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Doctoral Thesis

Examining the ethnoreligious dimension of conflicts in Nigeria

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Examining the ethnoreligious dimension of conflicts in Nigeria

DISSERTATION

Zur Erlangung des akademischen Grades

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(Dr. phil.)

an der Kultur-, Sozial- und Bildungswissenschaftlichen Fakultät
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Peace is to violence what health is to disease

-Johan Galtung

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Summary

Violent conflicts remain a nagging problem in Nigeria. Because Nigeria's population is polarized along ethnic and religious lines, conflicts that have nothing to do with ethnicity and religion often turn ethnoreligious owing to the ethnic and religious identities of the conflict actors. This often makes conflicts more violent and intractable. Although some studies have been conducted on the ethnoreligious dimension of violent conflicts in Nigeria, most of them are qualitative. There is generally a dearth of quantitative studies examining the ethnoreligious dimension of violent conflicts in Nigeria. In this dissertation, I use large-N survey data and econometric techniques to fill this gap. I focus specifically on two contemporary conflicts in Nigeria—i.e., the secessionist conflict in Nigeria's Eastern Region and the intercommunal violence between nomadic pastoralists and resident communities (especially those engaged in crop cultivation) over land and water resources. The three empirical chapters in this dissertation show that ethnicity and religion are crucial in understanding contemporary conflicts in Nigeria. While the topics of ethnicity and religion are contentious, their neglect in the analysis of violent conflicts prevents a holistic understanding of the problem. Solutions can sometimes be found in the places where we are least willing to look.

Zusammenfassung

Gewaltsame Konflikte sind nach wie vor ein drängendes Problem in Nigeria. Da die nigerianische Bevölkerung entlang ethnischer und religiöser Linien polarisiert ist, werden Konflikte, die nichts mit ethnischer Zugehörigkeit und Religion zu tun haben, aufgrund der ethnischen und religiösen Identitäten der Konfliktparteien oft ethnoreligiös. Dadurch werden die Konflikte oft gewalttätiger und unlösbarer. Obwohl einige Studien über die ethnisch-religiöse Dimension von Gewaltkonflikten in Nigeria durchgeführt wurden, sind die meisten von ihnen qualitativ. Generell mangelt es an quantitativen Studien, die die ethnoreligiöse Dimension von Gewaltkonflikten in Nigeria untersuchen. In dieser Dissertation verwende ich große N-Erhebungsdaten und ökonometrische Techniken, um diese Lücke zu schließen. Ich konzentriere mich speziell auf zwei aktuelle Konflikte in Nigeria, nämlich den Sezessionskonflikt in der Ostregion Nigerias und die Gewalt zwischen nomadischen Hirten und ansässigen Gemeinschaften (insbesondere denjenigen, die Ackerbau betreiben) um Land und Wasserressourcen. Die drei empirischen Kapitel dieser Dissertation zeigen, dass Ethnizität und Religion für das Verständnis der gegenwärtigen Konflikte in Nigeria von entscheidender Bedeutung sind. Die Themen Ethnizität und Religion sind zwar umstritten, aber ihre Vernachlässigung bei der Analyse von Gewaltkonflikten verhindert ein ganzheitliches Verständnis des Problems. Lösungen können manchmal dort gefunden werden, wo wir am wenigsten bereit sind zu suchen.

Contents

Acknowledgements	II
Summary	III
Zusammenfassung.....	IV
1. Introduction	2
2. Undead past: What drives support for the secessionist goal of the Indigenous People of Biafra (IPOB) in Nigeria?	19
2.1. Introduction.....	20
2.2. Ethnic competition and the Biafra War	25
2.3. Horizontal inequalities and conflict	30
2.4. Trend in pro-Biafra agitation.....	39
2.5. Data and methodology.....	44
2.6. Results and discussion.....	50
References	59
3. Violent conflict and hostility towards ethnoreligious outgroups in Nigeria.....	71
3.1. Introduction.....	72
3.2. Violent conflicts in Nigeria.....	77
3.3. Theoretical considerations.....	80
3.4. Data and methodology	84
3.5. Results and discussion.....	93
3.6. Conclusion.....	101
References	104
4. Pastoral conflicts and (dis)trust in the Fulani and Muslims: Evidence from Nigeria using an instrumental variable approach.	112
4.1. Introduction.....	113
4.2. Theoretical considerations.....	116
4.3. Data and methods.....	121
4.4. Results and discussion.....	133
4.5. Conclusion.....	137
References	140
5. Concluding remarks.....	151

1. Introduction

Nigeria has witnessed a lot of conflicts over the past two decades. Data from the Armed Conflict Location and Events Database (ACLED) (Raleigh et al. 2010) shows that between 1997 to 2022, a total of 29,038 incidents occurred in Nigeria, making it the country with the second highest incidence of conflict in Africa. Only Somalia performed worse. These incidents caused 103,838 fatalities. In this dissertation, I focus on two major conflicts currently affecting Nigeria: the first is the secessionist conflict between the Indigenous People of Biafra (IPOB) movement and the Nigerian government, which pertains to IPOB's demand for the secession of Nigeria's Eastern Region from the country. The second pertains to the violent clashes between nomadic pastoralists of Fulani ethnicity and sedentary communities (especially those engaged in crop cultivation) over land and water resources.¹ What these two conflicts share is that they have historical roots and an ethnoreligious dimension. The historical and ethnoreligious dimensions are interrelated because the religious fault lines in present-day Nigeria are rooted in its history.

Ethnicity and religion, which overlap significantly in Nigeria, have played a central role in shaping Nigeria's precolonial, colonial, and postcolonial histories. Nche (2023, p. 31) observes that "Religion is practiced along ethnic lines in Nigeria which further accentuates ethnic divisions and hatred in the country." Because of the salience of ethnoreligious cleavages and the absence of a strong sense of national identity among the Nigerian population, Tafawa Balewa, Nigeria's first prime minister, openly admitted that Nigeria existed only on paper (Siollun 2009, p. 12). Obafemi Awolowo, one of Nigeria's founding fathers, referred to the country as a "mere geographical expression" (Awolowo 1947, pp. 47–48). Because Nigerians attach considerable importance to their ethnoreligious identities, it is

¹ I refer to these conflicts as "pastoral conflicts" in this dissertation.

not uncommon for disputes that have nothing to do with religion and ethnicity to interact with the ethnoreligious identities of the opposing actors and take a religious turn. Oftentimes, this transformation makes the conflict intractable and deadlier.

Nigeria's population is almost evenly split between Christians and Muslims. This division has historical roots. Northern Nigeria has a predominantly Muslim population because it was an Islamic caliphate for a century, until its capture by the British in 1903. Conversely, Southern Nigeria has a predominantly Christian population because Christian missionary evangelization was concentrated there, and because there was a willingness of the tribes residing in the region to substitute Christianity for their traditional religions. Writing two years before Nigeria's independence from British colonial rule, Coleman (1958, p. 351), commenting on the contrast between Northern and Southern Nigeria, observed: "Certain basic underlying differences in history, culture, temperament, and levels of development and acculturation provided the classical setting for intergroup friction." As will be shown in the three empirical chapters that make up this dissertation, we cannot ignore this ethnoreligious divide if we wish to gain a holistic understanding of contemporary conflicts in Nigeria.

The first conflict—i.e., the secessionist conflict—pertains to IPOB's desire to re-establish the defunct Republic of Biafra. Biafra was established in 1967, when the predominantly Igbo Eastern Region seceded from Nigeria. The decision to secede was driven by the pogroms of 1966 in which members of the Igbo ethnic group were systematically targeted and killed in Northern Nigeria. This led to the Nigerian Civil War, which is also known as the Biafra War. With the defeat of Biafran forces by the Nigerian military in 1970, Biafra was reincorporated into Nigeria. However, grievances pertaining to the marginalization of Igbos in the political and socioeconomic spheres persist today. This has led to the establishment of neo-Biafran movements, the first of which was established in 1999 after Nigeria transitioned from a military dictatorship to civilian rule. As will be

discussed in Chapter 2, early neo-Biafran movements employed peaceful protests to make their demands known to the Nigerian government. However, the Nigerian government, through its security agencies, employed brute force in dealing with these groups. This led to the emergence of radical neo-Biafran groups like IPOB. The emergence of IPOB has been associated with a transition from peaceful protests to violent confrontations with Nigerian security agencies. The increased intensity of the conflict has also led to a rise in the number of associated fatalities.

Because the secessionist conflict primarily involves members of the Igbo ethnic group (the majority of whom are Christians) and the Nigerian Federal government, which for most of Nigeria's history has been dominated by members of the mainly Muslim Hausa/Fulani ethnic group, it has taken a religious turn. IPOB portrays the proposed state of Biafra as a Judeo-Christian state and has explicitly expressed its concern about Muslim domination as well as the Islamization of Nigeria.² IPOB's leader has connected the Biafran struggle to Nigeria's precolonial and colonial past by "blaming the Hausa-Fulani Caliphate's hegemony and 'Islamization Agenda' as the source of the age-long oppression and marginalization of Biafrans, particularly the Igbo people in Nigeria." (Nche 2023, p. 32). In a study that analyzes several speeches by IPOB's leader Nnamdi Kanu, Nche (2023) finds that a recurrent theme in his speeches is the reference to Biafrans (i.e., members of the Igbo ethnic group) as "children of God" and the portrayal of the state of Biafra as an entity ordained by God. Moreover, the Biafran leader portrays those who oppose the establishment of the Biafran state (i.e., the Nigerian government) as forces of evil standing in the way of God's will.

² <https://www.ipobinusa.org/>. (Accessed November 11, 2023).

One of the main concerns of IPOB, as stated on its website, pertains to the failure of the Nigerian government to provide security for the citizenry, as evidenced by the persistent violent attacks by the radical Islamist group *Boko Haram*, and the conflict between nomadic Fulani pastoralists (who are predominantly Muslims) and sedentary communities. IPOB sees these conflicts primarily through a religious lens and frames them as attacks against Christians by Muslims: “We are determined to restore the Biafran nation so that our people can live in freedom, peace and security—protected from Islamic genocide and terrorism.”³ The group also explicitly highlights the incompatibility of Islam with the Judeo-Christian values held by Biafrans (i.e., Igbos): “For Biafrans, Islam has all too often brought violence and suppression of basic rights with it. Historically, when there have been riots in Northern Nigeria Christians are targeted, and most of those Christians have been Biafran.”⁴ Implicit in IPOB’s contention is the assertion that the Nigerian federal government is reluctant to take decisive action geared towards ending the violence in Eastern Nigeria (especially that involving Muslim nomadic Fulani pastoralists) because the government is dominated by Muslims and attaches little importance to Christian lives. IPOB sees the Nigerian government’s disarmament campaign and crackdown on vigilante groups operating in Eastern Nigeria as a systematic attempt to make communities defenseless to violent attacks. It contends that the government’s action is geared towards “ethnic cleansing [which]... renders whole communities vulnerable so that herdsmen can overrun them.”⁵ Conversely, the Nigerian government, in a statement released through the Federal Ministry of Information and National Orientation, has accused IPOB of exploiting religion to advance its aims (Shehu 2020).

³ <https://www.ipobinusa.org/what-is-wrong-with-nigeria>. (Accessed November 11, 2023).

⁴ *ibid.*

⁵ <https://www.ipobinusa.org/nigeria-britains-creation>. (Accessed November 11, 2023).

The second conflict—i.e., pastoral conflicts—is primarily driven by competition over land and water resources. Pastoral conflicts are not peculiar to Nigeria. Data obtained from ACLED (Raleigh et al. 2010) shows that between 1997 to 2022, there were over 7,500 conflict incidents in Africa in which at least one of the conflict actors was a pastoralist. These incidents spanned 38 countries. What makes Nigeria unique is that most pastoral conflicts in Africa happen there. In fact, Nigeria accounted for one-third of the total pastoral conflicts in Africa between 1997 to 2022. It also accounted for half of the 27,392 total fatalities. Because nomadic pastoralists in Nigeria are Muslims and the sedentary communities where these conflicts are mainly concentrated (e.g., the states of Benue and Plateau) are predominantly Christian, coupled with the fact that Nigeria's population is polarized along religious lines (Scacco & Warren 2021; Angerbrandt 2018, 2011; Hoffman 2017; Albert 1996), pastoral conflicts tend to fit snugly into pre-existing religious cleavages.

