 2019). I argue that part of these divergent findings—especially concerning communal conflict—can be explained by the exclusive focus on either the group level (Wig and Kromrey, 2018) or groups' integration on the state-level (Eck, 2014), in Africa or its sub-regions.

I argue that the essential feature in this context is the possibility of norm collision, and therefore study the interaction of group-level and state-level institutions. Furthermore, communal conflicts are the result of local interactions between ethnic groups, but also between neighboring tribes that are part of a larger group. Therefore, territorial features, as well as the groups' internal structures, should be considered. Lastly, traditional institutions are not an African phenomenon, but are prevalent in large parts of the world. For instance, there is evidence that indigenous institutions affect political outcomes in Latin America (e.g., Díaz-Cayeros, Magaloni, and Ruiz-Euler, 2014; Mähler and Pierskalla, 2015) and Asia (e.g., Cooper, 2018; Grenfell, 2006; Isser, 2011; Tajima, 2013, 2014).

In my theory, I suggest an approach that considers how norm collisions translate into conflicts between communities, as opposed to structural or elitists theories of group violence (cf. Bunte and Vinson, 2016). I start with the argument that institutions accommodate conflicts before they escalate into violence, especially by creating predictability, which hinges on accepting the norms shared across communities. However, when subnational groups with own sets of rules exist, this can lead to overlapping jurisdictions that undermine predictability. The evolving uncertainty leads to a situation susceptible to violent mobilization between different groups on their territories. In consequence, I first propose that the existence of traditional governance should increase the likelihood of conflict.

Second, I propose a horizontal mechanism: Most ethnic groups accommodate multiple 'subgroups,' below the 'supergroup'-level, each of which may have their own system of traditional authorities. The existence of more than one authority that applies customary law on a given territory further increases uncertainty, which can ignite local conflict between communities.

Yet, the state can re-establish predictability by providing collision rules and establishing spheres of jurisdiction for traditional institutions. This should decrease the risk associated with the existence

of coexisting norms. Beyond this effect, I argue that if regulated, traditional institutions and the state can enter a relationship of co-production. Traditional institutions are frequently attributed benefits such as context-sensitivity and increased physical approachability, especially in rural areas (e.g., Baldwin, 2016). This can lead to an increased effectiveness to manage conflicts, increase access to justice, and avert issues of impunity (Ubink and Rooij, 2011, p. 8, Tamanaha, 2011, p. 7), compared to a situation where only the nation-state has policing power.

To analyze these arguments, I use new global data on the group and state level. The primary unit of analysis are the territories of politically relevant ethnic groups (Cederman, Wimmer, and Min, 2010; Vogt et al., 2015; Wucherpfennig et al., 2011), which I pair with their socially relevant subgroups identified by the All Minorities at Risk (AMAR) project (Birnir et al., 2015). I match the raw group data to new expert survey data on traditional institutions and their policing capacity and project communal conflict events from 1989-2017 onto the map of groups. To test whether state-level covariates moderate the relationship between policing capacity and communal conflict, I nest all groups in states and present new data on whether the state includes jurisdictional regulations in its constitution.

I estimate multilevel regressions, with group-years nested in states. The analysis lends support to my arguments: The core function of traditional governance—the capacity to ensure within-societal order—can have adverse effects on inter-communal peace. Without regulation, the policing capacity of politically relevant groups increases the likelihood of communal conflicts on their territory. However, when the state regulates traditional governance, or the group is included in the state-level government, higher policing capacity of politically relevant groups leads to less communal conflicts on the territories of ethnic groups.

Yet, there is no monolithic relationship between policing capacity of traditionally governed group and communal conflict: the relationship also hinges on the structure of the group itself. An increase in the number of subgroups with policing capacities leads to significantly more conflict. This lends support to a horizontal mechanism of uncertainty: more diverse groups lead to increasing norm collisions. State-level regulation does not condition this relationship. I furthermore find evidence that state-level political inclusion of the larger ethnic group increases the likelihood of conflict with more subgroups that have traditional policing institutions. The political power of the dominant group may, therefore, come to the detri-

ment of other groups, suggesting that horizontal inequality between groups adds to the mechanism of norm collisions on communal conflict. Finally, I obtain direct evidence on my proposed mechanism: Groups with policing capacities more often experience jurisdictional conflicts with the state.

3.2 concepts and gaps

Traditional and indigenous systems of governance govern many ethnic groups around the world. Traditional systems of governance are subnational polities, with leaders and collective institutions exhibiting authority over subnational ethnic groups and territories on the basis of customary law. Traditional systems practice their authority through a "customary mode of governing" (Baldwin, 2016, p. 21), that is, by virtue of historical, cultural, and sacred legitimacy (Ubink, 2008, p. 8). This legitimacy frequently (but not necessarily) stems from precolonial institutions and is continuously reinforced by group members today that accept the traditional norms and procedures (Holzinger, Kern, and Kromrey, 2016, p. 470). As a result, traditional systems are locally-rooted and can be contrasted to alien rule (Zartman, 2000, p. 7).

Examples of traditional authorities include chiefs, councils of elders, and customary courts. There is world-wide and regional variation in the functions of traditional governance. However, common functions include land and property rights (e.g., Boone, 2014), personal status and family matters, and policing crime (Ubink, 2008, p. 15). These functions are exerted based on substantive and procedural rules of the society, through customary dispute resolution, as well as customary law. In that way, traditional governance has a profound impact on the everyday lives of members of the group.

By definition, states that host traditionally governed ethnic groups face a parallelism of political institutions with different sources of law. States formally deal with this parallelism by inserting regulations into their constitutions that aim to harmonize the parallelism (Holzinger et al., 2019). This has been done increasingly since the end of the cold war. For instance, a constitutional resurgence has been witnessed across the African continent, with legal regulations that entrench traditional authorities in the state system, giving them rights, but also regulating jurisdictions (e.g., Englebert, 2002; Sklar, 2005).

Variation in constitutional regulation has been shown to affect violent conflict. Mustasilta (2019) reports that the formal integration of

traditional authorities into the state's polity affects the likelihood of civil war onset. These results indicate that traditional authorities can be connected to large-scale violence, yet it can be expected that their effect is largely local as governors of the everyday lives of people in their localities. Hence, there is reason to believe that traditional governance should affect local forms of violence, as Eck (2014) shows in her study on communal land conflicts in West Africa. She finds that communal conflicts over land are less likely in countries without customary courts or that integrate them into the legal system of the state. The inference from these findings is that traditionally governed communities should be more prone to fight in (communal) conflicts in countries without official legal regulations. Yet, these studies do not consider the groups and their types of institutions themselves, nor do they pay attention to the geographies of groups and where exactly such conflict manifests itself.

In fact, a large number of studies have shown that ethnic groups and their territorial features affect conflict (e.g., Buhaug and Gleditsch, 2008; Cederman, Buhaug, and Rød, 2009; Cunningham and Weidmann, 2010; Raleigh and Hegre, 2009; Weidmann, 2009; Wucherpfennig et al., 2011; Østby, Nordås, and Rød, 2009), but we lack evidence on how this spells out under different configurations of traditional authority.

To approximate group-level effects of traditional institutions, some researchers have analyzed the long-term effect of precolonial group institutions on state-based conflict in contemporary Africa (Depetris-Chauvin, 2015; Paine, 2019; Wig, 2016), which has led to different conclusions about the direction of the effect. These studies exclusively rely on the Ethnographic Atlas by George Peter Murdock (1959), which maps socio-political traits of ethnic groups before European settlers colonized them.[2] Traditional systems of governance can stem from precolonial political systems but may as well be the result of colonial political engineering, reinvention (Ranger, 1993), and at times resurged after the cold war (e.g., Herbst, 2000; Logan, 2008; Muriaas, 2011; Ubink, 2008). In particular, with regards to their role in conflict resolution and policing, it is quite likely that their importance shifted with changing political circumstances. Therefore, contemporary data on traditional governance is required to assess their role in current conflicts.

2 These studies proxy traditional institutions by using Murdock's jurisdictional hierarchy variable, which measures the degree to which groups had institutions beyond the village level.

Wig and Kromrey (2018) provide the first quantitative study of contemporary group-level systems of traditional governance and communal conflict in sub-Saharan Africa. Taking an actor- and elite-specific perspective, they argue that highly institutionalized traditionally governed groups reduce uncertainty by being able to tie their hands in negotiations with other groups (cf. Fearon, 1997), which facilitates credible commitment and thereby peaceful conflict settlement. Furthermore, they put forth that traditional authorities can mediate conflicts of communal fighting of their subgroups. Their results support the hypothesis that highly institutionalized groups are less likely to be involved in communal conflicts.

While it is certainly true that traditional systems can support the recognition of a group as an actor in negotiations, it is unclear why institutionalization *per se* should enable credible commitment. As North observes, "throughout most of history [. . .] institutions have not provided the credible commitment necessary" (North, 1993, pp. 12–13). This points to the requirement of a more nuanced analysis of groups with traditional authorities and their impact on violence.

Combining the findings of Wig and Kromrey (2018) with those of Eck (2014) adds a layer of complexity. Eck (2014) shows that communal conflicts hinge on state-level integration of customary and courts, which supposes a positive effect of non-integrated customary governance on conflict, which stands opposite to Wig and Kromrey (2018). When we look at the world-wide distribution of the existence of traditionally governed groups and relevant legal regulations of their host states, significant variation can be observed. Out of the 94 countries that host politically relevant groups with traditional governance, 40 percent do not include any legal regulations in their constitutions.[3] I, therefore, suggest an approach that both considers group-level characteristics and state-level variation in legal integration.

Additionally, I take a theoretical perspective that puts uncertainty at the center in the explanation of communal conflicts. Events that lead to violence between communities are frequently "spontaneous, individualistic, and local" (Koos and Neupert-Wentz, 2019, p. 8, see also Fjelde and Uexkull, 2012, p. 446, Fearon and Laitin, 2000).

3 Figures are based on the TradGov Constitutional dataset and the TradGov Group dataset collected within the German Research Foundation (DFG) Reinhart Koselleck Project "Traditional Governance and Modern Statehood." (grant no. HO 1811/10-1) at the University of Konstanz. I acknowledge support by Katharina Holzinger, Axel Bayer, Daniela Behr, and Roos Haer in data collection. A detailed description of the datasets and the population of this study is presented in the data section of this article.

For instance, farmer-herder conflicts in Nigeria that spiraled into large-scale violence were often spurred by "spontaneous reactions to provocations" and did not involve the traditional leadership to either mobilize against other groups or mediate the conflict in its early stages (International Crisis Group, 2018).

Geography furthermore has been stressed in conflict research: conflict takes place locally, and should therefore be driven by local configurations (e.g., Cunningham and Weidmann, 2010; Rustad et al., 2011). This is particularly true for traditional authorities as "sons of the soil"—combining governance over group territory with a people (Fearon and Laitin, 2011; Geschiere, 2011). Hence, in defining traditional systems of governance as sub-national polities, a geographical aspect has to be considered: traditional authorities govern in a geographically confined space within a state's territory. I expect their impact on conflict to play out locally.

In summary, I propose that when focusing on uncertainty through norm-collision, it is useful to take the territorial dimension of traditional authorities into account and where conflicts take place, rather than taking an actor-specific perspective that focuses on bargaining between elites.

3.3 THEORY

I argue that the existence of traditionally governed groups—and in particular their policing institutions—increases the likelihood of communal conflict by generating uncertainty through norm collision. I start by assessing how institutions, and particularly those that aim to create social order, generate behavioral norms that lead to the peaceful resolution of conflicts. Then I show how the presence of parallel political institutions generates uncertainties about those behavioral norms, which increases the likelihood of violence between communities. However, I will argue that the presence of multiple actors is not bound to lead to more violence: formal rules can embed the systems and may even contribute to a system of coproduction, leading to less violence.

3.3.1 *Institutions Induce Predictability: Core of Peaceful Interactions*

Institutions constrain political, economic, and social interactions, "to create order and reduce uncertainty in exchange" (North, 1991, p. 97). Both formal and informal institutions prevent social conflicts

through socially-shared rules and repeated interaction (North, 1990, 1991). When conflicts emerge, institutions help to settle them in a non-violent way (Tajima, 2014; Tilly, 1978). Hence, institutions aim to exhibit order with the primary objective of the prevention and deterrence of violent conflict and crime (Migdal, 1988).

Practically, this is achieved through policing institutions: The law, courts, and police.[4] Punishment alters the incentives to use violence, but policing institutions importantly lead to predictability: the knowledge about the consequences of one's behavior and the trust that the rules are also obeyed by other members of the community (North, Wallis, and Weingast, 2009, p. 16). Legal certainty is fundamental to establishing predictability, which has been described as the "*idée directrice*" of the rule of law (Arnauld, 2006, p. 691, Schuppert and Kötter, 2007, p. 65). In consequence, the very idea of conflict resolution hinges on an agreement on the general rules of society, and the recognition of a shared community (Deutsch, Coleman, and Marcus, 2006).

In summary, institutions create behavioral norms that constrain the behavior of individuals to induce predictability and prevent conflicts from escalating into violence. Only if the rules apply to everyone, predictability can be achieved. Therefore, within-society compliance and (legal) certainty for individuals are crucial to achieve order.

3.3.2 *Institutional Parallelism Induces Uncertainty*

The state's institutions are frequently the focal point in the assessment of order and security (Weber, 1919). The Weberian ideal type of the state monopolizes the use of violence and the implementation of rules. In this vein, a lack of administrative control in the state's peripheries has been identified that a structural cause of internal wars (Fearon and Laitin, 2003, p. 88). However, where traditional authorities govern, legitimate institutions and policing are not limited to the state, and sources of law differ.

What are the consequences of the coexistence of different governance and policing structures? I argue that the parallel governance of policing institutions generates uncertainty through norm collisions. Customary law of one group regulates certain situations dif-

4 This theory is agnostic with regard to the normative value of one sphere of authority over the other, i.e., "effective police organizations should not be understood as normatively desirable, but rather as organizations whose capacity can be used both for social good and to illiberal ends" (Eck, 2018, p. 148).

ferently from the state and other traditionally governed communities (Lund, 2008, p. 10, Ubink and Amanor, 2008, pp. 12–13, Woodman, 2008, p. 29). In legal terms, this leads to legal pluralism and diversity of norms, which "can result in inconsistent decision-making if different laws are applied by different justice mechanisms" (Wallis, 2014, p. 36). These inconsistencies can feature in various social interactions, with the prominent example being conflicts over property rights and land (Beyene, 2009; Boone, 2014; International Crisis Group, 2011; Unruh, 2003). If a land title allocated to one person by a traditional authority and to another person by the state, it is likely that conflict will emerge as both disputants see their land claim as legitimate.

Divergent behavioral norms evolve where legal systems coexist. Individuals cannot rely on the law to regulate social, economic, and political interactions ex-ante. The so-called "forum shopping" additionally inserts a strategic element resulting from the parallelism: disputants choose between the different institutions based on their expected utility outcome from one institution over the other (Benda-Beckmann, 1981, p. 117). For instance, in a field experiment in Papua New Guinea, Cooper, 2018, p. 49 finds that under an expanding state, state and non-state institutions become "strategic complementarities," reinforcing forum shopping.

In consequence, a cohesive system of law that creates predictability may be undermined. Put differently, the monopoly of legitimate violence cannot be maintained if faced with the existence of other authorities with their own legitimacy, societal rules, and enforcement mechanisms to uphold these. If a governance system is fragmented in such a way, particularly with regards to its legal institutions, predictably vanishes and uncertainty arises.

3.3.3 *Groups and Space Matter*

How does the resulting uncertainty relate to communal conflict? Norms, monitoring, and internal punishment mechanisms of traditionally governed groups are group- and territory-specific. Hence, while jurisdictional authority can lead to within-group conformity and order (Fortes and Evans-Pritchard, 1958), it can invoke conflicts between proximate groups when norms collide.

Conflicts that emerge from uncertainty about norms can be spontaneous and individual. Yet when customary law and its enforcement are organized around groups, individuals identify with their group's version of customary law (Waldorf, 2019). This identifica-

tion can invoke perceived biases vis-à-vis other sources of law. For instance, when asked about the functions of the traditional authorities of the Mandinka in the Senegal, an expert surveyed for the TradGov Group data answered: "To keep the Jural [*sic*] business of the village away from the state organized judicial system, whose state-bias was suspect."[5]

Similarly, Blattman, Hartman, and Blair (2014, p. 107) report from their research in Liberia that

> *"[w]hen people narrated the history of their disputes, they almost always mentioned the intervention of multiple authorities. In interviews, nearly every authority [...] stated that he or she was responsible for land disputes."*

Furthermore,

> *"[d]isputes that fall along group lines were often marred by suspicion and prejudice, and few forums were seen as unbiased"*
>
> (Blattman, Hartman, and Blair, 2014, p. 107)

In a situation where members from different groups are involved in a conflict, perceptions about lawfulness will diverge. One disputant will deem the other actions as illegal under his or her customary law, but the other will see his or her action as rightful given the law he or she adheres to. In consequence, if there are two or more policing institutions and norms in place on the same territory structured along group lines, then members of each group will be unwilling to be policed by other group's institutions. Accordingly, individuals will predict that there will be no reliable, mutually accepted set of rules and institutions. This then actually approximates a situation where no policing or law exists.

If in further interaction, group-outsiders act in discordance with the local norms and are sanctioned, it will not be perceived by them as legitimate law enforcement, but as unjustified punishment, triggering inter-group tensions. At the same time, the punishment of group-outsiders is inhibited when the perpetrator cannot be identified, which can result in punishment of the collective outside group, resulting in spirals of violence between groups (Fearon and Laitin,

5 Anonymous expert. Source: TradGov Group data; see data section for the description of the dataset.

1996, p. 719, Tajima, Samphantharak, and Ostwald, 2018). The organizational capacity and internal cohesion of traditionally governed groups can then reinforce the escalation of intergroup relations (Gurr, 2000; Tilly, 1978).

Lastly, norm collisions ignite communal violence in the confined spaces in which traditional authorities govern. In summary, I expect policing institutions of traditionally governed communities to have an adverse effect on communal relations and derive hypothesis 1a:

HYPOTHESIS 1A: Higher policing capacities of traditionally governed groups increase the likelihood of communal conflict on their territory.

Beyond the presence of traditional governance, the specific configurations in the localities of traditionally governed groups should impact whether conflicts erupt (cf. Cunningham and Weidmann, 2010). That is, intra-group dynamics should play a pivotal role in communal conflicts, especially when the groups are internally heterogeneous (cf. Kalyvas, 2003). Clans and tribes below the level of the larger ethnic group can drive conflicts within ethnic groups through micro-level processes (Warren and Troy, 2015).

Figure 12 depicts a stylized structure of multiple groups within one state. More subgroups—potentially with their own set of laws—increase possible contact and boundary points, which can increase norm collisions and thereby uncertainty and conflict. In this stylized example, the territory of Supergroup 2 is shared with the state only, whereas Supergroup 3 features two more subgroups. In the latter situation, we would expect even higher levels of uncertainty due to norm collision.

In fact, ethnic heterogeneity has been found to lead to a "diversity penalty" in the production of public goods, including welfare, justice, and security (Tajima, Samphantharak, and Ostwald, 2018). Habyarimana et al. (2007, p. 724) find that the higher productivity of ethnically homogeneous societies can be caused by the "norms and institutions that police the defection of non-contributors" within the groups. In turn, heterogeneity of policing institutions within a larger ethnic group should inhibit their capacities and heighten the risks outlined above.

Beyond increasing uncertainty, the presence of multiple subgroups in an ethnic supergroup also points to "nested hierarchies" (Warren and Troy, 2015, p. 502). Authorities at the supergroup-level may have more power and define customary law (Joireman, 2014). Given

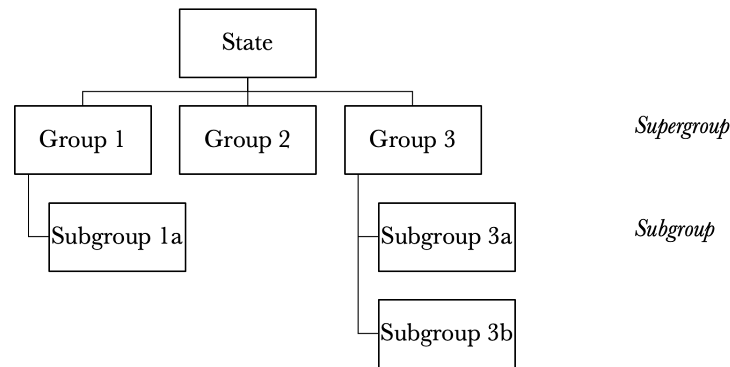


Figure 12: Stylized State-Group Structure.

the hierarchy, this can lead to the exclusion of subgroups from the judicial proceedings of the larger ethnic groups (Boone, 2014; Fearon and Laitin, 2011). Such exclusionary practices can amplify horizontal inequalities, heightening the risk of communal conflict (cf. Fjelde and Østby, 2014). Therefore, I complement the first hypothesis with hypothesis 1b, which reads:

HYPOTHESIS 1B: The higher the number of traditionally governed subgroups with policing capacities, the higher the likelihood of communal conflict on the territory of the supergroup.

3.3.4 *The State can Reduce Uncertainty*

In the previous section, I have argued that when jurisdictional responsibility is not attributed to one authority that legitimately settles disputes (Eck, 2014, p. 443), the likelihood of violence between different communities with different norms increases. Yet, more authorities with different sources of law can increase order—even if authority is diffused among different groups (Migdal, 1988, p. 34)—when jurisdictional responsibilities are harmonized.

The state can bridge the effects of the presence of multiple authorities by formally reckoning with these institutions: it can establish rules and regulations that police jurisdictions. The formal aspect of such harmonization brings about credibility, while the state can also act as a guarantor of the arrangement. In this way, institutionalized channels of relationships and interaction can again accommodate conflicts before they bring about violence (Tilly, 1978). Hence, institutionalizing fields of responsibility can decrease the uncertainty

that stems from the presence of distinct authorities and policing institutions. This can build predictability and trust and close the gaps of overlapping jurisdictions.

Formal regulations can take different forms, with constitutions representing the highest form of formal reckoning and a certain degree of stability. Their norms are special in that they take precedence over all other laws and represent the guiding principles of a state. Through the regulation of political power, they are particularly important for traditional authority-state relationships (Cuskelly, 2011; Grenfell, 2013).

A clarified constitutional status changes the way local traditional authorities can work with other authorities and the state policing institutions when conflicts arise. Constitutional backing supports the delegation and negotiation along institutionalized channels of accommodation between different authorities. In this way, conflicts as a result of norm collisions are limited.

Beyond the diffusion of risks associated with norm collisions and uncertainty, state recognition can also give customary courts and their enforcing institutions the authority to settle disputes effectively. Wiessner and Pupu (2012) show that the neo-customary village courts in Papua New Guinea could successfully mediate a decade-long surge in inter-tribal violence among the Enga group. Their effectiveness is particularly due to a mixture of authority gained through the legitimation of the state, balanced by a high degree of flexibility, with little constraints and supervision. Furthermore, their dispute settlement is "sensitive to current conditions, emotions, and values" (Wiessner and Pupu, 2012, p. 1653). Under these conditions, dispute resolution of traditional authorities can increase stability and intergroup peace, beyond the diffusion of risks. At times, these may be more effective, context-sensitive, and accessible than state institutions. In turn, they can avert impunity (Tamanaha, 2011; Ubink and Rooij, 2011), which leads to a system of co-production (Ostrom, 1996). Functioning policing institutions of traditionally governed groups can thereby act as complements.

While the state may be unwilling to recognize other non-state political authorities with their own set of legitimacy within its borders (see also Holzinger et al., 2019), it may also have an interest in increasing legal security and institutional coherence. By establishing regulatory laws, it can bolster its presence without acting against powerful authority with high mobilization potential.

Reckoning formally with traditional institutions of governance may then contain some of the risks that result from the coexistence

of institutions. The formal recognition of traditional governance embeds the systems, which can lead to more cohesion between them. I summarize this argument as follows:

HYPOTHESIS 2: Policing capacities of traditionally governed groups decrease the likelihood of communal conflict on their territory if traditional governance is regulated at the state level.

Constitutional regulation usually harmonizes jurisdictional responsibilities across the state territory and applies to all traditional authorities. Yet, it may be the case that in some states, specific groups have more power and better access to (state) resources (Cederman, Wimmer, and Min, 2010), which might reinforce the harmonization mechanism outlined above. If a group becomes part of the state, it does not only have the resources but also specific means to harmonize. What is more, traditional authorities of these groups have a stake in state politics, and it should, therefore, be their interest to enforce both customary as well as state law on their territories. This leads to the final hypothesis:

HYPOTHESIS 3: Policing capacities of traditionally governed groups decrease the likelihood of communal conflict on their territory if the group is politically included at the state level.

3.4 DATA

I limit the sample to all groups that were relevant in 2017, which coincides with the collection of information on the main explanatory variables. The initial sample of the groups under study are 807 ethnic groups in 187 countries. The GeoEPR only assigns polygons to groups with clearly identifiable settlement patterns (Schvitz and Müller-Crepon, 2018). I exclude groups with state-wide geolocation, which fits the conceptualization of traditional authorities as subnational actors.[6] This results in a population of 583 groups in 130 countries in the year 2017 and 16,392 observations of politically relevant groups over time.

3.4.1 *Outcome Variable: Communal Conflict*

Communal conflicts are defined as events in which violence occurs between "groups that define themselves along identity lines, be it

6 Furthermore, urban, migrant, and dispersed groups are excluded from the analysis.

ethnic, clan, religious, national or tribal identities," and that result in at least 25 battle-related deaths in one year (Sundberg, Eck, and Kreutz, 2012, p. 353). To obtain a communal conflict measure for the population of groups under study, I project communal conflict events on the map of polygons, using the UCDP Georeferenced Event Dataset (GED)[7] and the UCDP Non-State Conflict Dataset[8] (Croicu and Sundberg, 2017; Sundberg, Eck, and Kreutz, 2012; Sundberg and Melander, 2013).[9][10] I only include events that can be geolocated with an exact precision or a maximum of a 25 km radius around the event (variable where_prec $\geqslant 2$).

Finally, I count the number of conflicts for each year between 1989 and 2017 within each group polygon and log-transform the count (+1). Out of the 583 politically relevant groups, 117 (20 percent) have experienced at least one communal conflict on their territory in the years under study.

3.4.2 *Group-Level Explanatory Variables*

The explanatory variables on the group-level are obtained from the TradGov Group data. This dataset is based on an online expert survey on ethnic groups worldwide, containing information on the existence and structure of contemporary, traditional governance.[11] Expert surveys are a useful tool to obtain informed and comparable data, especially for research questions that require systematic information on institutions at the subnational level (cf. Maestas 2016). The baseline population of groups for the survey is mostly based on the EPR (Cederman, Wimmer, and Min, 2010) and the All Minorities at Risk (AMAR) Project (Birnir et al., 2015), which lists groups identified as socially relevant.[12] Experts were identified based on

7 Global Version 18.1 (2017), available at `http://ucdp.uu.se/downloads/`.

8 Version 18.1 (2018), available at `http://ucdp.uu.se/downloads/`.

9 It is likely that the number of communal conflict events is underestimated in the UCDP, particularly in the rural context. This is due to a media bias, as media outlets are less liable to cover lower-scale events (cf. Weidmann, 2016).

10 Although the GED allows filtering non-state conflicts, this category includes conflict events that may not be related to my theoretical argument, such as violence that occurs between supporters of particular political parties (Sundberg, Eck, and Kreutz, 2012, p. 353). To only acquire communal conflict events, I use the UCDP Non-State Conflict Dataset (Sundberg, Eck, and Kreutz, 2012), which is fully compatible with the GED, and identify the events in which violence occurs between informally organized groups (Organizational Level 3) (Sundberg, Eck, and Kreutz, 2012, p. 353).

11 Data collected by the German Research Foundation (DFG) Koselleck research project on "Traditional Governance and Modern Statehood" (HO 1811/10-1).

12 Furthermore, the population was complemented by ethnic groups mentioned in current constitutions and ethnic groups identified by the EPR as politically relevant (Cederman,

(academic) publications, group-association, or affiliation with an organization working on behalf of the group.[13] Overall, almost 7000 experts were contacted in the period between January 2016 and May 2017, resulting in a dataset of about 1700 groups in 147 countries worldwide.

To combine the data of the outcome variable with the data of the groups in the expert survey, I matched the groups in the survey to politically relevant groups of the GeoEPR. Out of the population of 583, 375 groups in 103 countries were successfully matched. In most cases, it was possible to identify the EPR group in the survey dataset clearly. In some cases, however, the EPR gives the same identifier to multiple groups represented in the expert survey, so that variables from the latter had to be aggregated.[14].

The theory proposes a mechanism of uncertainty that stems from the parallelism of societal rules, which are enforced by traditional authorities. To arrive at a measure that captures both the existence of customary norms and rules as well as their actual enforcement, I rely on two survey items. First, experts were asked whether the groups have customary dispute resolution and security institutions and functions, such as customary law and customary courts. Second, if the experts stated that traditional authorities engage in policing, they were asked to rate the capacity to settle disputes and ensure security, peace, and order within their groups.[15] For the first hypothesis, I create an ordinal variable Policing Capacity from these measures that ranges from 0 to 3, where 0 indicates that experts state that the groups do not have any policing institutions.[16] The ensuing categories measure low (1), medium (2), and high policing capacity

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Wimmer, and Min, 2010). However, the survey was also open for experts to add groups of their expertise, due to the lack of a defined population of traditionally organized groups.

13 The largest share of experts with 59 percent are academics from disciplines such as political science, anthropology, ethnology, economics, or public administration (59 percent). Smaller proportions of the experts work for national and international NGOs (12 percent), the public sector (7 percent), are group members (12 percent), or group leaders (3 percent). The survey was available in English, French, Spanish, Portuguese, and Russian.

14 Matching and aggregation rules are provided in Section C.2.

15 "How would you rate the capacity of the traditional organization (leaders, bodies, and rules) to settle disputes among the group X?" and "How would you rate the capacity of the traditional organization (leaders, bodies, and rules) to ensure security, peace and order among the group X?" (5-point measure from perfectly capable – Incapable). All survey items used in the analyses are presented in the Appendix Section C.3.

16 By decreasing the scale and using two survey items, measurement error can be reduced. Traditional systems of governance usually do not neatly fit institutional categories, such as judicative and executive functions (Court, Hyden, and Mease, 2003, p. 3). Also, experts may identify institutions and capacities differently from one another.

(3).[17] A little less than a fourth of the groups in the data do not have any policing capacity, 12 percent have low capacity, while medium and high capacities are coded for about a third of the groups in the data.

Hypothesis 1b states that higher numbers of traditionally governed groups with policing institutions on one territory can increase the risk of communal conflict. To measure the existence of such subgroups, I make use of the nested group structure that comes with the AMAR group list (Birnir et al., 2015), which was matched to the groups in the EPR. The AMAR lists socially relevant groups, which are defined as groups where "people notice and condition their actions on ethnic distinctions in everyday life" (Fearon, 2006, p. 852). This means that these groups need not necessarily be politically mobilized as in the EPR category. Importantly, AMAR enumerates subgroups of the larger ethnic group, which enables me to proxy the heterogeneity on the territories. The supergroups in the stylized state-group structure in Figure 1 are therefore politically relevant groups, while the subgroups are socially relevant groups that are nested in the supergroup.