Most studies on pastoral conflicts in Nigeria contend that they are caused by the adverse effects of climate change. Rising temperatures and droughts have degraded lands and depleted water sources, leading to increased competition for these between nomadic pastoralists and sedentary communities. Increased resource competition has in turn heightened the risk of conflict. A slight variant of the preceding argument is that droughts have prompted nomadic pastoralists to move away from their primary grazing areas to other parts of Nigeria in search of land and water for their livestock (mostly cattle), leading to increased resource competition in host communities (Ehiane & Moyo 2022; Lenshie et al. 2021; Madu & Nwankwo 2021; Eberle et al. 2020; Koubi 2019; Homer-Dixon 1995). Yet, although the climate change argument has merit, it neglects the fact that resource scarcity does not always lead to conflict. In fact, some studies have shown that it could foster cooperation, especially when the competing parties recognize that initiating a violent attack could lead to a downward spiral of reprisals, resulting in losses for all parties involved (Nie

et al. 2020; Adano et al. 2012). Moreover, arguments focusing on climate change often neglect the ethnic and religious identities of the conflict actors; they also fail to explain why competition over resources turns violent in some communities but not in others. The few studies that refer to the ethnoreligious angle of pastoral conflicts tend to rely heavily on secondary information obtained from extant articles and news reports (e.g., Ejiofor 2022; Chukwuma 2020; Maiangwa 2017; Akov 2017). Some studies have even referred to explanations focusing on the ethnoreligious dimension of pastoral conflicts as oversimplifications of a complex social problem (e.g., Ajala 2020; Blench 2019).

In this dissertation, I seek to answer the following question: *To what extent do intergroup conflicts in Nigeria have an ethnoreligious dimension? And how does this shape the intensity of these conflicts and their consequences for intergroup relations in Nigeria?* These overarching questions underpin the three empirical chapters that make up this dissertation. Although it is generally agreed that Nigeria is polarized along ethnoreligious lines and that conflicts in the country have an ethnoreligious dimension, most of the studies that make this assertion are qualitative (e.g., Onwuegbuchulam & Mtshali 2017; Agbiboa 2013; Agbiboa & Maiangwa 2013; Ukiwo 2003). There is generally a dearth of quantitative studies on the ethnoreligious dimension of conflicts in Nigeria. This dissertation seeks to fill this gap using large-N survey data and econometric techniques. My main contention in this dissertation is that ethnicity and religion are crucial in understanding the conditions under which conflicts occur in Nigeria. Moreover, the way people experience conflicts and the interpretations they ascribe to these experiences are shaped by their religious affiliation. Neglecting the ethnoreligious dimension of conflicts prevents scholars from understanding them holistically. This dissertation thus contributes to the broader literature on ethnoreligious conflicts, especially those with a quantitative tilt (e.g., Schutte et al. 2023, 2022; Lewis 2022; Calvo et al. 2020; Kanas et al. 2017; Rohner et al. 2013).

A challenge confronting most quantitative research, especially multivariate regression analysis, is confounding. Confounding arises when variables that could influence both the dependent and explanatory variables are not controlled for in the regression model. Reverse causation is another challenge. These problems make it difficult for researchers to make causal inferences. This explains why Dunning (2012, p. 4) argued that “the validity of multivariate regression models or various kinds of matching techniques depends on the veracity of causal and statistical assumptions that are often difficult to explicate and defend—let alone validate.” He asserted that randomization is crucial in making a causal claim because “random or as-if random assignment usually obviates the need to control statistically for potential confounders.” He recommended instrumental variable regression design as one of the ways to address the problems of confounding and reverse causation. An instrumental variable design involves finding a variable “that is correlated with the treatment variable...but that could not be influenced by the dependent variable or correlated with its other causes.” (Dunning 2012, pp. 88–89). More specifically, this pertains to the “relevance” and “excludability” conditions, which are crucial to instrumental variable analysis (See Hernán & Robins 2020, p. 204).

Except for Chapter 2, which is a correlational study, the remaining two empirical chapters—i.e., Chapters 3 and 4—attempt to establish causation. I do this by estimating instrumental variable regressions. To meet the excludability condition, which is a common challenge in instrumental variable regression analysis, I rely not only on post-estimation statistical tests like those for overidentifying restrictions and endogeneity, but also draw upon detailed qualitative information regarding the history and local conditions in the case study to justify my instrumental variables. Dunning (2012, p. 4) highlighted the importance of qualitative information in establishing causation by pointing out that “Detailed qualitative information on the circumstances that created a natural experiment, and especially on the

process by which ‘nature’ exposed or failed to expose units to a putative cause, is often essential.”

The remaining chapters of this dissertation are organized as follows: Using representative survey data for Nigeria’s population obtained from the Afrobarometer surveys (BenYishay et al. 2017), Chapter 2 examines how perceived marginalization at the group level, Igbo ethnicity, and horizontal inequalities along political and socioeconomic lines, influence support for secession among members of the Igbo ethnic group. Although this is a correlational study in which I do not make a causal claim, this study is still novel because there is a dearth of large-N quantitative studies on the factors influencing support for secession in Nigeria. Employing an ordered logit regression model, I show that perceived marginalization at the group level, negative perceptions toward Nigerian democracy, and Igbo ethnicity increase the likelihood of supporting secession. I measure socioeconomic condition at the household and communal levels. To measure the socioeconomic condition of households, I develop a deprivation index. I proxy socioeconomic condition at the communal level using the mean literacy rate of the population in the local government area (LGA) (i.e., municipality) where the respondents reside. I find that socioeconomic condition at the household level has no effect on support for secession, but the communal measure—i.e., literacy rate—positively correlates with support for secession. This suggests that improvements in socioeconomic conditions at the communal level increase the likelihood of supporting secession. This might be because Igbo feel that their association with Nigeria holds them back and they could do better if the Eastern Region seceded.

Chapter 3, which also relies on the Afrobarometer survey data (BenYishay et al. 2017), examines the effect of violent conflict on hostility towards ethnoreligious outgroups among Nigeria’s population, and among members of its two main religious groups—i.e., Christians and Muslims. Outgroup hostility was measured using an additive indicator that

combines the responses to two questions probing respondents' willingness to have people who belong to a different religion and people from a different ethnic group as neighbors. To measure conflict exposure, I computed the total number of violent conflict incidents within a 30 km buffer around the respondents' geolocations. I was able to do that because I relied upon the Afrobarometer and ACLED datasets, both of which are georeferenced. Because violent conflict erodes trust (e.g., Ahmad & Rehman 2022; Rohner et al. 2013), people who are exposed to violent conflict might be hostile towards ethnoreligious outgroups. Conversely, outgroup hostility could foster grievances and culminate in violent conflict. This leads to the problem of reverse causality. To address this, I lagged the explanatory variable by only considering conflict events that occurred before the year in which the dependent variable—i.e., outgroup hostility—is measured. Because this only addresses reverse causation but not omitted variable bias, I estimated the model using instrumental variable regression. Causal identification stemmed from instrumenting exposure to violent conflict with forest cover. This model is underpinned by the assumption that forest cover would plausibly not have a direct effect on outgroup hostility, except through the mechanism of the treatment—i.e., conflict exposure. The regression results show that exposure to violent conflict has a positive effect on outgroup hostility among the Nigerian population and among Christians. I explain this finding by arguing that the existential threat posed by conflict exposure strengthens cohesion among ingroup members and erodes trust in outgroup members. This is especially the case when the opposite party to the conflict constitutes a distinct cultural outgroup, which in turn makes the establishment of ingroup-outgroup distinctions easier. Among Muslims, however, exposure to violent conflict has no effect on outgroup hostility. This is likely because the main conflict affecting Muslims—i.e., the *Boko Haram* insurgency—does not involve Christians, which makes it illogical for Muslims to be hostile toward Christians. Moreover, a significant number of Muslims are affected by conflicts involving

nomadic Fulani pastoralists who are Muslims. The common religion of Islam shared by the conflict actors, thus makes it difficult for ingroup-outgroup distinctions to be established.

Chapter 4, the last empirical chapter, shifts the focus of the analysis from the national level to the subnational level by zooming in on the Northern Nigerian state of Kaduna, which has the third highest incidence of pastoral conflicts out of Nigeria's 36 states. Relying on survey data collected as part of the Transnational Perspectives on Migration and Integration (TRANSMIT) research project,⁶ I examine the effect of exposure to pastoral conflicts on distrust in members of the Fulani ethnic group and Muslims. Causal identification stems from instrumenting exposure to pastoral conflicts with state capacity and the incidence of drought. I derive the measure for drought from the Standardized Precipitation-Evapotranspiration Index (SPEI) (Vincente-Serrano et al. 2010) and develop the measure for state capacity by computing the distance from the geolocations of the respondents to the state governor's residence in kilometers. The instrumental variable regression results show that among the population in Kaduna, exposure to pastoral conflicts has a positive effect on distrust in both members of the Fulani ethnic group and Muslims. This suggests that the population in Kaduna tends to conflate members of the Fulani ethnic group with the larger Muslim population. However, disaggregating the data based on religious affiliation (i.e., Muslims and Christians) shows that exposure to pastoral conflicts has a positive effect on distrust in the Fulani and Muslims only among Muslims. This might be because the common religion of Islam that the Muslim sedentary population share with nomadic Fulani pastoralists erodes ingroup trust. Among Christians however, exposure to pastoral conflicts had no effect on distrust in both the Fulani and Muslims. A reason for the null effect among Christians might be because even in the absence of pastoral conflicts, Christians are already distrustful

⁶ For more information on the TRANSMIT project visit: <https://www.projekte.hu-berlin.de/en/transmit>

of Muslims due to long history of animosity between members of the two religious groups in the state (Suberu 2012), leading to a scenario where pastoral conflicts fit into pre-existing religious fault lines. It is imperative to point out that the statistical insignificance of exposure to pastoral conflict found among Christians does not mean that Christians are not distrustful of the Fulani and Muslims. On the contrary, the regression results showed that a robust positive relationship exists between Christian affiliation and distrust in the Fulani and Muslims.

The most violent conflict incidents in Kaduna have been religiously motivated. An example is the Shariah Crisis in 2000 which was caused by the state governor's decision to implement Shariah law in the state. While this move was supported by Muslims, it was vehemently opposed by Christians, leading to Christian-Muslim violence that left over 2,000 people dead (Human Rights Watch 2003). A common characteristic of religious conflicts in Kaduna is their high intensity in terms of the number of fatalities and their scope in terms of the diffusion of violence to other parts of the state. For instance, the killing of a Christian or Muslim in one part of the state often triggers reprisals in other parts of the state. In contrast, violent pastoral conflicts in Kaduna and Nigeria at large, are quite a recent phenomenon that began around 2009. Because religiously motivated conflicts in Kaduna predate violent pastoral conflicts, coupled with the fact that pastoral conflicts are less intense and have a smaller scope than religious conflicts, it is possible that the effect of exposure to pastoral conflicts on distrust in the Fulani and Muslims among Christians is muffled by the preexisting distrust. Put differently, exposure to pastoral conflicts has no statistically significant effect on distrust in the Fulani and Muslims among Christians in Kaduna because they simply fit into pre-existing religious cleavages.

A comparison of the regression results in chapters 3 and 4—specifically the models based on the Christian subsample of respondents—show that they contradict each other.

While exposure to violent conflict had a negative effect on the willingness of Christians to have Muslims as neighbors (i.e., chapter 3), which I attributed to Christians being distrustful of Muslims, chapter 4 shows that exposure to pastoral conflicts had no statistically significant effect on distrust in Muslims and members of the Fulani ethnic group among Christians in Kaduna. A reason for this contradiction might be the level of analysis. While the results in chapter 3 are based on the total Christian population in Nigeria (i.e., those residing in Nigeria's Northern and Southern Regions), the results from Kaduna focus only on Christians who are resident in Northern Nigeria. Although parallels can be established between Christians in Nigeria's Northern and Southern Regions, they also differ in some ways. The conditions under which they embraced Christianity differ: While the tribes in Southern Nigeria were open to British influence and Christian missionary evangelization, which was concentrated in Southern Nigeria, non-Muslims in Northern Nigeria who embraced Christianity (especially those in the Middle belt Region) did so as a form of collective action against the threat of Muslim domination (Vaughan 2016).

As had been earlier mentioned, Northern Nigeria had been an Islamic caliphate for a century until its capture by British forces in 1903. The 1804–1808 jihad launched by Usman dan Fodio, a Muslim cleric, entrenched Islam in the region. Although most tribes in Northern Nigeria embraced Islam, some of them did not because they were able to resist emirate forces and hence retain their traditional religions and ways of life. These peoples, who constantly lived under the threat of domination by the Muslim emirates, were often raided by emirate forces who sought to capture them as slaves. This is because slavery was crucial to the functioning of the Muslim emirates. Moreover, Muslims were forbidden from enslaving their fellow co-religionists because of the brotherhood they shared under the banner of Islam, which made the tribes that had not embraced Islam (i.e., unbelievers) a viable source of slave labor (Van Beek 1988; Morrison 1982). Suffice it to add that the Christian enclaves in

Northern Nigeria (e.g., the southern part of Kaduna and the state of Plateau) have been hotspots for Christian-Muslim conflicts in post-independence Nigeria.

To reconcile the empirical results in chapters 3 and 4, I re-analyzed the data upon which chapter 3 is based. I estimated a regression model in which I considered only the subsample of Christian respondents who are resident in Northern Nigeria. I also found—i.e., similar to the findings in Chapter 4—that exposure to violent conflict has no effect on outgroup hostility.⁷ Conversely, the negative effect of conflict exposure on outgroup hostility was present when I estimated models using the subsample of Christian respondents who are resident in Southern Nigeria. What this means is that the positive effect of conflict exposure on hostility towards ethnoreligious outgroups found among Nigeria’s Christian population in chapter 3 is driven by Christians who are resident in Southern Nigeria. This suggests that it might be misleading to lump Christians from Nigeria’s two major regions into the same category because they differ considerably. This is an area that future research needs to pay close attention to.⁸

Chapter 5 presents the concluding remarks. The three empirical chapters that make up this dissertation are at different stages in the publication process. While Chapters 2 and 3 have been published in journals, Chapter 4 has been submitted to a journal and is currently under peer review. Table 1 below provides more details on the empirical chapters.

⁷ I do not report these regression results in chapter 3 because it has already been published in a peer reviewed journal and I have inserted the chapter into the dissertation in its accepted form.

⁸ I am already doing some research on this and have recently published a paper (i.e., Tuki 2024) in which I highlight some contrasts between Christians and Muslims in Northern Nigeria and their co-religionists in Southern Nigeria.

Table 1: Publication status of the three empirical chapters

Title	Chapter	Under review	Published
Undead past: What drives support for the secessionist goal of the indigenous people of Biafra (IPOB) in Nigeria? [<i>Journal of Race, Ethnicity & Politics</i>]. https://doi.org/10.1017/rep.2023.36	2		X
Violent conflict and hostility towards ethno-religious outgroups in Nigeria. [<i>Terrorism & Political Violence</i>]. https://doi.org/10.1080/09546553.2023.2285939	3		X
Pastoral conflicts and (dis)trust in the Fulani and Muslims: Evidence from Nigeria using an instrumental variable approach.	4	X	

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2. Undead past: What drives support for the secessionist goal of the Indigenous People of Biafra (IPOB) in Nigeria?

Abstract

This study examined the effect of perceived ethnic marginalization, perception towards Nigerian democracy, and socioeconomic condition on support for secession among members of the Igbo ethnic group. Perceived ethnic marginalization and negative perceptions toward Nigerian democracy were found to positively correlate with support for secession. Socioeconomic condition was measured at the household and communal levels. The household measure had no effect on support for secession, but the communal measure did: socioeconomic condition at the communal level was positively correlated with support for secession. Igbo ethnicity increased the likelihood of supporting secession, while belonging to the Hausa/Fulani and Yoruba ethnic groups reduced the likelihood of supporting secession.

Keywords: *Indigenous People of Biafra, IPOB, Secession, Horizontal inequalities, Ethnic marginalization, Nigeria.*

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2.1. Introduction

Since Nigeria's transition to civilian rule in 1999, it has contended with various groups agitating for the independence of the predominantly Igbo Eastern Region to form the Republic of Biafra. This sentiment is tied to the defunct Republic of Biafra, which was in existence from May 30, 1967, to January 15, 1970. The secession of the Eastern Region from Nigeria marked the beginning of the Nigerian Civil War, which is also known as the Biafra War. The collapse of Biafra and its subsequent reincorporation into Nigeria marked the end of the war. Pro-Biafra agitations have largely centered on the topic of marginalization faced by members of the Igbo ethnic group in post-war Nigeria. Although secession had been contemplated by the predominantly Hausa/Fulani Northern Region and the predominantly Yoruba Western Region prior to the Biafra War, these considerations never morphed into action (Harnischfeger 2019; Imuetinyan 2017, p. 216; Orobator 1987). The Igbos were the first to challenge the entity called "Nigeria" by both words and action. Despite losing the war and being reintegrated into Nigeria, Achebe (1983, p. 50) warned that unless all Nigerians (especially the Igbo) were treated fairly, the polity risked retrogression and instability. Two prominent pro-Biafra groups are the Movement for the Actualization of the Sovereign State of Biafra (MASSOB), which was established in 1999 (Okonta 2018, p. 361), and the Indigenous People of Biafra (IPOB) movement, a splinter group of MASSOB, which was established in 2014 (BBC 2017). Although both groups are still in existence, MASSOB has diminished in prominence compared to IPOB. IPOB was created to rejuvenate the drive for secession when the head of MASSOB, Ralph Uwazurike, was thought to have compromised in his commitment to the goals of the movement (Adangor 2018, p. 144).

The Nigerian government has been resolute in its commitment to keep the country united and has often employed brute force through its security agencies to quell pro-Biafra

agitations (Amnesty International 2016, 2021). Nigeria's former President, Muhammadu Buhari, who was in office from May, 2015, to May, 2023, and who had fought on the side of the Nigerian military during the Biafra War, proscribed IPOB as a terrorist organization in 2017 (Ogbonna 2017; Ezea and Olaniyi 2017), a move that Adangor (2018) strongly criticized for its politicization of the fight against terrorism. The leader of IPOB, Nnamdi Kanu, is currently in the custody of Nigerian authorities and has been charged with treasonable felony (Jalloh 2021, The Cable 2021). This is not the first time he has been arrested on such charges. He was first arrested in 2015 and released on bail after two years of incarceration. The conditions of his release prohibited him from granting interviews, participating in rallies, and being in gatherings of over ten people (Richards 2017), conditions he flouted when he fled the country shortly after his release and continued his campaign from abroad (Ojoye 2017; Nasiru 2018). His lawyers and IPOB, on the other hand, contend that he did not defy his bail conditions, but was rather compelled to flee the country because his life was under threat (Nwachukwu 2021; Yusuf 2021; The Cable 2017).

IPOB's first objective, as stated on its official website, centers on discrimination: "To promote human rights advocacy and protect the rights of Indigenous Peoples in all parts of the world who are facing persecution and discrimination."⁹ The relationship between the various ethnic groups in post-colonial Nigeria, especially the major three (Hausa/Fulani, Yoruba, and Igbo) has been very competitive, and to some degree adversarial. The overlap between ethnicity and religion adds another layer of complexity to the mix. The Igbo are predominantly Christian, the Hausa/Fulani are predominantly Muslim, while both religions are almost equally represented among the Yoruba (Laitin 1986, p. 8). After six decades of independence, the goal of national integration continues to elude Nigeria. Commenting on

⁹<https://www.ipobgovernment.org/our-mission/> (Accessed June 1, 2022).

the prominence of ethnic cleavages after Nigeria gained independence from British colonial rule, Falola and Heaton (2008, p. 159) observed: “when Nigeria became an independent sovereign state in 1960, in many ways it was a state without a nation.” In his little book entitled, *The Trouble With Nigeria*, Achebe (1983, p. 5) pointed out that “Nothing in Nigeria’s political history captures her problem of national integration more geographically than the chequered fortune of the word tribe in her vocabulary.” Whenever the topic of marginalization is mentioned in Nigerian public discourse, it often pertains to the Igbos and their relationship with the other two major ethnic groups (Adewole 2021; Ede 2021; Njoku 2019). Ikpeze (2000, p. 90) observed: “As a people the Igbo have been systematically disempowered politically, economically, militarily and socially by the Hausa/Fulani and Yoruba groups.”

Although the state of Biafra ceased to exist in 1970, its memory persists in the minds of many, including those who were born after the war (Smith 2007, pp. 191-220; Maier 2000, p. 271). Despite the government’s heavy-handed approach in suppressing IPOB’s activities, it has remained active, and its ideology has kept spreading. The government’s fixation on the group has enhanced its popularity and turned its leader, Nnamdi Kanu, into a “cult hero” (Maiangwa 2021). Emphasizing the futility of the forceful approach adopted by the Nigerian government, Idachaba and Nneli (2018, p. 56) observed that it “only strengthens ethno-nationalist movements, radicalize some of her members and attract public sympathy to such groups.”

Many Igbos migrate from their Eastern homeland to other regions within Nigeria. Such movement is driven by their competitive, individualistic, and entrepreneurial nature, which enables them to perceive and take advantage of opportunities (Ede et al. 2021; Nnadozie 2002; Coleman 1958, p. 333). Also, the infertility of the land in Eastern Nigeria, which makes it unsuitable for agricultural purpose, coupled with its scarcity and a high

population density, further drives emigration from the region (Achebe 2012, pp. 74-75; Ikpeze 2000, pp. 105-106; Coleman 1958, p. 332). Given such interregional dependence, not every member of the Igbo ethnic group would support the secession of the Eastern Region from Nigeria. Relying on the horizontal inequalities theory, this study seeks to investigate how perceived ethnic marginalization, attitudes towards Nigerian democracy, and socioeconomic condition influence support for secession among members of the Igbo ethnic group. Moreover, it examines how belonging to Nigeria's three major ethnic groups—i.e., Igbo, Hausa/Fulani, and Yoruba—influences support for secession.

Although much research has been conducted on the demand for secession by neo-Biafra groups, most of them are qualitative. With the exception of the study by Lewis (2022), the few studies that use quantitative data often employ it descriptively and focus on the leadership of the movements and the response of the Nigerian government, while paying scant attention to the perceptions of the larger Nigerian population (e.g., Idachaba and Nneli 2018; Obi-Ani, Nzubechi, and Obi-Ani 2019; Chiluwa 2018). Relying on survey data, Lewis (2022) found that exposure to neo-Biafran conflicts positively correlated with support for secession among the subsample of respondents who belong to ethnic groups that are autochthonous to Biafran territory. Moreover, his regression results showed that support for secession was strongest among ethnic groups that would dominate the state of Biafra; the smaller ethnic groups that would be dominated were not supportive of secession.

This study differs from the one conducted by Lewis (2022) in the following ways: First, it relies upon the framework of the horizontal inequalities theory and pays particular attention to how political and socioeconomic horizontal inequalities influence support for secession. Second, recognizing the tripoidal nature of Nigeria's ethnic landscape, this study zooms in on Nigeria's three major ethnic groups—i.e., the Hausa/Fulani, Yoruba, and Igbo—and investigates how belonging to each of these groups influences support for

secession. Third, this study, which relies heavily on historical analysis, provides a more detailed analysis of the Nigerian case study than Lewis (2022). Lastly, unlike Lewis' study which focuses on the ethnic groups that are autochthonous to Biafran territory, this study focuses specifically on members of the Igbo ethnic group. It is important to focus on Igbos because the IPOB movement is essentially an Igbo affair: IPOB members are primarily Igbos, most IPOB-related conflicts occur in Igbo territory, support for IPOB is highest among Igbos, and IPOB's claims mostly pertain to the political and socioeconomic exclusion of Igbos in postwar in Nigeria.