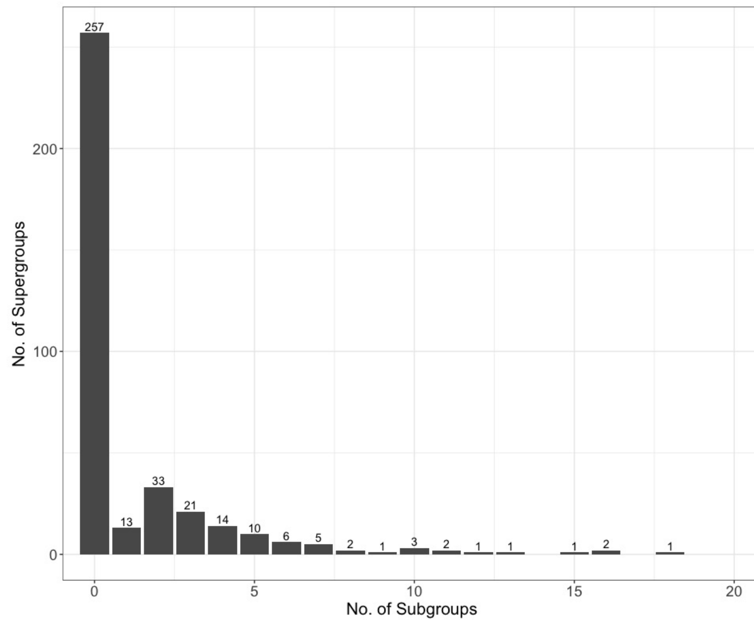
To arrive at a measure that corresponds to my theoretical mechanism, I count the number subgroups which have policing institutions in place. To take an example, the Kru in Côte D'Ivoire have four subgroups with policing institutions, as identified by the survey: the Yacoboue Dida, the Aizi, the Wobe, and the Krahn subgroups. Hence, the Kru receive a value of four for the No. of Subgroups variable.[18] The distribution of the variable is displayed in the frequency plot in Figure 13.

3.4.3 *Moderating Variables*

In the second and third hypothesis, I argue that constitutional regulation and political inclusion of the supergroup moderates the relationship between policing and communal conflict. To obtain a variable that captures the degree to which states clarify jurisdictional responsibilities, I use the TradGov Constitutional dataset. In these data, constitutions of all 193 United Nations (UN) member states

17 Discrepancies between the two questions were considered. I.e., if a group was rated medium capacity in dispute resolution and no capacity in security provision, the group's measurement resulted in a low policing capacity. Robustness tests using different combinations of single survey items are provided in the Appendix Section C.5 Table 28 and Table 29.

18 In cases of aggregated EPR groups, such as the Hausa-Fulani and Middlebelt, all subgroups of the three groups were considered for the count.



Note: Cross-Section of the number of subgroups. The plot omits two groups with more than 20 subgroups.

Figure 13: Distribution of the Variable No. of Subgroups.

were coded.[19] The resulting dataset is a cross-section of all current constitutions as of July 2014, containing more than 200 variables.[20] The variable Constitutional Regulation is based on an additive index combining 43 variables, including measures of the jurisdictional responsibilities of traditional authorities, the specification of collision rules between customary and state law.[21] The distribution across groups can be read from Figure 14. To ensure that regulations specifically deal with jurisdictional parallelism, I only consider constitutional clauses that concern traditional governance for a subset of the population. Article 246 of the Colombian constitution exemplifies this. It acknowledges the right of groups to exercise their jurisdictional functions and provides for the establishment of collision rules:

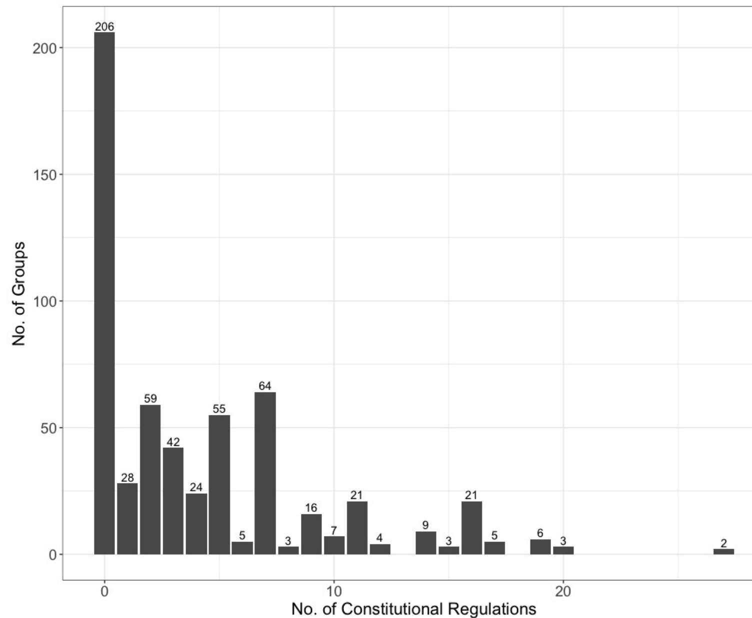
> *"The authorities of the indigenous (Indian) peoples may exercise their jurisdictional functions within their terri-*

19 Constitutions were coded twice and in cases of discordant coding, reconciled by a third researcher to ensure inter-coder reliability.

20 For countries that do not have a codified constitution, e.g., the United Kingdom, Israel, or San Marino, a collection of legal documents which have constitutional rank according to legal experts was used. All constitutions that were available in an official translation were coded in English. For some countries, authorized translations of the current constitution were not publicly available. If no authorized translations were available, the coding was done using its original language (e.g., Spanish, Dutch, or French).

21 The list of variables included in the index is provided in the Appendix Section C.4

torial jurisdiction in accordance with their own laws and procedures provided these are not contrary to the Constitution and the laws of the Republic. The law will establish the forms of coordination of this special jurisdiction with the national judicial system."



Note: Plot displays the number of provisions of a country's constitution per politically relevant supergroup in the year 2014.

Figure 14: Distribution of the Variable Constitutional Regulation.

As the index measures the depth of regulation, only the number of provisions included in the index restrict the upper bound. To keep most of the variance but restrict the effect of outliers, I use min-max scaling so that the variable ranges between zero and one. Out of 193 states, 86 (44 percent) include at least one provision that regulates traditional governance.[22] Constitutional Regulation does not vary across time, while the outcome is time-variant. To avert endogeneity, I code the variable from the last date where a substantial change in the constitutional rights on traditional authorities, indigenous groups, or customary law can be observed, as identified by Holzinger et al. (2019). Group-years before that change are coded missing.

The variable Political Inclusion of the supergroup is a dichotomous measure that stems from the EPR dataset (Cederman, Wimmer, and Min, 2010). An ethnic group counts as politically included

22 The summary statistics are presented in the Appendix Section C.1.

(one) if it either holds absolute power or shares power with other groups in government. Conversely, a group is excluded (zero) if it does not participate in the government. The variable does not reflect a possible political influence at the subnational level (Cederman, Wimmer, and Min, 2010, pp. 100–101).[23]

3.4.4 *Control Variables*

To control for potential confounders, I include covariates on the group and state level that could both affect the proposed relationships (Pearl, 2009). First, I use geographical and political measures on the group-level, which are all obtained for the supergroups. The main independent variable measures the Policing Capacities of traditionally governed groups. To test whether the effect on communal conflict is not driven by traditional governance per se—i.e., irrespective of their internal policing capacities—I include a dichotomous variable Any Traditional Governance. The variable measures whether an expert in the TradGov Group data indicated that the supergroup has any form of traditional political organization, including the existence of chiefs, elders, or spiritual leaders.[24]

Groups in rural areas far away from the state's capital may be more prone to experience conflict (Buhaug, Cederman, and Rød, 2008). This is argued to be due to a gradient decline of state power with an increased distance to the capital, and due to the exclusion of groups in the peripheries (cf. Baldwin, 2016; Herbst, 2000). At the same time, traditional authorities are more prevalent in rural areas (Holzinger et al., 2019, p. 1786). Therefore, I control for the logged area-weighted mean of the geographical distance to the state's capital, as measured by the PRIO GRID and re-coded by GeoEPR (Girardin et al., 2015; Tollefsen, Strand, and Buhaug, 2012; Vogt et al., 2015).[25]

Furthermore, populous groups are more powerful, have larger pools to recruit from, and lower costs to mobilize for violence. To account for this, I include the (logged) population size of the group by PRIO GRID.[26] Opportunity structures for violence could also be affected by the groups' geographical expansion (Weidmann, 2009).

23 For the purpose of interpretability, I take the reverse of the original "status excluded" variable of the EPR.

24 The wording of all survey items can be read in Section C.3.

25 As the measure is only available until 2014, I extrapolate the mostly time-invariant measure until the year 2017.

26 The population size of groups is collected every decade; I use these measures for the equivalent decades 1990: 1989-1999, 2000: 2000-2009, 2010: 2010-2017.

Larger territories may be more difficult to govern for traditional authorities and at the same time, affect the likelihood of violence between groups. To control for this, I include the (logged) settlement area in square kilometers by the GeoEPR (Vogt et al., 2015).

Night light emissions are a good predictor of local wealth (Weidmann and Schutte, 2017), and could, therefore, influence both the likelihood of violence between groups and the local capacity of traditional systems of governance. I add the logged area-weighted sum of the calibrated nightlight emissions for each group as measured by the PRIO GRID and re-coded by GeoEPR (Girardin et al., 2015; Tollefsen, Strand, and Buhaug, 2012; Vogt et al., 2015).[27]

Second, I also add state-level covariates. Democracy could affect the likelihood of constitutional regulation and conflict, as regime type influences the responsiveness of political institutions and the reliability of constitutions (Holzinger et al., 2019). To account for this, I use the egalitarian democracy index by the V-Dem Project (Coppedge et al., 2015, 2018; Sigman and Lindberg, 2015). The variable continuously measures on a scale from zero to one whether resources and power are equally distributed among social groups, and also whether the state is an electoral democracy. Colonial Past affects whether parallel institutions of traditional governance emerge, as well as their role within the state. Therefore, I include a dichotomous measure based on Hensel (2018), which is one when the state gained independence between 1945 and 1990.[28]

While higher numbers of traditionally governed groups may increase the risk of communal conflict, the moderating constitutionalization variable may be driven by a demand factor (Holzinger et al., 2019). To account for state-wide dynamics of traditional governance, I include a measure that captures the TG population share in the country, with the population that is governed by traditional authorities divided by the state's overall population (Baldwin and Holzinger, 2019).[29]

Lastly, I control for two types of violence that could affect policing capacity and communal conflict propensity of a group. First, traditional institutions and policing institutions, in particular, may be the result of mobilization for civil war activities that target the state.

27 The measure is only available for the years 1992-2013 and 2015. Where appropriate, I extrapolate the variable for the entire time-span (1989-2017).

28 Thereby, I exclude states that gained independence pre-WWII (e.g., the United States) or as a result of the end of the Cold War (e.g., Ukraine).

29 From the three population estimates "minimum," "best," and "maximum" share, I use the "best estimate" of the population share. See Baldwin and Holzinger (2019, 6) for a closer description.

At the same time, rebellion activity of the group could affect other types of violence, including communal conflict. I include Rebellion Incidence (incidence_flag variable) provided by the ACD2EPR, which combines the EPR with the UCDP Armed Conflict Database (ACD) (Wucherpfennig et al., 2012) and codes if the group can be connected to rebellion activities.

Second, communal conflicts within the borders of the ethnic group may also be driven by communal conflicts in neighboring groups (Le Sage and Pace, 2009). To control for spatial autocorrelation, I include a spatial lag into all models, measured as the average of communal conflicts of neighboring polygons (number of conflicts in neighboring polygons/number of neighboring polygons).

3.5 ANALYSIS

To account for the hierarchical structure of the argument and data — supergroups nested in states — I choose mixed effect models that partially pool the data. This allows me to fit the model at the group-level while accounting for state-level variation.

The outcome is the logged count of communal conflict events for each group polygon and each year between 1989 and 2017. Therefore, I estimate a log-linear mixed-effects model with varying intercepts across states and years, with predictors on the group and state level. Estimations are done using the R package lme4 (Bates et al., 2015).

I start by testing hypotheses 1a and b. Table 4 reports the results. The first three models test the bivariate relationship between the policing capacity and the number of subgroups with policing institutions separately and in conjunction. I then add the control variables in model 4. In these first four models, policing capacity only reaches statistical significance in model 3, with a negative coefficient, which runs against the expectations. However, the number of subgroups has a consistently positive and highly significant effect. With each additional subgroup that has policing institutions in place, the likelihood of communal conflict on the territory of the supergroup increases by one percent over the entire period under study.[30] I.e., if we move from 0 to 10 subgroups on one territory, we observe a 10 percent increase in the likelihood of communal conflict events. This is in line with hypothesis 1b.

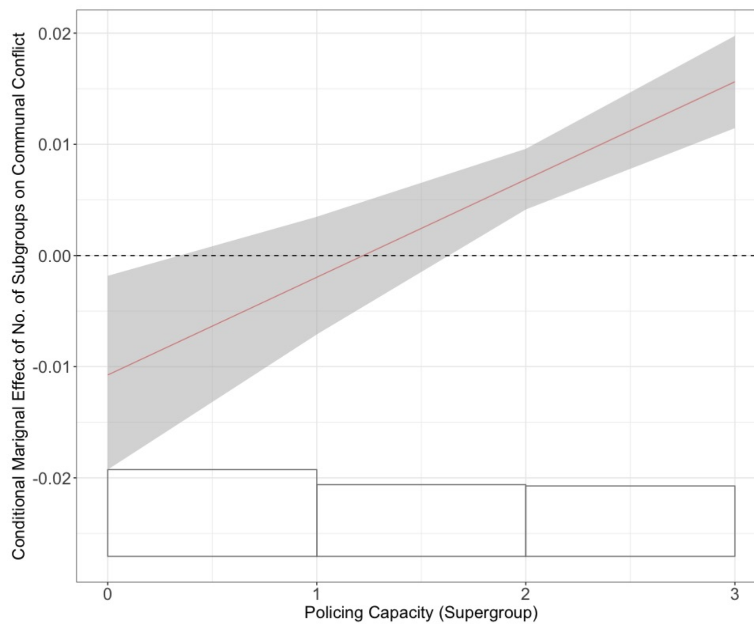
30 As the outcome is log-transformed, the coefficient has to be exponentiated: $e^{(0.01)} = 1.01005$. Due to the functional form, the higher the coefficient, the more will it diverge from its exponential.

Table 4: Log-Linear Mixed Effects Models of Communal Conflict, 1989-2017

	(1)	(2)	(3)	(4)	(5)
Supergroup Policing Capacity	−0.002		−0.01***	−0.002	−0.01**
	(0.003)		(0.003)	(0.01)	(0.01)
No. of Subgroups		0.01***	0.01***	0.01***	−0.01**
		(0.001)	(0.001)	(0.001)	(0.004)
Supergroup Policing Capacity X					0.01***
No. of Subgroups					(0.002)
Constitutional Regulation				−0.03	−0.04
				(0.06)	(0.05)
Supergroup Political Inclusion				−0.01	−0.01
(EPR)				(0.01)	(0.01)
Any Traditional Governance				−0.05***	−0.04**
				(0.01)	(0.02)
Capital Distance (log)				0.02**	0.02**
				(0.01)	(0.01)
Population Size (log)				0.03***	0.03***
				(0.005)	(0.005)
Settlement Area (km^2, log)				0.01**	0.01**
				(0.004)	(0.004)
Night Light Density (log)				−0.01*	−0.01*
				(0.003)	(0.003)
Democracy				−0.01	−0.01
				(0.05)	(0.05)
Colonial Past				0.01	0.01
				(0.03)	(0.02)
TG Population Share				0.08**	0.07**
				(0.03)	(0.03)
Rebellion Incidence				0.01	0.01
				(0.02)	(0.02)
Spatial Lag	0.03***	0.03***	0.03***	0.02***	0.02***
	(0.003)	(0.002)	(0.003)	(0.004)	(0.004)
σ^2	0.066	0.065	0.065	0.071	0.070
N_{state}	101	103	101	98	98
N_{year}	29	29	29	29	29
ICC_{state}	0.066	0.059	0.080	0.117	0.106
ICC_{year}	0.000	0.000	0.000	0.000	0.000
Observations	10,208	10,875	10,208	6,043	6,043
R^2	.120	.124	.130	.173	.174

Note: Standard Errors in Parentheses *p<0.1; **p<0.05; ***p<0.01

To see how policing capacity and the number of subgroups on the same territory relate in their effect on communal conflict, I interact the two variables in model 5. The interaction term is positive and significant, while the constitutive terms are both negative and significant. Figure 15 plots the interaction. With no policing institutions of the supergroup, the number of subgroups has a negative effect on communal conflicts. Yet, with increasing policing capacity of the supergroup, the effect becomes positive and significant. My theoretical argument predicts the latter phenomenon: When both super- and subgroups have policing institutions, then these collide and lead to uncertainty and more conflict.



Note: 95 percent confidence intervals. The underlying regression model is model 5 in Table 4.

Figure 15: Marginal Effect of No. of Subgroups on Communal Conflict by Supergroup's Policing Capacity.

On the other hand, the negative coefficient on the supergroup's policing capacity indicates that when there are no subgroups, dispute resolution and security enforcement can lead to stability within the group's territory. Together with the consistently negative and significant relationship between the supergroup variable Any Traditional Governance, this is in line with the findings of Wig and Kromrey (2018). In consequence, it may be the case that groups with traditional authorities can uphold stability and order through their institutions on their territory.

To test hypotheses 3 and 4, I include cross-level interaction terms between the group level explanatory variables and the moderators Constitutional Regulation and Political Inclusion. The results are

reported in Table 5. The interaction term *Policing Capacity X Constitutional Regulation* in model 1 is negative and significant on the 1 percent level, supporting the hypothesis that jurisdictional regulations moderates the relationship between policing capacity of traditionally governed groups and communal conflict. Yet, there is no relationship between the number of subgroups with policing capacity and regulations in the constitution, and the constitutive term of the subgroup count remains positive and significant.

Figure 16a shows the marginal effect of policing capacity on communal conflict by constitutional regulation. Without any constitutional regulation, policing capacity has a positive and significant effect on communal conflicts, as predicted. However, the upper bound of the 95 percent confidence interval crosses zero—and thus reaches a statistically significant negative effect on communal conflict—at .25 on the regulation variable, which corresponds to six regulations in the constitution. The moderation is substantial. At the maximum value on the regulation scale, the point estimate implies a 13 percent decrease for a one-unit increase in policing capacity.[31] Yet, the effect is also strong in the medium categories. At .5 on the regulation scale—which corresponds to 14 constitutional regulations—increasing policing capacities of the supergroups reduce the likelihood of conflict by five percent. This supports the hypothesis that jurisdictional regulation on the side of the state can lead to a system of co-production.

Figure 16b shows that constitutional regulation does not moderate the positive effect of the number of subgroups on communal conflict. The effect remains significant and positive across varying depths of regulations in the constitution. Therefore, while policing capacity of the larger ethnic group can lead to more intergroup peace on the territory when it is constitutionally regulated, this does not apply to the number of subgroups with such capacities.

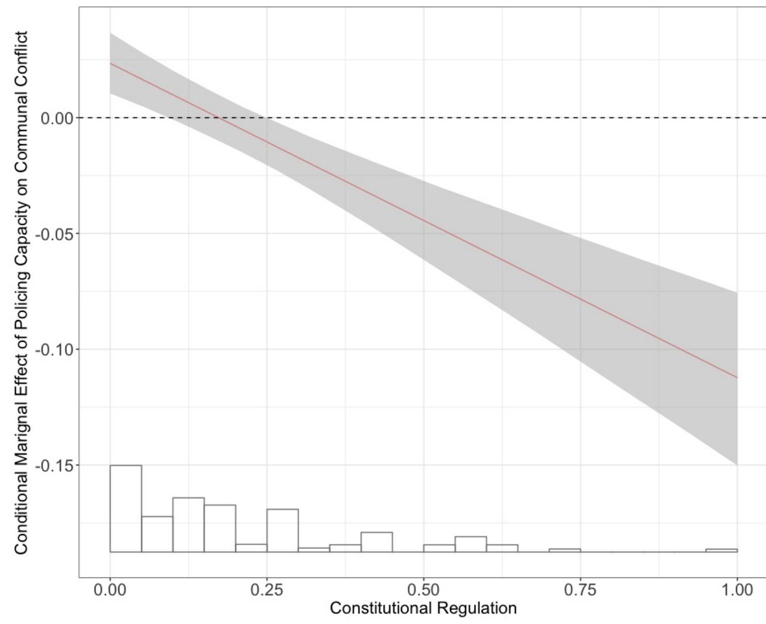
I test the third hypothesis in models 3 and 4 of Table 5, in which I interact the group level explanatory variables with Political Inclusion. The expectation of the relationship was—similar to the case of constitutional regulation—that groups that are included in the state's polity should have an incentive to harmonize the laws on their territory and likewise have more resources to establish intercommunal order. The results from the analysis offer more nuanced evidence. While the interaction between the supergroup and political inclusion is—as expected—negative and significant, the interaction between the count of subgroups with policing institutions and

31 Exponentiated due to log scale: $e^{(-0.14)} = 0.8693582$

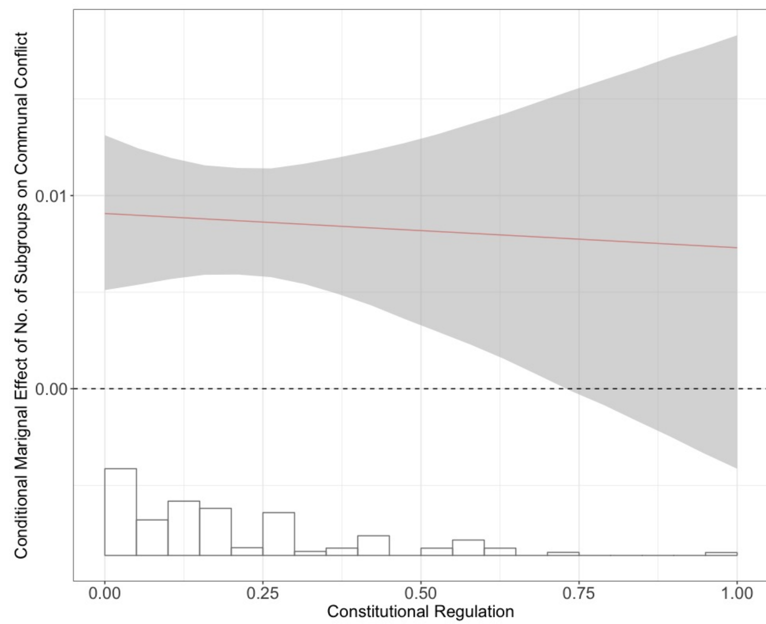
Table 5: Log-Linear Mixed Effect Models of Communal Conflict, 1989-2017, with Cross-Level Interactions

	(1)	(2)	(3)	(4)
Supergroup Policing Capacity X Constitutional Regulation	-0.14^{***}			
	(0.02)			
No. of Subgroups X Constitutional Regulation		-0.002		
		(0.01)		
Supergroup Policing Capacity X Supergroup Political Inclusion (EPR)			-0.02^{***}	
			(0.01)	
No. of Subgroups X Supergroup Political Inclusion (EPR)				0.01^{***}
				(0.003)
Supergroup Policing Capacity	0.02^{***}	-0.002	0.01	-0.002
	(0.01)	(0.01)	(0.01)	(0.01)
Constitutional Regulation	0.24^{***}	-0.03	-0.03	-0.03
	(0.07)	(0.06)	(0.05)	(0.05)
No. of Subgroups	0.01^{***}	0.01^{***}	0.01^{***}	0.01^{***}
	(0.001)	(0.002)	(0.001)	(0.002)
Supergroup Political Inclusion (EPR)	-0.01	-0.01	0.03	-0.03^{**}
	(0.01)	(0.01)	(0.02)	(0.01)
Any TG	-0.06^{***}	-0.05^{***}	-0.06^{***}	-0.05^{***}
	(0.01)	(0.01)	(0.01)	(0.01)
Capital Distance (log)	0.02^{***}	0.02^{**}	0.02^{**}	0.02^{**}
	(0.01)	(0.01)	(0.01)	(0.01)
Population Size (log)	0.03^{***}	0.03^{***}	0.03^{***}	0.03^{***}
	(0.005)	(0.005)	(0.005)	(0.005)
Settlement Area (km^2, log)	0.01^{*}	0.01^{**}	0.01^{**}	0.01^{**}
	(0.004)	(0.004)	(0.004)	(0.004)
Night Light Density (log)	-0.01	-0.01^{*}	-0.01^{*}	-0.004
	(0.003)	(0.003)	(0.003)	(0.003)
Democracy	-0.0002	-0.01	-0.01	-0.02
	(0.05)	(0.05)	(0.05)	(0.05)
Colonial Past	0.01	0.01	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.02)
TG Population Share	0.07^{*}	0.08^{**}	0.08^{**}	0.07^{**}
	(0.04)	(0.04)	(0.03)	(0.03)
Rebellion Incidence	0.01	0.01	0.01	0.002
	(0.02)	(0.02)	(0.02)	(0.02)
Spatial Lag	0.02^{***}	0.02^{***}	0.02^{***}	0.02^{***}
	(0.004)	(0.004)	(0.004)	(0.004)
σ^2	0.070	0.071	0.070	0.070
N_{state}	98	98	98	98
N_{year}	29	29	29	29
ICC_{state}	0.125	0.117	0.115	0.099
ICC_{year}	0.001	0.001	0.001	0.001
Observations	6,043	6,043	6,043	6,043
R^2	.179	.173	.174	.173

Note: Standard Errors in Parentheses $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$



(a) Supergroup Policing Capacity



(b) Number of Subgroups

Note: 95 percent confidence intervals. The underlying regression models are models 1 for Figure 16a and 2 for Figure 16b in Table 5

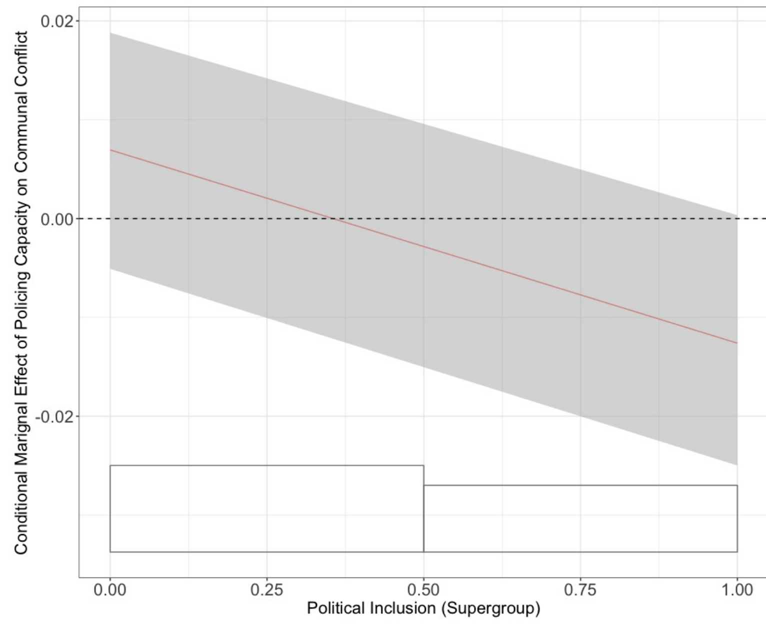
Figure 16: Marginal Effect on Communal Conflict by Constitutional Regulation.

political inclusion of the supergroup is positive and significant. The conditional marginal effects are plotted in Figure 17.

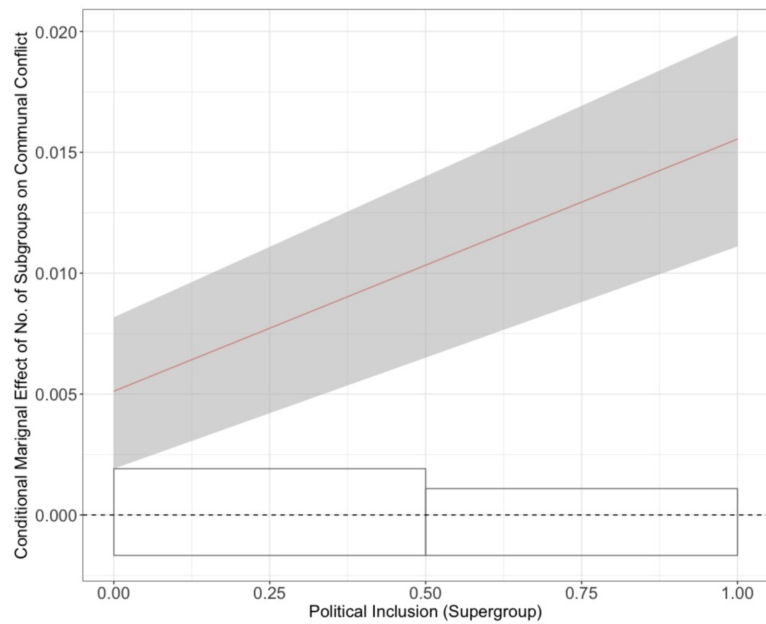
Recall that political inclusion pertains to the politically relevant supergroup, while the subgroup count is based on socially relevant groups. The interaction of policing capacity and political inclusion plotted in Figure 17a runs in the expected direction. When groups are included, the likelihood of communal conflicts on their territory decreases with increasing scales of policing capacity, which extends findings on civil war and political inclusion (e.g., Cederman, Wimmer, and Min, 2010). However, we observe the opposite in Figure 17b. For supergroups with political power, the conflict-inducing effect of subgroups becomes even stronger. This suggests that the success of customary institutions to create order may be influenced by the distribution of power between supergroups. As I argued in my theory, customary law may be defined by those in power and may, therefore, induce unequal access to justice. This could increase tensions if, at the same time, the traditional policing of the subgroups will be regarded as legitimate. In consequence, community-driven conflict resolution could be undermined (cf. Wiessner and Pupu, 2012, p. 1654).

Such an effect also resonates with recent findings of Hartman, Blair, and Blattman (2018) on the impact of alternative dispute resolution training in Liberia that sought to avoid forum shopping among customary institutions. After the intervention, they report a heterogeneous effect on security perceptions: while politically connected individuals felt more secure, "[p]oorer respondents, less politically connected individuals, and people with farm plots owned by other villagers all felt slightly less secure in treatment villages" (Hartman, Blair, and Blattman, 2018, p. 3). Political connections and power, therefore, come with detriments for other groups. The distribution of power, thus, also plays a role for traditional authorities and how they relate to communal conflict.

In summary, the results show that there is no monolithic relationship between the policing institutions of traditionally governed groups and communal conflict. The policing capacity of politically relevant supergroups can adversely affect communal peace if there are no constitutional regulations that harmonize different jurisdiction. Yet, its effect is strongly moderated by the constitutional regulation of the relationship between traditional and official state law. Higher numbers of socially relevant subgroups with policing institutions, too, increase the occurrence of communal conflicts, unaffected by constitutional regulation. Lastly, the political inclusion of



(a) Supergroup Policing Capacity



(b) Number of Subgroups

Note: 95 percent confidence intervals. The underlying regression models are models 3 for Figure 17a and 4 for Figure 17b in Table 5

Figure 17: Marginal Effect on Communal Conflict by Political Inclusion.

the larger politically relevant ethnic group at the center of the state bifurcates the effect of policing capacity and subgroups. Policing capacity decreases the likelihood of communal violence in included groups. However, for such groups, increases in the number of subgroups with policing capacity have an even stronger positive effect on the number of conflicts.

3.5.1 *Discussion and Robustness Tests*

To corroborate the findings of the main analysis, I perform several robustness tests with regard to model specifications, the operationalization of the variables, and the sample. The survey data I use could suffer from systematic non-response for non-traditionally governed groups. Furthermore, there could be false negatives in the constitutional regulation variable for countries without any traditional authorities. I account for both of these potential issues by including in the sample only countries with at least five percent of traditionally governed population, using the variable TG Population Share described above. The results are presented in Table 26 of Appendix Section C.5 and are robust. Additionally, the moderating effect of constitutional regulation of the policing capacity of supergroups slightly increases.

The only two studies examining traditional governance and communal conflict by Eck (2014) and Wig and Kromrey (2018) focus on Africa. To test whether groups on the African continent do not drive my results, I run the main models on a subset of non-African groups. The results are presented in the Appendix Section C.5, Table 27. Most of my findings also hold with this restricted sample. However, the main findings that relate to the number of subgroups with policing capacities seem to be Africa-driven. First, the constitutive term No. of Subgroups loses statistical significance. Second, and related, the interactions with this variable turn insignificant, i.e., the positive effect of the interaction with supergroup policing capacity and political inclusion, respectively. This could indicate that group-internal structures are less important in non-African groups. Furthermore, a large number of communal conflicts as measured by UCDP take place in Africa, which is reflected in this finding (Sundberg, Eck, and Kreutz, 2012).