This study finds that among Igbos, perceived ethnic marginalization at the group level and negative perceptions toward Nigerian democracy increases the likelihood of supporting secession. This is likely because of the exclusion of Igbos from political power at the center in Nigeria. Socioeconomic condition was measured at the household and communal levels. The household measure had no effect on support for secession, but the communal measure, which I proxied using the literacy rate of the population in the local government area (LGA) (i.e., municipality) where the respondent resided, positively correlated with support for secession. A plausible explanation for this finding could be that Igbos feel that their association with Nigeria holds them back and they could do better alone. Belonging to the Hausa/Fulani and Yoruba ethnic groups reduced the likelihood of supporting secession, while belonging to the Igbo ethnic group was positively correlated with support for secession. This study contributes to the broader literature on the determinants of secession, especially those with an empirical focus (e.g., Lewis 2022; Cunningham and Sawyer 2017; Jenne, Saideman, and Lowe 2007; Cunningham 2013).

This study proceeds as follows: Section 2, which relies on historical analysis, provides an overview of the relationship between Nigeria's three major ethnic groups from the 1950s up to 1970 when the Biafra War ended. Section 3 discusses the literature on inter-group

conflict with particular emphasis on the nexus between horizontal inequalities and secessionist conflict. Section 4 discusses the trend of Biafra-related conflicts in Nigeria. Section 5 operationalizes the variables that will be used to estimate the regression model and specifies the general form of the model to be estimated. Section 6 presents the regression results and discusses them, while Section 7 summarizes the paper and concludes.

2.2. Ethnic competition and the Biafra War

Nigeria, like most African countries, plummeted into civil war after gaining independence from colonial rule. Nigeria was created by the British when they merged the Northern and Southern protectorates, previously distinct entities administered by the British, on January 1, 1914. The amalgamation report written by Sir. Frederick Lugard, Nigeria's first Governor-General, shows that the merger was driven by financial expediency and administrative convenience, with little consideration for the cultural differences between the peoples who were brought together (Lugard 1919, pp. 7-8). Despite the amalgamation, the British continued administering the Northern and Southern Regions differently. In the Northern Region, which had been an Islamic caliphate for a century until its capture in 1903, the British did not change much when they took over. They appropriated the existing institutions and even employed the local Hausa language for administrative purposes. This contrasts with the Southern Region where English was adopted as the administrative language, and the strategies of Westernization and Christianization were pursued ardently (Coleman 1958, pp. 46-47; Nafziger and Richter 1976, pp. 92-93). The division of the Southern Region into the Eastern and Western Regions in 1939 entrenched ethnic consciousness in the minds of Nigerians. This is because the three administrative divisions were closely associated with each of Nigeria's three major ethnic groups: The Northern Region was dominated by the Hausa/Fulani, while the Eastern and Western Regions were dominated by the Igbo and

Yoruba respectively (Ake 1993, p. 3; Imuetinyan 2017, pp. 208-209). This put the minority ethnic groups in the uncomfortable position of having to fit into the mold of the dominant ethnic groups in the regions where they resided (Achebe 2012, p. 47).

The heterogeneous peoples who constitute Nigeria were able to transcend their differences to confront a common foe—European rule, but then turned against each other after the goal of independence had been achieved. This explains why Geertz (1973, p. 237) asserted that “removing European rule has liberated the nationalisms within nationalisms.” Having established their dominance over the colony through brute force and demonstrated their willingness to employ violence in quelling dissent, the British created a superficial semblance of stability within the colony (Falola 2009, pp. 1-25). In the middle of the twentieth century when Nigeria began taking bold strides towards independence, the ethnic cleavages between the various ethnic groups that had been lurking beneath the surface became more prominent.

Besides the adversarial relationship between Nigeria’s three major ethnic groups, the smaller ethnic groups also feared domination from the bigger ones (Nigeria comprises of 250 ethnic groups). As the period of independence drew nearer, the minority ethnic groups became apprehensive about their status under the majority ethnic groups in post-independence Nigeria. They appealed to the British government to create more states to mitigate their concerns about ethnic domination. The British Government set up the Willink Commission in 1957 to examine these concerns (Akinleye 1996).

During the hearings that followed, the minority ethnic groups accused the majority ethnic groups of occupying most of the top positions in the civil service, using the institutions of the state for their benefit, and bias in the allocation of infrastructure and social amenities (Akinyele 1996, pp. 77-78). Although the commission acknowledged that the minority ethnic groups had genuine concerns, it did not support the creation of more states because this

could create new ethnic minorities, thus failing to address the fundamental problem of ethnic domination. The commission recommended constitutional safeguards as a viable tool for protecting ethnic minorities (Imuetinyan 2017, p. 217). Nevertheless, the Nigerian government created more administrative regions after independence. The Mid-west Region was created in 1963, which increased the number of administrative units to four. In the wake of the Biafra War in 1967, the military government divided the four regions into twelve states. The number of states increased to nineteen in 1976, twenty-one in 1987, thirty in 1991, and thirty-six in 1996 (Alapiki 2005).

Nigeria gained independence from British colonial rule on October 1, 1960. Politics in post-independence Nigeria was characterized by stiff competition between the three regions, and by extension the three major ethnic groups. This seriously undermined national integration. Each region had a major political party whose support base largely consisted of the dominant ethnic group residing there. Northern People's Congress (NPC), as can be inferred from the name, was the main party in the Northern Region. It was akin to the party of the Hausa/Fulani. Action Group (AG) in the Western Region was closely associated with the Yoruba, and the National Council of Nigeria and the Cameroons (NCNC) was closely tied to the Igbos (Akinyele 1996, p. 75; Laitin 1986, p. 6). The fear of domination was not peculiar to the minority ethnic groups. The Hausa/Fulani feared that they would be dominated by the Igbos and Yoruba because they lagged in the area of education and did not have a large pool of educated people to fill up positions in the civil service. The Igbos and Yoruba, on the other hand, feared domination by the Hausa/Fulani because of their influence in the political sphere (Falola and Heaton 2008, pp. 165-166; Siollun 2009, pp. 76-77; Diamond 1988, pp. 49-50; Laitin 1986, p. 6).

Nigeria's first six years after independence were tumultuous. Like Falola and Heaton (2008, p. 159) concisely put it, "Official corruption, rigged elections, ethnic baiting, bullying

and thuggery dominated the conduct of politics in the First Republic, which existed from 1960 to 1966.” Frustrated with the inability of the civilian government to unite the peoples of the various regions and maintain stability over the polity, a group of army officers, mostly of Igbo ethnicity, launched a coup on January 15, 1966, which toppled the civilian government. The coup resulted in the deaths of Nigeria’s Prime Minister, who was from the Northern Region, the Premiers of the Northern and Western Regions, and some senior military officers, most of whom were from the Northern Region. However, the Premiers of the Eastern and Mid-West Regions, who were Igbos, were not killed (Falola and Heaton 2008, p. 172; Achebe 2012, p. 64; Siollun 2009, p. 79). The coup succeeded in toppling the civilian government, but the plotters were arrested.

The most senior army officer at the time, Major General Johnson Aguiyi-Ironsi, who was of Igbo ethnicity, took over power and appointed military governors to head the four administrative regions. Lt. Colonel Chukwuemeka Ojukwu was appointed as the Governor of the Eastern Region. Since the perpetrators of the coup were mostly Igbos, it was interpreted as an attempt by the Igbos to dominate the other ethnic groups (Achebe 2012, p. 66; Siollun 2009, p. 79). Arguiyi-Ironsi’s regime lasted for only six months because he was killed in a counter coup orchestrated by soldiers from the Northern Region. This led to the ascension of Lt. Colonel Yakubu Gowon, a Northerner, as Head-of-State. The Northern soldiers’ thirst for revenge on the Igbos was not allayed by the killing of Arguiyi-Ironsi and the transfer of power to a Northerner. They systematically targeted and killed their Igbo colleagues. Subsequently, they moved into the civilian sphere, alongside blood-thirsty hoodlums, and unleashed their barbarity on Igbo civilians. Tens of thousands of Igbos were killed, and their properties looted and destroyed. This led to the mass exodus of the Igbos to their homeland in the Eastern Region (Siollun 2009, pp. 117-138). Between 80,000 to

100,000 lives were lost during the pogrom (Ekwe-Ekwe 1990, p. 12). Conservative estimates put the death toll at 30,000 (Achebe 2012, p. 82).

The Igbos no longer felt safe in a united Nigeria. “It was not until 1966-7 when it [anti-Igbo sentiment] swept through Northern Nigeria like ‘a flood of deadly hate’ that the Igbo first questioned the concept of Nigeria which they had embraced with much greater fervor than the Yoruba or the Hausa/Fulani.” (Achebe 1983, p. 45). This led to the Governor of the Eastern Region, Lt. Colonel Odumegwu Ojukwu, proclaiming the Republic of Biafra on May 30, 1967. Although Ojukwu was at the forefront in the fight for secession, the decision to secede was a collective one that was supported by the Igbo people (Achebe 2012, p. 91). Diplomatic attempts to forestall the secession like the Aburi Summit in Ghana and a visit to the Eastern Region by members of the National Reconciliation Commission, were unsuccessful. The secession of Biafra was soon followed by the Biafra War, which was primarily about the reincorporation of Biafra into Nigeria. After 30 months of fighting and the deaths of over a million people, mostly from starvation as a result of the economic blockade imposed on Biafra by the Nigerian military, the war ended on January 15, 1970, with the surrender of Biafra (Falola and Heaton 2008, p. 180; Achebe 2012, pp. 222-228).

The Biafrans and the Federal Military Government (FMG) viewed the conflict from different perspectives: The Biafrans saw the war as a fight for the continued survival of the Igbo people and an effort to resist the genocidal tendencies of the FMG. In his speech commemorating the one-year anniversary of Biafra, Ojukwu observed: “We have convinced the aggressors that force alone cannot subdue a people, that Biafrans have chosen independence, the only guarantee of their survival, and are prepared to die defending it.” (Biafran Government 1968, p. 3). The FMG saw the war as a battle to preserve a united Nigeria. The dynamics of the war was influenced by external actors, especially the British and French governments. Nigeria may have gained independence from British rule in 1960, but

it was not economically independent because Britain still played a central role in its economic life. The British had significant investments in the financial sector, oil sector, and extractive industries. Also, Nigeria was an important market for manufactured goods from Britain. The close ties between the two countries made it difficult for Britain to remain neutral in the war, especially because its investments were at stake and the unity and stability of Nigeria was in its economic interest. The six-day Arab-Israeli war, which resulted in the closure of the Suez Canal, further threatened British oil supplies. These factors prompted the British government to renege on its initial decision to not sell ammunition to the FMG. British support skewed the war in favor of the FMG, leading to the eventual defeat of Biafran forces in 1970 (Ekwe-Ekwe 1990, pp. 27-36). The duration of the war was also influenced by the support that the French offered Biafran forces, which enabled them to better resist attacks launched by the Nigerian military (Ekwe-Ekwe 1990, p. 46).

After Biafra's surrender, Nigeria's Head-of-State, Yakubu Gowon, declared an amnesty to ensure that vengeance was not taken out against the Igbos (Okafor 2006, p. 160; Achebe 1983, p. 45). In his speech after the war, he declared, "no victor, no vanquished," and referred to the conflict as a "war between brothers." (Hill 2012, p. 113). Gowon subsequently launched the Reconciliation, Reconstruction and Rehabilitation (3R's) program, which was aimed at reintegrating the Igbos back into Nigerian society. However, many Igbos today still feel marginalized politically and socioeconomically (Campbell and Page 2018, p. 34; Smith 2007, pp. 191-220; Ikpeze 2000).

2.3. Horizontal inequalities and conflict

Not every multiethnic society is embroiled in conflict. The horizontal inequalities theory explains why cultural diversity leads to conflict in some instances but not in others. The crux of this theory is that cultural differences among groups, say along ethnic or religious lines,

do not lead to conflict. What causes conflict is the horizontal inequalities that exist among these culturally defined groups (Stewart 2000). By portraying inequalities among groups as the source of conflict rather than cultural differences, this theory challenges the “Clash of civilizations” perspective which contends that conflict occurs when different cultural groups come into contact (Huntington 1996). Horizontal inequalities could be economic, social, political or cultural. Social Horizontal inequality constitute unequal access to services like education, healthcare, housing etc. Cultural horizontal inequality could emanate from discrepancies in the recognition ascribed to different languages, norms, customs, and practices (Stewart 2000, p. 249; 2010, pp. 1-2). These inequalities, which have the capacity to cause grievances among marginalized groups, are crucial in the mobilization process that precedes the onset of conflict. For a group to be cohesive, its members need to share certain characteristics like having a common language, tradition, ethnicity, religion, and the same source of hardship. The leaders of these groups often employ the strategy of “reworking historical memories” to accentuate the identity of the group and strengthen cohesion within it (Stewart 2000, p. 247).

Toft (2012) contends that ethnicity is central to secessionist conflicts: “Whereas an ethnic group is a latent nation, a nation is a politically active ethnic group, which tends to demand greater cultural autonomy or self-determination.” (p. 584). She also points out that exclusion precipitates the emergence of nations because it “forces groups of individuals to identify themselves in relation to that non-membership.” (p. 584). In the mobilization process that precedes conflict, perceived inequality is just as important as objective measures of inequality. Stewart (2000, p. 252) notes that “a poor ‘objective’ situation in terms of group inequality may not translate itself into conflict...if ideological elements are such that the inequalities are not widely perceived.” Similarly, Brown and Langer (2010, p. 30) observe: “If groups do not perceive the prevailing socio-economic and political inequalities as unfair or

unjust, severe objective horizontal inequalities might not provoke conflict.” The capacity of the marginalized group to challenge the state also depends on its size: “Where groups are small numerically, their potential to cause conflict on a substantial scale is limited, even when they suffer persistent discrimination.” (Stewart 2000, p. 254).

Brown and Langer (2010) acknowledge that similarities exist between horizontal inequalities theory and Ted Gurr’s “relative deprivation” theory,¹⁰ but they also contend that both theories differ because horizontal inequalities theory allows for the possibility that the group instigating conflict might not necessarily be disadvantaged. As they concisely put it: “[I]f an economically privileged group is geographically concentrated, it may seek more autonomy or even independence in order to maintain or improve its relatively advantageous position.” (p. 33). Similarly, Horowitz (1985, pp. 249-250) argues that when the population in the affluent region of a country feels it is contributing disproportionately to the state’s coffers—thus subsidizing the poorer regions—it might seek secession to gain greater control over its resources.

Although horizontal inequalities theory is predicated upon the constructivist view that identity is malleable, socially constructed, and changes over time, it acknowledges that some aspects of identity are quite stable and difficult to change. It is often on the basis of these difficult-to-change identities that group leaders stir up grievances in the mobilization process. These relatively stable aspects of identity also tend to make ethnic boundaries more salient (Stewart 2008, pp. 10-11). Sen (2006, p. 2) supports this argument: “A strong—and exclusive—sense of belonging to one group can in many cases carry with it the perception of distance from other groups.” He also highlights the tendency for identity to be exploited

¹⁰ Gurr (1968, p. 1104) defined relative deprivation as “actors’ perceptions of discrepancy between their value expectations (the goods and conditions of the life to which they believe they are justifiably entitled) and their value capabilities (the amounts of those goods and conditions that they think they are able to get and keep).”

for violent ends: “Violence is fomented by the imposition of singular and belligerent identities on gullible people, championed by proficient artisans of terror.” (Sen 2006, p. 2). A crucial element in Sen’s view of identity is the attribution of responsibility to the individual. He points out that while an individual can belong to several groups and have multiple identities, he or she has the capacity to decide on the amount of importance to attach to each of these identities (Sen 2006, pp. 5-6). Nevertheless, he also acknowledges that people may encounter difficulty in disentangling themselves from certain categories that are ascribed to them by the larger society, for instance in the case of race (Sen 2006, pp. 6-8).

Griffiths (2021) has developed a theory where he asserts that secessionist movements are essentially the same, since their ultimate goal is to obtain recognition from both the home state and the international community. Secessionist movements employ two main strategies to achieve this goal: compellence and normative appeal. He defines compellence as “the use of assets to coerce the home state and/or international community; it is direct action designed to increase the costs of not complying with secessionist demands.” (p. 30), and normative appeal as a “set of tactics that are designed to showcase the grievances and demands of the aspiring nation and either change preferences on the issue or bring into the game previously uninvolved parties.” (pp. 30-31). Both strategies, which tend to complement one another, are often used simultaneously by secessionist groups. Englebert and Hummel (2005) contend that the decision on whether or not to pursue secession depends on a cost-benefit analysis: Regional leaders compare the benefits from having partial control over the sovereign state’s institutions with the potential benefits that could accrue from secession without international recognition. Only when the dividends from the latter exceed the former do regional leaders pursue secession. They tout this as one of the reasons for the deficit of secessionist conflicts in Sub-Saharan Africa. Horowitz (1992, p. 122) makes a similar

assertion when he observes that “whether a group is integrationist or secessionist depends, in large measure, on its assessment of its prospects in the undivided state.”

Cunningham (2013) argues that self-determination campaigns are likely to turn violent when the group seeking secession is large, marginalized in the political sphere, economically disadvantaged, seeking independence, and operating in a country characterized by a low level of economic development. Cunningham and Sawyer (2017) have identified three conditions for a group to make a self-determination claim: First, the group needs to see its ethno-nationalist identity as relevant, especially in relation to other ethnic groups. Second, there needs to be a common grievance among members of the group, this grievance could be economic, political, or even embedded in the lack of recognition of traditional structures that are peculiar to the ethnic group (e.g., language). Lastly, there needs to be an expectation among members of the group that the goal of self-determination is achievable. Cunningham and Sawyer (2017) have also noted that governments address secessionist claims either by making concessions to accommodate the demands of the group or by repressing the group. Both approaches are likely to foment the demand for secession because making concessions could embolden the group to make further demands; repressing the group could heighten the feeling of grievances among its members, lending credence to their claim of maltreatment by the government.

Members of the Igbo ethnic group and IPOB meet most of the criteria stipulated in horizontal inequalities theory. The Igbos constitute the third largest ethnic group in Nigeria (i.e., after the Hausa/Fulani and Yoruba), which makes them politically relevant and large enough to contend with the Nigerian state.¹¹ Since Nigeria’s transition to democracy in 1999, the Igbos have been excluded from political power at the center. Presidents and vice

¹¹ Refer to table A4 in the appendix for the ethnic distribution of the respondents in the Afrobarometer survey data, upon which this study relies.

presidents have emerged from the Hausa/Fulani and Yoruba ethnic groups, but never has an Igbo person held any of these offices. For most of Nigeria's history, political power at the center has been controlled by the Hausa/Fulani group (Harnischfeger 2019, pp. 329-330; Ukiwo 2013, pp. 182-184; Mustapha 2009).¹² Harnischfeger (2019) contends that even though the rhetoric of the early neo-Biafran movements (especially MASSOB) was radical, its ultimate goal was not to secede from Nigeria, but rather to use the threat of secession to gain leverage in the political landscape and eventually produce a president of Igbo ethnicity.

IPOB, through its campaigns, has kept memories of the defunct Republic of Biafra alive and constantly reminded the Igbos of their marginal position in postwar Nigeria. Choi and Piazza (2016) have shown that political marginalization positively correlates with the incidence of domestic terrorist attacks. In a microlevel study conducted in Turkey, Sarigil and Karakoc (2016) have found that Kurds who feel that they are treated unfairly by the Turkish government are more supportive of secession and autonomy. Choi and Noll (2021) have pointed out that "ethnic inclusiveness is part of everyday perceptions of democracy," and when politically relevant ethnic groups are excluded from the political process, the risk of intrastate and interstate conflicts rises. In a more recent study, Choi (2022) has shown that when political leaders uphold their legitimacy by appealing to the ethnicity of their supporters, disfavored ethnic groups, whose members fear being dominated, might resort to ethnic terrorism as a means survival.

In a country like Nigeria, where the population attaches more importance to its ethno-religious identity than its nationality (Tuki 2023; Agbiboa 2013; Agbiboa and

¹² Since Nigeria's transition to civilian rule in 1999 up to the present, a Hausa/Fulani person has always either been president or vice president. A Yoruba was president from May, 1999, to May, 2007, and the vice president from May, 2015, to May, 2023.

Maiangwa 2013), it is not surprising that neo-Biafran conflicts have religious undertones.¹³ Igbos often frame their resentment over perceived marginalization by the Nigerian state in religious terms by likening themselves to the Jews and the Nigerian state to the Egyptian Pharaoh who held the Jews captive in biblical times (Smith 2007, p. 206). IPOB, on its website, associates Igbo ethnicity with Christianity: “We, the Indigenous People of Biafra, are seeking the restoration of the sovereign, independent, and Judeo-Christian Nation-state of Biafra.” The group also alludes to the threat of Igbos (i.e., Christians) being dominated by a predominantly-Muslim national government: “We are also fighting against radical, state-sponsored, Islamic terrorism that has slaughtered millions of our people and is hell-bent on the occupation of our land and Islamization of our people.”¹⁴

Given the political exclusion of the Igbos, I expect that they would have a higher level of perceived ethnic marginalization at the group level and invariably more negative attitudes towards Nigerian democracy than members of the other major ethnic groups—i.e., the Hausa/Fulani and Yoruba. This in turn, should increase their likelihood of supporting secession. The discussion so far leads to the first set of hypotheses that this study seeks to test:

H1: *Belonging to the Igbo ethnic group positively correlates with support for secession.*

H2: *Perceived ethnic marginalization at the group level positively correlates with support for secession among Igbos.*

H3: *Negative perceptions towards Nigerian democracy positively correlates with support for secession among Igbos.*

¹³ Ethnicity overlaps with religion to a great extent in Nigeria. Moreover, it is not uncommon for the Nigerian political elite to exploit the ethno-religious differences among the population to advance their political goals (Sahara Reporters 2023; The Pillar 2023)

¹⁴ <https://www.ipobinusa.org/> (Accessed September 30, 2023).

While the existence of grievances—imagined or real—is crucial in linking horizontal inequalities to conflict, some scholars have challenged the notion that grievances cause conflict. Collier and Hoeffler (2004, 2000), in their *Greed and Grievance* series of publications, argue that most rebellions are driven by greed; the narrative of grievances is merely a façade used by rebel leaders to conceal their ulterior motive of self-enrichment. One of the main predictors of conflict onset in their model is socioeconomic condition, which they proxy with income. Low income reduces the opportunity cost of joining a rebel group, which in turn increases the risk of conflict. In a later publication, in which they zoom in on the determinants of secessionist conflicts, they conclude that “secessionist movements should not in general be seen as cries for social justice. Those few secessionist movements that are able to scale-up to being organizations with a serious political or military capability are likely to occur in rich regions and contain an element of a resource grab.” (Collier and Hoeffler 2006, pp. 52-53).

Choi and Luo (2013) have shown that poverty emanating from economic sanctions creates an avenue for opportunistic leaders to exploit the grievances of the poor by attributing their suffering to the actions of external governments. This, in turn, increases the risk of international terrorism. In a study conducted in Ivory Coast, Langer (2005) finds that political horizontal inequality among elites and socioeconomic horizontal inequality among the masses were crucial in the mobilization process preceding the country’s descent into violent conflict in the 1990s. This is because the exclusion of some elites from the political process prompted them to mobilize their ethnic kin/supporters towards conflict; the mobilization process was successful because of the socioeconomic horizontal inequality that existed among the masses. Using disaggregated data for Sub-Saharan Africa, Østby, Nordås, and Rød (2009) have shown that regions characterized by low levels of education, relative deprivation in terms of asset ownership, and intraregional inequalities are susceptible to

conflict. Conversely, Deiwiiks, Cederman, and Gleiditsch (2012) contend that advantaged groups might seek secession because they contribute disproportionately to the state's coffers and think they could do better on their own. A case in point would be the pursuit of secession by Indonesia's natural resource-rich regions of Aceh, Riau, Papua, and East Kalimantan (Tadjoeddin 2011).