I argue that policing is comprised of both within-group dispute resolution and security provision, i.e., justice and executive action. Therefore, the variable Policing Capacity is a composite of two items from the TradGov groups data. To test whether I am not losing

important variation and whether there are heterogeneous effects between the two different measurements, I estimate the main specifications with dispute resolution capacity and security capacity of the supergroup separately. The results are presented in the Appendix Section C.5, Table 28 and Table 29.

The estimates are in line with my main findings, with two differences between the two measurements worth mentioning here. First, the point estimate of the interaction between dispute resolution capacity and political inclusion is negative as before, although it does not quite reach conventional significance levels (p=.133). Second, the moderating effect of constitutional regulation is twice as large with regard to dispute resolution capacity compared to security capacity. This latter finding shows that constitutional regulations may more effectively regulate dispute resolution provision within the group.

In my analyses, the outcome variable is the logged (+1) number of communal conflicts on the territory of the ethnic group. Although communal conflicts are a rare event, some groups have particularly high levels of conflicts throughout the years under analysis. To ensure that these outliers do not drive the results, I exclude groups that in at least one of the years under analysis, have experienced more than 20 conflict events on their territory (eight groups). The results (Table 30, Section C.5) are robust except for the moderating effect of political inclusion, which loses statistical significance but remains negative.

Finally, with regard to the outcome, I proposed that a geographic approach is helpful when analyzing traditional governance and communal conflict. Yet, this comes with the limitation that I cannot identify the actors that fight, as done by Wig and Kromrey (2018). To assess whether jurisdictional conflict between groups and their state—which should happen in the territories of traditional authorities—is related to the policing capacity of traditional authorities, I run an additional test in the next section.

3.6 Mechanism: Jurisdictional Conflict

In the previous sections, I argued that traditionally governed groups with policing capacities run into norm collisions so that sometimes policing leads to more communal conflicts. Following the theoretical claim, the expectation is that higher capacities lead to more frequent jurisdictional conflict.

I can shed light on this mechanism using an item of the TradGov Groups survey that inquires about the frequency of conflict between

the state and the group's authorities regarding the responsibility for settling disputes and generating order and security.[32] The variable mirrors the policing capacity variable: it combines jurisdictional conflicts over executive and judicative responsibilities and ranges from zero to three.

Both the independent as well as this outcome variable are measured conditional on the existence of traditional authorities. Hence, I compare differing policing capacities of groups within the population of groups with traditional authorities, as coded in the main analysis. I repeat the set-up of the main analysis—including the cross-level interactions with constitutional regulation and political inclusion of the group—short of the conflict control variables measuring rebellion incidences and the spatial lag of communal conflict because I now look at a different outcome. As the population for this analysis is only comprised of groups with traditional authorities, I drop this control variable too. I calculate a cross-section in the year 2014 when the Constitutional Regulation data was collected because outcome and explanatory variables are time-invariant. Then, I estimate simple linear mixed-effects regressions and let the country intercepts vary. Table 6 reports the results.

Across specifications, policing capacity is positively and significantly related to the frequency of jurisdictional conflict throughout all models. Holding the control variables constant, a one-unit increase in policing capacity increases the frequency of jurisdictional conflict with the state by about .5 units (model 2).

The effect of the constitutive term of Policing Capacity increases when I introduce the cross-level interaction term with Constitutional Regulation. With no harmonizing articles in the country's constitution, the point estimate climbs to .63 (model 4). The interaction term *Policing Capacity X Constitutional Regulation* reaches statistical significance at the ten percent level, and Figure 18a shows an increasing depth of regulation corresponds to a shrinking conflict-inducing effect of policing capacities. Models 5 and 6 introduce the interaction between policing and political inclusion, which yield similar results, although the moderating effect is less strong. Inclusion of a group leads to a smaller effect of its policing capacities on jurisdictional conflict.

32 "Sometimes there is disagreement over who is responsible for dispute resolution/providing security, peace, and order between the traditional organization and state authorities. To your knowledge, how often do these conflicts currently occur for group X?" (5-point measure from Always – Never). All survey items used in the analyses are presented in Appendix Section C.3.

Only two control variables reach statistical significance in this model. Capital distance reduces the likelihood of jurisdictional conflict. The measure may hence approximate state presence: the less the state is physically approachable, the less jurisdictional conflict should occur. Furthermore, the effect of number of subgroups with policing institutions is negative, which runs counter to the intuition of this paper and the findings of the main analysis. Yet, when I test the relationship of the number of subgroups across the main models (Table 31 in Section C.6), the variable is mostly insignificant. It is important to note that the outcome variable does not capture jurisdictional conflicts between groups, but is concerned with disagreements between the supergroup and the state.

These findings underpin the main tenets of this article. As policing capacity increases, a raised likelihood of jurisdictional conflict follows. The resulting uncertainty is the mechanism that I suggest links traditional policing with communal conflict. As posited and shown in the main analysis, regulations and inclusion at the state-level can avert jurisdictional conflict.

3.7 conclusion

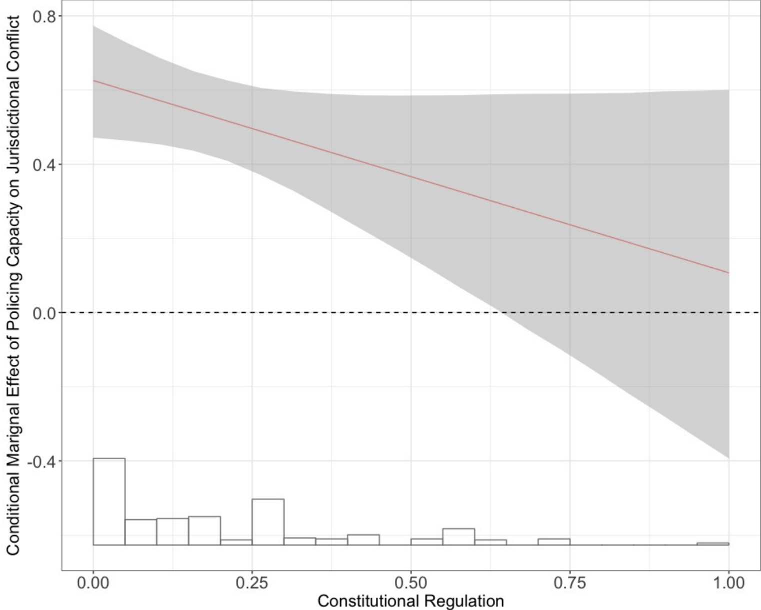
Many states in the world host ethnic groups that employ their own political authority over their territory. In this article, I have investigated how the policing capacity of traditionally governed ethnic groups relates to communal conflict. I argued that community policing can have adverse effects on communal peace, which is due to uncertainty that emerges when norms collide. Yet, I argued that state-level regulation and inclusion can dampen the negative effects of policing by increasing predictability through clear jurisdictional responsibilities.

Using new data on the group and state level, I find that indeed, there is no monolithic relationship between policing and communal conflict. Importantly, the number of subgroups with policing institutions significantly increase uncertainty, leading to more communal violence. While the policing capacity of the larger ethnic group has a negative effect on communal conflict in and by itself, I find that state-level regulation moderates this relationship. If the constitution does not provide for jurisdictional responsibilities, policing institutions increase the risk of conflicts. Furthermore, political inclusion in the center of the state moderates the relationship between policing capacity and communal violence on the territory of these groups, leading to less communal violence.

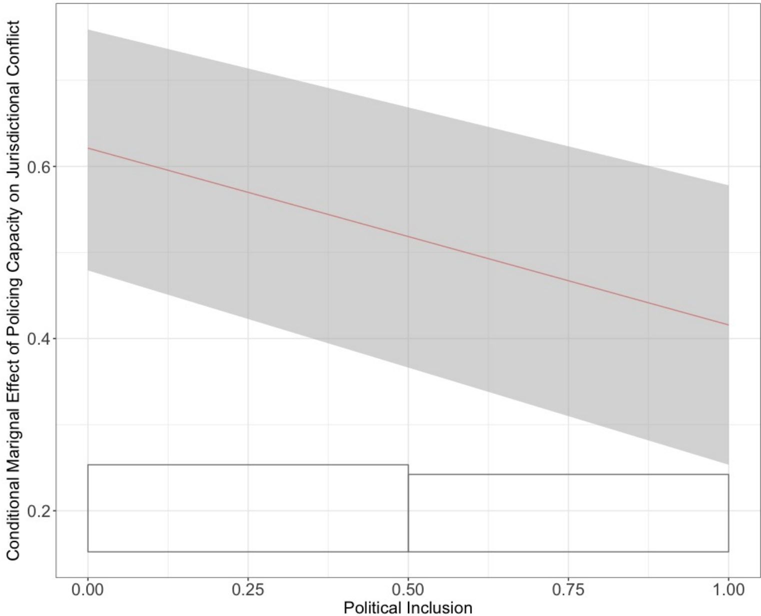
Table 6: Linear Mixed Effects Models of Jurisdictional Conflict, 2014

	(1)	(2)	(3)	(4)	(5)	(6)
Supergroup Policing Capacity	0.52***	0.53***	0.61***	0.63***	0.63***	0.62***
	(0.05)	(0.06)	(0.07)	(0.08)	(0.07)	(0.07)
Supergroup Policing Capacity X Constitutional Regulation			−0.52*	−0.52*		
			(0.30)	(0.31)		
Supergroup Policing Capacity X Supergroup Political Inclusion (EPR)					−0.23**	−0.21*
					(0.11)	(0.11)
Constitutional Regulation		−0.09	1.13	1.07		−0.07
		(0.25)	(0.69)	(0.73)		(0.25)
Supergroup Political Inclusion		−0.27**		−0.28**	0.36	0.17
(EPR)		(0.12)		(0.12)	(0.25)	(0.27)
No. of Subgroups		−0.03**		−0.02*		−0.03**
		(0.01)		(0.01)		(0.01)
Capital Distance (log)		−0.11*		−0.12*		−0.11*
		(0.07)		(0.07)		(0.07)
Population Size (log)		0.03		0.03		0.03
		(0.04)		(0.04)		(0.04)
Settlement Area (km^2, log)		0.02		0.01		0.01
		(0.04)		(0.04)		(0.04)
Night Light Density (log)		0.01		0.02		0.01
		(0.03)		(0.03)		(0.03)
Democracy		0.16		0.15		0.13
		(0.34)		(0.33)		(0.33)
Colonial Past		−0.13		−0.12		−0.11
		(0.12)		(0.12)		(0.12)
TG Population Share		0.13		0.13		0.13
		(0.18)		(0.18)		(0.18)
(Intercept)	0.69***	0.82	0.51***	0.66	0.55***	0.71
	(0.12)	(0.58)	(0.16)	(0.58)	(0.15)	(0.57)
σ^2	0.572	0.580	0.573	0.581	0.572	0.580
N_{state}	90	86	90	86	89	86
ICC_{state}	0.034	0.030	0.028	0.020	0.023	0.018
Observations	284	272	284	272	278	272
R^2	.325	.334	.324	.330	.325	.330

Note: Standard Errors in Parentheses *p<0.1; **p<0.05; ***p<0.01



(a) By Constitutional Regulation



(b) By Political Inclusion (EPR)

Note: 95 percent confidence intervals. The underlying regression models are models 4 for Figure 18a and 6 for Figure 18a in Table 6

Figure 18: Marginal Effect of Policing Capacity on Jurisdictional Conflict.

Yet, the political inclusion of the supergroup positively moderates the effect between the number of subgroups with policing institutions and communal conflict. The latter finding provides a link between inequality that can emerge when the larger ethnic group is politically empowered, vis-à-vis groups that have no say in national politics.

I corroborate these findings by providing additional evidence for the mechanism. I can show that increasing policing capacities of traditionally governed ethnic groups increase the frequency of jurisdictional conflict. This relationship is also moderated by constitutional regulation and political inclusion. Even though this mechanism test only provides for a link between jurisdictional conflict between the state and the group (and not between different groups), it shows that we should analyze traditional authority not only through elite-centric frameworks, but that their presence may result in structural uncertainty. Accounted for, however, traditional authorities may complement the state and lead to more order and security.

With these findings, I critically contribute to the literature on traditional governance and violence, in particular, communal violence. A closer look at institutional capacities, as well as a geographical approach to testing the effects of institutions, have shown that there are different ways in which traditional governance structures affect violence. This provides an important link in the extant literature, but also has practical relevance: traditional governance can be both conflict-promoting or conflict-averting, depending on the specific context. In particular jurisdictional conflicts can be solved through legal regulations so that the parallelism of group and group authorities leads to a system of successful co-production. Furthermore, the distribution of power should not be neglected: horizontal political inequality may have detrimental effects on inter-communal peace.

4

SECURING A STATE: TRADITIONAL AUTHORITIES AND STRATEGIES IN DEMANDS FOR SELF-DETERMINATION

Co-authored with Friederike Luise Kelle. See Part v for author's contribution.

Ethnic groups employ different strategies to pursue demands of self- determination: while some act within existing channels of political contestation, others choose nonconventional strategies, including violence and rebellion. We conceive of this as a result of bargaining between group and state and argue that both sides' institutions determine the likelihood conflict. Specifically, groups with traditional authorities have the capacity and incentives to escalate conflicts. Only when such institutions are matched with internal accountability mechanisms can groups credibly commit so that bargaining failure and thus conflict is less likely. Similarly, states with open elections can tie their hands more effectively, and constitutional regulations of traditional authorities formalize the state-group interaction, which also mitigates the effect of traditional authorities on conflict. We use new global data on groups that demand self-determination, their traditional political institutions, and strategy choice from 2005 to 2015. Employing multilevel logistic regression analysis, we find support for our argument. Traditional authorities are much more likely to employ nonconventional strategies. Yet, this relationship is moderated by their internal audience costs and the strategic environment provided by the state. Our findings advance new perspectives on the interactions of customary and national political systems in the context of subnational conflict.

4.1 INTRODUCTION

Ethnic and socially relevant groups around the world demand self-determination from their host states. In such contestations, different strategies can be observed that result from the bargaining situation between state and group. Some disputes are negotiated by conventional means, through the existing and institutionalized channels of political contestation provided by the political system, other con-

flicts escalate outside these channels, through sit-ins, terrorism, or civil war. What prompts some conflicts over self-determination to remain in the realm of conventional politics, and others to depart into nonconventional strategies?

In this article, we examine the role of a group's institutions and their interaction with state institutions in the choice of strategies in contestations over self-determination. Specifically, we assess the role of traditional authorities in these conflicts. Traditional authorities are collective political institutions based on customary legitimacy that govern subnational ethnic groups and territories (Ubink, 2008, p. 9, Holzinger, Kern, and Kromrey, 2016, p. 470, Baldwin, 2016, Zartman, 2000). Despite the recent surge in scholarly attention to the role of traditional authorities in conflicts with the state (Mustasilta, 2019; Paine, 2019; Wig, 2016), as well as increasingly elaborate accounts of strategy choice in subnational conflict (e.g., Bormann and Savun, 2018; Cunningham, 2013), the extant literature devotes little attention to pre-existing institutions for strategy choice in subnational conflicts.

However, in the context of conflicts over self-rule, traditional authorities are particularly important. Demands for self-determination are explicitly concerned with the exercise of authority over territory, thus requiring a degree of political organization to be legitimate and credible towards the state and group audiences. Therefore, developing and testing a theory of the role of such institutions enriches our understanding of the sources of group-state conflicts.

While self-determination movements frequently evolve from regional or ethnic parties (Brancati, 2006), traditional authorities seem to play a particular role in shaping the claim-making process. An example are the Lozi in Zambia, which are a territorially concentrated group in Barotseland/Western Province. Barotseland is politically organized in a hierarchical structure with the paramount chief—the Litunga—at the top, who owns "land, soil, cattle and animals" (Englebert, 2005a, p. 42). The title Litunga even translates to "'the land'" (Hogan, 2014, p. 909). Characterized by a history of a strong kingdom and protectorate status during British colonialization, the Lozi traditional leadership continues to exert substantive authority in parallel to today's state institutions. The capacity and legitimacy of the Lozi kingdom translated into a continued preference for separatism since the impending independence of Zambia in the early 1960s (Englebert, 2005b, pp. 32, 35).

The Lozi employed different types of strategies, including negations, riots, and police violence, accumulating in the foundation

of the Barotse Patriotic Front in 1998 (Englebert, 2005a, p. 38). In 2013, numerous separatists were arrested and charged with treason, which can carry the death penalty in Zambia (Africa Review, 2013). What accounted for the increasing escalation since the Zambian independence?

We argue in this article that the conflict strategies vary in response to the credible commitment opportunities of traditional authorities and the state. Traditional authorities have the capacity to mobilize for nonconventional strategies and are motivated to pursue them to hold on to their local power grip. Once a claim is filed—which is our scope condition—backing down is costly because they risk loss of their legitimacy (cf. Fearon, 1994). Yet—under conditions of incomplete information—the state should have little incentives to respond such claims and bolster the power of traditional authorities. In consequence, traditional authorities use their local capacities to mobilize outside conventional channels of political contestation.

Yet, some traditional authorities can incur domestic audience costs through institutionalized accountability mechanisms. Audience costs are the punishment of political leaders when they back down from threats (Fearon, 1994). Traditional authorities with accountability mechanisms in place that can remove them from their offices can, therefore, make costly and credible signals toward the state. In these cases, the state will more likely accommodate the conflict.

The state can also send costly signals to traditional authorities to facilitate credible commitment. We identify two critical commitment devices of the state. First, states which provide political access should be more credible when signaling their intentions (Fearon, 1994, 1995). Second, some states choose to commit to traditional authorities in their constitutions by granting legal status and a stake in national politics (Holzinger et al., 2019). Constitutional commitments reflect successful bargaining in the past and are a framework for continued interaction, raising the stakes of nonconventional strategies for groups.

To assess our argument, we use global data on strategies in negotiations about self-determination between 2005 and 2015 and from an expert survey on traditionally organized groups.[1] Using multilevel logistic regression analysis, we find support for our expectations.

1 These data are from the German Research Foundation (DFG) Reinhart Koselleck Project "Traditional Governance and Modern Statehood" (grant no. HO 1811/10-1) at the University of Konstanz. The project created two distinct datasets: the TradGov Constitutional dataset and the TradGov Group dataset. Both are not yet published but are available upon request from Neupert-Wentz. We acknowledge support by Katharina Holzinger, Axel Bayer, Daniela Behr, and Roos Haer in

Traditional authorities foster the mobilization for nonconventional conflict strategies. Furthermore, we present evidence for our theoretical mechanism: Visible audience costs through accountability instruments that can depose traditional leaders from their position moderate this effect. Account for state institutions as the strategic environment within which groups operate, we find that political access and constitutional commitment to traditional authorities moderates the positive effect of traditional authority on nonconventional strategies.

Using precolonial institutions as an instrument, we corroborate our analysis and show that traditional authorities have a causal effect on nonconventional strategies. The approach supports our claim that traditional authorities that did not emerge into sovereign states increase the likelihood of nonconventional strategies. We also investigate effects on the specific nonconventional strategies groups employ. Furthermore, we find that traditional authorities are particularly influential when it comes to large-scale violence in disputes over self-determination, using multinomial regression.

4.2 TRADITIONAL AUTHORITIES IN SELF-DETERMINATION DISPUTES: CONCEPTS AND GAPS

We follow Cunningham and define self-determination groups as comprising "a group of people that shares a collective identity and believes it has a legitimate right to self-rule" (2014, p. 13), making claims for autonomy or independence from the state. The claim-making results in a bargaining situation between the group and the state (Jenne, Saideman, and Lowe, 2007), which can proceed in peaceful negotiations through conventional channels of contestation, or escalate into disruptive politics outside these channels. We assume here that conventional strategies should be preferred to more costly ways of reaching the best outcome for both parties. Ultimately, however, the course of bargaining is determined by the internal structures of both parties, which affect both their actions and interaction (cf. Cunningham, 2011, 2013).

The extant literature on self-determination demands has considered both group characteristics that facilitate bargaining with the state (e.g., Cunningham, 2011), the strategic environment within which groups operate, and strategic decisions of the state (e.g., Walter, 2006b) to explain how conflicts over self-determination evolve.

data collection. See also: https://www.polver.uni-konstanz.de/holzinger/research/third-party-funded-projects/traditional-governance-and-modern-statehood/.

For instance, subnational groups are more likely to make demands when they are attached to the contested territory (Kelle, 2017), and escalate their claims if they are territorially concentrated (Toft, 2003). Siroky and Cuffe (2015) argue that the capacity of subnational groups to demand self-determination is larger if they have lost autonomy in the past, which contributes to both motivations and opportunities to pursue self-rule. This provides a link between preexisting institutions and the motivation to secede.

Jenne, Saideman, and Lowe (2007) identify the relative power of groups as an explanation of whether groups radicalize, connecting self-determination contests to the relative bargaining position of groups and states. Cunningham (2013) argues that due to their inability to make credible commitments, contestations with internally divided self-determination groups should increase the likelihood to observe large-scale violence.

Cunningham (2011) analyzes how the state responds to the aforementioned internal divisions. Her analysis suggests that governments rarely make concessions to unitary actors, but if they do, concessions settle disputes more effectively than when concessions are given to divided groups, which are more likely to take up arms despite concessions. Precedent-setting plays a role in the strategic actions of the state in-concessions today, set a precedent tomorrow (Toft, 2003, pp. 26–29). Walter (2006a) finds that governments escalate territorial conflicts to build reputation amongst other potential separatists. Bormann and Savun (2018) extend on the argument, specifying that the precedent logic applies to concessions after fighting and for politically excluded groups only.

A different argument is presented by Sorens (2012), who argues that autonomy movements will more likely remain peaceful if states allow a legal form of accommodating self-determination. Thereby, it facilitates and incentivizes institutionalized ways of secession. These findings show that concessions from the state can have mixed effects on violence in self-determination movements, both direct and indirect (cf. Brancati, 2006).

Territory, preexisting institutions, and lost autonomy, as well as questions about concessions, connect traditional authorities to the research on self-determination claims and resulting strategies. Traditional authorities are the collective institutions and leaders that govern ethnic groups and territories of the communities. Types of leadership and institutions of traditional authorities vary: Leaders

include chiefs, headmen, elders, and customary judges.[2] They summon in institutions, including councils of elders and chiefs, customary courts, and village assemblies. Traditional institutions also involve procedural rules, such as customary law, which serves as the basis for leadership and decision-making within the group (Holzinger, Kern, and Kromrey, 2016, p. 470).

Traditional authorities employ a "customary mode of governing" (Baldwin 2015, 21) by virtue of historical, cultural, and sacred legitimacy (Ubink, 2008, p. 9, Holzinger, Kern, and Kromrey, 2016, p. 470). This legitimacy is locally rooted and validated by group members that accept the traditional norms and procedures (Zartman, 2000, p. 7).[3] Traditional authorities frequently evolved from precolonial modes of governance (Fortes and Evans-Pritchard, 1958; Murdock, 1969) into subnational polities within states. Through processes of colonization and subsequent independence, this led to dual polities and mixed governance of both state and traditional authorities (Sklar, 2005). In that sense, traditional authorities resemble the state on a subnational level. They are legitimate institutions that allow for the execution of power over a people and land, combining the group territory with a sense of identity and belonging (Dunn, 2009; Geschiere, 2011).

An emerging literature on traditional authorities addresses their role in subnational conflict processes, both concerning group-level institutions and the state's response to their existence. Wig (2016) finds that excluded groups with centralized precolonial traditional institutions are less likely to be involved with civil war today, by allowing for credible commitments. Paine (2019) takes the group-state relationship into account and finds that precolonial statehood of groups exacerbates states' internal security dilemmas and increases the likelihood of coups in the sub-Saharan African context. A similar logic of group-state interactions has recently been explored for development outcomes. Although it has been shown that precolonial centralization leads to higher development today (e.g., Michalopoulos and Papaioannou, 2013), Archibong (2019) finds that this relationship is conditional in Nigeria: the positive effect of precolonial centralization on development only holds if groups can credibly bargain with the federal regime. Mustasilta (2019) looks at different ways how states grapple with traditional authorities on their terri-

2 Regions and groups have different names for traditional leaders and institutions, such as Ariki, Jif, or Cacique, which are synonyms for the chief.

3 In some instances, the legitimacy and perception of traditional authorities by citizen can merge with that of the state. See for example Logan (2013a).

tories and establishes that the state-level integration of traditional authorities reduces the risk of armed conflict.

Considering these two research strands jointly, the gap in the literature becomes discernable: Traditional authorities and their internal setup, as well as the state's response to those subnational groups, should be a relevant factor in self-determination bargaining. We, therefore, go on to theorize the role of contemporary traditional authorities in conflicts over self-rule first and take its strategic environment into account, second.

4.3 Theorizing the Link Between Traditional Authority and Contestation Strategies

4.3.1 *Bargaining Theory: Traditional Authorities and the State in Disputes over Self-determination*

The scope condition of our theory is that groups have already filed a claim for self-determination towards the state. On this basis, we start our theory with three central and interrelated claims. First, negotiating disputes between traditional authorities and the state in self-determination contests is similar to bargaining in inter-state conflict. As political actors, and through their subnational governance functions over land and territory, traditional authorities are state-like in their character. This also applies to the conflict type we examine in this article: Disputes over self-determination are about autonomy and sovereignty. Furthermore, these issues can be divided in multiple ways by various legal and political configurations, so that compromise *per se* is possible.

Second, political survival is salient for both traditional authorities and the state, which, therefore, shapes incentives in contestations over self-determination. For the state, bestowing legitimacy on traditional authorities might lead to territorial concessions that limit and potentially threaten the state's sovereignty.[4] In contrast, self-rule constitutes a means of preserving and gaining power for traditional authorities, both in relation to the state and towards group members. In short, self-rule is a "vital interest" (Fearon, 1997) for traditional authorities. Traditional authorities, therefore, have a strong incentive to reach a bargain.

Third, and relatedly, conventional politics should be the preferred option for both parties, in comparison to costly mobilization tactics.

4 Given this strong competitive role of traditional authorities, states have even tried to abolish them (Logan, 2013b).

The high costs of violence and political uproar[5] stand in contrast to the legitimacy–vis-à-vis the other party, the international community, and the domestic audience – achieved by operating under the rules of the game.

A central explanation of the escalation of conflicts are information problems (Fearon, 1995, 1997). As conventional politics should be preferred, the true intentions and resolve of the bargaining partner become vital for the settlement of the dispute. One way to make signals more credible is through audience costs, defined as "the domestic punishment that leaders would incur for backing down from public threats" (Weeks, 2008, p. 35, cf. Fearon, 1994). Audience costs signal resolve to the negotiation partner: generating them will decrease the likelihood of escalation as the true preferences are revealed (Fearon, 1994, 1997). In the following, we apply these central claims and commitment problems to authorities and the state, respectively.

4.3.2 *Traditional Authorities' Capacity and Motivation for Mobilization*

We first argue that traditional authorities increase the collective capacity to overcome collective action problems of mobilization, which is crucial for actions outside political channels of contestation (cf. Hechter and Okamoto, 2001). They do so through at least three interrelated channels: by ensuring repeated interaction within the group, providing institutional capacity, and securing resources required for mobilization.

First, traditional authorities are enduring institutions deeply embedded in the societal structure that allow for long-term *repeated interaction* of individual group members. By claiming autonomy rights from the state, traditional authorities insert a dichotomous understanding of authority: theirs versus that of the state. As governors of ethnic groups, traditional authorities can politicize the collective identity against the state and make self-determination necessary to preserve the community. A threat to the power of traditional leaders then also becomes a threat to identity and the very existence of the community (Horowitz, 1985, p. 130).

Second, preexisting institutions based on former autonomy movements, *strengthen capacity*, and are conducive to separatism (Siroky and Cuffe, 2015). Traditional authorities perform a similar function: they clearly assign group membership and structure the social life

5 At the same, violence can help to push for a better negotiation outcome for both parties by imposing costs on the opposing party (Fearon, 2004, p. 289).

by defining expectations about appropriate behavior as a community member. Close-knit networks and customary courts ease sanctioning of defecting group members, which reduces individual incentives for free-riding (Fearon and Laitin, 1996, Cederman, Weidmann, and Gleditsch, 2011, p. 96).

Third, for strategies that take place outside the conventional channels of political contestations, *resources* are essential to mobilize for rallies against the state (cf. Dahl et al., 2017). Although the state may claim land ownership, traditional authorities are frequently custodians and managers of the land (Boone, 2014; Wily, 2008), and control the local resources. The land is, therefore, not only the central conflict issue in the demand for self-rule (Kelle, 2017), and the power struggles with the state (Behr, Haer, and Kromrey, 2015), but a critical resource for mobilization. In sum, traditional authorities should have the means to mobilize for self-determination outside institutionalized channels of political contestation.

Given the capacity, how do traditional authorities determine the pursuit of their claim? We argue that the motivation of traditional leaders to pursue their self-determination goals lies in their political self-preservation and power maximization interest. Successful demands lead to higher legitimacy among the population: The state legitimizes the authority of traditional leaders by engaging in a debate about sovereignty (Bayer, 2018; Kadt and Larreguy, 2018). Group members assess the performance and success of traditional authorities in demands for self-rule and update their legitimacy beliefs accordingly (cf. Baldwin, 2016, Williams, 2010, p. 96). Citizens can confer their trust and allegiance to the state or other traditional leaders, which may as well strife for the state's recognition (Adotey, 2019). Hence, if traditional authorities are at risk of being unsuccessful in their demand, they are at threat to be debunked of their legitimacy. This makes backing down an unviable option. On the other hand, legitimacy bestowed on traditional leaders by the state through mutual bargaining and, potentially, concessions, boosts the local support of traditional authorities (Henn, 2018).

4.3.3 *Bargaining, Uncertainty, and Audience Costs*

Traditional authorities hence have a strong incentive to bolster their power vis-à-vis the state. The state will generally be reluctant to do so. This creates a bargaining situation, where the group has the outside option to engage in potentially violent non-conventional strategies. If both sides knew about the other's true intentions, capabili-

ties, and resolve, a bargain within conventional channels could be reached (Fearon, 1995).

However, there is likely substantial uncertainty about these factors. The question then is whether there are institutions that resolve this uncertainty. In this regard, Wig (2016) argues that groups with traditional authorities are better able to "tie their hands" (Fearon, 1997) than groups without such authorities. However, in the context of self-determination claims, the increased incentives for such authorities need to be considered, as explained above. Furthermore, we argue that traditional authorities *per se* do not generate large audience costs that are visible to the state. Although they are vulnerable to the defection of their population, research suggests that they are autocratic authorities with an uncontested power-base and not accountable to their "subjects" (Mamdani, 1996). To take an example—according to the 2009 Afrobarometer survey—people in rural Zambia trust traditional authorities to a large degree and "' once the chief says something, there is no debate'" (Baldwin, 2013, p. 798).

The functional equivalent of no audience costs is audience costs that are invisible to the negotiation partner, the state. With no visible audience costs in place, traditional authorities have a harder time signaling resolve to the state, because not following through with a threat is not costly (Fearon, 1994). Therefore, under conditions of uncertainty, an escalation of the conflict and violence becomes likely, as the state will sometimes grant too little self-determination to the group. Hence, we derive our first hypothesis:

HYPOTHESIS 1: Self-determination groups are more likely to employ nonconventional strategies if they are governed by traditional authorities.

However, some traditional authorities might be able to incur greater audience costs. In fact, some groups with traditional authorities have rules that allow them to depose their leaders. This is a central mechanism through which audience costs are generated across different types of regimes (Tomz, 2007; Weeks, 2008).

In such instances, traditional leaders can not only mobilize around the issue of self-determination, but also convey visibly to the state that if it does not grant (some) autonomy, the group internal threat of political removal will lead them to take costlier, nonconventional means. As backing down is costly once the dispute escalates (Fearon, 1994), traditional authorities with strong accountability mechanisms

in place should opt for conventional channels to make their claim heard.

While traditional authorities can anticipate the audience costs when these are institutionalized, the state is sent a credible signal to resolve. Groups with institutionalized ways to depose their traditional leaders expose their true preferences (Fearon, 1994, 1995). This solves private information problems and thereby helps "locating a bargain both sides would prefer to a fight" (Fearon, 1995, p. 382), i.e., conventional politics. Since this threat to the state becomes more credible with accountability mechanisms on the group level, the state will accommodate the group's demands, and the latter will enter this process using conventional means.

HYPOTHESIS 2: The positive effect of traditional authority on the use of nonconventional strategies is smaller if they institutionalized high accountability mechanisms.

In summary, traditional authorities have a vital interest to succeed in negotiations with the state over self-rule. While we argue that traditional authorities have the capacity and motivation to pursue their self-determination claims outside the channels of conventional politics, this should not be their preferred option. Not being able to signal resolve to the state can, however, lead to the breakdown of negotiations via conventional means, and nonconventional strategies should become more likely. This problem can be alleviated insofar as groups do not only have traditional authorities, but also accountability mechanisms that allow leaders to "tie their hands." However, as bargaining is a reciprocal process, credibility should also be a function of the state's institutions, which shapes the strategic environment within which traditional authorities operate. We discuss this issue in the next section.

4.3.4 *The State and Strategic Environments*

Credible commitment is a two-way road. Therefore, the state's ability to credibly commit should also be analyzed. If the state does not credibly signal its intention to strike a bargain with the group that demands self-determination, traditional authorities will rather choose escalatory strategies than back down, to avoid punishment from their local population.

We identify two types of commitment devices of the state that affect strategy choice: First, political access that signals the govern-

ment's commitment to political participation in decision-making processes. Second, special rights in constitutions that give traditional authorities a special status. The presence of these commitment devices, we contend, increases the incentives for traditionally governed communities to engage in nonconventional strategies to express their demands.

Functional governmental decision-making structures that provide political access are a necessary condition for the use of conventional channels of political contestation. Groups that operate in an accessible political system should stand better chances to engage in conventional politics successfully. The existing channels of political contestation are the cheapest way to gain concessions from the government through deliberative problem solving, both for the subnational contestant and the government (Cunningham, 2013). In fact, states that include subnational groups in national power structures are less likely to be involved in civil wars (Cederman, Wimmer, and Min, 2010). Contrarily, political access is limited for groups in closed polities. Institutionalized ways to access decision-making procedures to make demands heard are blocked, and conventional cooperation with the state hindered.

Providing access to political decision-making and democratic institutions signals a strong commitment from the state, not only by actively allowing for the participation of all segments of society. Simultaneously, opening up political processes generates high audience costs for the state leaders, as the public has a say in politics and can, therefore, punish the government (cf. Fearon, 1994). Once decisions are taken and commitments made, refraining from agreements imposes costs regarding the credibility and legitimacy of state governments. States that are willing and able to provide access to political power at the center, therefore, send a credible signal to commit to deals with the subnational contender. In sum, our third hypothesis reads:

HYPOTHESIS 3: The positive effect of traditional authority on the use of nonconventional strategies is smaller when the state provides political access.

The second pathway through which governments shape the strategic environment for traditional authorities is by establishing special legal status, rights, and responsibilities (Holzinger et al., 2019), which we refer to as constitutional commitment. Constitutions are

a way to signal commitment credibly: the state constrains itself by inserting rules that are hard to violate (North and Weingast, 1989).

Higher degrees of special rights endowed upon traditional authorities reflect the power position of traditional authorities within the state. To take an example, the constitutional right to practice traditional dispute resolution represents the right of traditional authorities to provide customary justice, but also the government's willingness to dispense a central state competence—jurisdictional power—to such institutions.

How do constitutional commitments affect traditional authorities' strategy choices? Despite warnings from the precedent-setting literature (Toft, 2003; Walter, 2006a), we argue that constitutional commitment can mitigate the logic of reputational costs and lead to conventional politics. On the one hand, rights granted to traditional authorities usually treat all traditionally governed groups equally, creating a type of constitutionally advantaged communities. For instance, in Art.2A, III, the Mexican constitution refers to the

> *"indigenous peoples' right to self-determination, [...]" and states that they can "[...] elect, in accordance with their traditional rules, procedures and customs, their authorities or representatives to exercise their own form of government."*

As a special type of group, concessions granted to traditionally governed groups do not necessarily justify demands for similar rights by other subnational groups (cf. Griffiths, 2016).

On the other hand, these rights showcase the successful bargaining of group authorities with the central state. Constitutional rights provide a reliable framework for the continued interactions between traditionally governed groups and state authorities, generating a high degree of mutual commitment and continuity. It is not only the state that commits through institutional preferential treatment of traditional authorities, alongside the release of sovereign powers. Groups' stakes in maintaining long-term interactions with the state increase at the same time. Mobilizing visibly against the state outside its channels of political contestation may deprive them of the preferential treatment in constitutions. Furthermore, during the history of negotiation, both parties have created informational resources based on repeated interactions with one another, and are

constitutionally bound to continue their interactions.[6] This increases incentives to opt for conventional strategies, which is reflected in our third hypothesis:

HYPOTHESIS 4: The positive effect of traditional authority on the use of nonconventional strategies is smaller when they are granted special rights in the national constitution.

4.4 DATA

4.4.1 *Structure of the Dataset*

This study assesses the strategies self-determination groups choose in their interaction with the state from 2005 until 2015. The scope condition for the analysis is that groups have formulated a claim for more autonomy towards the state. These claims can range from demands for more autonomy in specific policy areas to fully-fledged independence. To identify claiming groups, we use the Peace and Conflict 2005 report (Marshall and Gurr, 2005).[7] The coding and definition of groups are based on the group list by the All-Minorities at Risk (AMAR) project, which covers socially relevant groups on a global scale (Birnir et al., 2015), defined as "when people notice and condition their actions on ethnic distinctions in everyday life" (Fearon, 2006, p. 852). This definition assumes no prior political organization and mobilization. Taken together, the AMAR and the Peace and Conflict reports list 128 groups that made self-determination claims in the time span of this study. As the political conditions within a state critically affect the strategic choices of self-determination groups, and we are interested in developments over time, the state-group-year is the unit of analysis.

Almost all of the groups in the dataset are geographically concentrated on their territory. This is not surprising, given the conduciveness of territorial concentration to persistent collective identities and strong group networks (cf. Toft, 2003). It also underscores the territoriality of sovereignty both in the form of traditional authority and

6 However, we cannot test in this article whether conventional or nonconventional strategies marked the previous history.

7 Sambanis, Germann, and Schädel (2018) propose an alternative list of self-determination movements. The more extensive character of this dataset results from a critical review of coding rules established in established data sources. Alternative inclusion criteria include, for instance, relaxing the required minimum group size, including overlapping identities, and more systematically accounting for regionally based identities.

self-governance: As Kelle (2017) argues, self-determination is intrinsically territorial. The territoriality of both demands and traditional authority is therefore reflected in our data.[8]

4.4.2 *Outcome Variable: Nonconventional Strategies*

The outcome variable distinguishes between conventional and nonconventional strategies. That is, strategies that operate within existing channels of political contestations on the one hand, and irregular strategies on the other. We code the dominant strategy that is employed by members of the respective group in the given year.[9]

The coding of conflict strategies for each group-year is based on multiple sources, including the UCDP Conflict Encyclopedia (Croicu and Sundberg, 2017) and the Armed Conflict Dataset (ACD) Version 4-2015 (Gleditsch et al., 2002; Pettersson and Wallensteen, 2015). For group-years not included in the ACD, we code news reports in multiple languages available from Nexis.[10] To avoid measurement error, we cross-reference any information—in particular, using the MAR Risk Assessments (Minorities at Risk Project, 2009) and the World Directory of Minorities and Indigenous Peoples (Minority Rights Group International, 2015). Moreover, we rely on academic and encyclopedic sources as well as reports by organizations such as Amnesty International, Human Rights Watch, or the International Crisis Group.

Figure 19 shows a modal map of conflict strategies in self-determination demands, plotting the average choice of all contesting groups by country over time. If there is at least one group that uses nonconventional strategies, the country is marked black.

4.4.3 *Explanatory Variable: Traditional Authority*

To test our arguments, we match our universe of self-determination groups to the independently collected TradGov Groups dataset, which is also based on the social relevance category of the AMAR dataset (Birnir et al., 2015). These data stem from a new global expert sur-

8 Summary statistics of all variables are provided in the appendix Table 32

9 Note, however, that some groups apply a mix of strategies. Cases, where multiple strategies are used to about an equal degree, are assigned to the "mixed strategies" category. When a dominant strategy cannot be identified, we exclude these group-years from our analysis. This is the case in 78 group-year dyads, including 25 groups in the period of our sample.

10 Of the 128 groups, 51 are included in this dataset, but not necessarily for the entire period of 2005-2015.

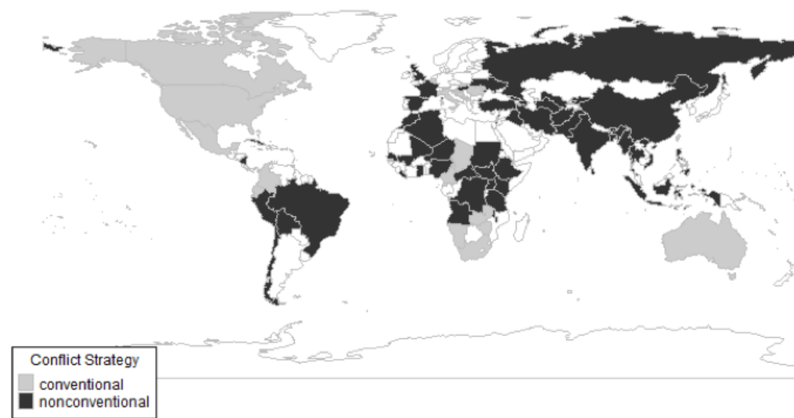


Figure 19: Conflict Strategy by Country.

vey on the existence and internal structure of traditional authorities. The dataset provides information for about 1700 groups in 147 countries, representing the first collection of data providing detailed comparative knowledge on contemporary traditional governance.[11] To account for selection effects in the expert data, we researched and cross-validated groups with no match in the self-determination data and determined whether there was clear evidence that they have no form of traditional authority, which resulted in three types of matches (liberal, medium, conservative).[12] We use the medium category in the main analysis and present robustness tests with the other categories in the appendix Section D.5.1, which yield the same results.

Our theory links traditional authority with strategy choice via two group-internal structures: the traditional leaders and the collective political institutions of groups. This is reflected in the coding of our explanatory variable, which is based on two survey items in-

11 Although the data on strategy choice and traditional authority are based on the same universe of groups, 14 groups (13 percent) in the data on traditional authority had to be aggregated in the matching process of the two data collections. In these cases, we took the (rounded) mean value of the variables measuring traditional authority. To ensure that the aggregation does not affect our results, we also aggregated by using the (rounded) median and mode of the variables. The resulting variables provide the same measure for each group. However, four groups are aggregation-sensitive if we code the Traditional Authority and *High Accountability* variable before aggregation: Scheduled tribes of South India, Indigenous peoples in Colombia and Mexico respectively, and lowland indigenous in Peru. We provide a robustness test with the alternative aggregation in the appendix Section D.4, Table 33 and Table 34, the results are robust.

12 The matching procedure and difference between the conservative, medium, and liberal match are described in the appendix, Section D.5.

terrogating about these characteristics. In the first item, experts can choose whether the group has one or more traditional leaders, including kings and queens (or paramount chiefs), chiefs, headmen, healers, and spiritual leaders. The second item offers experts different types of bodies and collective institutions, namely councils of elders, king's councils, (village) assemblies, customary courts, and customary rules and norms.[13] Both items are conditional on the first question of whether the group has some form of traditional organization identified by the expert.

Only if experts specify that the group has both at least one traditional political leader and one collective institution, our dichotomous measure Traditional Authority codes 1, 0 otherwise. We opt for a strict coding of the variable and do not consider the presence of non-political traditional leaders—such as spiritual leaders and healers. If groups only have non-political traditional leaders, they are not counted into the Traditional Authorities variable. Although these leaders may have considerable influence on their group, non-political leaders do not satisfy our assumption of the power-preserving motivation.

To test our theoretical claim that audience costs are decisive in the strategic choice of traditional leaders, we code a dichotomous measure, which can only be positive for groups that have traditional authorities. We suggest that accountability mechanisms are high when there are institutionalized channels within the community that can remove the traditional leader from office (*High Accountability*). We rely on a survey item that inquires how traditional leaders are held accountable. Our variable codes one if any of the leaders coded in the above variable (Kings, Chiefs, Headmen, Judges), can be voted out of office or can be forced to step down. Therefore the zero contains observations with other accountability mechanisms—such as apology or justification—and no institutionalized accountability mechanisms. For descriptive information on the variable, see Baldwin and Holzinger (2019).

4.4.4 *Moderating Variables*

4.4.4.1 *Political Access*

We argue that state characteristics condition the effect of traditional authority on nonconventional strategies. To proxy political access, we use Multiparty Elections, which represents state-level openness

13 The exact wording of the survey items can be found in the appendix Section D.2.

for political competition and the accommodation of different interests within the system. For this measure, we take the original scale (_osp) version of the variable v2elmulpar, as coded by the V-Dem Project (version 8, 2018) (Coppedge et al., 2018; Pemstein et al., 2018). The variable measures whether the national election was a multi-party election and ranges continuously from 0 to 4, were 0 means implies "no meaningful competition" between parties, and 4 measures the presence of multi-party elections. The mid-range scores measure instances where only candidates from the same party compete (1), one real opposition party is allowed, but political contestation is constrained (2), or one "real opposition party is prevented from competing, or conditions [...] prevent competition in a proportion of the territory" (3) (Coppedge et al., 2018).

As the variable is an event variable based on the election year, we impute the rating of the data from the last election to the next election coded by V-Dem. Although elections can be regarded as events that may increase the risk of violence during election time (e.g., in majoritarian elections (Fjelde and Höglund, 2016)), in other periods than election time, elections can also be seen as (potentially stabilizing) institutions (Knutsen, Nygård, and Wig, 2017). Groups will consequently be informed by previous elections and adapt expectations towards the political system accordingly. We center the variable around its mean 3,57 of the original scale, because—although theoretically possible—the variable does not contain a real zero.[14]

4.4.4.2 *Constitutional Commitment*

Some states have already enshrined rights to traditional authorities in their constitutions. To measure the constitutional commitment, we rely on the new TradGov constitutional dataset, which codes the rights and regulations in all constitutions of United Nations member states concerning traditional authorities in 2014. The constitutions were coded independently by different coders, and in cases of discordant results, reconciled by a third researcher to ensure intercoder reliability. The coding scheme was developed inductively, as the legal treatment of traditional authorities may vary significantly across states.

For our purpose, we choose 28 variables from the dataset that explicitly give enabling rights to traditional authorities. The variables—listed in the appendix (Section D.3)—have four dimensions.

14 Since we use the variable as a moderator, the constitutive term of Traditional Authority would otherwise be the result of extrapolation. The interpretation of as well as the significance is not affected by mean-centered variables.

First, whether the constitution recognizes traditional leaders and bodies, as well as customary law and courts. Second, whether the constitution grants representation and participation in the state's polity to traditional authorities. For instance, they can be allowed to veto certain decisions by the state or can have reserved seats in any state organs. The third dimension regulates the non-intrusion of the state into traditional affairs, such as the prohibition to sanction traditional authorities from the side of the state. The fourth dimension measures specific functions of traditional authorities executed independently of the state. These functions include whether governance functions can be administered in autonomy, such as land administration and respective extraction rights, and cultural functions.

Taken together, the components of the constitutional commitment measure range from 0 to 19, with Colombia representing the highest score (19) of the index. Due to the inductive nature of the coding and the different degrees of specificity of individual constitutions (e.g., Ginsburg, 2010; Holzinger et al., 2019), we generate a measure that limits the range of the variable, whilst accounting for the breadth of Constitutional Commitment. For that purpose, we calculate the percentiles of the distribution and recode the variable accordingly. As countries with no rights are in the 50th percentile, we assign three different values. Groups in countries with no specific constitutional rights are coded 0, and the variable takes on the value 1 if there are up to five rights anchored in the constitution, representing the third quartile. Any groups in countries whose constitution codifies more than five rights of the list specified, at the 75th percentile or higher, and are coded 2.[15] As the variable is collected as a cross-section, we follow Holzinger et al. (2019) in coding the constitutions backward until the last substantial change in provisions in rights for indigenous groups, customary law, and traditional political institutions and set the previous group-years missing (122 observations are thereby cut from the analysis).

4.4.5 *Control Variables*

Beyond the two state-level moderators, we include control variables on the group- and state- level to avoid potential issues with omitted variable bias. First, the strategy in contestations over self-rule

15 We also run our conditional models with the cross-level interaction between Traditional Authority and the original scale of Constitutional Commitment. Thereby the coefficient naturally decreases due to the increase in values on the moderator. The results are presented in the appendix (Section D.6, Table 39) and robust.

may be affected by the type of claim itself. If groups demand complete independence, they may be readier to target the state using unconventional means and vice versa. Therefore, we control for *Independence Claim*, which is based on our coding. Second, the relative population size of a group can also affect both their mobilization capacity and their bargaining power within a state. Thus, we add the *Group Share (log+1)* of the total state population to our models. As there is no available variable for the size of our population of self-determination groups, we collect the measure based on national population figures for 2005 from the World Bank (2013), as well as group population figures based on our coding, using on reports, newspaper articles, and the Ethnologue database (Lewis, Simons, and Fennig, 2014). Wherever figures differ across sources, we calculate the mean value. Third, self-determination demands by one group in multi-ethnic societies can lead to contagion through reputation building. The state may then respond to demands with violence to deter other groups from claiming autonomy (Bormann and Savun, 2018; Walter, 2006a). We include a count of the (logged) number of groups per state in our analysis, to control for possible contagious effects (*Number of SD Groups*).

Fourth, parallel governance through traditional authority is frequently a consequence of colonialism. This could both affect the subnational existence of authority and the likelihood of self-determination movements (Hechter and Okamoto, 2001). Therefore, we control for *Colonial Past*, based on the last colonizing country identified by Hensel (2018). We code a dichotomous variable that equals 1 if the respective state gained independence between 1945 and 1990.[16]

Fifth—in order to self-govern—groups should have the economic resources necessary to uphold their polities, formulate, and mobilize for their demands. Their economic status should also affect a state's response to the demands of a group. An example of this is Catalonia, which is relatively wealthier than the rest of Spain. Although extant work offers conflicting evidence as to the direction of the relationship (Jenne, Saideman, and Lowe, 2007), it could confound the relationship between traditional authority and nonconventional strategies. We compute the *Economic Differential* variable from the difference between, first, logged regional economic development for 2005 from Nordhaus (2006) in the PRIO-Grid data (Tollefsen, Strand, and Buhaug, 2012), and second, the logged na-

16 Thereby, we exclude countries from the measure that gained independence pre-WWII (e.g., the United States) or as a result of the end of the Cold War (e.g., Ukraine).

tional GDP per capita, taken from the World Bank data (World Bank, 2016).

Sixth, we include a variable measuring if the group is politically excluded from the state. *Political exclusion* of groups can aggravate grievances towards the state and lead to secessionist civil wars (Cederman, Wimmer, and Min, 2010) and runs counter to our political access argument. Furthermore, state repression may alter our hypothesized paths of credible commitment. Thus, we add the variable Excluded Group—taken from the Ethnic Power Relations (EPR) project—coded 1 when groups have no political power and if "political exclusion directly targeted at an ethnic community" (Cederman, Wimmer, and Min, 2010, p. 99) in the group-year, 0 otherwise.

The two latter controls introduce systematic missingness to our population of socially relevant groups from 2005 to 2015. The Economic Differential variable is missing data for the year 2015, and the EPR data does not feature data on socially relevant groups that are politically irrelevant. Therefore, we only include them in our final models.

4.5 ANALYSIS

Table 7 cross-tabulates *Traditional Authority* and its subcategory *High Accountability* with strategy type. Slightly above 40 percent of our group-years are observed to be governed by traditional authorities. Low accountability mechanisms within groups with traditional authorities are more common than accountability mechanisms that can lead to the removal of traditional leaders. The majority of self-determination groups opt for conventional strategies, which is in line with our assumption that regular political channels should be preferred over nonconventional strategies.

The bivariate relationship between traditional authority and the choice of nonconventional strategies is extremely strong. Among groups with traditional authorities, nonconventional strategies are applied in 70 percent of the group-years. Yet, groups without traditional authorities choose such strategies, just 30 percent of the time. Also, consistent with our theory, groups with lower-scale accountability mechanisms, seem to engage in nonconventional strategies more frequently than those with higher-scale accountability mechanisms.

Table 7: Group-Year Strategies of Self-Determination, by Traditional Authority and Accountability Mechanisms

Strategy	*No Traditional Authority*	*Traditional Authority*			*Total*
			Accountability		
			Low	*High*	
Conventional	401	161	*79*	*82*	573
Nonconventional	84	200	*126*	*74*	284
Total	485	361	*205*	*156*	846

4.5.1 *Multilevel Model*

State-level variables can have a significant impact on the internal structure of groups and their political interests (Posner, 2004b), an aspect that we considered theoretically. To empirically test the state-group relationship, we use a multilevel model nesting self-determination groups in the strategic environment of the state. We assume a strict hierarchy of groups in states, which is a necessary condition for a group to claim self-rule vis-à-vis its host state. Thus—in order to avoid confusion of cross-border groups—the expert data on traditional authority has been collected with the explicit reference to the host state.

As our outcome variable is dichotomous, we run logistic regressions, where $Y = 1$ if a group employs a nonconventional strategy in a given year. Modeling the data on both levels of analysis averts ignoring higher-level variance in the case of no pooling, or reverting to strict-within state analyses, as in the case of country fixed effects (Gelman and Hill, 2007). Hence, we let intercepts vary across countries and years in all models. Estimations are done using the R package lme4 (Bates et al., 2015).

Our initial sample consists of 128 groups in 68 states, of which 39 countries host a single group that demands self-determination. The data clusters around two to four groups with such demands per country and peaks with India, which faces demands of 12 groups. When adding the traditional authority variable to that sample and excluding the country-years with missing information on strategy choice, we are left with 103 groups in 57 states, and a total of 876 observations.

We first test hypothesis 1 that traditional authority positively affects the use of nonconventional strategies. Subsequently, we exam-

ine the mechanism that audience costs drive strategy choice within traditionally governed groups (both in table 2). We then test the hypotheses that consider state-level institutions by introducing cross-level interactions between traditional authority and multiparty elections and constitutional commitment, respectively (table 3).

Model 1 in Table 8 is a variance component model. In this "empty" model, we can see that 96 percent of the variance is explained by state-level factors, as can be read from the value of the intraclass correlation (ICC). Hence, it is appropriate to use a hierarchical model for the strategic choice of groups.

In the following models, we test the bivariate relationships and then introduce the control variables. Including economic differential and excluded groups as control variables changes our population from socially relevant groups to its subset politically relevant groups from 2005-2014. However, throughout the models, Traditional Authority has a positive and highly significant effect on strategies that take place outside "normal politics," a finding that is robust to the introduction of control variables.

Without taking the state's ability to commit into account, groups that have both traditional institutions and leaders are more likely to choose nonconventional strategies and therefore fight for self-determination against the state outside its institutional set-up for political contestation. In the population of socially relevant groups (model 3, Table 8), the presence of traditional authority increases the predicted probability from 0.4 to 3.2 percent, holding the other control variables constant.[17] Albeit small, this reflects an increase of 700 percent. The marginal effect is considerably increased when we change the population to only politically relevant groups in model 4, Table 8: here we observe that groups without traditional authorities have a 1 percent probability of using nonconventional strategies, while groups with traditional authorities have a 22.4 percent probability. Although comparing the models should be done with caution, and we did not make an explicit argument about the difference between socially and politically relevant groups, this finding gives evidence that political relevance strongly moderates the effect of traditional authorities on strategy choice.

Next, we probe our argument that the mechanism that fosters the choice between strategies in self-determination groups with traditional authorities are visible audience costs (Table 9). As High Accountability can only be positive whenever Traditional Authority is

17 All predicted probabilities were obtained using the *ggeffects* package in R by Lüdecke (2018).

Table 8: Multilevel Logistic Regression of Nonconventional Strategies

	(1)	(2)	(3)	(4)
	Variance Component	*Soc. Rel. '05-'15*	*Soc. Rel. '05-'15*	*Pol. Rel. '05-'14*
Traditional Authority		2.15^{***}	2.02^{***}	3.53^{***}
		(0.36)	(0.53)	(0.76)
Multiparty Elections			0.02	−1.34
			(0.77)	(1.00)
Constitutional Commitment			−1.09	−0.48
			(1.25)	(1.19)
Independence Claim			1.06^{+}	2.59^{**}
			(0.64)	(1.00)
Group Share (log+1)			−0.14	10.84^{*}
			(3.34)	(4.90)
No. of SD Groups (log)			2.35	1.26
			(1.49)	(1.17)
Colonial Past			3.34^{+}	2.63
			(1.97)	(1.67)
Economic Differential				−0.06
				(0.20)
Excluded Group				4.65^{***}
				(1.01)
Constant	-7.36^{***}	-5.56^{*}	-8.68^{***}	-12.10^{***}
	(1.88)	(2.19)	(2.36)	(2.59)
N_{state}	57	56	52	49
N_{year}	11	11	11	10
ICC_{state}	0.962	0.912	0.904	0.829
ICC_{year}	0.000	0.000	0.000	0.000
Observations	876	846	636	511
Deviance	475.154	413.538	286.493	203.262

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

1, the two variables are collinear. Thus, to test whether accountability moderates the effect of traditional authorities, we first control for institutionalized accountability mechanisms that can depose traditional leaders (models 1 and 2) and then subset the data to traditional authorities in models 3-5, rather than using a multiplicative interaction term.

Throughout the models in Table 9, High Accountability—the possibility that traditional leaders can be forced or voted out of office—is negatively and significantly related to nonconventional strategies. To interpret the finding substantively, we turn to the models that subset the data only to groups with traditional authorities, in order to directly compare strong accountability mechanisms to no such mechanisms within the groups with traditional authorities. Having high accountability decreases the predicted probability of nonconventional strategies from 80.4 to 14.1 percent in model 4 and from 98 to 23 percent in model 5 of Table 9.

The finding is telling: if members of groups with traditional authorities disapprove of the decisions of their traditional leader and have the ability to depose the leader from office, conventional politics are more likely. Audience costs, therefore, also apply to traditional-state relationships in conflicts over autonomy. On the one hand, traditional leaders will anticipate the risk of deposition if they have to back down and choose less costly ways to claim self-determination from the state. At the same time, traditional leaders make their claims credible: they make a costly signal when demanding autonomy from the state and by that signal resolve, which will make state authorities more likely negotiate bargains within the institutionalized channels of political contestation of the state.

Having established that traditional authorities and their accountability mechanisms have a significant impact on the strategies in contestations over self-determination, we continue to examine the conditional hypotheses (H3 and H4) that take the institutional structure of the state into account.

Table 10 presents the models introducing cross-level interactions between traditional authority and multiparty elections to assess the degree to which political access moderates the positive relationship between traditional authorities and nonconventional strategies. The coefficient of the interaction term is negative and significant throughout the models, but the p-value does not fall below five percent in model 3 of Table 10. We take this as evidence that political access moderates the relationship between traditional authorities

Table 9: Multilevel Logistic Regression of Nonconventional Strategies, Audience Costs

	(1)	(2)	(3)	(4)	(5)
	Soc. Rel.	*Pol. Rel.*	*Soc. Rel.*	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'14*	*'05-'15*	*'05-'15*	*'05-'14*
			Traditional Authority Subset		
Traditional Authority	2.94^{***}	4.33^{***}			
	(0.66)	(0.89)			
High Accountability	-2.21^{**}	-2.24^{*}	-1.28^{*}	-3.22^{**}	-5.25^{**}
	(0.75)	(0.95)	(0.53)	(1.14)	(1.65)
Multiparty Elections	0.07	−1.42		−0.62	−1.45
	(0.78)	(1.10)		(1.08)	(2.50)
Constitutional Commitment	−0.92	−0.43		-5.67^{*}	-11.53^{+}
	(1.22)	(1.36)		(2.52)	(5.94)
Independence Claim	1.01	3.23^{**}		5.33^{+}	9.41^{+}
	(0.67)	(1.13)		(3.06)	(5.33)
Group Share (log+1)	2.54	13.22^{*}		7.49	44.14^{***}
	(3.50)	(5.28)		(4.71)	(12.80)
No. of SD Groups (log)	2.24	1.36		4.65^{*}	9.70^{*}
	(1.46)	(1.32)		(1.90)	(4.46)
Colonial Past	3.54^{+}	2.95		−0.10	1.54
	(1.99)	(1.87)		(2.34)	(5.54)
Economic Differential		−0.04			−0.02
		(0.21)			(0.36)
Excluded Group		4.56^{***}			8.07^{***}
		(0.99)			(2.16)
Constant	-8.98^{***}	-13.27^{***}	−0.44	−3.83	-13.72^{*}
	(2.37)	(2.93)	(1.18)	(3.07)	(6.42)
N_{state}	52	49	27	24	22
N_{year}	11	10	11	11	10
ICC_{state}	0.904	0.859	0.871	0.805	0.944
ICC_{year}	0.000	0.000	0.000	0.000	0.000
Observations	636	511	361	254	203
Deviance	278.321	194.498	200.989	129.403	62.512

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

and nonconventional strategies to a degree, and plot the conditional marginal effect in figure 3.