Toft (2012) has questioned the potential for economic grievances to cause secessionist conflicts: "In short, it generally takes something more than economic grievances to motivate groups to challenge the existing order and demand greater autonomy or secession." (p. 587). These arguments could be tied to the Nigerian case: IPOB's leaders might court the support of poor Igbos by attributing their poverty to the Nigerian government's ineffectiveness and portray secession as the key to improving their socioeconomic condition. It is also possible that the Igbos have a better socioeconomic condition than the national average; this disparity makes them feel that their association with Nigeria holds them back, and they can do better if the Eastern Region secedes. The latter mechanism is especially plausible given that Nigeria relies heavily on crude oil exports for its revenues and a significant proportion of Nigeria's oil reserves are within the proposed Biafran territory.¹⁵ Moreover, relying on gridded data on literacy rate in Nigeria (Bosco et al. 2017), I find that the average literacy rate for members of the Igbo ethnic group is higher than those for the Yoruba, Hausa/Fulani, and the Nigerian population. To capture these different possibilities, I will test the following three hypotheses:

H4a: *Socioeconomic condition negatively correlates with support for secession among Igbos.*

H4b: *Socioeconomic condition positively correlates with support for secession among Igbos.*

¹⁵ Although the minority ethnic groups in the oil-producing regions in Eastern Nigeria have distanced themselves from IPOB.

H4c: *Socioeconomic condition does not correlate with support for secession among Igbos.*

2.4. Trend in pro-Biafra agitation

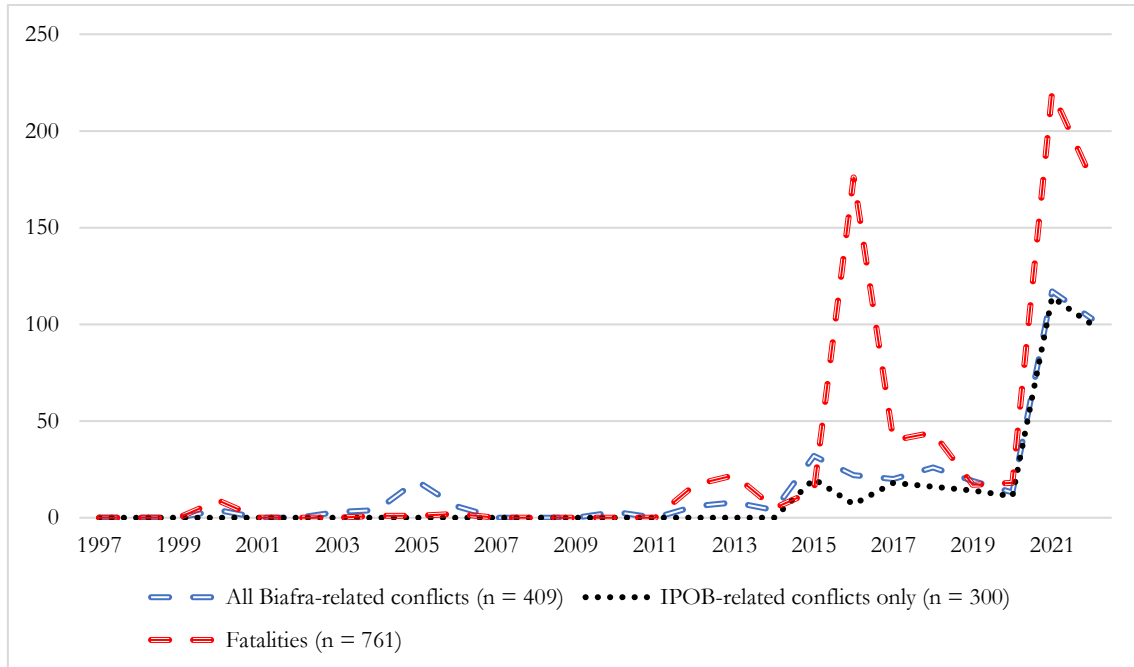


Figure 1: Biafra-related conflicts and fatalities, 1997–2022 (ACLED)

Except for the period of rule by Alhaji Shehu Shagari, which lasted from 1979 to 1983, and the 83-day rule of Chief Ernest Shonekan in 1993, Nigeria was ruled by military dictators from 1970, when the Biafra War ended, until May 1999, when the military officially handed over power to a civilian government.¹⁶ Nigeria has remained under civilian rule since then. The transition to civilian rule marked the beginning of pro-Biafra agitations. The absence of agitation prior to 1999 may be explained by the repressive nature of the military governments and their willingness to employ brute force to keep the polity under control. Moreover, the way the Biafra War ended almost certainly shook the resolve of the Igbos. Biafran forces were defeated, the Biafran leader fled to Ivory Coast, and the war had caused both material and psychological carnage. The transition to civilian rule probably created a semblance of

¹⁶ Both civilian leaders were deposed through military coups.

expanded freedoms, which allowed pro-Biafra sentiments that had been simmering beneath the surface to erupt.

Figure 1, which is based on data obtained from the Armed Conflict Location and Events Database (ACLED) (Raleigh et al. 2010), shows the trend in Biafra-related conflicts and the accompanying fatalities from 1997 to 2022.¹⁷ A limitation of the ACLED dataset is its heavy reliance on media reports. It is possible that pro-Biafra agitations were present when Nigeria was under military rule, but they were not reported in the media because press freedom was stifled. Nevertheless, the ACLED dataset still remains invaluable in understanding the trends in and nature of Biafra-related conflicts because of its disaggregated nature and the fact that it is updated in real time. The blue dashed curve shows the annual trend in conflicts where at least one of the actors was a neo-Biafran group; the black dotted curve shows only the incidents involving IPOB. The latter curve is a subset of the former. The red dashed curve shows the annual trend in fatalities associated with Biafra-related conflicts.

A total of 409 Biafra-related conflicts occurred between January 1, 1997, and December 31, 2022. These incidents caused 761 fatalities. IPOB accounted for 73 percent of the total Biafra-related conflicts. The first incident, which involved MASSOB, was recorded in February 2000. Prior to 2015, MASSOB was the main pro-Biafra movement, but this changed with the advent of IPOB, whose first incident was recorded in 2015. The advent of IPOB have been associated with an increase in the number of fatalities. In 2016, a year after IPOB entered the scene, 176 fatalities were recorded. This corresponds to a growth of 1,157 percent when compared to the 14 fatalities recorded in 2015. 2021 was the most violent year between 1997 and 2022, both in terms of the incidence and intensity of the conflict.

¹⁷ To access the ACLED data visit: <https://acleddata.com/>

There were 114 incidents and 220 fatalities. The proximity of the black dotted curve to the blue dashed curve from 2019 to 2022 indicates that IPOB alone accounted for almost all Biafra-related conflicts during this period. The total Biafra-related incidents ($n = 409$) were categorized as Battles (40%), Protests (23%), Violence against civilians (20%), Riots (7%), Explosions/Remote violence (1.7%), and Strategic developments (8%). 32 incidents were recorded in 2015, of which 75 percent were protests. A total of 220 incidents were recorded between 2021 and 2022, of which 79 percent were either Battles or Violence against civilians. There were only 9 protests during this period. This indicates that Biafra-related conflicts have become violent.



Figure 2: Spatial distribution of Biafra-related conflicts (1997–2022)

Since the ACLED dataset is georeferenced, I rendered the geolocations of the Biafra-related conflicts on a map showing Nigeria's 36 states, the federal capital territory (i.e.,

Abuja), and Nigeria's three major regions.¹⁸ Relying on the Georeferencing of Ethnic Groups (GREG) dataset (Wiedmann, Rød, and Cederman 2010), I also show the spatial area occupied by members of the Igbo ethnic group.¹⁹ As shown in Figure 2, Biafra-related incidents are clustered in Nigeria's Eastern Region—especially the Igbo spatial area. There were seven incidents in Abuja, which is not surprising, since it is the seat of the Nigerian federal government (See point B on map). Four incidents were recorded in Lagos State (see point A). This may be explained by the concentration of Igbos in the state (See panel 1 in Figure 3).

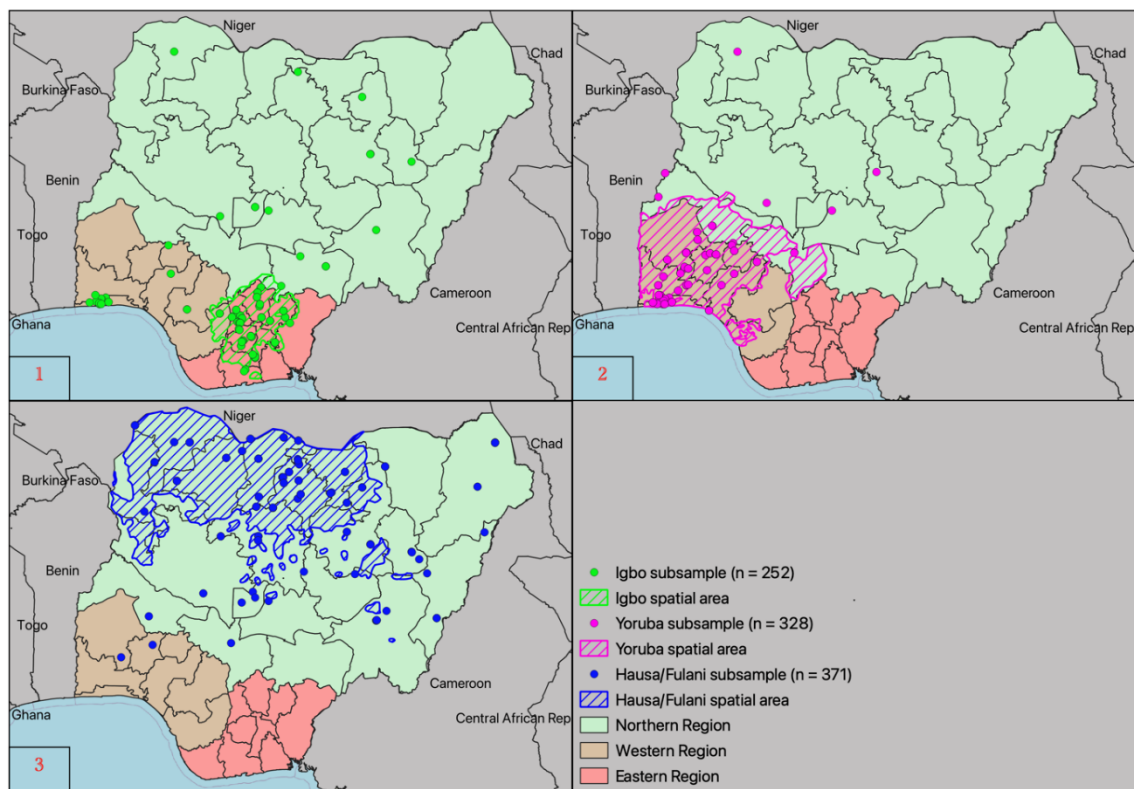


Figure 3: Ethnicity and settlement patterns

¹⁸ The shapefiles containing Nigeria's administrative boundaries was developed by United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA). It can be accessed here: <https://data.humdata.org/dataset/nga-administrative-boundaries>

¹⁹ Relying on maps and data obtained from the 1960s Soviet *Atlas Narodov Mira*, the GREG dataset matches the ethnolinguistic groups across the world with the spatial area they occupy.

Ethnic settlement patterns have persisted over time in Nigeria. Moreover, ethnicity was considered in the state-creation process in postcolonial Nigeria. Toft (2003) has highlighted the tendency for ethnic identity to be closely associated with the spatial area occupied by members of an ethnic group. She has also pointed out that structural factors like settlement patterns—i.e., the concentration of members of an ethnic group in a region—could lead to secessionist conflicts because it “a) makes political organization easier over a compact territory; b) facilitates military operations; and c) defines the territory over which claims can be made.” (Toft 2012, p. 590). “In Nigeria, ...territories have traditionally been associated with ethnic groups and the expression, ‘owners of the land,’ remains viable even to the extent of identifying cities as ‘belonging’ to particular ethnic group” (Plotnicov 1972, p. 001).

Because this study relies on the Afrobarometer survey dataset (BenYishay 2017), which is georeferenced, I rendered the geolocations of the respondents who belong to Nigeria’s three major ethnic groups (i.e., Hausa/Fulani, Igbo, and Yoruba) on a map showing Nigeria’s three major regions and the spatial areas they occupy. Figure 3 shows that settlement patterns among Nigeria’s major ethnolinguistic groups have persisted over time. Panel 1 shows the geolocations of the 252 survey respondents who belong to the Igbo ethnic group, 83 percent of who reside within the Eastern Region and the spatial area occupied by their ethnolinguistic group. As Panel 2 shows, 95 percent of the Yoruba respondents reside within the Western Region and the Yoruba spatial area. Panel 3 shows that 99.5 percent of the Hausa/Fulani respondents reside in the Northern Region and the Hausa/Fulani spatial area. The relatively higher number of Igbos residing outside the Eastern Region and the Igbo spatial area mirrors their tendency to emigrate to other regions within Nigerian.