Table 10: Multilevel Logistic Regression of Nonconventional Strategies with Multiparty Cross-Level Interaction

	(1)	(2)	(3)
	Soc. Rel.	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'15*	*'05-'14*
Traditional Authority X Multiparty Elections	-2.73^{**}	-3.32^{**}	-4.24^{+}
	(1.05)	(1.28)	(2.32)
Traditional Authority	1.74^{***}	1.27^{*}	3.44^{***}
	(0.41)	(0.61)	(0.87)
Multiparty Elections	1.67	1.92^{+}	1.56
	(1.05)	(1.13)	(1.98)
Constitutional Commitment		-1.30	-0.99
		(1.42)	(1.58)
Independence Claim		0.98	2.61^{**}
		(0.64)	(1.00)
Group Share (log+1)		-0.64	10.39^{*}
		(3.38)	(5.11)
No. of SD Groups (log)		2.45	1.77
		(1.70)	(1.56)
Colonial Past		4.77^{*}	4.02^{+}
		(2.36)	(2.30)
Economic Differential			-0.09
			(0.22)
Excluded Group			4.49^{***}
			(1.02)
Constant	-9.06^{***}	-9.68^{***}	-13.51^{***}
	(1.71)	(2.64)	(2.99)
N_{state}	55	52	49
N_{year}	11	11	10
ICC_{state}	0.971	0.931	0.890
ICC_{year}	0.000	0.000	0.000
Observations	729	636	511
Deviance	339.145	274.782	189.850
Note:	$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001		

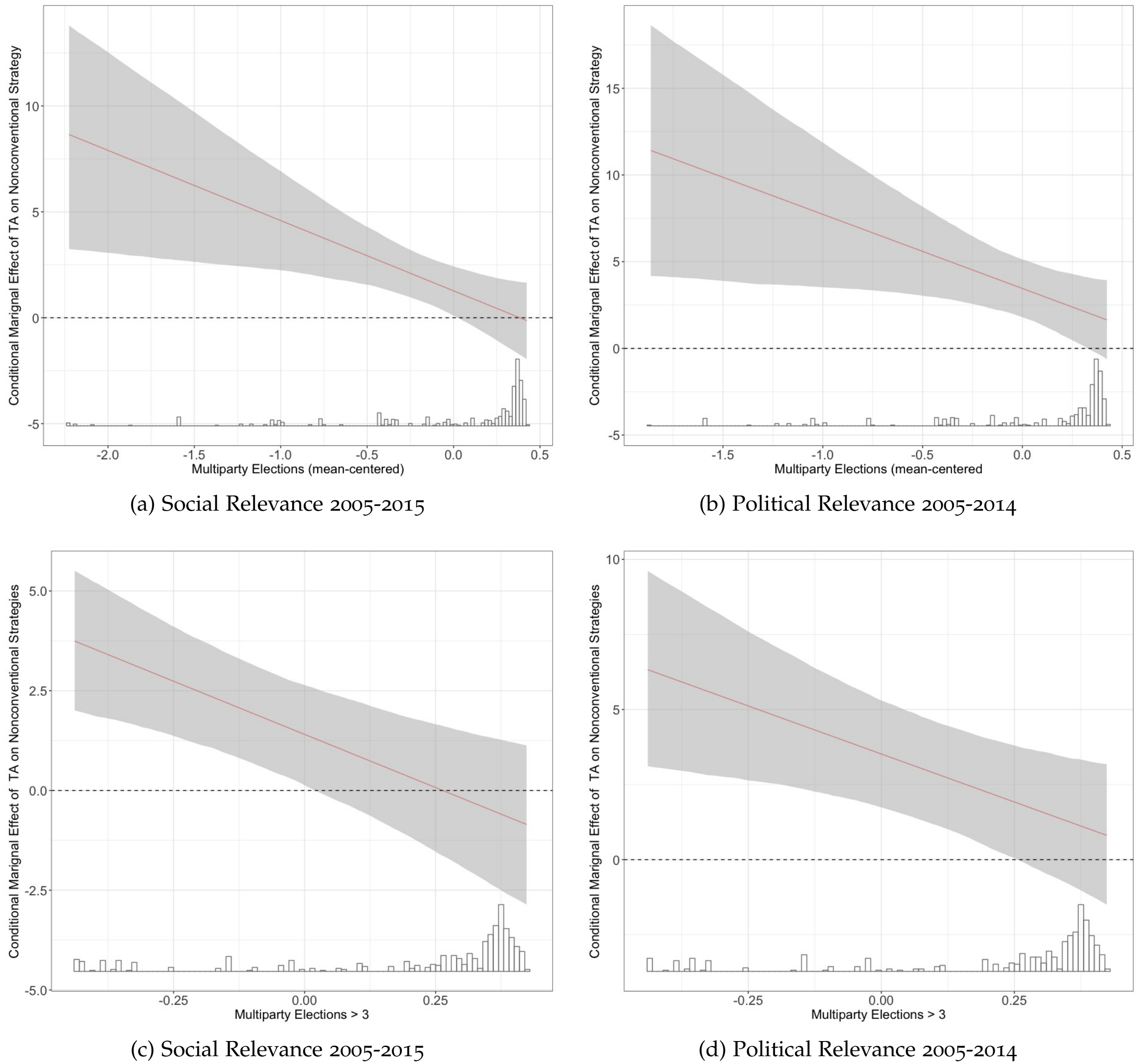
At the mean of *Multiparty Elections*, *Traditional Authority* retains a positive and significant effect on nonconventional strategies. To assess how *Traditional Authority* behaves across multiparty elections scores, we plot the effect of models 2 and 3 in Figure 20 (panels (a) and (b), respectively). Increasing openness to political competition on the state-level decreases the likelihood of groups with traditional authorities to engage in nonconventional strategies.

The large confidence interval on the left side of Figure 20a and Figure 20b with low scores on the Multiparty Elections variable reflects the small number of observations of groups in countries where party participation is more restrictive in elections, as can be read on the histogram on the x-axis. In both plots, the 95 percent confidence interval narrows at a (mean-centered) score of -0.6, which approximately reflects a score of 3 on the original scale. This score is also theoretically meaningful, as it indicates that at least one opposition party is excluded or "conditions such as civil unrest (excluding natural disasters) prevent competition in a portion of the territory" (Coppedge et al., 2018, p. 54), which neatly fits our argument.

To examine whether the interaction is meaningful at scores of three and higher, we calculate the model on a subset of observations that have a rating higher than 3 on the Multiparty Elections variable. The conditional marginal effects are presented in panels (c) and (d) of Figure 20. In the underlying regression models, the interaction effect increases in significance (appendix Section D.6, Table 40). From 3 to full multiparty elections, we can observe stark a decline in the likelihood of nonconventional strategies in systems with multiparty political systems. Overall, these findings lend support to our argument that political accessibility on the side of the state—and by that the strategic environment in which groups operate—moderate the effect of traditional authorities on the decision whether or not to engage in conventional channels of political contestation.

The models in Table 11 assess our final hypothesis 4 that nonconventional strategies by traditional authorities should become less likely, if the state provides constitutional commitments to traditional authorities. The cross-level interaction is negative and significant on the one percent level throughout the models, indicating that, indeed, constitutional commitment moderates the relationship between traditional authority and nonconventional strategies. We plot the conditional marginal effects of models 2 and 3 of Table 11 in Figure 21.

If countries do not include traditional authorities in their constitutions, traditional authorities positively affect nonconventional strategies: the predicted probability increases from 1.5 to 7.7 percent in model 2 and from 1.5 to 45.5 percent in model 3 of Table 11. A high degree of constitutional rights (above the (75th percentile) moderates the effect towards zero and (borderline) negative in the population of socially relevant groups. Normal politics become more likely when traditional authorities have successfully bargained with the state in the past.



(a) Social Relevance 2005-2015

(b) Political Relevance 2005-2014

(c) Social Relevance 2005-2015

(d) Political Relevance 2005-2014

Note: 95 percent confidence intervals. The underlying regression model for panel (a) is model 2 and for panel (b) model 3 in Table 10 The models of panels (c) and (d) subset the data to multiparty elections scores above 3, and the underlying models are available in the appendix Section D.6, Table 40 models 2 (panel c) and 3 (panel d).

Figure 20: Marginal Effect of Traditional Authority on Nonconventional Strategy by Multiparty Elections.

Table 11: Multilevel Logistic Regression of Nonconventional Strategies with Constitutional Commitment Cross-Level Interaction

	(1)	(2)	(3)
	Soc. Rel.	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'15*	*'05-'14*
Traditional Authority X	-1.32^{**}	-3.08^{***}	-4.04^{***}
Constitutional Commitment	(0.43)	(0.90)	(1.23)
Traditional Authority	3.50^{***}	3.25^{***}	6.00^{***}
	(0.61)	(0.72)	(1.35)
Constitutional Commitment	0.85	0.33	1.09
	(1.20)	(1.11)	(1.07)
Multiparty Elections		-0.16	-1.50
		(0.79)	(1.00)
Independence Claim		1.13^{+}	2.81^{**}
		(0.63)	(0.95)
Group Share (log+1)		0.59	10.65^{*}
		(3.25)	(4.65)
No. of SD Groups (log)		2.15^{+}	1.79
		(1.22)	(1.11)
Colonial Past		3.64^{*}	2.55
		(1.82)	(1.55)
Economic Differential			-0.002
			(0.21)
Excluded Group			4.27^{***}
			(0.96)
Constant	-6.16^{**}	-8.34^{***}	-13.02^{***}
	(1.98)	(1.94)	(2.49)
N_{state}	56	52	49
N_{year}	11	11	10
ICC_{state}	0.913	0.870	0.823
ICC_{year}	0.000	0.000	0.000
Observations	758	636	511
Deviance	367.457	279.791	195.033

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

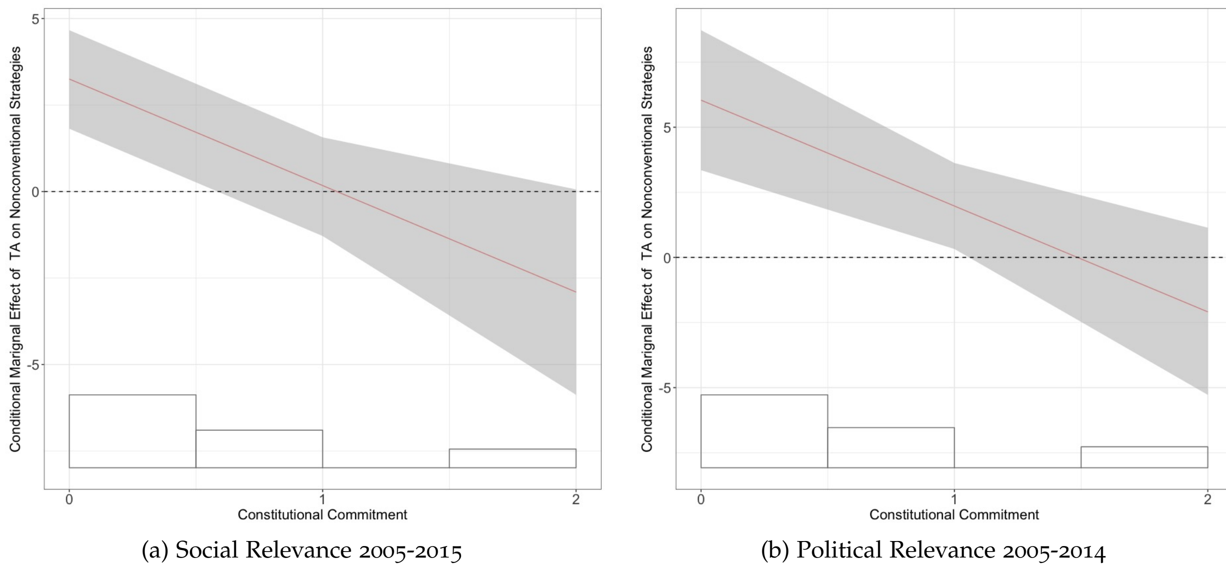
As constitutional commitments are frequently framed towards all traditional authorities within one country, the finding can contribute to the literature on prior concessions and reputation building. We can show that the granting of rights towards a specific type of group has limited costs for the state when it comes to its reputation towards other groups of the same kind. Additionally, there does not seem to be a meaningful reputational effect on groups without traditional authorities. Although the constitutive term of Constitutional Commitment is positive (*Traditional Authority*=0), it does not reach statistical significance, remaining below the 10 percent level.

The findings of our analysis contain a powerful message for both academic research and practice. We show that traditional authorities increase the likelihood of nonconventional strategies in self-determination disputes. This relationship is mitigated by institutionalized accountability mechanisms, giving evidence that audience costs are at work for traditional leaders. Furthermore, nonconventional strategies are conditioned by the state's institutions, supporting our argument that traditional authorities and the state are in a bargaining situation that requires reciprocity and institutions on both sides of the table as commitment devices. States with multiparty elections can tie their hands more effectively, and constitutional commitment—in the form of special rights for traditional authorities—formalized the state-group interaction, which also mitigates the effect of traditional authorities on nonconventional.

A few control variables deserve mentioning here. Independence claims are consistently positively related to nonconventional strategies, which emphasizes the importance of indivisible claims for the escalation of conflicts (Fearon, 1995). Excluded groups are also much more likely to engage in nonconventional strategies, which underscores our argument that political access fosters hand-tying and credible commitment. Larger groups, as well as groups in post-colonial states, are more likely to mobilize outside conventional channels of political contestation. This supports our argument that mobilization and the political parallelism that emerged from colonization are important factors driving the conflict strategies of groups that seek self-determination.

4.5.2 *Discussion and Robustness*

To corroborate our findings, we run a number of robustness tests, which are all presented in the appendix Appendix D. Three deserve particular attention here. First, the literature that engages with



(a) Social Relevance 2005-2015

(b) Political Relevance 2005-2014

Note: 95 percent confidence intervals. The underlying regression model for panel (a) is model 2 and for panel (b) model 3 in Table 11.

Figure 21: Marginal Effect of Traditional Authority on Nonconventional Strategy by Constitutional Commitment.

traditional governance structures and violence has thus far mostly focused on the African continent. Furthermore, research suggests that particularly in Africa, self-determination contestation turned violent. Our analysis could, therefore, suffer from selection bias. To make sure that an African phenomenon does not drive our results, we run the main models, excluding all groups in African countries. The regression output is presented in the appendix (Section D.6, Table 41 and Table 42). The results are robust to the exclusion of African groups, which is an important finding given the current regional focus on the African continent.

Second, we disentangle nonconventional strategies. In our theory and analysis, we imply a dichotomous understanding of conventional versus nonconventional strategies. However, nonconventional strategies can be of different natures. We distinguish between three types of nonconventional strategies directly related to the dispute over self-determination: nonviolent (e.g., protests), small-scale violence (less than 25 casualties), and large-scale violent conflict (more than 25 casualties).

The tabular relationship is reported in appendix Section D.6.3, Table 43. From the variations of nonconventional strategies, large-scale violence is the most frequent, as compared to lower-scale nonconventional action. This could indicate that contentious politics over self-determination is more likely to escalate to armed conflict. Descriptively, slightly less than half of the groups with traditional

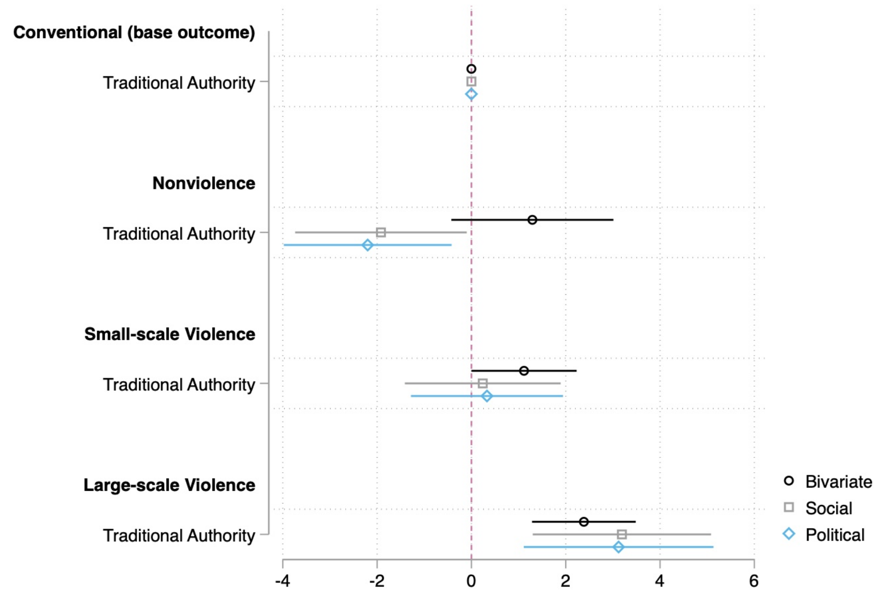
authority choose conventional strategies in the years under study. However, in comparison to groups without traditional authority, those with traditional authority seem to engage in nonconventional strategies more frequently than groups without such authorities. To examine how the Traditional Authority variable impacts on different types of nonconventional strategies, we run a simple multinomial logistic regression. We include time-fixed effects and robust clustered standard errors at the country-level. The regression table with the repeated set-up of the main analysis is reported in appendix Section D.6.3, Table 44, and the corresponding coefficient plot of the explanatory variable is presented in Figure 22.

With and without control variables, traditional authority is positively related to large-scale violent strategies in comparison to the base outcome of conventional strategies. This relationship is also reflected in smaller-scaled violent strategies, yet it only reaches statistical significance in the bivariate model and when considering politically relevant groups only. The relationship with nonviolent strategies is only positively related to Traditional Authority in the bivariate model. With control variables, the relationship becomes negative. Although this could raise concerns about our approach to use nonviolent strategies as a form of nonconventional, we are hesitant to put too much emphasis on this finding, as the number of group-years with nonviolent campaigns in our population is very low (25 in total). Tentatively, the effect of Traditional Authority increases with increasing scales of violence, which supports our claim that traditional authorities can successfully mobilize violence.

Third, to rule out further concerns of selection bias and potential reverse causality, we estimate instrumental variable (IV) models. Thus far, we assumed that there was pre-claim governance through traditional authorities due to their customary roots of legitimacy. Yet traditional governance can also be the result of political engineering (e.g., Ranger, 1983). In this case, traditional authorities could be created for the purpose of self-determination movements and potentially for mobilization in nonconventional strategies.

To ensure that our analysis does not suffer from reverse causality, we use the Ethnographic Atlas (EA) by ethnographer George Peter Murdock (1959) and match our data to the updated version by Gray (1999).[18] The *EA* codes precolonial social structures of ap-

18 We were able to match 92 self-determination groups to the *EA*. In some cases, we had to aggregate groups, as in the Traditional Authority variable, these were not sensitive to different types of averaging. In some instances, groups in our self-determination data have their roots in the same group in the *EA*. To match the groups, we relied on the subgroup



Coefficient plot based on the regression Table 44 in appendix Section D.6.3, (1: Bivariate model, 2: Social model, 3: Political model), with 95 percent confidence intervals. Control variables are omitted from the plot.

Figure 22: Coefficient Plot of Multinomial Logistic Regression of Traditional Authority on Type of Strategy.

proximately 1200 ethnic groups worldwide. For our instrument, we use the variable jurisdictional hierarchy (v33)—which measures the degree of precolonial centralization—and has been used widely to measure precolonial traditional institutions (e.g., Michalopoulos and Papaioannou, 2013; Wig and Kromrey, 2018). We code a binary measure that codes 1 if the group had community-level institutions, "petty chiefdoms," or "larger chiefdoms" (levels 0-2) (Gray, 1999) and 0 for those with larger states. We argue that this variable fulfills the necessary condition for an exclusion restriction: First, the precolonial institutions of groups should affect our outcome only through their post-colonial institutions, measured as Traditional Authorities. Second, we use the lower-scale institutions as an instrument here, as we are looking at sub-national institutions that did not evolve into modern states.

We repeat the set-up of our main analyses in an IV probit regression with robust clustered standard errors at the country-level and year fixed effects, because a ready-made multilevel implementation is not available. The first and second-stage models are presented in appendix Section D.6.4. The Wald test for exogeneity is statistically

list of socially relevant groups in the AMAR (Birnir et al., 2015) and cross-validated the information using online sources.

significant (p<.05) in Table 45. Thus the null hypothesis of no endogeneity can be rejected, and we move forth with our IV approach. The first-stage F statistics of the first stage regression suggest that precolonial institutions are a strong instrument for traditional authorities, with values of 30 and above (Stock and Yogo, 2005).

Our precolonial institutions dummy is positive and significant in the first-stage regression on the outcome *Traditional Authority* (Table 46. Yet again, the significance increases when we regress on the populations of politically relevant groups. In the second-stage regressions (Table 45), the coefficient of *Traditional Authority* is of similar magnitude and significance as in our main models. This indicates that the relationship between traditional authority and nonconventional strategy is causal, at least in the subset of matched groups between our data and the *EA*.

4.6 CONCLUSION

Traditional authorities are a particular type of political organization when it comes to self-determination movements. Based on a distinct customary legitimacy, they govern subnational groups using their own political systems in parallel to the state. They are a worldwide phenomenon that originates from precolonial times but exert substantial authority in contemporary politics.

In this article, we have argued that if traditional authorities choose to demand self-determination or more autonomy from their host state—either in distinct policy fields or complete independence—they tend to mobilize outside institutionalized channels of political contestation and frequently use large-scale violence when escalating their demands. We show that these strategies are a function of reciprocity between groups and the state: if credible commitment possible, traditional authorities choose conventional politics more frequently. On the one hand, in groups with visible accountability mechanisms that can depose traditional leaders from their offices, their risk-anticipation and signal to resolve decreases chances to observe nonconventional strategies. Furthermore, the state's institutions play a critical role, too: the positive effect of traditional authorities on nonconventional strategy is moderated by political access through multiparty elections and constitutional commitments to traditional authorities by the government. If traditional authorities or the state credibly signal resolve, strategies are more likely to take place in the realm of conventional politics, as compared to the absence of such signals.

We demonstrate how fruitful a theoretical and empirical approach is that takes both the internal set-up of a group's institutions and that of the state into account when analyzing strategies in self-determination disputes (cf. Cunningham, 2011, 2013). Signals of resolve through audience costs that facilitate credible commitment are also at work when examining institutions beyond the nation-state and other than democracies (cf. Weeks, 2008). This opens many pathways for future research. In particular, the literature on territorial conflicts should take internal sanctioning mechanisms into account. Furthermore, concessions from the state do not necessarily work against its interest: constitutional rights in national constitutions can accommodate conflicts between traditional authorities and the state, which adds to the literature of reputation building. Accommodation of broader segments of society could offer important insights to the question of whether concessions work (Bormann and Savun, 2018; Sorens, 2012; Walter, 2006a). This also pertains to multiparty elections and decentralization, which could be an appropriate solution for the accommodation of traditional authorities (cf. Brancati, 2006).

Our findings travel to other forms of subnational contestation. Group institutions foster mobilization capacity and create incentives for power-seeking leaders, while at the same time threatening the power base of the government by strengthening parallel institutions. The mechanisms illustrating how traditional institutions help overcoming collective action problems and strengthen collective identification, therefore, effects on other societal movements around the world. Subsequent research should address traditional authority in other violent contestations between groups and the state.

Above all, we suggest that considering reciprocity in bargaining situations is necessary. Both the group and the state-level should be theorized and empirically analyzed to assess if conflict evolves. Critically, credible signals to resolve are not only an important lens to understand international conflicts in an anarchic international system (Fearon, 1995), but are an essential way to understand why disputes between subnational institutions and the state escalate.

Part III

CONCLUSION

5

CONCLUSION

Customary institutions affect the lives of people around the globe. They encompass a wide array of social systems, such as marriage institutions and policing, and are responsible for many political outcomes we observe today. In this dissertation, I have developed and tested theoretical mechanisms that explain their often indirect but significant impact on conflict. Using data on precolonial and contemporary customary institutions, I demonstrated how they can escalate both intergroup and group-state relations.

In the research articles, I show that, first, polygyny is a group-level institutions that affects young males' perceptions of justice and the legitimacy of violence, leading to intergroup violence (Chapter 2). Second, using contemporary data on traditional policing institutions, I show that while these are designed to bring about intragroup order, they can have adverse effects on intergroup relations by creating norm collisions (Chapter 3). Finally, whether groups have traditional authorities has a large effect on the occurrence of escalatory strategies in disputes over self-determination. Yet, the internal accountability mechanisms as well as the state-level institutional environment moderate this effect (Chapter 4).

These studies all point into a similar direction: While institutions emerge to solve some societal problem and frequently aim to produce order within a society (North, 1991; Tajima, 2014, cf.), they evoke negative externalities outside their subsystems, which can result in disorder and ultimately violence. This can partially be explained by incongruence: the parallel existence of institutions with a distinct legitimacy, claims to power, and regulations on the territory of modern state.

Together, these studies advance our theoretical and empirical knowledge on the empirical variety of local customary institutions and the effects it brings about. In this concluding chapter, I will highlight the core contributions of this dissertation and outline future avenues for research that builds on these findings.

5.1 CONTRIBUTION

5.1.1 *A Worldwide Phenomenon*

Traditional institutions govern subnationally in all parts of the world. Yet, thus far, research has largely focused on their prevalence and effects on the African continent. While Chapter 2 assesses the effect of polygyny on conflicts in Africa only, Chapter 3 and Chapter 4 both make the case that the proposed theoretical mechanisms can be empirically observed around the globe. As I will sketch below, an important avenue for future research will also be to apply some of the questions and theoretical mechanisms specifically to developed countries.

5.1.2 *Theoretical Mechanisms*

All three research articles make a distinct theoretical argument, which is subsequently tested. Chapter 2 shows how customary institutions governing the smallest social entity – the family – can have an large effect on the possibility of intergroup violence. Polygyny leads to a social imbalance, where males are precluded from the possibility to marry and rear children. Since the family functions as a natural unit of belonging, but also as a source of economic benefits, these *excess men* become "risk-takers" (Barash, 2016, p. 30). We provide evidence for both the meso-level effects on intergroup relations as well as individual-level effects on the attitudes of young males.

In Chapter 3, I argue that conflicting customary and state institutions in the area of policing and justice nullify their respective capacity to create predictability in social interactions. Such "norm collisions" can, however, be avoided by explicit state-level regulations. To my knowledge, this phenomenon has neither been explicitly theorized nor empirically probed in the conflict literature.

In Chapter 4, I show that self-determination conflicts are a bargaining process where the institutions of both sides matter for whether the process escalates. While such dyadic and institutionalist arguments are quite common in the international relations literature, my analysis suggests that such insights are also valuable for subnational processes and comparative politics.

5.1.3 *Empirical Analysis of Subnational Non-State Political Systems*

To test these theoretical mechanisms, all three articles relied on subnational data on group-level customary institutions. By theorizing that borders with polygynous groups create a risk for neighbors of these groups (rather than a risk for polygynous group members themselves), the territorial effects of customary institutions and negative externalities for other groups are taken into account. An appropriate empirical test necessarily involves spatial, subnational data (Chapter 2). The judicial and policing functions of traditional institutions apply and affect conflicts locally. Therefore, taking conflicts on the territories of traditional institutions into account is crucial (Chapter 3). Self-determination disputes are, in their essence, territorial conflicts. The close interrelationship between traditional authority and territory therefore has a large effect on how these conflicts evolve (Chapter 4).

5.1.4 *Elite-driven vs. Structural Theories*

Although the extant literature that provides a link between group-level traditional institutions and conflict has focused on elite-bargaining (Paine, 2019; Wig, 2016; Wig and Kromrey, 2018), this dissertation demonstrates that conflicts are affected both by traditional leadership as well as by structural conditions that emerge due to their governance structures.

In Chapter 2 and Chapter 3, conflicts between groups are argued to be the result of spontaneous, individualistic conflicts caused by structural conditions. Polygynous marriage institutions skew the marriage market and therefore create conditions that foster intergroup conflicts through the emergence of "excess men." These will turn against other groups to acquire the resources necessary to marry and start a family. Norm collisions emerge due to the existence of parallel laws and policing functions, which undermines predictability. Although these can escalate into violence that require mobilization, they ignite due to incongruence.

At the same time, Chapter 4 make the case that traditional leadership plays a role in bargaining situations with the state. Threats to their local power determine the course of the dispute.

Structural conditions—the coexistence of different laws—and overcoming collective action problems—such as group mobilization through the mechanisms of traditional organization—do not offset elite-driven motivations, for instance by following through with a self-determination

claim. After all, "structural theories are very much compatible with a focus on individual decision making" (Cederman, Gleditsch, and Buhaug, 2013, p. 24).

5.2 POLICY IMPLICATIONS

This dissertation carries two central implications for policy-makers. First, local traditional institutions are prevalent around the globe and can have side-effects on conflict. Of special interest is the phenomenon from Chapter 3: While it may seem tempting to let traditional institutions settle dispute locally, this can lead to norm collision and undermine both the functioning of these local and state-level institutions. Second, and relatedly, I have argued and empirically shown that the negative effects of such norm collisions can be alleviated by constitutional regulation.

5.2.1 *Traditional Institutions: An Empirical Reality*

This dissertation shows that local traditional institutions are not only an empirical reality around the globe, but that they vary in their norms, political systems, and capacities, and affect political outcomes. Neglecting local customary norms, traditional political institutions as well as their political systems in the design of policies could thus lead to policy failure.

Both national as well as international policy-makers should therefore consider that the implementation of their policy goal could be affected by local institutions. For instance, a legal reform may be well designed. Yet, if it does not consider that customary courts regulate and sanction social conflicts on the ground, the best design could fail.

For example, the formal prohibition of polygyny by the state may have little effect due to the widespread stickiness of this family institution. International programs designed to prevent youth from participating in violent activities should be aware of the potential norm collisions that may ignite conflicts in the first place, but also of the social pressures a male member of a polygynous society may face.

Lastly, a government that negotiates with self-determination groups with traditional authorities should not underestimate the political risks involved for traditional leaders, their mobilization potential, and capacity to escalate conflicts, as shown in Chapter 4.

5.2.2 *Establishing Congruence*

A central insight that emerges from both Chapter 3 and Chapter 4 is that the state can establish rules that can mitigate the negative externalities that may stem from the incongruence of traditional political institutions and the state.

Such constitutional integration of traditional authorities can be regarded as a form of power-sharing. Giving these authorities a stake in national politics can avert conflicts between subnational authorities and the state.

With regard to norm collisions, it is possible to incorporate traditional institutions and thereby both reckon with their local importance and increase the overall security production within the state. This is not only in line with the idea of implementing context-sensitive policies, but also with arguments made about the co-production of state and non-state institutions (Ostrom, 1996).

5.3 FUTURE RESEARCH

5.3.1 *Customary Institutions*

The analyses of this dissertation show how we can systematically theorize and test a variety of research questions that pertain to the governance of subnational communities. The use of a combination of information on customary institutions, geographical, and group-level data has provided important insights on how local customary institutions affect violence.

Future research should therefore continue to open-up the inner working of traditional institutions. Just like political science has analyzed nation-states, traditional institutions should be accepted as important political entities, with vast effects on the lives of millions of people.

5.3.2 *Micro-Level Evidence*

Chapter 2 shows that polygyny affects intergroup conflict by changing individual-level attitudes. Future research should aim to uncover micro-level evidence for the other theoretical mechanisms, namely norm collisions and leadership deposition.

In Chapter 3, for instance, I make the theoretical claim that the simultaneous presence of state and local customary policing and ju-

dicial authorities leads to norm collisions. Future research should elicit individual preferences for the presence of state and/or local customary policing and should explore whether individuals perceive that such situations lead to effective cooperation and justice.

Furthermore, an analysis of the individual approval of traditional leaders could advance our understanding of how domestic customary leadership affects their interaction with other institutions. In the spirit of Tomz (2007), it would be important to underpin the finding that audience costs moderate the relationship between traditional authority and the escalation of disputes over self-determination. For instance, it would be instructive to assess whether group members "care about [...] reputation" (Tomz, 2007, p. 821) of their group nationally or internationally.

5.3.3 *Gendered Traditional Institutions and Imbalances*

A central finding that comes out of Chapter 2 is that gendered traditional institutions, i.e., polygyny, inheritance customs, or child marriage, can have important societal consequences, such as conflict. Yet, with few exceptions discussed in Chapter 1 (Hager and Hilbig, 2019; Lazarev, 2019; Muriaas et al., 2019), we still know very little about how localized customs shape outcomes such as social and gender inequality and violence. Future research should thus consider these customary social institutions.

First, although the persistence of social institutions such as polygyny seems to be driven by factors other than the persistence of political institutions (for an analysis of the persistence of polygyny see Dalton and Leung, 2014; Fenske, 2015), data on current social institutions could advance our knowledge how they shape outcomes today. Furthermore, it can be expected that these institutions also shape the effectiveness of development interventions. That is, local social institutions may support or hinder programs intended to achieve social equality.

Another insight from the research on polygyny in Chapter 2, as well as a small but growing literature in the field (Dancygier et al., 2019; Edlund et al., 2007b; Grant et al., 2018), is that sex ratio shifts that lead to imbalances between males and females have important consequences. Sex ratios tipped towards men caused by female infanticide, female labor market migration, or polygyny can have crime-inducing effects. This is possibly through the generation of frustration and decreased chances to fulfill basic needs for men (Dancygier et al., 2019; Edlund et al., 2007b). On the other hand,

historical sex ratios tipped towards women have been shown to positively affect female participation–in particular in political offices (Grant et al., 2018) – which in turn may affect more reporting of gendered violence, which may decrease violence in the long run (Iyer et al., 2012). Yet, existing research mostly focuses on developing countries, and it is unclear to what extent the relationship between sex ratios and crime travels to developed contexts.

Part IV

APPENDIX

A

APPENDIX INTRODUCTION

The information in this section provides additional information for the analysis presented in Section 1.4.1 and Figure 1 in particular. The information is based on the unpublished working paper of Neupert-Wentz and Müller-Crepon (2019), which is available upon request.

A.1 DATA

A.1.1 *Ethnic Matching*

We link the TradGovGroups to the Murdock data to be able to analyze the relationship between Murdock's coding of precolonial political centralization and the contemporary data on ethnic groups' traditional institutions.

To do so in a coherent and replicable manner, we draw on a new technique that leverages the universe of known languages to link datasets on ethnic groups in Africa to each other. Drawing on Müller-Crepon, Pengl, and Bormann, 2019, our matching procedure consists linking each ethnic group in the TradGovGroups and Murdock datasets with the list of languages provided by Ethnologue (Lewis, 2009). In a second step, we link each group from the TradGov Groups and Murdock data if they have at least one language in common and are coded to be present in the same contemporary country.[1] The research project led by Müller-Crepon, Pengl, and Bormann (2019) provides the data on the links between Ethnologue and the Murdock and TradGov Groups data that are necessary to implement these two steps.

Because linguistic groups most often nested within ethnic groups encoded in our datasets, the matching procedure produces consistent results. There are relatively few groups—such as the Hutu and Tutsi in Rwanda or the various Somali subgroups on the Horn—where several groups speak the same language. In these cases, our matching is imprecise, but unlikely to introduce systematic bias.

The first step of the coding is successful, with more than 95% of groups in both datasets linked to one or more languages from

1 Murdock groups are linked to countries via their geographic settlement area derived from Murdock (1969).

the Ethnologue data. In the second step, we are able to match 579 (84.3%) groups from the TradGov data to a total of 731 (55.3%) groups enumerated by Murdock. As a result of the fact that Murdock and the TradGov data enumerate ethnic groups in different manners, the resulting matching is many-to-many, that is, some TradGov groups are linked to several groups from Murdock's data and vice-versa. It is therefore necessary to collapse the data on groups from the TradGov data that are linked to the same Murdock group. We do so by taking the mean of the variables we use below.

Table 12 presents additional details on the results of a descriptive analysis of the attributes of Murdock groups that lack a link to the TradGovGroups data. The results show that small groups and those colonized by Portugal or Belgium are least likely to be associated with a counterpart in the TradGovGroups data. Importantly, the probability of being matched is independent of the level of precolonial centralization.

Table 12: Covariates of successful link between Murdock and TradGovGroup data

	Matched Murdock Group (0/1)				
	(1)	(2)	(3)	(4)	(5)
Constant	0.178**	0.623***	0.522***	0.626***	0.181*
	(0.082)	(0.023)	(0.024)	(0.046)	(0.103)
Population (1880; log)	0.041***				0.046***
	(0.008)				(0.009)
Area (log)	0.042***				0.042***
	(0.008)				(0.008)
Split (0/1)		−0.108***			−0.014
		(0.028)			(0.030)
Precol. Centr. (v33)			0.025*		0.006
			(0.014)		(0.013)
Belgian colony				−0.202***	−0.224***
				(0.064)	(0.065)
British colony				−0.015	0.022
				(0.050)	(0.050)
French colony				−0.099*	−0.078
				(0.051)	(0.051)
Portuguese colony				−0.298***	−0.274***
				(0.077)	(0.078)
Observations	1,321	1,321	1,205	1,321	1,205
Adjusted R^2	0.090	0.010	0.002	0.022	0.125
Note:	*p<0.1; **p<0.05; ***p<0.01				

A.1.2 *Main outcomes*

In order to assess the level of institutionalization of traditional institutions today, we focus on indices from the TradGov Group data that capture four dimensions:

Institutions:

TPI Level: Coding of experts of the highest level of traditional organization, indicating whether a group is acephalous, organized on the district or regional level, or a higher level. This is the variable that coincides most with Murdock's ordinal coding of precolonial centralization (v33).

Institution Index: This is the mean of a series of dummy variables that encode whether an ethnic group features a council of elders and/or the king, assemblies, dispute resolution mechanisms such as courts, and native customary rules.

Leaders:

Leader Index: The average existence of a series of leader roles, ranging from a king or paramount chief, over chiefs, headmen, judges, healers, to spiritual leaders.

Max Leader: Again oriented towards Murdock's level of centralization, we encode the maximum hierarchical level on which a leader exist with kings being on level 3, chiefs on level 2, and headmen on level 1. Groups that have none of these political leaders are coded as 0.

Ties with the state:

The State-ties Index is the average response to the question of whether traditional authorities are (1) formally acknowledges by the state, (2) interact regularly through formal institutions, and on (3) the strength of traditional authorities' informal ties to state politicians.

Functions:

The Functions Index is the average existence of official or unofficial responsibility of a groups' traditional institutions for the governance of land, culture, family matters, dispute resolution, health, security, religion, and infrastructure.

All index variables are standardized to range from 0 to 1. In order to derive a single and non-redundant measure of the level of institutionalization of traditional governance institutions, we extract the first principal component from the six variables that cover the

four dimensions. The principal component analysis, reported in full in 13, shows that all four dimensions are positively correlated with the first principal component, which explains 50.7 percent of the variance in the data. This component, named TPI Index hereafter, constitutes the the main outcome of the empirical analyses. We also report the results for the constitutive parts of the index.

Table 13: PCA of group-level traditional institutions indicators

	Component					
	(1)	(2)	(3)	(4)	(5)	(6)
Summary statistics:						
Standard deviation	1.744	1.052	0.879	0.647	0.614	0.533
Proportion of Variance	0.507	0.185	0.129	0.070	0.063	0.047
Cumulative Proportion	0.507	0.691	0.820	0.890	0.953	1.000
Factor loadings:						
TPI Level	0.407	−0.439	0.292	−0.628	−0.250	−0.316
Institution Index	0.450	0.397	0.041	−0.039	−0.550	0.578
Leader Index	0.480	0.206	0.049	0.562	−0.149	−0.622
Max Leader	0.433	−0.273	0.448	0.262	0.570	0.379
State-ties Index	0.253	−0.587	−0.714	0.208	−0.115	0.161
Functions Index	0.387	0.434	−0.449	−0.420	0.523	−0.097

A.1.3 *Summary Statistics*

Table 14: Pre-colonial centralization and current TPIs: Summary Stats

Statistic	N	Mean	St. Dev.	Min	Max
TPI Index	618	0.599	0.214	0.000	1.000
TPI Level	636	0.555	0.362	0.000	1.000
Institution Index	662	0.579	0.267	0.000	1.000
Leader Index	662	0.483	0.249	0.000	1.000
Max Leader	662	0.687	0.370	0.000	1.000
State-ties Index	622	0.783	0.222	0.000	1.000
Functions Index	643	0.677	0.222	0.000	1.000
Precol. centr. (v33)	1,205	1.382	1.027	0	4
Population	1,321	83,761.310	263,798.200	0.000	5,948,205.000
Area	1,321	1.953	3.908	0.00000	43.779
Distance to coast	1,320	613.237	446.201	2.119	1,784.015
Distance to nav. river	1,320	275.833	413.786	0.727	2,344.628
Reliance on agriculture	1,274	2.453	2.011	0	9
Reliance on pastoralism	1,274	5.382	1.933	0	9
Intensity of agriculture	1,215	2.304	0.838	0	4
Altitude	1,321	614.760	447.576	2.667	2,899.750
Ruggedness	1,321	4.059	1.256	1.000	9.000
Temperature	1,321	24.492	3.262	7.550	30.011
Evapotranspiration	1,321	1,659.086	290.233	1,085.276	2,519.306
Precipitation	1,321	1,031.031	596.754	0.071	3,147.643
Precipitation/Evapotr.	1,321	4.031	1.650	1.000	8.000
Agr. suitability	1,311	0.327	0.246	0.000	0.985
Cash crop suitability	1,320	0.329	0.166	0.000	0.824
Malaria environment	1,321	0.583	0.201	0.00001	0.962
Tsetse environment	1,321	0.495	0.438	0.000	1.000

A.2 SPECIFICATION AND ANALYSIS

We start by investigating the level of institutional persistence as the simple relationship between ethnic groups' level of precolonial centralization and our index of contemporary outcomes of traditional institutions. To do so, we estimate the following OLS equation:

$$\text{TPI Index}_i = \alpha_c + \beta_1 \text{v33}_i + \delta \mathbf{X_i} + \text{›}_i, \qquad (1)$$

where country-fixed effects α_c net the data of all variation that is constant within countries. We cluster standard errors on the level of ethnic groups (based on Murdock's coding), many of which are observed in multiple countries. We add a vector of control variables $\mathbf{X}_i$ to ensure that we capture the continuous effects of precolonial centralization itself and not the persistent effects of its proximate causes. We sequentially add three vectors of controls to our model:

Baseline: To control for the geography and location of ethnic groups, we add their population size, estimated for the year 1880 (Goldewijk, Beusen, and Janssen, 2010), their area, their distance to the coast as well as to the closest navigable river.[2] These measures are all logged to reduce their right-skew.

Ethnic: Since precolonial agriculture might have been an important driver of political centralization (e.g. Fenske, 2013), we add variables that capture the extent to which ethnic groups relied on agriculture and husbandry, as well as an indicator of the intensity of agriculture in a group. These variables are encoded in the Ethnographic Atlas (Murdock, 1959).

Nature: Lastly, we control for a vector of characteristics of the natural environment of ethnic groups, which might have influenced their prosperity and propensity for political centralization. These variables consist of the altitude, temperature, precipitation and evapotranspiration, the ratio of the two, agricultural suitability, and soils' suitability for cash crop production,[3] as well as the local disease environment regarding malaria[4] and the Tsetse fly.[5]

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2 Data on navigable rivers comes from Jedwab and Moradi (2016).

3 These variables come from the FAO's (2015) GAEZ database. The cash crop suitability is calculated as the local max of soils' suitability for the production of the eight most prominent cash crops, in particular coffee, cotton, cocoa, groundnuts, oil palms, sugarcane, tea, and tobacco.

4 This is a temperature-based index from Gething et al. (2011).

5 Data from the Programme Against African Trypanosomosis (1999).

Table 15: Precolonial centralization and current TPI Index

	TPI Index			
	(1)	(2)	(3)	(4)
Precol. centralization (v33)	0.042***	0.040***	0.037***	0.035***
	(0.009)	(0.010)	(0.009)	(0.009)
Baseline covariates	no	yes	yes	yes
Ethnic covariates	no	no	yes	yes
Nature covariates	no	no	no	yes
Country (2016) FEs	yes	yes	yes	yes
Observations	566	566	566	566
Adjusted R^2	0.417	0.424	0.423	0.426

Notes: OLS models. Standard errors are clustered on the ethnic group level. Baseline controls consist in groups' population, area, distance to coast and navigable river. Nature controls consist of median altitude and slope, mean annual temperature, precipitation and evapotranspiration, the ratio of the two, agricultural suitability, and soils' suitability for cash crop production. Ethnic controls are the reliance on agriculture and pastoralism, as well as the intensity of agricultural activities. Significance codes: *p<0.1; **p<0.05; ***p<0.01.

B

APPENDIX TO POLYGYNOUS NEIGHBORS, EXCESS MEN, AND INTERGROUP CONFLICT IN RURAL AFRICA

B.1 DATA VALIDITY AND PESISTENCE

Kanazawa (2009) uses the coding of polygyny by Kanazawa and Still, 1999, which Gleditsch et al. (2011) replicate. Both base their coding of polygyny on the Encyclopedia of World Cultures (EWC) (Levinson, 1996), which has likely led to an underestimation of the number of polygynous ethnic groups. A closer look at the data of Gleditsch et al. (2011) reveals that the independent variable polygyny is highly zero-inflated, which does not resonate with the extant sociological, economic, and anthropological literature (cf. Fenske, 2015). The authors analyze 557 groups in 155 countries in the time period between 1946 and 2005. In 2002, the year in which their number of groups peaks, only six out of 192 African ethnic groups are coded as "polygynous."

We compare the data with other quantitative datasets measuring polygyny. One of the most comprehensive sources, which is also the one we rely on in our analysis, is Murdock's (1959) Ethnographic Atlas (EA) of more than 800 African ethnic groups. It reports that 80 percent of ethnic groups in Africa practiced general polygyny before European colonization. Dalton and Leung (2014, p. 613) test the persistence of polygyny as coded in Murdock's EA by using a pooled sample of 238,075 respondents from the Demographic and Health Survey (DHS) in Africa and find that polygyny rates are significantly higher in groups that were coded as polygynous by Murdock (1969) relative to those coded monogamous. In western Africa, Dalton and Leung (2014) find rates of female respondents living in polygynous marriages of up to 44 percent in Guinea, 21 percent in Togo, and 25 percent in Benin.

These figures not only suggest that polygyny is a persistent or "sticky" institution, which remains prevalent today, but also illustrate that polygyny can create severe competition among men. Furthermore, in a representative socioeconomic survey in eastern DR Congo conducted by one of the authors of this article in April 2017, 13 percent of male respondents reported having more than one wife.

These different, independent sources suggest a much higher rate of polygyny than what Gleditsch et al.'s (2011) polygyny variable reflects. Random examples support our suspicion that the coding falsely led to an exaggerated zero-inflation of polygyny. For instance, the Zulu in South Africa, the Dinka in South Sudan, and the Tiv in Nigeria are coded as not practicing polygyny, although they are documented as doing so (cf. Gwaza, 2014; Møller and Welch, 1990; Pinaud, 2014). This low number of polygynous groups in Gleditsch et al.'s (2011) analysis relative to the prevalence of polygyny across the African continent indicated by other data sources creates doubts about the reliability of the analysis.

B.2 CODING OF THE POLYGYNY VARIABLE

We rely on Nathan Nunn's (2011) dataset of the EA, but newly coded the polygyny variable. The reason for that is that in Nunn's dataset, Murdock's polygyny variable "Column 14: Family Organization" (p. 155, 156) (Murdock, 1959) misses some of Murdock's specifications. This applies for the three categories E, F, and G, which do not specify monogamy or polygyny, but rather the extent of the family:

Column 14: Family Organization. The prevailing form of domestic or familial organization is indicated by the following symbols:

E Large extended families, i.e., corporate aggregations of smaller family units occupying a single dwelling or a number of adjacent dwellings and normally embracing the families of procreation of at least two siblings or cousins in each of at least two adjacent generations.
F Small extended families, i.e., those normally embracing the families of procreation of only one individual in the senior generation but of at least two in the next generation. Such families usually dissolve on the death of the head.
G Minimal extended or "stem" families, i.e., those consisting of only two related families of procreation (disregarding polygamous unions), particularly of adjacent generations.
M Independent nuclear families with monogamy.
N Independent nuclear families with occasional or limited polygyny.
O Independent polyandrous families.
P Independent polygynous families, where polygyny is general and not reported to be preferentially sororal, and where co-wives are not reported to occupy separate dwellings or apartments.
Q The same as P except that co-wives typically occupy separate quarters.
R Independent polygynous families, where polygyny is common and preferentially sororal, and where co-wives are not reported to occupy separate quarters.
S The same as R except that co-wives typically occupy separate quarters.

For these three specifications (E, F, G) Murdock coded additional lower-case letters to indicate the monogamy/polygyny status which were not included in Nunn's dataset:

Lower-case letters from m to s, following E, F, or G, indicate the marital composition of the component familial units in extended families, e.g., Gm for stem families with monogamy.

We therefore recoded the variable to capture the monogamy/polygyny status for groups coded as E, F, or G by looking up the lower-case indicators (p. 170-233). For instance, on page 186, the table below shows that column 14 frequently adds these lower-case specifiers to indicate the monogamy/polygyny status, which can be referenced from column 14 of the coding scheme. Below, the red-marked values resulted that groups with "q" and "s" were coded as "polygynous", but groups with an "m" as monogamous.

TABLE A. *Continu*

1	3	7	12	14
Aj2	119: Masai	01090	B	Q
Aj3	120: Nuer	00154	B	Fq
Aj4	219: Lango	01045	B	Gq
Aj5	220: Turkana	21034	B	Fq
Aj6	318: Luo	01126	B	Fs
Aj7	319: Nandi	00055	B	N
Aj8	354: Bari	01045	Bs	Q
Aj9	648: Kipsigis	01045	B	Q
Aj11	677: Dinka	01153	B	Eq
Aj12	678: Lotuko	02134	B	Q
Aj15	1065: Kuku	01036	Bs	Q
Aj16	1066: Mondari	01225	B	N
Aj17	1067: Alur	01225	B	Fq
Aj18	1068: Bodi	02053	B	Gq
Aj19	1069: Didinga	02044	Bs	Q
Aj20	1070: Suri	01135	B	Q
Aj21	1071: Jie	00046	B	Eq
Aj23	1073: Plains Suk	01063	B	Q
Aj24	1074: Topotha	11053	B	Q
Aj26	1076: Hill Suk	01036	B	Q
Ca1	18: Konso	00046	O	Gq
Ca2	19: Somali	00091	B	Fq
Ca3	121: Tigrinya	00037	D	M
Ca4	221: Iraqw	00055	B	N
Ca5	320: Bisharin	00082	B	N
Ca6	649: Afar	10180	B	Fq
Ca7	679: Amhara	00136	O	Em

B.3 SUMMARY STATISTICS

Table 16: Summary Statistics

Variable	Mean	Std. Dev.	Min	Max	Observations
ACLED	6.110559	23.74971	0	428	805
ACLED, 50km buffer	4.626087	16.17621	0	268	805
UCDP-GED	3.643478	38.79774	0	1060	805
UCDP-GED, 50km buffer	2.650932	23.44966	0	610	805
Polygynous neighbors	.8011141	.296843	0	1	805
Observed group: polygynous	.7987578	. 4011779	0	1	805
Land area (log)	2.722613	1.27114	-1.44693	6.405068	805
Population (log)	11.56545	1.617259	4.069916	17.06716	805
Distance to coast	606.0628	432.8517	.216258	1721.298	805
Mean elevation	.6247487	.4302845	.0055083	2.029194	805
Agricultural suitability	.4095921	.2405186	.0013636	.9785454	805
Malaria stability index	.7515172	.359914	0	1	805
Precolonial kingdom	.3801242	.4857189	0	1	805
Distance to empires	.1723426	.2273959	0	1.23591	805
Major city in AD 1400	.0385093	.1925419	0	1	805
Precolonial conflict	.4028637	.3435089	0	2.241172	805
Slave exports by land (log)	1.600163	2.599606	0	10.62245	805
Muslims (%)	43.71484	33.30388	.4	100	805
Intense agriculture	.3167702	.4655062	0	1	805

B.4 ROBUSTNESS TESTS

B.4.1 *Matching*

Since coarsened exact matching (CEM) does not work with ratio variables such as ours, we have to create a binary treatment variable. We acknowledge that coding a ratio variable into a binary one is a somewhat arbitrary exercise, because there is no self-evident cutoff point.

To circumvent this problem, we only use observations with values in the lower half (0-50 percent shared borders) and the upper decile (90.1-100 percent) and we drop those in between. This leaves us with 622 observations (183 dropped) of which 137 are coded as untreated (0-50 percent) and 485 as treated (90.1-100 percent). We use a larger range for lower values for empirical reasons mainly, i.e., our variable is right-hand skewed, so we have to increase the number of control units. We believe this approach is theoretically justified, because the effect of polygynous neighbors accelerates at around 50 percent (see figure 5). We use the covariates of the parsimonious model land area (log), population (log), and precolonial conflict as well as the region dummies. We set the cutoff points for the continuous variables at the 25th, 50th, and the 75th percentile.

The L1 statistic as a measure for the joint balance between treatment and control group improves from 0.97 to 0.88. This is far from a perfect balance, but the improvement is significant. Due to the CEM procedure we lose 103 observations without common empirical support and remain with 519 observations (805 in the full sample). Next, we use the same regression set-up as in the main table, only that we use our matched sample and the binary treatment variable indicating that a group shares more than 90 percent of its borders with polygynous groups.

Table 17: Main Models including Spatial Lags and Region Fixed Effects

	(1) ACLED	(2) ACLED 50km buffer	(3) UCDP-GED	(4) UCDP-GED 50km buffer
Polygynous neighbors	1.84***	1.65***	2.20***	2.01***
	(0.50)	(0.46)	(0.60)	(0.51)
Observed group: polygynous	-0.39	-0.56*	0.19	-0.07
	(0.28)	(0.27)	(0.44)	(0.44)
Land area (log)	0.35***	0.21**	0.41***	0.31**
	(0.08)	(0.07)	(0.12)	(0.12)
Population (log)	0.59***	0.63***	0.71***	0.69***
	(0.05)	(0.05)	(0.14)	(0.13)
Precolonial conflict	0.79*	0.89*	1.47**	1.35***
	(0.36)	(0.36)	(0.46)	(0.40)
Distance to coast	0.00***	0.00***	0.00***	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Mean elevation	-0.43	-0.83*	-0.55	-0.89
	(0.35)	(0.36)	(0.67)	(0.61)
Agricultural suitability	0.89+	1.08*	2.63***	2.68***
	(0.46)	(0.46)	(0.56)	(0.54)
Malaria stability index	-0.61	-0.60	-3.23**	-3.19***
	(0.46)	(0.42)	(1.16)	(0.89)
Precolonial kingdom	-0.40*	-0.35*	-0.80*	-0.58+
	(0.17)	(0.17)	(0.33)	(0.35)
Distance to empires	-0.24	-0.58	-0.12	0.04
	(0.50)	(0.59)	(1.05)	(0.83)
Major city in AD 1400	-0.30+	-0.09	-0.67	-0.58
	(0.18)	(0.19)	(0.46)	(0.43)
Slave exports by land (log)	-0.09*	-0.08*	-0.18+	-0.14
	(0.04)	(0.04)	(0.10)	(0.10)
Muslims (%)	-0.01**	-0.01**	-0.01*	-0.01*
	(0.00)	(0.00)	(0.01)	(0.01)
Intense agriculture	0.14	0.16	-0.16	-0.15
	(0.19)	(0.17)	(0.29)	(0.28)
Region FE	Yes	Yes	Yes	Yes
Spatial lags	Yes	Yes	Yes	Yes
Pseudo R^2	0.133	0.136	0.123	0.122
AIC	3037.55	2828.85	1897.83	1815.54
BIC	3140.75	2932.05	2001.03	1918.74
Observations	805	805	805	805

Note: Outcome variable: number of conflict events per ethnic group territory.
Robust standard errors clustered by country.

$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table 18: Main Models with Outcome Variable cleaned of Conflicts between Ethnic Sub-Groups

	(1) UCDP-GED	(2) ACLED
Polygynous neighbors	2.07**	1.81***
	(0.79)	(0.41)
Observed group: polygynous	-0.42	-0.82**
	(0.41)	(0.30)
Land area (log)	0.70***	0.49***
	(0.16)	(0.08)
Population (log)	0.45*	0.51***
	(0.18)	(0.06)
Precolonial conflict	0.25	0.49
	(1.14)	(0.62)
Mean elevation	1.12	0.24
	(0.88)	(0.60)
Agricultural suitability	0.40	0.08
	(0.90)	(0.66)
Precolonial kingdom	-1.48***	-0.62**
	(0.28)	(0.22)
Distance to empires	-0.21	0.47
	(0.80)	(0.68)
Major city in AD 1400	-0.68	-0.68*
	(0.56)	(0.32)
Slave exports by land (log)	-0.15*	-0.13**
	(0.07)	(0.04)
Muslims (%)	0.02	0.21***
	(0.20)	(0.03)
Intense agriculture	-0.39	-0.29+
	(0.28)	(0.18)
Country FE	Yes	Yes
Pseudo R^2	0.179	0.158
AIC	1759.84	2833.09
BIC	1905.26	2917.53
Observations	805	805

Note: Outcome variable: number of conflict events per ethnic group territory. Robust standard errors clustered by country.

$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table 19: Main Models Using the EA's 3-Level Indicator for Polygyny

	(1)	(2)
	ACLED	UCDP-GED
Polygynous neighbors: Limited	0.99	0.89
	(0.69)	(1.73)
Polygynous neighbors: General	2.53***	2.75+
	(0.72)	(1.62)
Observed group: Limited Polygyny	0.10	0.99
	(0.76)	(1.57)
Observed group: General Polygyny	-0.66	0.45
	(0.75)	(1.51)
Land area (log)	0.50***	0.73***
	(0.08)	(0.15)
Population (log)	0.51***	0.43*
	(0.06)	(0.17)
Mean elevation	0.21	1.19
	(0.59)	(0.84)
Agricultural suitability	0.07	0.28
	(0.69)	(0.91)
Precolonial kingdom	-0.61**	-1.44***
	(0.20)	(0.25)
Distance to empires	0.37	-0.11
	(0.69)	(0.79)
Major city in AD 1400	-0.64*	-0.79
	(0.31)	(0.59)
Precolonial conflict	0.38	0.09
	(0.58)	(1.19)
Slave exports by land (log)	-0.13**	-0.15*
	(0.04)	(0.07)
Muslims (%)	0.21***	-0.24
	(0.03)	(0.20)
	-0.34*	-0.41
Intense agriculture	(0.17)	(0.27)
Country FE	Yes	Yes
Pseudo R^2	0.162	0.182
AIC	2931.96	1797.70
BIC	3021.08	1957.19
Observations	805	805

Note: Outcome variable: number of conflict events per ethnic group territory. Robust standard errors clustered by country.

$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table 20: State-Based Conflict Events as Outcome Variable

	(1) ACLED, state-based conflict	(2) UCDP-GED, state-based conflict
Observed group: polygynous	-0.31	-0.04
	(0.23)	(0.26)
Land area (log)	0.22*	0.15
	(0.10)	(0.13)
Population (log)	0.53***	0.73***
	(0.14)	(0.11)
Distance to coast	0.00*	0.00***
	(0.00)	(0.00)
Mean elevation	-0.56	-0.77
	(0.50)	(0.52)
Agricultural suitability	0.46	1.20
	(0.83)	(0.98)
Malaria stability index	-1.21*	-1.78**
	(0.48)	(0.69)
Precolonial kingdom	-0.14	0.44
	(0.25)	(0.35)
Distance to empires	-0.22	0.46
	(1.15)	(1.49)
Major city in AD 1400	0.40	-0.60
	(0.33)	(0.40)
Precolonial conflict	-0.38	-0.77
	(0.77)	(0.92)
Slave exports by land (log)	0.04	0.08
	(0.05)	(0.07)
Muslims (%)	0.22***	-0.37***
	0.(06)	(0.08)
Intense agriculture	0.02	0.13
	(0.29)	(0.29)
Country FE	Yes	Yes
Pseudo R^2	0.083	0.124
AIC	7426.51	4292.67
BIC	7492.18	4377.10
Observations	805	805

Note: Outcome variable: number of conflict events per ethnic group territory. Robust standard errors clustered by country.

$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table 21: Polygynous Neighboring Groups and Intergroup Conflict Events including Post-Treatment Variables

	(1) ACLED	(2) ACLED	(3) ACLED
Polygynous neighbors	1.71***	1.67***	1.71***
	(0.34)	(0.34)	(0.34)
Observed group: polygynous	-0.77**	-0.72**	-0.77**
	(0.26)	(0.26)	(0.26)
Polity (1990-95) avg.	0.01		0.16***
	(0.04)		(0.05)
Polity up >2 (1990-95)	-1.92+		-3.18**
	(0.99)		(1.00)
GDPpc (1990/95) %change	0.03***		0.12***
	(0.01)		(0.02)
Legal polygamy		-2.33**	-0.14
		(0.84)	(0.49)
Customary law polygamy		0.56	-1.86***
		(0.47)	(0.17)
Women stats scale		1.12*	
		(0.44)	
Muslims (%)	0.11***	-0.15+	0.17***
	(0.03)	(0.08)	(0.03)
Intense agriculture	-0.42**	-0.42**	-0.42**
	(0.16)	(0.15)	(0.16)
Country FE	Yes	Yes	Yes
Geographic controls	Yes	Yes	Yes
Historical controls	Yes	Yes	Yes
Pseudo R^2	0.152	0.163	0.152
AIC	2715.32	2876.89	2715.32
BIC	2794.11	2961.03	2794.11
Observations	761	792	761

Note: Outcome variable: number of conflict events per ethnic group territory. Robust standard errors clustered by country.

$^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

Further Information: Since we use a cross-section, we calculate 5-year-averages for time-varying variables prior to our outcome variable intergroup conflict events. In particular, we calculate the average of the polity score for the period 1990 to 1995 (polity (1990-95) avg.), a dummy which indicates three or more polity-point increases (polity up >2) and decreases (polity down >2). We also add the percentage change of GDP per capita between 1990 and 1995 (GDPpc (1990/95) % change). The variables for legal polygamy, customary law polygamy and the WomanStats scale are static and do not require any transformation. Note also that when using UCDP-GED as outcome variable, the model did not converge.

Table 22: Polygynous Neighboring Groups and Intergroup Conflict Events using the Number of Polygynous Neighbors (instead of the Percentage of Shared Border)

	(1) ACLED	(2) ACLED	(3) ACLED 50km buffer	(4) ACLED 50km buffer
Polygynous neighbors (number)	0.11**	0.07*	0.12**	0.08**
	(0.04)	(0.03)	(0.04)	(0.03)
Observed group: polygynous	-0.52	-0.28	-0.58	-0.37
	(0.38)	(0.26)	(0.36)	(0.25)
Land area (log)	0.20+	0.27***	0.01	0.08
	(0.11)	(0.07)	(0.12)	(0.08)
Population (log)	0.44***	0.53***	0.49***	0.59***
	(0.08)	(0.06)	(0.09)	(0.08)
Precolonial conflict	0.83	0.23	0.85	0.22
	(0.56)	(0.50)	(0.53)	(0.52)
Distance to coast		0.00		0.00
		(0.00)		(0.00)
Lake indicator		0.58+		0.58+
		(0.35)		(0.35)
River indicator		-0.22		-0.24
		(0.21)		(0.21)
Mean elevation		-0.48		-0.57
		(0.64)		(0.66)
Agricultural suitability		0.25		0.21
		(0.65)		(0.61)
Malaria stability index		-0.42		-0.28
		(0.69)		(0.68)
Precolonial kingdom		-0.47*		-0.47*
		(0.21)		(0.20)
Distance to empires		0.60		0.74
		(0.59)		(0.69)
Major city in AD 1400		-0.62*		-0.46
		(0.29)		(0.28)
Slave exports by land (log)		-0.10*		-0.10*
		(0.04)		(0.05)
Muslims (%)		0.25***		0.12***
		(0.04)		(0.03)
		-0.45**		-0.42**
Intense agriculture		(0.16)		(0.15)
Country FE	Yes	Yes	Yes	Yes
Pseudo R^2	0.147	0.163	0.141	0.157
AIC	2969.36	2933.84	2789.41	2760.12
BIC	3020.96	3032.35	2841.01	2858.63
Observations	805	805	805	805

$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

Note: Outcome variable: number of conflict events per ethnic group territory.
Robust standard errors clustered by country.
Note that when using UCDP-GED as outcome variable, the model did not converge.

Table 23: Polygynous Neighboring Groups and Intergroup Conflict Events using the Matched Sample

	(1) ACLED	(2) UCDP-GED
Polygynous neighbors (>90%)	1.37***	2.81***
	(0.26)	(0.44)
Observed group: polygynous	-0.47	0.04
	(0.49)	(0.41)
Land area (log)	0.34***	0.36+
	(0.10)	(0.20)
Population (log)	0.54***	0.79***
	(0.11)	(0.17)
Precolonial conflict	0.32	1.97**
	(0.76)	(0.71)
Distance to coast	0.00	0.00**
	(0.00)	(0.00)
Mean elevation	-0.63	-0.64
	(0.69)	(1.00)
Agricultural suitability	0.24	2.19**
	(0.77)	(0.82)
Malaria stability index	-0.36	-2.85***
	(1.03)	(0.70)
Precolonial kingdom	0.02	-0.21
	(0.31)	(0.38)
Distance to empires	1.52+	1.88+
	(0.80)	(1.05)
Major city in AD 1400	-0.56	-0.36
	(0.38)	(0.59)
Slave exports by land (log)	-0.11**	-0.25**
	(0.04)	(0.08)
Muslims (%)	0.39***	-0.01
	(0.04)	(0.01)
Intense agriculture	-0.37	-0.20
	(0.34)	(0.45)
Country FE	Yes	No
Region FE	No	Yes
Pseudo R^2	0.186	0.141
AIC	1856.62	1186.26
BIC	1945.91	1275.55
Observations	519	519

$^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

Note: Outcome variable: number of conflict events per ethnic group territory. Robust standard errors clustered by country.