2.5. Data and methodology

This study relies primarily on the Round 7 Afrobarometer survey data for Nigeria which was collected in 2017 (BenYishay et al. 2017).²⁰ It contains 1,600 observations and is representative for Nigeria's population. Observations were drawn from each of Nigeria's 36 states, plus the federal capital territory—i.e., Abuja. The data spanned 147 of Nigeria's 774 local government areas (LGAs) (i.e., municipalities).²¹ The dominance of Nigeria's three major ethnic groups was reflected in the data, with the Hausa/Fulani (25.62%), Yoruba (23.19%), and Igbo (17.22%) together accounting for 66 percent of the total respondents. Respondents were at least 18 years old. The data contains information about the ethnicity of the respondents, which enables me to breakdown the data based on ethnic affiliation. Table A1 in the appendix reports the summary statistics of the variables used to estimate the regression models, while Tables A2 and A3 report the cross-correlations between all the variables for the Igbo subsample of respondents and the full sample respectively. The variables used to estimate the regression models are discussed below.

Dependent variable

Support secession. This measures the degree to which respondents support IPOB's secessionist goal. It was derived from the question, "The Indigenous People of Biafra or IPOB, should be given the right to secede from the federation?", with response options on a scale with five ordinal categories ranging from "1 = strongly disagree" to "5 = strongly agree." In the original Afrobarometer dataset, higher ordinal values denoted more disagreement with IPOB's secessionist goal and vice versa. For easy interpretation of the

²⁰ To access the Afrobarometer dataset and the survey questionnaire visit: <https://www.afrobarometer.org/>

²¹ Each of Nigeria's 36 states comprises of 3 senatorial districts, which amounts to 109 senatorial districts (i.e. including Abuja which also doubles as a senatorial district). The senatorial districts are comprised of 774 local government areas (LGAs).

regression results, I inverted the ordinal values assigned to the response categories by subtracting each of them from 6, which allows higher values to denote greater support for secession and vice versa. I treated the “don’t know” and “refused to answer” responses as missing observations. I applied this rule to all variables derived from the Afrobarometer survey dataset.

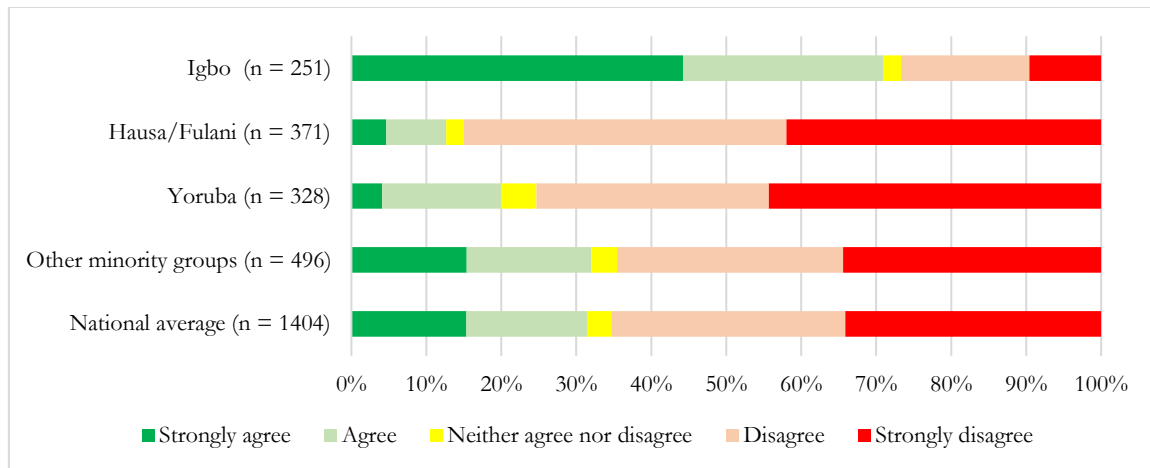


Figure 4: Ethnic distribution of support for secession

Figure 4 plots the responses to the question regarding support for IPOB’s secessionist goal on a stacked bar chart. The y-axis shows the number of respondents who belong to the various major ethnic categories and the total number respondents from the full sample who answered the relevant question. The x-axis shows the percentage of respondents who chose a particular response category. The figure shows that Igbos are more supportive of secession than the Yoruba, Hausa/Fulani, the minority ethnic groups combined, and the national average.

Explanatory variables

Ethnic marginalization. This measures the extent to which respondents think members of their ethnic group are marginalized. It was derived from the question, “How often, if ever, are [*Insert respondent’s Ethnic Group*] treated unfairly by the government?”, with the responses

measured on a scale with four ordinal categories ranging from “0 = never” to “3 = always.” A strength of this variable is its focus on marginalization at the group level rather than the individual level, which fits snugly with the horizontal inequalities theory. Its limitation is that it refers to marginalization in broad terms without focusing on any specific dimension of horizontal inequalities. As shown in Figure 5, Igbos have a higher level of perceived marginalization than the other ethnic categories and the national average.

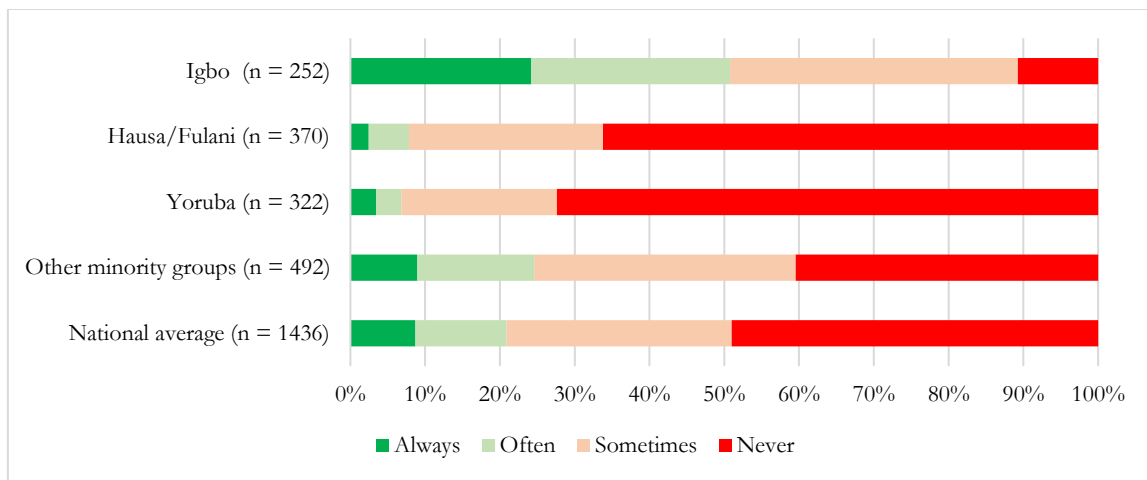


Figure 5: Ethnic distribution of perceived marginalization

Democracy. This measures the degree to which respondents think the political system in Nigeria is democratic. It was derived from the following question, “Now let us speak about the political system in this country. In your opinion how much of a democracy is Nigeria today?” The responses were measured on a scale with four ordinal categories ranging from “1 = not a democracy” to “4 = a full democracy.”

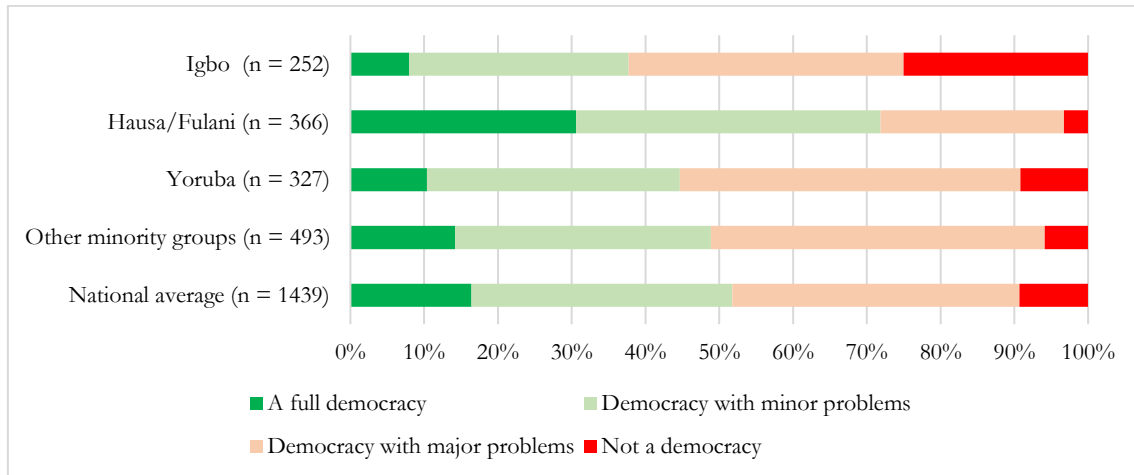


Figure 6: Ethnic distribution of perceptions toward democracy

As shown in Figure 6, Igbo have the most negative perceptions towards Nigerian democracy compared to the other ethnic categories and the national average. While 25 percent of Igbo contend that Nigeria is not a democracy, the estimate for the other ethnic categories are all below 10 percent. The Hausa/Fulani have the most positive attitudes towards democracy in Nigeria: only 3.2 percent of them contend that Nigeria is not a democracy.

Socioeconomic condition. I measured socioeconomic condition at the household and communal levels. The household measure for socioeconomic condition is based on a deprivation index derived by summing the responses to the following four survey questions: “Over the past year, how often, if ever, have you or anyone in your family: (a) Gone without food to eat? (b) Gone without enough clean water for home use? (c) Gone without medicines or medical treatment? (d) Gone without fuel to cook your food?” The responses were measured on a scale with five ordinal categories ranging from “0 = never” to “4 = always.” I summed the ordinal values across the four items to create an indicator which ranges from 0 to 16. Higher values denote a higher level of deprivation and vice versa. The four items had a Cronbach Alpha statistic of 0.78, which shows internal reliability. I proxied

socioeconomic condition at the communal level using the mean literacy rate (Bosco et al. 2017) in the LGA where the respondents reside.²² Because this dataset is gridded, I computed the relevant statistic for the respective LGAs using QGIS software. Literacy rate is expressed in percentage and measures the number of men and women aged between 15 and 49 years in the LGA who were literate in 2013. Since the raw data is gendered, I computed the estimates for males and females separately and then took the average. Higher values indicate a better socioeconomic condition and vice versa.

Igbo. This is a dummy variable that takes the value of 1 if the respondent belongs to the Igbo ethnic group and 0 otherwise. I developed a similar variable for the Yoruba, Hausa/Fulani, and the minority ethnic groups combined.

Control variables

Since most of the variables are measured at the individual level, I included control variables for the demographic attributes of the respondents—i.e., age and gender—in the regression models. Gender took the value of 1 if the respondent was male and 0 if female. I also controlled for political instability, which I measured using the total number of violent conflict incidents that occurred in the LGA where the respondents reside between 1997 to 2016. Based on the ACLED dataset (Raleigh et al., 2010), I define violent conflicts as incidents that fall under any of the following three categories: Battles, Violence against civilians, and Explosions/Remote violence. Although the ACLED data is available starting from 1997 and is updated in real time, I excluded incidents that occurred after 2016 while developing the variable. This lags the measure for political instability, since the dependent variable is measured in 2017. The persistence of violent conflict in Nigeria signals the inability of the

²² To access the gridded dataset for literacy rate visit: <https://hub.worldpop.org/geodata/summary?id=1266>

Nigerian government to protect its citizenry, which in turn has precipitated the establishment of ethnic paramilitary organizations. For instance, IPOB established the Eastern Security Network (ESN) in 2020 to address rising insecurity in Eastern Nigeria—especially because of the violent clashes between nomadic Fulani herders and the Igbo resident communities (Opejobi 2022; Njoku 2021; Campbell 2021).²³ The Nigerian government has voiced its opposition to the group; there have even been violent clashes between ESN and the Nigerian army (Gabriel 2023; Ugwu 2023; Chukindi 2023).²⁴ Given that ESN is a subset of IPOB, the government's heavy-handed approach towards the group might attract sympathy for IPOB's secessionist goal. Moreover, the Afrobarometer survey dataset shows that 30 percent of Nigerians agree that if the violence perpetrated by extremist groups cannot be resolved, Nigeria should be split into two countries.