Note that we had to change country FE to region FE in model 2 to allow the model to converge with the reduced sample size.

B.5 MECHANISM

Table 24: Effect of Polygyny on Individual-Level Attitudes

	Men below 40 years without children		*Men above 40 years*		*Women*	
	(1)	(2)	(3)	(4)	(5)	(6)
	Perceived inequality	Violence justified	Perceived inequality	Violence justified	Perceived inequality	Violence justified
Member of polygynous group	0.28*	0.10*	-0.02	-0.01	0.10*	-0.00
	(0.12)	(0.04)	(0.07)	(0.02)	(0.04)	(0.02)
Age	0.07	-0.02	-0.00	-0.01	-0.00	-0.00+
	(0.05)	(0.02)	(0.01)	(0.00)	(0.00)	(0.00)
Age2	-0.00	0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Education level	0.01	0.02*	-0.04***	0.01+	-0.01+	0.01***
	(0.02)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)
Assets	0.00	-0.00	0.03+	0.00	0.01	0.01+
	(0.03)	(0.01)	(0.02)	(0.01)	(0.01)	(0.00)
Urban	0.18**	-0.01	0.16***	-0.01	0.09***	-0.01
	(0.06)	(0.02)	(0.04)	(0.01)	(0.02)	(0.01)
Observations	1406	1481	3615	3842	9484	10217
AIC	4103.25	1743.59	10802.97	3738.81	28058.57	10443.26
BIC	4139.99	1780.69	10846.32	3782.58	28108.67	10493.88

Note: Linear model with robust standard errors in parentheses.

+p<0.1; *p<0.05; **p<0.01; ***p<0.001

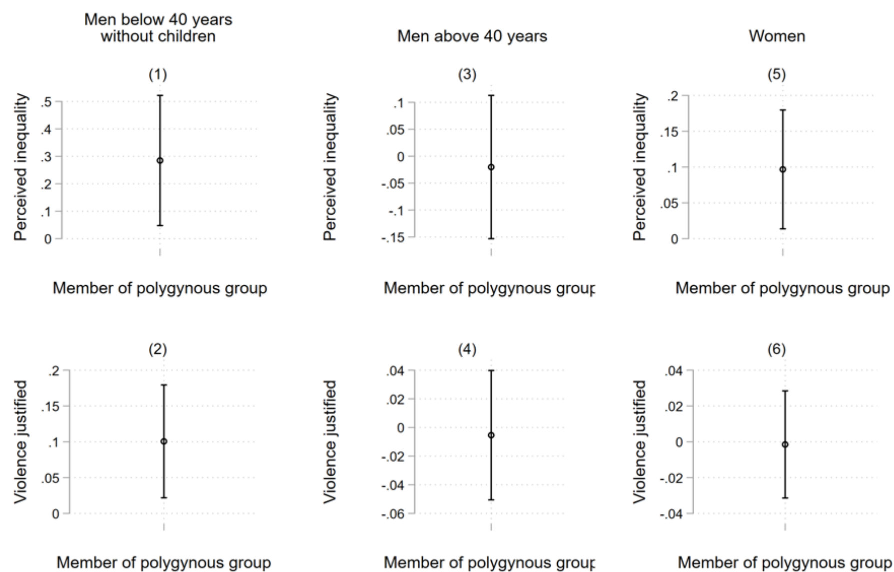

Figure 23: Effect of Polygyny on Individual-Level Attitudes (First Differences).

C

APPENDIX TO TRADITIONAL AUTHORITIES, NORM COLLISIONS, AND COMMUNAL CONFLICT

C.1 SUMMARY STATISTICS

Table 25: Summary Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Communal Conflict (log +1)	10,208	.046	.272	0	3.664
Spatial Lag	10,208	.245	1.094	0	25
Policing Capacity	10,208	1.716	1.143	0	3
No. Of Subgroups	10,208	1.568	377	0	43
Jurisdictional Conflict	10,092	146	1.070	0	3
Constitutional Regulation	6,971	.187	.189	0	1
Status Included (EPR)	9,469	.422	.494	0	1
Any TG	10,208	.818	.386	0	1
Capital Distance (km, log)	9,874	6.133	.945	3.171	8.684
Populations size (log)	9,593	1.361	2.002	6.218	1.942
Settlement Area (km^2, log)	10,208	1.042	1.880	0	1.509
Night Light Density (log)	9,127	9.031	266.976	1.19e-07	1.559
Democracy (V-Dem)	9,579	.290	.180	.037	.878
Colonial Past	10,208	.540	.498	0	1
TG Population Share	10,208	.533	.388	0	.993
Rebellion Incidence	9,961	.048	.213	0	1
Year	10,208	2003	837	1989	2017

C.2 MATCHING PROCEDURE EPR2TRADGOV

As the population in this study are politically relevant ethnic groups as coded in the Ethnic Power Relations data (Cederman, Wimmer, and Min, 2010), the survey data had to be matched to the EPR list. The survey is based on an open-ended list population of groups. The baseline population are from the All Minorities at Risk group list of socially relevant groups (Birnir et al., 2015) and the EPR. However, experts could make additions for groups they have expertise on.

Where possible groups were matched 1:1, i.e., an EPR group directly corresponded to the group in the TradGov group data. For instance, the Ternate in Indonesia were a direct match. Sometimes,

however, several groups in the survey matched to one EPR group, resulting in a 1:many match. Two possible scenarios are 1:many matches. First, sometimes survey answers were only available for subgroups of the EPR group, for instance, in the case of the Luhya in Kenya, where survey answers for eight subgroups were obtained, but no answer for the aggregate group. In such instances, I aggregated the subgroups from the survey to build one category in the final dataset.

Second, the EPR sometimes aggregates several groups into one category. As an example, for the EPR group "Hausa-Fulani and Muslim Middle Belt" in Nigeria, the survey included three distinct answers for each, the Hausa, the Fulani, and the Middle Belt. In consequences, there were 1:many groups for 66 EPR groups (17.6 percent), i.e., several groups from the survey had to be aggregated. There were no instances of many:1 matches in which more EPR groups had to be aggregated into one TradGov group.

For the 66 EPR group, I take the (rounded) median value to code the variable for the population in this paper. Research on the aggregation of expert knowledge suggests that more complicated aggregation techniques, such as Bayesian shrinkage models or principle components, may only modestly improve simple mean aggregation strategies (Maestas, 2016).

C.3 SURVEY ITEMS

ANY TRADITIONAL GOVERNANCE: Does the group X in country Y currently have any form of traditional/indigenous/native organization?

E.g. chiefs, elders, customary courts or rules and regulations such as customary land administration and customary jurisdiction.

It might be the case that the group consists of several subgroups, families, clans or other smaller entities. Nevertheless, try to answer this question for the entire group. Furthermore, we do not consider non-governmental organizations, interest groups, or political parties as traditional authorities.

- Yes
- No

POLICING CAPACITY

DISPUTE RESOLUTION CAPACITY: How would you rate the capacity of the traditional organization (leaders, bodies, and rules) to settle disputes among the group X?

- Perfectly capable to settle disputes
- Highly capable to settle disputes
- Moderately capable to settle disputes
- Hardly capable to settle disputes
- Incapable to settle disputes
- I do not know

SECURITY CAPACITY: How would you rate the capacity of the traditional organization (leaders, bodies, and rules) to ensure security, peace and order among the group X?

- Perfectly capable to ensure security
- Highly capable to ensure security
- Moderately capable to ensure security
- Hardly capable to ensure security
- Incapable to ensure security
- I do not know

JURISDICTIONAL CONFLICT

DISPUTE SETTLEMENT Sometimes there is disagreement over who is responsible for dispute settlement between the traditional organization and state authorities. To your knowledge, how often do these conflicts currently occur for the group X?

- Always
- Often
- Sometimes
- Rarely
- Never
- I do not know

SECURITY Sometimes there is disagreement over who is responsible for providing security, peace, and order between the traditional organization and state authorities. To your knowledge, how often do these conflicts currently occur for the group X?

- Always

- Often
- Sometimes
- Rarely
- Never
- I do not know

C.4 COMPONENTS OF CONSTITUTIONAL REGULATION INDEX

TRADITIONAL LEADERS Are traditional leaders mentioned in the constitution, which have authority over a part of the population?

TRADITIONAL BODIES Are there traditional political bodies mentioned in the constitution, which have authority over a part of the population?

MORE THAN ONE LEADER/BODY Does the constitution mention more than one traditional political body and/or leader, which has authority over a part of the population (e.g., chief and house of chiefs)?

CUSTOMARY COURTS Are customary/traditional dispute resolution mechanisms mentioned in the constitution?

CUSTOMARY LAW Is customary, traditional law, and/or customary right recognized by the constitution?

ESTABLISHMENT OF TRADITIONAL BODIES Are there authoritative bodies/ councils/ institutions established in the constitution which apply to parts of the population / only to ID group(s)?

SPECIFICATION OF THE PROCESS FOR THE COMPOSITION OF TPI Is any process for the composition of any TPI regulated/ mentioned in the constitution?

NO SANCTIONING OF TPI BY THE STATE Does the constitution forbid or does explicitly not allow for removal or sanction of traditional leaders by official side (government, parliament, courts) or by non-traditional means?

SANCTIONING OF TPI Does the constitution allow for removal or sanction of traditional leaders by official side (government, parliament, courts) or by non-traditional means?

prohibited representation Does the constitution forbid any traditional leader/s which apply to an id group/ sub-part of the population to hold office in (a) particular state organ(s)?

prohibited partisanship Does the constitution forbid any traditional leader/s to engage in partisan politics?

prohibitions for tpi Are there any other prohibitions and or proscriptions in connection to traditional political organs and/or traditional leaders mentioned in the constitution?

natural resource and land management Does the constitution grant traditional leaders or bodies a function related to Natural Resource Management and Land administration?

customary cultural functions Does the constitution grant traditional leaders or a function related to customs and culture?

intermediary function Does the constitution grant traditional leaders or bodies a function as intermediaries between state and community?

representation in organs by tpi Does the constitution state that traditional leaders or bodies are entitled to have a seat in any state organ?

shared responsibilities for administration Does the constitution grant traditional leaders or bodies a role in governance and administration in cooperation with state authorities?

exclusive administration functions by tpi Does the constitution grant traditional leaders or bodies the right to self-determined/ autonomous administration and governance?

security and public order function by tpi Does the constitution grant traditional leaders or bodies a function related to security and public order?

advisory function by tpi Does the constitution state that traditional leaders or bodies can give/ can be asked for advice within a decision-making process?

consultative function by tpi Does the constitution state that traditional leaders or bodies have to be mandatorily consulted within a decision-making process?

veto power by tpi Does the constitution provide for a "veto right"/ need of affirmation for traditional political organs and/or traditional leaders concerning a matter other than their own organization?

appointment function by tpi Does the constitution grant traditional leaders or a function related to the appointment / nomination /designation of certain people for offices?

shared competences in jurisdiction and dispute settlement Does the constitution grant traditional leaders or bodies a role in jurisdiction (judicial decisions and implementation) in cooperation with state authorities/ courts?

self-determined jurisdiction and dispute settlement by tpi Does the constitution grant traditional leaders or bodies the right to self-determined/autonomous jurisdiction (judicial decisions and implementation) and/ or dispute settlement within their communities and among themselves?

development by tpi Does the constitution grant traditional leaders or bodies a function related to Socio-Economic Development?

economic administration by tpi Does the constitution grant traditional leaders or a function related to the administration of assets, financial services?

constitutional constraints for tpi Are the traditional political organs /and or leaders constrained by the constitution?

secondary law constraints for tpi Are the traditional political organs /and or leaders constrained by the secondary law?

customary law constraints for tpi Are the traditional political organs /and or leaders constrained by the customary law?

human rights and international law constraints Are the traditional political organs /and or leaders constrained by the Human Rights and/or International Law?

financial support for tpi for a sub-part of the population Does the constitution mention that traditional political organs and/or traditional leaders get direct financial support from the State?

TAX POWER BY TPI FOR A SUB-PART OF THE POPULATION Does the constitution mention that traditional political organs and/or traditional leaders have power to levy taxes or fees?

REVENUES FROM NATURAL RESOURCES EXPLOITATION FOR TPI Does the constitution mention that traditional political organs and/or traditional leaders have a right to receive revenues from natural resources exploitation/land?

CONFLICT RESOLUTION BETWEEN TPI Does the constitution mention how conflicts between traditional leaders or bodies are resolved?

SPECIFICATION OF COLLISION RULES FOR CUSTOMARY LAW e.g. customary law can be applied as long as it does not contradict the principles of this constitution

SECONDARY LAW CONSTRAINTS FOR CUSTOMARY LAW Is customary law restricted by national law other than the constitution (and is thus subordinated to secondary law).

SOCIAL RIGHTS FOR INDIGENOUS GROUPS Does the constitution mention any social rights in connection with indigenous groups? Social rights refer to the term "social rights" itself, but also to more specific rights connected to family matters, inheritance, health rights, etc.

ECONOMIC RIGHTS FOR INDIGENOUS GROUPS Economic rights refer to the term "economic rights" itself, but also to more specific rights connected to property, land, etc.

LAND RIGHTS FOR INDIGENOUS GROUPS FOR INDIGENOUS GROUPS Does the constitution mention any rights and duties on land for indigenous groups?

RESERVATIONS FOR INDIGENOUS GROUPS Does the constitution mention the existence of areas that are inhabited by (a) indigenous group(s)?

POLITICAL RIGHTS FOR INDIGENOUS GROUPS Political rights refer to the term "political rights" itself, but also to more specific rights connected to election, representation, assembly of identity groups.

SELF-GOVERNANCE OF INDIGENOUS GROUPS Does the constitution mention that indigenous groups are granted the right to autonomy/ self-determination/ self-governance (either territorially or for a specific policy field)?

C.5 ROBUSTNESS TESTS

Table 26: Log-Linear Mixed Effects Models of Communal Conflict, 1989-2017, TG Population ⩾ 5%

	(1)	(2)	(3)	(4)	(5)	(6)
Supergroup Policing Capacity	−0.005	−0.01**	0.03***	−0.005	0.01	−0.005
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
No. of Subgroups	0.01***	−0.01**	0.01***	0.01***	0.01***	0.01***
	(0.002)	(0.01)	(0.002)	(0.003)	(0.002)	(0.002)
Supergroup Policing Capacity X		0.01***				
No. of Subgroups		(0.002)				
Supergroup Policing Capacity X			−0.16***			
Constitutional Regulation			(0.03)			
No. of Subgroups X				−0.01		
Constitutional Regulation				(0.01)		
Supergroup Policing Capacity X					−0.02***	
Supergroup Political Inclusion (EPR)					(0.01)	
No. of Subgroups X						0.01***
Supergroup Political Inclusion (EPR)						(0.003)
Constitutional Regulation	−0.03	−0.05	0.29***	−0.02	−0.03	−0.03
	(0.07)	(0.06)	(0.09)	(0.07)	(0.06)	(0.06)
Supergroup Political Inclusion	−0.01	−0.01	−0.01	−0.01	0.04*	−0.03*
(EPR)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Any TG	−0.06***	−0.04**	−0.06***	−0.06***	−0.06***	−0.06***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Capital Distance (log)	0.02***	0.02***	0.03***	0.02***	0.02**	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Population Size (log)	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Settlement Area (km^2, log)	0.01**	0.01**	0.01	0.01**	0.01**	0.01**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Night Light Density (log)	−0.01	−0.01	−0.004	−0.01	−0.01	−0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Democracy	0.005	0.01	0.01	0.004	0.002	0.001
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Colonial Past	0.01	0.01	0.01	0.01	0.01	0.004
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
TG Population Share	0.07	0.06	0.07	0.07	0.07	0.06
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Rebellion Incidence	0.01	0.01	0.005	0.01	0.01	0.001
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Spatial Lag	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
σ^2	0.080	0.080	0.079	0.080	0.080	0.080
N_{state}	73	73	73	73	73	73
N_{year}	29	29	29	29	29	29
ICC_{state}	0.126	0.111	0.136	0.127	0.123	0.107
ICC_{year}	0.001	0.001	0.001	0.001	0.001	0.002
Observations	5,307	5,307	5,307	5,307	5,307	5,307
R^2	.173	.174	.179	.173	.174	.173

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

Table 27: Log-Linear Mixed Effects Models of Communal Conflict, 1989-2017, Non-African Groups

	(1)	(2)	(3)	(4)	(5)	(6)
Supergroup Policing Capacity	−0.002	−0.0000	0.03***	−0.002	0.01	−0.002
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
No. of Subgroups	0.0002	0.004	0.001	−0.001	0.0000	0.0002
	(0.001)	(0.01)	(0.001)	(0.002)	(0.001)	(0.001)
Supergroup Policing Capacity X		−0.002				
No. of Subgroups		(0.003)				
Supergroup Policing Capacity X			−0.22***			
Constitutional Regulation			(0.03)			
No. of Subgroups X				0.004		
Constitutional Regulation				(0.01)		
Supergroup Policing Capacity X					−0.03***	
Supergroup Political Inclusion (EPR)					(0.01)	
No. of Subgroups X						0.0004
Supergroup Political Inclusion (EPR)						(0.01)
Constitutional Regulation	0.04	0.04	0.41***	0.03	0.04	0.04
	(0.04)	(0.04)	(0.07)	(0.05)	(0.04)	(0.04)
Supergroup Political Inclusion	0.01	0.01	0.004	0.01	0.06***	0.01
(EPR)	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)
Any TG	−0.04**	−0.04**	−0.04***	−0.04**	−0.03**	−0.04**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Capital Distance (log)	0.03***	0.03***	0.03***	0.03***	0.02***	0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Population Size (log)	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Settlement Area (km^2, log)	0.0004	0.001	0.002	0.001	0.001	0.0004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)
Night Light Density (log)	−0.001	−0.001	−0.001	−0.001	−0.001	−0.001
	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)
Democracy	0.05	0.05	0.06	0.06	0.06	0.05
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Colonial Past	0.03*	0.03*	0.03	0.03*	0.03	0.03*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
TG Population Share	0.07**	0.07**	0.06**	0.07**	0.09***	0.07**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Rebellion Incidence	−0.05**	−0.05**	−0.05***	−0.05**	−0.04**	−0.05**
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Spatial Lag	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
σ^2	0.057	0.057	0.056	0.057	0.056	0.057
N_{state}	58	58	58	58	58	58
N_{year}	29	29	29	29	29	29
ICC_{state}	0.035	0.035	0.051	0.035	0.033	0.036
ICC_{year}	0.000	0.000	0.000	0.000	0.000	0.000
Observations	3,613	3,613	3,613	3,613	3,613	3,613
R^2	.111	.111	.130	.111	.114	.111

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

Table 28: Log-Linear Mixed Effects Models of Communal Conflict, 1989-2017, Dispute Resolution

	(1)	(2)	(3)	(4)
Dispute Resolution Capacity	-0.01^{**}	-0.02^{***}	0.02^{**}	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)
No. of Subgroups	0.01^{***}	-0.01	0.01^{***}	0.01^{***}
	(0.001)	(0.01)	(0.001)	(0.001)
Dispute Resolution Capacity X		0.01^{***}		
No. of Subgroups		(0.002)		
Dispute Resolution Capacity X			-0.15^{***}	
Constitutional Regulation			(0.02)	
Dispute Resolution Capacity X				-0.01
Supergroup Political Inclusion (EPR)				(0.01)
Constitutional Regulation	-0.04	-0.04	0.30^{***}	-0.04
	(0.06)	(0.06)	(0.08)	(0.06)
Supergroup Political Inclusion	-0.02	-0.02	-0.02^{*}	0.01
(EPR)	(0.01)	(0.01)	(0.01)	(0.02)
Any TG	-0.03^{*}	-0.02	-0.04^{***}	-0.03^{*}
	(0.02)	(0.02)	(0.02)	(0.02)
Capital Distance (log)	0.02^{***}	0.02^{***}	0.02^{***}	0.02^{**}
	(0.01)	(0.01)	(0.01)	(0.01)
Population Size (log)	0.03^{***}	0.03^{***}	0.03^{***}	0.03^{***}
	(0.005)	(0.005)	(0.005)	(0.005)
Settlement Area (km^2, log)	0.01^{**}	0.01^{**}	0.01^{*}	0.01^{**}
	(0.004)	(0.004)	(0.004)	(0.004)
Night Light Density (log)	-0.01^{*}	-0.01	-0.004	-0.01^{*}
	(0.003)	(0.003)	(0.003)	(0.003)
Democracy	-0.02	-0.02	-0.01	-0.02
	(0.05)	(0.05)	(0.05)	(0.05)
Colonial Past	0.01	0.01	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.03)
TG Population Share	0.08^{**}	0.08^{**}	0.07^{*}	0.09^{**}
	(0.04)	(0.04)	(0.04)	(0.04)
Rebellion Incidence	0.01	0.003	0.001	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Spatial Lag	0.02^{***}	0.02^{***}	0.02^{***}	0.02^{***}
	(0.004)	(0.004)	(0.004)	(0.004)
(Intercept)	-0.50^{***}	-0.51^{***}	-0.57^{***}	-0.50^{***}
	(0.07)	(0.07)	(0.07)	(0.07)
σ^2	0.068	0.068	0.067	0.068
N_{state}	97	97	97	97
N_{year}	29	29	29	29
ICC_{state}	0.127	0.137	0.139	0.127
ICC_{year}	0.002	0.002	0.002	0.002
Observations	5,914	5,914	5,914	5,914
R^2	.181	.184	.189	.182

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Table 29: Log-Linear Mixed Effects Models of Communal Conflict, 1989-2017, Security

	(1)	(2)	(3)	(4)
Security Capacity	0.002	−0.002	0.02***	0.01**
	(0.004)	(0.004)	(0.01)	(0.01)
No. of Subgroups	0.01***	0.004*	0.01***	0.01***
	(0.001)	(0.002)	(0.001)	(0.001)
Security Capacity X		0.003***		
No. of Subgroups		(0.001)		
Security Capacity X			−0.07***	
Constitutional Regulation			(0.02)	
Security Capacity X				−0.02**
Supergroup Political Inclusion (EPR)				(0.01)
Constitutional Regulation	−0.04	−0.04	0.07	−0.04
	(0.05)	(0.05)	(0.06)	(0.05)
Supergroup Political Inclusion	−0.01	−0.01	−0.01	0.01
(EPR)	(0.01)	(0.01)	(0.01)	(0.02)
Any TG	−0.06***	−0.06***	−0.06***	−0.06***
	(0.01)	(0.01)	(0.01)	(0.01)
Capital Distance (log)	0.02**	0.02**	0.02***	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)
Population Size (log)	0.03***	0.03***	0.03***	0.03***
	(0.005)	(0.005)	(0.005)	(0.005)
Settlement Area (km^2, log)	0.01**	0.01**	0.01*	0.01*
	(0.004)	(0.004)	(0.004)	(0.004)
Night Light Density (log)	−0.01	−0.01*	−0.005	−0.01
	(0.003)	(0.003)	(0.003)	(0.003)
Democracy	−0.01	−0.01	−0.01	−0.01
	(0.05)	(0.05)	(0.05)	(0.05)
Colonial Past	0.01	0.01	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.03)
TG Population Share	0.08**	0.08**	0.07**	0.08**
	(0.03)	(0.03)	(0.04)	(0.03)
Rebellion Incidence	0.01	0.01	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Spatial Lag	0.03***	0.03***	0.03***	0.03***
	(0.005)	(0.004)	(0.005)	(0.005)
(Intercept)	−0.47***	−0.45***	−0.50***	−0.46***
	(0.07)	(0.07)	(0.07)	(0.07)
σ^2	0.072	0.072	0.072	0.072
N_{state}	98	98	98	98
N_{year}	29	29	29	29
ICC_{state}	0.110	0.104	0.115	0.108
ICC_{year}	0.001	0.001	0.001	0.001
Observations	5,901	5,901	5,901	5,901
R^2	.174	.175	.177	.175

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

Table 30: Log-Linear Mixed Effects Models of Communal Conflict, 1989-2017, Outlier Excluded

	(1)	(2)	(3)	(4)	(5)	(6)
Supergroup Policing Capacity	−0.001	−0.01**	0.01**	−0.001	0.001	−0.0004
	(0.004)	(0.005)	(0.01)	(0.004)	(0.01)	(0.004)
No. of Subgroups	0.01***	−0.01***	0.01***	0.01***	0.01***	0.01***
	(0.001)	(0.004)	(0.001)	(0.002)	(0.001)	(0.001)
Supergroup Policing Capacity X		0.01***				
No. of Subgroups		(0.002)				
Supergroup Policing Capacity X			−0.06***			
Constitutional Regulation			(0.02)			
No. of Subgroups X				−0.01		
Constitutional Regulation				(0.01)		
Supergroup Policing Capacity X					−0.004	
Supergroup Political Inclusion (EPR)					(0.01)	
No. of Subgroups X						0.01***
Supergroup Political Inclusion (EPR)						(0.002)
Constitutional Regulation	−0.03	−0.04	0.10	−0.02	−0.03	−0.02
	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)
Supergroup Political Inclusion	−0.001	−0.002	−0.003	−0.002	0.01	−0.02**
(EPR)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Any TG	−0.03**	−0.01	−0.03**	−0.03**	−0.03**	−0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Capital Distance (log)	0.01*	0.01*	0.01**	0.01**	0.01*	0.01**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Population Size (log)	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Settlement Area (km^2, log)	0.003	0.004	0.002	0.003	0.003	0.003
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Night Light Density (log)	−0.01**	−0.01**	−0.01*	−0.01**	−0.01**	−0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Democracy	−0.02	−0.02	−0.02	−0.02	−0.02	−0.03
	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.04)
Colonial Past	0.005	0.003	0.01	0.01	0.005	0.002
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
TG Population Share	0.06*	0.06*	0.06*	0.06*	0.06**	0.06*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Rebellion Incidence	0.03**	0.03*	0.03*	0.03**	0.03**	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Spatial Lag	0.03***	0.03***	0.03***	0.03***	0.03***	0.02***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
(Intercept)	−0.29***	−0.29***	−0.32***	−0.30***	−0.29***	−0.26***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
σ^2	0.053	0.053	0.053	0.053	0.053	0.053
N_{state}	98	98	98	98	98	98
N_{year}	29	29	29	29	29	29
ICC_{state}	0.132	0.115	0.137	0.133	0.132	0.108
ICC_{year}	0.000	0.000	0.000	0.000	0.000	0.000
Observations	5,973	5,973	5,973	5,973	5,973	5,973
R^2	.176	.179	.178	.177	.176	.177

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

C.6 MECHANISM: NO. OF SUBGROUPS AND JURISDICTIONAL CONFLICT

Table 31: Linear Mixed Effects Models of Jurisdictional Conflict and No. of Subgroups, 2014

	(1)	(2)	(3)	(4)	(5)	(6)
No. of Subgroups	−0.01	−0.03**	−0.02	−0.02	−0.01	−0.02
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
No. of Subgroups X			0.01	−0.03		
Constitutional Regulation			(0.08)	(0.07)		
No. of Subgroups X					−0.01	−0.02
Supergroup Political Inclusion (EPR)					(0.03)	(0.03)
Constitutional Regulation		−0.09	0.13	−0.002		−0.10
		(0.25)	(0.36)	(0.31)		(0.25)
Supergroup Political Inclusion		−0.27**		−0.28**	0.04	−0.24*
(EPR)		(0.12)		(0.12)	(0.13)	(0.13)
Supergroup Policing Capacity		0.53***		0.53***		0.53***
		(0.06)		(0.06)		(0.06)
Capital Distance (log)		−0.11*		−0.11*		−0.11*
		(0.07)		(0.07)		(0.07)
Population Size (log)		0.03		0.03		0.03
		(0.04)		(0.04)		(0.04)
Settlement Area (km^2, log)		0.02		0.02		0.01
		(0.04)		(0.04)		(0.04)
Night Light Density (log)		0.01		0.01		0.01
		(0.03)		(0.03)		(0.03)
Democracy		0.16		0.15		0.16
		(0.34)		(0.34)		(0.34)
Colonial Past		−0.13		−0.13		−0.12
		(0.12)		(0.12)		(0.12)
TG Population Share		0.13		0.12		0.15
		(0.18)		(0.18)		(0.18)
(Intercept)	1.84***	0.82	1.81***	0.84	1.83***	0.78
	(0.07)	(0.58)	(0.09)	(0.58)	(0.09)	(0.58)
σ^2	0.728	0.580	0.730	0.582	0.735	0.582
N_{state}	90	86	90	86	89	86
ICC_{state}	0.104	0.030	0.107	0.029	0.103	0.027
Observations	284	272	285	272	279	272
R^2	.278	.334	.277	.333	.272	.333

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

D

APPENDIX TO SECURING A STATE: TRADITIONAL AUTHORITIES AND STRATEGIES IN DEMANDS FOR SELF-DETERMINATION

D.1 SUMMARY STATISTICS

Table 32: Summary Statistics

Variable	*Obs*	*Mean*	*Std. Dev.*	*Min*	*Max*
Nonconventional Strategy	876	.349	.477	0	1
Strategy Type	876	.871	1.249	0	3
Traditional Authority	1,166	.481	.500	0	1
High Accountability	1,199	.239	.426	0	1
Multiparty Elections	1,044	.055	.506	-2.225	.424
Constitutional Commitment	1,077	.737	.807	0	2
Independence Claim	1,035	.786	.410	0	1
Group Share (log+1)	1,199	.078	.093	.000	.450
Number of Self-determination groups (log)	1,199	.912	.779	0	2.484
Colonial Past	1,199	.468	.499	0	1
Economic Differential	1,040	3.112	1.350	.25	9
Excluded Group (EPR)	1,132	.657	.475	0	1

D.2 SURVEY ITEMS

D.2.1 *Traditional Authority*

Which forms of traditional/ indigenous/ native organization does the group X in country Y have? *It may be the case that there is more than one leader or body for group X. Please tick all the boxes that apply.*

LEADERS: If there are leaders of one category on more than one hierarchical level (e.g. chiefs and sub- chiefs), please make use of the 'other' options to differentiate between these leaders.

- King/ Queen/ Paramount chief/ Emir
- Chief/ Khan/ Ariki/ Jif
- Headman/ Bandleader
- Traditional/ Indigenous/ Native judge
- Traditional/ Indigenous/ Native healer
- Traditional/ Indigenous/ Native spiritual leader
- Other, namely (1)...
- Other, namely (2)...
- Other, namely (3)...
- No leader (acephalous)

TRADITIONAL/INDIGENOUS/NATIVE BODIES AND RULES OF THE GROUP X:

- Council of elders
- King's council
- Traditional/Indigenous/Native (village) assembly
- Traditional/Indigenous/Native dispute resolution mechanisms and/or courts
- Traditional/ Indigenous/ Native customary rules and norms
- Other, namely (1)...
- Other, namely (2)...
- Other, namely (3)...

D.2.2 *High Accountability*

How is the leader of the group X in country Y held accountable by the members of that group for decisions they disapprove of? *Note: We are not concerned with the way that they are held accountable by the state. Moreover, it can well be the case that it depends on the degree of offenses committed. Please tick all boxes that apply for each leader.*

	Apology	**Vote out of office**	**Forced to step down**	Justification of his or her actions	Other sanctions	No accountability mechanisms	Don't know
King/Queen/ Paramount chief/ Emir							
Chief/ Khan/ Ariki/ Jif							
Headman/ Bandleader							
Traditional/ Indigenous/ Native judge							

D.3 COMPONENTS OF CONSTITUTIONAL COMMITMENT INDEX

Any of the following items count one towards the index, which serves as the basis for the variable *Constitutional Commitment*.

- Does the constitution mention any traditional political bodies and/or leaders, which have authority over a part of the population?
- Are traditional leaders mentioned in the constitution, which have authority over a part of the population?
- Are there traditional political bodies mentioned in the constitution, which have authority over a part of the population?
- Does at least one of the traditional political bodies and/or leaders, which have authority over a part of the population, come into office based on customary law?
- Does the constitution forbid or does explicitly not allow for removal or sanction of traditional political leaders, who have

authority over a part of the population, by the state (government, parliament, courts) or by non-traditional means (e.g., by the president or any other state agent)?

- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function related to natural resource management and/or land administration (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function related to customs and culture (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function as intermediaries between state and community (at any level)?
- Does the constitution mention that traditional political bodies and/or leaders that have authority over a part of the population, are entitled to have a seat in a state organ (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a role in governance and administration in cooperation with state authorities (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, the right to self-determined/autonomous administration and governance (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function related to security and public order (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function within the decision-making process (at any level)?
- Does the constitution mention that traditional political bodies and/or leaders that have authority over only a part of the population, can give or can be asked for advice within a decision-making process (at any level)?

- Does the constitution mention that traditional political bodies and/or leaders that have authority over a part of the population, have to be mandatorily consulted within a decision-making process (at any level)?
- Does the constitution mention a veto right or a required affirmation for traditional political bodies and/or leaders that have authority over a part of the population or over a particular ID group, concerning a matter other than their own organization (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, to appoint, nominate or to designate certain people for offices in the state polity (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have only authority over a part of the population, a function related to either jurisdiction (judicial decisions and implementation) or dispute settlement within their communities and among themselves (at any level)-either cooperative or self-determined?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a role in jurisdiction (judicial decisions and implementation) in cooperation with state authorities/courts (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function related to socio-economic development (e.g. developing their community) (at any level)?
- Does the constitution grant traditional political bodies and/or leaders that have authority over a part of the population, a function related to the administration of assets and/or financial services (at any level)?
- Does the constitution mention that traditional political bodies and/or leaders that have authority over a part of the population get financial support from the state?
- Does the constitution mention that traditional political bodies and/or leaders that have authority over a part of the population have the power to levy taxes or charge fees?

- Does the constitution mention that traditional political bodies and/or leaders that have authority over a part of the population have a right to receive revenues from natural resources exploitation or land?
- Are customary/traditional dispute resolution mechanisms mentioned in the constitution?
- Is customary, traditional law, and/or customary right recognized by the constitution?

D.4 AGGREGATION-SENSITIVE CASES

Table 33: Aggregation Sensitive Cases: Main Models

	(1)	(2)	(3)	(4)
	Soc. Rel.	*Pol. Rel.*	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'14*	*'05-'15*	*'05-'14*
Traditional Authority (diff. aggr.)	2.00^{***}	3.47^{***}	3.14^{***}	4.69^{***}
	(0.53)	(0.77)	(0.67)	(0.94)
High Accountability (diff. aggr.)			-2.81^{***}	-3.54^{***}
			(0.76)	(1.04)
Multiparty Elections	0.03	−1.35	0.18	−1.35
	(0.78)	(1.03)	(0.81)	(1.17)
Constitutional Commitment	−1.21	−0.89	−1.18	−0.96
	(1.25)	(1.19)	(1.21)	(1.26)
Independence Claim	1.09^{+}	2.79^{**}	1.17^{+}	4.11^{***}
	(0.64)	(1.00)	(0.69)	(1.25)
Group Share (log+1)	−0.15	10.90^{*}	−1.15	8.23^{+}
	(3.34)	(4.93)	(3.37)	(4.98)
No. of SD Groups (log)	2.37	1.45	2.01	1.36
	(1.48)	(1.21)	(1.42)	(1.33)
Colonial Past	3.51^{+}	3.07^{+}	4.05^{*}	3.93^{*}
	(1.98)	(1.71)	(2.00)	(1.98)
Economic Differential		−0.07		−0.01
		(0.21)		(0.22)
Excluded Group		4.65^{***}		4.70^{***}
		(1.02)		(1.05)
Constant	-8.81^{***}	-12.53^{***}	-8.77^{***}	-14.25^{***}
	(2.34)	(2.64)	(2.22)	(3.08)
N_{state}	52	49	52	49
N_{year}	11	10	11	10
ICC_{state}	0.907	0.842	0.904	0.882
ICC_{year}	0.000	0.000	0.000	0.000
Observations	636	511	636	511
Deviance	286.303	202.324	273.841	185.963

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

Table 34: Aggregation Sensitive Cases: Cross-Level Models

	(1)	(2)	(3)	(4)
	Soc. Rel. '05-'15	*Pol. Rel. '05-'14*	*Soc. Rel. '05-'15*	*Pol. Rel. '05-'14*
Traditional Authority (diff. aggr.) X Multiparty Elections	-3.34^{**}	-4.43^{+}		
	(1.28)	(2.26)		
Traditional Authority (diff. aggr.) X Constitutional Commitment			-3.12^{***}	-4.08^{***}
			(0.90)	(1.21)
Traditional Authority (diff. aggr.)	1.26^{*}	3.40^{***}	3.26^{***}	6.00^{***}
	(0.61)	(0.88)	(0.72)	(1.35)
Multiparty Elections	1.94^{+}	1.69	−0.17	−1.50
	(1.13)	(1.97)	(0.79)	(0.99)
Constitutional Commitment	−1.30	−1.15	0.45	1.22
	(1.42)	(1.53)	(1.17)	(1.10)
Independence Claim	0.98	2.66^{**}	1.10^{+}	2.75^{**}
	(0.64)	(0.99)	(0.63)	(0.96)
Group Share (log+1)	−0.64	10.34^{*}	0.59	10.58^{*}
	(3.38)	(5.12)	(3.24)	(4.64)
No. of SD Groups (log)	2.46	1.85	2.10^{+}	1.72
	(1.70)	(1.56)	(1.21)	(1.11)
Colonial Past	4.78^{*}	4.22^{+}	3.51^{+}	2.45
	(2.35)	(2.26)	(1.83)	(1.54)
Economic Differential		−0.09		0.002
		(0.22)		(0.21)
Excluded Group		4.47^{***}		4.26^{***}
		(1.02)		(0.96)
Constant	-9.69^{***}	-13.68^{***}	-8.21^{***}	-12.89^{***}
	(2.64)	(2.96)	(1.95)	(2.48)
N_{state}	52	49	52	49
N_{year}	11	10	11	10
ICC_{state}	274.746	189.279	280.047	195.286
ICC_{year}	0.000	0.000	0.000	0.000
Observations	636	511	636	511
Deviance	286.303	202.324	273.841	185.963

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

D.5 DIFFERENT TYPES OF MATCHES

To match the data on strategies of self-determination groups and the data on the traditional authorities, we employed three different types of matches. The *conservative* match only uses exact matching, that is, if we can clearly identify the exact group in both datasets. For instance, only if the Quechua in Bolivia were named in both datasets, a match was created.

The medium match—which we use in the main analysis—adds additional matches in two distinct ways: first, by allowing a subgroup match to the group in the self-determination data. To identify the subgroups, we relied on the AMAR list of socially relevant groups (Birnir et al., 2015), which is the population basis of our study and which also codes socially relevant subgroups that are below the aggregate group. An example of this are the Dinka in Sudan (pre-2011). In the self-determination data, the group coded are the Southern Sudanese. There was no exact match of this aggregate group in the TradGov data, but only for its subgroup, the Dinka.

The second type of *medium* match that is allowed in the medium category, but not in the conservative category, are additional searches for groups without traditional governance. Although the expert survey of the TradGov data explicitly also interrogated experts of groups that are potentially not traditionally organized, such as the French Canadian in Canada, it is likely that there is a selection bias at work: experts were academics who have their expertise on a particular group in a particular country. If the expert has not heard and analyzed traditional governance—-e.g., if he or she focuses on Quebecoise self-determination claims—-it is likely, that the expert will not respond to a survey on traditional governance, leading to a selection bias tipped towards traditionally organized groups

To enable us to draw the right conclusions from our analysis, we, therefore, conducted online research about all groups that did not have a match in the data and coded those as not having some form of traditional governance as zero. We coded those as non-traditional, where we could not find any evidence, even if it did not fit fulfill our condition of a traditional leader and institution. E.g., if we found a group to perform some task via customary law, we did not code it as non-traditional. Furthermore, we cross-validate groups if they were found to have no traditional governance structures in other countries. Examples of the extra coding include Germans in Hungary, Ligurians in Italy, Hungarians in Romania, or Zanzibar Africans in Tanzania.

Finally, the *liberal* match allowed the coding of groups where the cross-validation in the medium match was less conclusive and in some instances, the extrapolation of other groups to that group. In the analysis presented below, only one group is added in the liberal match: The Native Hawaiian in the United States, where the generic expert answer for indigenous peoples in the United States was used. The results are robust to all types of matches, and we, therefore, stick to the medium category in our main analysis.

D.5.1 *Main Models with Different Types of Matches*

Table 35: Main Models: Liberal Match

	(1)	(2)	(3)	(4)
	Soc. Rel. '05-'15	*Pol. Rel.* '05-'14	*Soc. Rel.* '05-'15	*Pol. Rel.* '05-'14
Traditional Authority	2.02^{***}	3.41^{***}	2.94^{***}	4.34^{***}
	(0.53)	(0.001)	(0.66)	(0.90)
High Accountability			-2.22^{**}	-2.26^{*}
			(0.75)	(0.95)
Multiparty Elections	0.03	-1.49^{***}	0.08	-1.41
	(0.77)	(0.001)	(0.78)	(1.10)
Constitutional Commitment	-1.08	-0.52^{***}	-0.91	-0.43
	(1.26)	(0.001)	(1.22)	(1.37)
Independence Claim	1.06^{+}	2.30^{***}	1.01	3.25^{**}
	(0.64)	(0.001)	(0.67)	(1.13)
Group Share (log+1)	-0.11	9.69^{***}	2.58	13.34^{*}
	(3.34)	(0.001)	(3.50)	(5.28)
No. of SD Groups (log)	2.36	1.21^{***}	2.24	1.37
	(1.50)	(0.001)	(1.46)	(1.34)
Colonial Past	3.36^{+}	2.20^{***}	3.57^{+}	2.99
	(1.97)	(0.001)	(2.00)	(1.88)
Economic Differential		-0.11^{***}		-0.04
		(0.001)		(0.21)
Excluded Group		4.26^{***}		4.57^{***}
		(0.001)		(0.99)
Constant	-8.75^{***}	-10.80^{***}	-9.05^{***}	-13.37^{***}
	(2.36)	(0.001)	(2.38)	(2.93)
N_{state}	52	49	52	49
N_{year}	11	10	11	10
ICC_{state}	0.906	0.834	0.906	0.862
ICC_{year}	0.000	0.000	0.000	0.000
Observations	647	521	647	521
Deviance	286.420	203.008	278.269	194.358

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

Table 36: Cross-Level Models: Liberal Match

	(1)	(2)	(3)	(4)
	Soc. Rel. '05-'15	*Pol. Rel. '05-'14*	*Soc. Rel. '05-'15*	*Pol. Rel. '05-'14*
Traditional Authority X Multiparty Elections	-3.34^{**}	-4.29^{+}		
	(1.29)	(2.31)		
Traditional Authority X Constitutional Commitment			-3.08^{***}	-4.05^{**}
			(0.90)	(1.23)
Traditional Authority	1.26^{*}	3.44^{***}	3.24^{***}	6.01^{***}
	(0.61)	(0.88)	(0.72)	(1.36)
Multiparty Elections	1.94^{+}	1.60	−0.14	−1.49
	(1.14)	(1.99)	(0.80)	(1.01)
Constitutional Commitment	−1.28	−1.00	0.33	1.10
	(1.43)	(1.59)	(1.12)	(1.09)
Independence Claim	0.98	2.62^{**}	1.13^{+}	2.83^{**}
	(0.64)	(1.00)	(0.63)	(0.96)
Group Share (log+1)	−0.60	10.45^{*}	0.62	10.78^{*}
	(3.38)	(5.11)	(3.25)	(4.66)
No. of SD Groups (log)	2.46	1.78	2.16^{+}	1.80
	(1.71)	(1.58)	(1.23)	(1.13)
Colonial Past	4.81^{*}	4.07^{+}	3.69^{*}	2.62^{+}
	(2.38)	(2.31)	(1.83)	(1.58)
Economic Differential		−0.09		−0.002
		(0.22)		(0.21)
Excluded Group		4.49^{***}		4.29^{***}
		(1.02)		(0.97)
Constant	-9.76^{***}	-13.60^{***}	-8.43^{***}	-13.16^{***}
	(2.70)	(2.98)	(1.95)	(2.50)
N_{state}	52	49	52	49
N_{year}	11	10	11	10
ICC_{state}	0.932	0.893	0.874	0.829
ICC_{year}	0.000	0.000	0.000	0.000
Observations	647	521	647	521
Deviance	274.698	189.658	279.637	194.764

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

Table 37: Main Models: Conservative Match

	(1)	(2)	(3)	(4)
	Soc. Rel.	*Pol. Rel.*	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'14*	*'05-'15*	*'05-'14*
Traditional Authority	2.09***	4.50***	3.20***	5.83***
	(0.56)	(1.07)	(0.70)	(1.30)
High Accountability			−2.70***	−3.25**
			(0.77)	(1.03)
Multiparty Elections	−0.12	−1.38	0.08	−1.24
	(0.81)	(1.26)	(0.85)	(1.50)
Constitutional Commitment	−0.63	0.24	−0.65	0.17
	(1.43)	(1.66)	(1.37)	(1.77)
Independence Claim	1.11+	3.98**	1.13	5.06***
	(0.66)	(1.22)	(0.70)	(1.39)
Group Share (log+1)	9.32	33.22*	8.26	34.49*
	(7.81)	(16.08)	(7.38)	(16.67)
No. of SD Groups (log)	2.07	0.97	1.64	0.95
	(1.73)	(1.75)	(1.65)	(1.89)
Colonial Past	3.15	4.54+	3.31	5.39*
	(2.29)	(2.47)	(2.23)	(2.67)
Economic Differential		−0.04		0.01
		(0.25)		(0.26)
Excluded Group		7.61***		7.48***
		(1.84)		(1.75)
Constant	−8.36**	−18.52***	−7.91**	−20.04***
	(2.94)	(4.45)	(2.82)	(4.66)
N_{state}	33	31	33	31
N_{year}	11	10	11	10
ICC_{state}	0.885	0.890	0.877	0.905
ICC_{year}	0.000	0.000	0.000	0.000
Observations	399	328	399	328
Deviance	229.886	135.289	219.132	123.567

Note: +p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table 38: Cross-Level Models: Conservative Match

	(1)	(2)	(3)	(4)
	Soc. Rel.	*Pol. Rel.*	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'14*	*'05-'15*	*'05-'14*
Traditional Authority X	-3.50^{**}	-5.18^{+}		
Multiparty Elections	(1.35)	(3.09)		
Traditional Authority X			-3.12^{***}	-4.25^{**}
Constitutional Commitment			(0.92)	(1.47)
Traditional Authority	1.24^{+}	4.35^{***}	3.25^{***}	6.76^{***}
	(0.64)	(1.21)	(0.73)	(1.77)
Multiparty Elections	2.01^{+}	2.89	−0.24	−1.49
	(1.22)	(3.00)	(0.82)	(1.26)
Constitutional Commitment	−1.11	−0.22	0.77	2.06
	(1.61)	(1.99)	(1.46)	(1.64)
Independence Claim	1.02	3.69^{**}	1.18^{+}	3.81^{***}
	(0.66)	(1.21)	(0.65)	(1.07)
Group Share (log+1)	8.12	36.32^{*}	9.98	28.91^{*}
	(7.79)	(17.59)	(7.44)	(12.52)
No. of SD Groups (log)	2.23	1.51	2.21	1.57
	(1.94)	(2.19)	(1.47)	(1.53)
Colonial Past	4.97^{+}	6.19^{+}	3.30	3.95^{+}
	(2.72)	(3.20)	(2.25)	(2.14)
Economic Differential		−0.04		0.03
		(0.26)		(0.25)
Excluded Group		7.20^{***}		6.53^{***}
		(1.72)		(1.49)
Constant	-9.03^{**}	-19.92^{***}	-8.51^{***}	-18.06^{***}
	(3.13)	(5.01)	(2.59)	(3.66)
N_{state}	33	31	33	31
N_{year}	11	10	11	10
ICC_{state}	0.913	0.928	0.855	0.852
ICC_{year}	0.000	0.000	0.000	0.000
Observations	399	328	399	328
Deviance	219.320	124.941	222.327	131.626
Note:				$^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

D.6 robustness

D.6.1 *Operationalization of Moderators*

Table 39: Original Scale of Constitutional Commitment

	(1)	(2)	(3)
	Soc. Rel. '05-'15	*Soc. Rel. '05-'15*	*Pol. Rel. '05-'14*
Traditional Authority X Constitutional Commitment (full scale)	-0.24^{*}	-0.60^{*}	-0.76^{*}
	(0.11)	(0.29)	(0.33)
Traditional Authority	2.99^{***}	2.47^{***}	4.28^{***}
	(0.53)	(0.59)	(0.90)
Constitutional Commitment (full scale)	-0.10	-0.12	0.05
	(0.19)	(0.31)	(0.24)
Multiparty Elections		-0.18	-1.70
		(0.79)	(1.06)
Independence Claim		1.26^{*}	3.06^{**}
		(0.64)	(1.04)
Group Share (log+1)		0.22	10.47^{*}
		(3.28)	(4.74)
No. of SD Groups (log)		1.81	1.45
		(1.21)	(1.05)
Colonial Past		3.69^{*}	2.99^{+}
		(1.80)	(1.54)
Economic Differential			-0.06
			(0.20)
Excluded Group			4.38^{***}
			(0.97)
Constant	-5.19^{*}	-7.72^{***}	-12.29^{***}
	(2.03)	(1.91)	(2.54)
N_{state}	56	52	49
N_{year}	11	11	10
ICC_{state}	0.908	0.859	0.811
ICC_{year}	0.000	0.000	0.000
Observations	758	636	511
Deviance	372.726	287.240	201.847
Note:	$^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$		

Table 40: Multiparty Elections >3

	(1)	(2)	(3)
	Soc. Rel. '05-'15	*Soc. Rel. '05-'15*	*Pol. Rel. '05-'14*
Traditional Authority X Multiparty Elections >	-4.19^{**}	-5.37^{**}	-6.38^{*}
	(1.44)	(1.79)	(2.58)
Traditional Authority	2.07^{***}	1.40^{*}	3.51^{***}
	(0.46)	(0.65)	(0.89)
Multiparty Elections >	3.31^{*}	4.25^{*}	3.64
	(1.61)	(1.88)	(2.30)
Constitutional Commitment		−1.50	−1.16
		(1.24)	(1.27)
Independence Claim		1.10	2.02^{*}
		(0.72)	(0.96)
Group Share (log+1)		−2.22	9.14^{+}
		(3.40)	(4.83)
No. of SD Groups (log)		2.10	1.72
		(1.37)	(1.25)
Colonial Past		5.73^{**}	4.77^{*}
		(2.17)	(1.97)
Economic Differential			−0.08
			(0.22)
Excluded Group			4.04^{***}
			(0.94)
Constant	-8.75^{***}	-9.24^{***}	-12.66^{***}
	(2.03)	(2.39)	(2.86)
N_{state}	52	48	46
N_{year}	11	11	10
ICC_{state}	0.960	0.884	0.828
ICC_{year}	0.000	0.000	0.000
Observations	646	556	463
Deviance	321.058	254.376	188.494
Note:	$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001		

D.6.2 *Non-African Groups*

Table 41: Non-African Groups: Main Models

	(1)	(2)	(3)	(4)
	Soc. Rel. '05-'15	*Pol. Rel. '05-'14*	*Soc. Rel. '05-'15*	*Pol. Rel. '05-'14*
Traditional Authority	1.83^{**}	2.93^{***}	2.54^{***}	3.37^{***}
	(0.56)	(0.75)	(0.65)	(0.82)
High Accountability			-2.45^{**}	-2.60^{*}
			(0.85)	(1.07)
Multiparty Elections	0.50	-3.16^{*}	0.40	-3.01^{*}
	(0.99)	(1.41)	(0.95)	(1.48)
Constitutional Commitment	−0.79	0.07	−0.94	−0.09
	(1.33)	(0.95)	(1.25)	(1.04)
Independence Claim	1.17^{+}	2.36^{*}	0.82	2.50^{*}
	(0.66)	(0.99)	(0.70)	(1.08)
Group Share (log+1)	−8.90	−0.86	-9.58^{+}	−1.82
	(5.43)	(7.35)	(5.47)	(7.56)
No. of SD Groups (log)	0.10	−0.15	0.20	−0.004
	(1.29)	(0.89)	(1.19)	(0.97)
Colonial Past	3.59	1.91	3.08	2.10
	(2.18)	(1.49)	(2.05)	(1.63)
Economic Differential		−0.11		−0.08
		(0.23)		(0.24)
Excluded Group		5.52^{***}		5.68^{***}
		(1.51)		(1.56)
Constant	-5.94^{**}	-9.68^{***}	-5.29^{**}	-10.22^{***}
	(2.01)	(2.54)	(1.86)	(2.71)
N_{state}	37	36	37	36
N_{year}	11	10	11	10
ICC_{state}	0.840	0.639	0.812	0.682
ICC_{year}	0.000	0.000	0.000	0.000
Observations	504	410	504	410
Deviance	256.348	174.434	250.510	166.089

Note: $^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$

Table 42: Non-African Groups: Cross-Level Models

	(1)	(2)	(3)	(4)
	Soc. Rel. '05-'15	*Pol. Rel.* '05-'14	*Soc. Rel.* '05-'15	*Pol. Rel.* '05-'14
Traditional Authority X Multiparty Elections	-3.76^{*}	-6.69^{*}		
	(1.54)	(2.80)		
Traditional Authority X Constitutional Commitment			-3.26^{**}	-2.88^{***}
			(1.12)	(0.81)
Traditional Authority	0.77	2.77^{**}	2.76^{***}	4.34^{***}
	(0.70)	(0.92)	(0.69)	(0.001)
Multiparty Elections	2.32^{+}	-1.31	0.73	-2.65^{***}
	(1.29)	(1.82)	(1.04)	(0.001)
Constitutional Commitment	-0.91	-0.26	-0.09	0.58^{***}
	(1.51)	(1.09)	(1.34)	(0.001)
Independence Claim	0.84	2.14^{*}	0.98	2.54^{***}
	(0.67)	(0.94)	(0.67)	(0.001)
Group Share (log+1)	-11.47^{+}	-4.96	-9.58^{+}	-3.44^{***}
	(5.86)	(8.07)	(5.63)	(0.001)
No. of SD Groups (log)	0.11	-0.25	0.74	0.34^{***}
	(1.59)	(1.02)	(1.36)	(0.001)
Colonial Past	6.06^{*}	3.62^{+}	4.71^{*}	3.10^{**}
	(2.79)	(2.10)	(2.34)	(1.20)
Economic Differential		-0.31		-0.04^{***}
		(0.27)		(0.001)
Excluded Group		5.71^{***}		5.49^{***}
		(1.62)		(0.001)
Constant	-6.92^{**}	-9.10^{**}	-6.62^{***}	-11.15^{***}
	(2.30)	(2.77)	(1.91)	(0.001)
N_{state}	37	36	37	36
N_{year}	11	10	11	10
ICC_{state}	0.902	0.718	0.857	0.753
ICC_{year}	0.000	0.000	0.000	0.000
Observations	504	410	504	410
Deviance	244.476	159.991	244.377	161.609
Note:	$^{+}p<0.1$; $^{*}p<0.05$; $^{**}p<0.01$; $^{***}p<0.001$			

D.6.3 *Traditional Authority by Strategy Type*

Table 43: Traditional Authority by Strategy Type

Strategy		*No Traditional Authority*	*Traditional Authority*	*Total*
Conventional		401	169	570
	Nonviolent	10	15	25
Nonconventional	*Small-scale*	43	62	105
	Large-scale	31	145	176
Total		485	391	876

Table 44: Multinominal Logistic Regression of Traditional Authority on Strategy Type

	(1)	(2)	(3)
	Soc. Rel.	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'15*	*'05-'14*
BASE OUTCOME: CONVENTIONAL STRATEGIES (0)			
NONVIOLENCE (1)			
Traditional Authority	1.293 (0.877)	-1.919* (0.929)	-2.200* (0.908)
Multiparty Elections		0.238 (0.511)	-0.324 (0.567)
Constitutional Commitment		0.400 (0.412)	0.365 (0.701)
Independence Claim		0.194 (0.975)	0.774 (1.382)
Group Share (log+1)		0.0164 (6.543)	-3.871 (7.408)
Number of SD Groups (log)		0.767 (0.512)	0.725 (0.461)
Colonial Past		1.963* (0.836)	1.752+ (1.000)
Economic Differential			0.319 (0.348)
Excluded Group (EPR)			0.310 (0.702)
Year FE	Yes	Yes	Yes
Constant	-3.007*** (0.679)	-4.232*** (0.961)	-5.168** (1.996)
SMALL-SCALE VIOLENCE (2)			
Traditional Authority	1.116* (0.569)	0.240 (0.843)	0.330 (0.823)
Multiparty Elections		-0.567 (0.785)	-1.674+ (0.919)
Constitutional Commitment		0.0422 (0.440)	0.141 (0.479)
Independence Claim		0.336 (0.794)	0.166 (0.775)
Group Share (log+1)		-3.484 (4.042)	-3.008 (7.396)
Number of SD Groups (log)		0.282 (0.374)	0.0544 (0.507)
Colonial Past		0.978 (0.779)	1.749* (0.777)
Economic Differential			0.159 (0.252)
Excluded Group (EPR)			1.519+ (0.919)
Year FE	Yes	Yes	Yes
Constant	-2.316*** (0.489)	-3.815*** (0.890)	-5.347** (1.663)
LARGE-SCALE VIOLENCE (3)			
Traditional Authority	2.385*** (0.561)	3.191*** (0.965)	3.122** (1.026)
Multiparty Elections		-1.598** (0.596)	-2.008* (0.813)
Constitutional Commitment		-0.781 (0.517)	-0.894 (0.661)
Independence Claim		0.305 (1.003)	0.644 (1.141)
Group Share (log+1)		1.958 (2.322)	7.960+ (4.271)
Number of SD Groups (log)		0.753* (0.337)	0.450 (0.353)
Colonial Past		-0.115 (0.708)	0.891 (0.784)
Economic Differential			-0.428 (0.320)
Excluded Group (EPR)			3.503** (1.206)
Year FE	Yes	Yes	Yes
Constant	-2.693*** (0.471)	-4.079*** (1.120)	-6.197** (2.010)
Observations	846	636	511

*Notes: Standard errors in parentheses, + p<.1 * p<.05 ** p<.01 *** p<.001*

D.6.4 *Instrumental Variable: IV Probit*

Table 45: Second Stage IV Probit

	(1)	(2)	(3)	(4)
	Soc. Rel.	*Pol. Rel.*	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'14*	*'05-'15*	*'05-'14*
Traditional Authority	2.675***	2.813***	3.069***	3.170***
	(5.68)	(3.80)	(7.18)	(4.43)
High Accountability			-1.257***	-1.060+
			(-3.60)	(-1.84)
Multiparty Elections	-0.252	-0.304	-0.343	-0.555
	(-0.87)	(-0.63)	(-1.10)	(-1.13)
Constitutional Commitment	-0.273	-0.069	-0.285	-0.083
	(-1.09)	(-0.32)	(-1.19)	(-0.39)
Independence Claim	-0.741	-0.283	-0.801	-0.394
	(-1.21)	(-0.47)	(-1.30)	(-0.61)
Group Share (log+1)	0.714	3.181*	1.422	3.140*
	(0.62)	(2.34)	(1.16)	(2.16)
Number of SD Groups (log)	0.104	-0.070	0.050	-0.126
	(0.57)	(-0.31)	(0.21)	(-0.42)
Colonial Past	-0.979*	-0.825	-0.875*	-0.814
	(-2.08)	(-1.38)	(-1.96)	(-1.54)
Economic Differential		0.099		0.113
		(0.74)		(0.82)
Excluded Group (EPR)		1.266**		0.997+
		(3.02)		(1.88)
Year FE	Yes	Yes	Yes	Yes
Constant	-0.591	-2.486***	-0.488	-2.084*
	(-0.97)	(-3.51)	(-0.77)	(-2.47)
Wald test of exogeneity	4.44 *	4.33*	4.91*	5.04*
Observations	464	368	464	368

*Notes: Standard errors in parentheses, + p<.1 * p<.05 ** p<.01 *** p<.001*

Table 46: First Stage IV Probit – Outcome = Traditional Authority

	(1)	(2)	(3)	(3)
	Soc. Rel.	*Pol. Rel.*	*Soc. Rel.*	*Pol. Rel.*
	'05-'15	*'05-'14*	*'05-'15*	*'05-'14*
Precolonial Institutions	0.213+	0.219**	0.175+	0.184**
	(1.83)	(2.69)	(1.74)	(2.59)
High Accountability			0.400***	0.323**
			(4.80)	(2.87)
Multiparty Elections	-0.024	-0.117	0.015	-0.015
	(-0.26)	(-1.22)	(0.20)	(-0.16)
Constitutional Commitment	0.122	-0.012	0.108+	-0.006
	(1.64)	(-0.24)	(1.65)	(-0.13)
Independence Claim	0.454***	0.281*	0.405***	0.275**
	(3.32)	(2.53)	(3.42)	(2.71)
Group Share (log+1)	-0.129	-0.676+	-0.340	-0.615+
	(-0.29)	(-1.73)	(-0.93)	(-1.96)
Number of SD Groups (log)	0.048	0.126*	0.056	0.127*
	(0.74)	(2.13)	(0.98)	(2.35)
Colonial Past	0.387**	0.428***	0.303*	0.368**
	(2.71)	(3.50)	(2.31)	(3.03)
Economic Differential		-0.060*		-0.056*
		(-2.14)		(-2.10)
Excluded Group (EPR)		-0.171*		-0.088
		(-2.01)		(-1.00)
Year FE	Yes	Yes	Yes	Yes
Constant	-0.276*	0.232	-0.246*	0.121
	(-2.11)	(1.52)	(-2.17)	(0.85)
Wald test of exogeneity	4.44 *	4.33*	4.91*	5.04*
First Stage F Statistic	29.59***	36.93***	40.67***	44.10***
AIC	823.498	510.308	725.247	451.178
Observations	464	368	464	368

*Notes: Standard errors in parentheses, + p<.1 * p<.05 ** p<.01 *** p<.001*

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Part V

AUTHOR'S CONTRIBUTION

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Chapter 1: Introduction

data collection

The TradGov Groups, TradGov Population, and TradGov Constitutions datasets described in Section 1.3.2, are the result of Katharina Holzinger's Reinhart Koselleck Project "Tradtional Governance and Modern Statehood", (HO 1811/10 1) funded by the German Research Foundation. These data were used in the second (Chapter 3) and third (Chapter 4) articles. Furthermore, it was used for the Section 1.4.1 of the introduction.

The data collection was achieved jointly in the team consisting of Katharina Holzinger, Roos Haer, Axel Bayer, Daniela Behr, and myself. Furthermore, we were supported by research assistants, in particular Fabian Bergmann and Sven-Patrick Schmid.

institutional persistence (Section 1.4.1)

The exploratory analysis on institutional persistence of Chapter 1 is the result of a joint research article with Carl-Müller Crepon. More details of the article's empirical analysis are provided in Appendix A.

Chapter 2: Polygynous Neighbors

The article is co-authored with Carlo Koos, with shared first (equal) authorship. The joint contribution includes the article idea, development, and framing – as well as the introduction, and conclusion. The main responsibility of Carlo Koos was the data preparation, description, analysis, and presentation. My main responsibility was the literature and theory.

Chapter 3: Norm Collisions

The article is single-authored.

Chapter 4: Self-Determination Strategies

The article is co-authored with Friederike Luise Kelle. This article is part a joint project from which two articles will emerge, for which each author is the lead author respectively. In the article in Chapter 4, I am the lead author.

The data on self-determination strategies was collected by Friederike Luise Kelle and the data on traditional authority was collected at the Reinhart-Koselleck Project described above.

The joint contribution includes idea development, the development of the theoretical argument, and the data merging process. My main responsibility was further theory and theoretical mechanism development, streamlining, data analysis, and presentation.