Analytical technique

The general form of the model to be estimated could be expressed thus:

$$Y_i = \beta_0 + \beta_1 D'_i + \beta_2 X'_i + e_i \quad (1)$$

Where Y_i is the dependent variable which measures respondent i 's support for secession, β_0 denotes the intercept, D'_i is a vector of explanatory variables measuring perceptions towards democracy, perceived ethnic marginalization, socioeconomic condition, and Igbo ethnicity. X'_i is a vector of control variables measuring political instability and the respondent's demographic attributes. β_1 and β_2 denote the coefficients of the explanatory and control variables respectively, e_i is the error term. Since the dependent variable has five ordinal

²³ The clashes between nomadic Fulani pastoralists and resident communities are the most violent intercommunal conflicts Nigeria has witnessed during the last two decades See Tuki (2023a, pp. 7-10) for an overview.

²⁴ A similar group named *Amotekun* has been established by the Yoruba governors in Western Nigeria (Campbell and McCaslin 2020)

categories, I estimated the model using ordered logit regression, which is based on maximum likelihood estimation (MLE). To allow for the possibility of correlation between observations within the same LGA (i.e., district), I clustered the standard errors at the district level.²⁵ Because Hypotheses 2, 3, and 4 pertain specifically to members of the Igbo ethnic group, I will test these hypotheses using the subsample of respondents who belong to the Igbo ethnic group. I will test Hypothesis 1 using the representative sample for Nigeria's population.

2.6. Results and discussion

Regression models using the Igbo subsample

Table 1: Correlates of support for secession among Igbo

Support secession [†]	(1)	(2)	(3)	(4)	(5)	(6)
Ethnic marginalization	0.57*** (0.132)				0.418*** (0.142)	0.432*** (0.143)
Democracy		-0.556*** (0.108)			-0.438*** (0.104)	-0.429*** (0.108)
Deprivation index			-0.029 (0.048)		-0.008 (0.056)	-0.01 (0.056)
Literacy rate (LGA)				0.043*** (0.01)	0.041*** (0.011)	0.043*** (0.012)
Political instability						-0.005 (0.006)
Age						-0.004 (0.01)
Gender						0.456** (0.229)
Intercept 1	-1.436*** (0.242)	-3.573*** (0.378)	-2.337*** (0.232)	1.298 (0.82)	0.648 (1.043)	0.942 (1.087)
Intercept 2	-0.165 (0.212)	-2.287*** (0.301)	-1.098*** (0.198)	2.603*** (0.865)	2.018* (1.109)	2.326** (1.156)
Intercept 3	-0.041 (0.221)	-2.161*** (0.284)	-0.979*** (0.201)	2.728*** (0.877)	2.152* (1.121)	2.46** (1.168)
Intercept 4	1.166*** (0.27)	-0.971*** (0.273)	0.146 (0.201)	3.908*** (0.861)	3.448*** (1.101)	3.765*** (1.153)
Observations	251	251	251	251	251	251
Pseudo R²	0.031	0.027	0.001	0.026	0.068	0.073
Log pseudolikelihood	-323.244	-324.787	-333.369	-325.099	-311.061	-309.138
AIC statistic	656.487	659.574	676.737	660.199	638.121	640.276

Note: Clustered robust standard errors are in parentheses, [†] is the dependent variable which has five ordinal categories, *** p<0.01, ** p<0.05, * p<0.10. All models are estimated using ordered logit (Ologit) regression.

²⁵ I conducted a robustness check where I rather used simple robust standard errors, the results were identical to those reported in Tables 1 and 2. I have not reported these results here.

Table 1 presents the regression results of models that were estimated using the subsample of Igbo respondents. I considered only ethnic marginalization in model 1. It carried a positive sign and was significant at the one percent level. This supports Hypothesis 2 which states that Igbos who feel that members of their ethnic group are treated unfairly by the Nigerian government would be supportive of secession. In model 2 where I considered only democracy, it carried a negative sign and was significant at the one percent level. This suggests that Igbos who have positive attitudes towards Nigeria's political system are less supportive of secession. Put differently, Igbos who think Nigeria's political system is undemocratic are more supportive of secession. This is consistent with Hypothesis 3.

As shown in model 3, the household measure for socioeconomic condition—i.e., deprivation index—had no statistically significant effect on support for secession. This supports Hypothesis 4c which states that socioeconomic condition does not correlate with support for secession. However, as shown in model 4, the communal measure for socioeconomic condition—i.e., literacy rate—was significant at the one percent level and carried a positive sign, which supports Hypothesis 4b that socioeconomic condition positively correlates with support for secession. A plausible explanation for this finding is that Igbos feel that their association with Nigeria holds them back socioeconomically and they could do better if the Eastern Region secedes. A closer inspection of the literacy rate variable shows that Igbos outperform the other ethnic categories and the national average: Igbos had a mean literacy rate of 86 percent; the estimates for the Hausa/Fulani, Yoruba, and the national average were 35, 80, and 64 percent respectively. The discrepancy in the findings between the household and communal measures for socioeconomic condition indicates that the effect of socioeconomic condition on support for secession depends upon the level of aggregation. Moreover, these two variables do not measure the same thing. In fact, the correlation between the deprivation index and literacy rate was 0.13. In model 5

where I considered all the explanatory variables simultaneously, the results were consistent with those in the baseline models. As shown in model 6, these results are robust to the inclusion of control variables for political instability and the demographic attributes of the respondents.²⁶

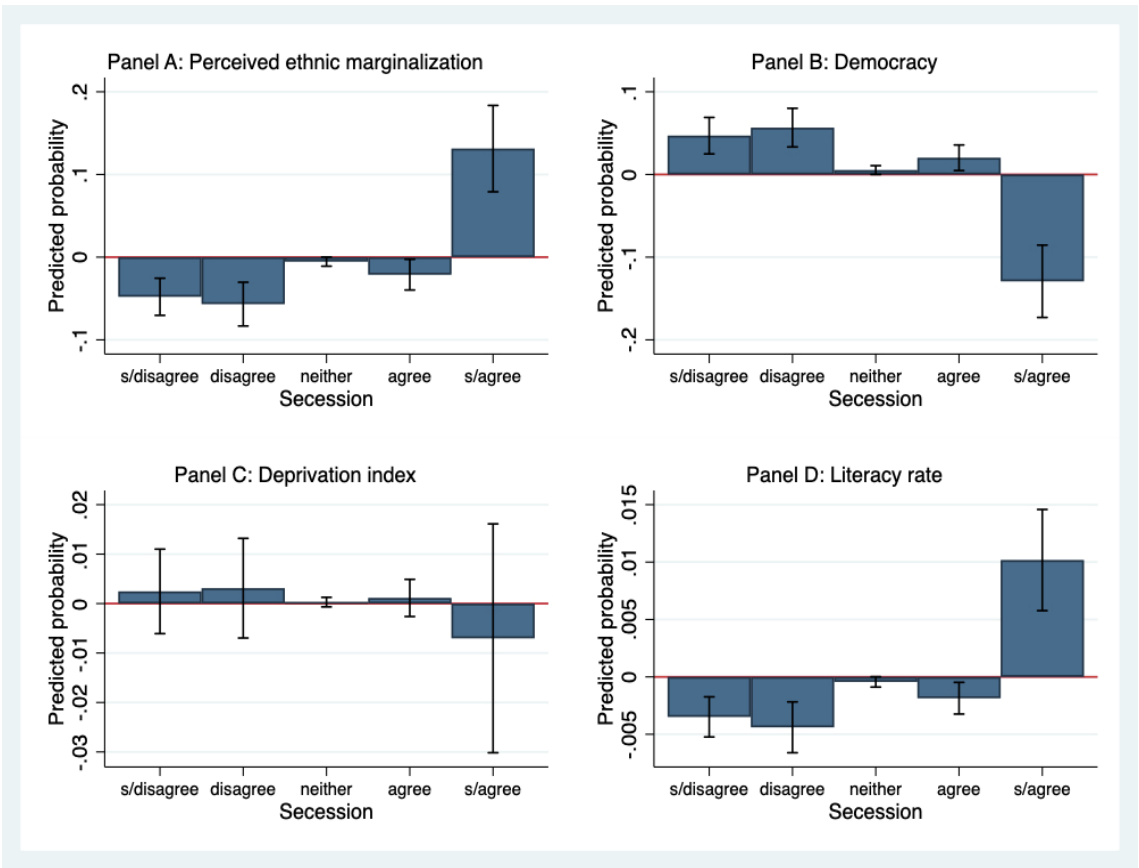


Figure 7: Average marginal effects of the explanatory variables on support for secession

Note: Panels A, B, C, and D show the average marginal effects of perceived ethnic marginalization, democracy, deprivation index, and literacy rate respectively on the five ordinal categories of the dependent variable which measures support for secession among Igbo. These results are based on the baseline regression models (i.e., models 1, 2, 3, and 4) reported in Table 1. Confidence intervals are at the 95 percent level.

To illustrate the magnitude of the effects reported in Table 1, I plotted the predicted probabilities for the baseline models—i.e., models 1, 2, 3, and 4—in Figure 7. A cursory look

²⁶ Although the results reported in Table 1 are based on the Igbo subsample of respondents, which is the main focus of this study, I estimated some regression models where I examined the correlates of support for secession using the non-Igbo subsample of respondents. Table A5 in the appendix reports the results.

at the four panels shows that the effect size is biggest for the “strongly agree” response category of the dependent variable. Panel A shows that a one unit increase in the perceived ethnic marginalization increases the probability of an Igbo respondent “strongly agreeing” with secession by 13 percent and reduces the probability of him/her “strongly disagreeing” with secession by 5 percent. Panel B shows that a one unit increase in perceived democracy reduces the probability of an Igbo respondent choosing the “strongly agree” response category by 13 percent when asked whether Eastern Nigeria should be allowed to secede. Consistent with the results in model 5, the average marginal effects of the deprivation index on the respective categories of the dependent variable were all statistically insignificant (i.e., Panel C). Panel D shows that a one percentage point increase in literacy rate in the municipality where an Igbo respondent resides increases the probability of him/her “strongly agreeing” with secession by one percent.

Regression models using the full sample

Table 2: Correlates of support for secession among the major ethnic categories

Support secession [†]	(1)	(2)	(3)	(4)	(5)
Igbo	2.045*** (0.195)				1.712*** (0.228)
Yoruba		-0.661*** (0.137)			-0.551*** (0.166)
Hausa/Fulani			-0.799*** (0.14)		-0.638*** (0.167)
Ethnic minorities				0.007 (0.166)	
Intercept 1	-0.42*** (0.074)	-0.824*** (0.1)	-0.897*** (0.104)	-0.658*** (0.107)	-0.786*** (0.133)
Intercept 2	1.02*** (0.096)	0.485*** (0.121)	0.432*** (0.112)	0.634*** (0.124)	0.677*** (0.151)
Intercept 3	1.194*** (0.104)	0.635*** (0.126)	0.587*** (0.117)	0.782*** (0.129)	0.855*** (0.156)
Intercept 4	2.294*** (0.148)	1.578*** (0.159)	1.542*** (0.158)	1.712*** (0.17)	1.968*** (0.191)
Observations	1403	1403	1403	1403	1403
Pseudo R²	0.059	0.008	0.013	0.00	0.066
Log pseudolikelihood	-1879.887	-1981.26	-1971.537	-1997.721	-1864.968
AIC statistic	3769.775	3972.519	3953.075	4005.441	3743.935

Note: Clustered robust standard errors are in parentheses, [†] is the dependent variable, *** p<0.01, ** p<0.05, * p<0.10. All models are estimated using ordered logit (Ologit) regression.

To test Hypothesis 1 regarding whether Igbo ethnicity increases the likelihood of supporting secession, I estimated a bivariate regression model. To better understand the attitudes of members of the other major ethnic categories (i.e., the Hausa/Fulani, Yoruba, and Ethnic minorities) towards secession, I estimated additional bivariate regression models where I considered each of them. Table 2 reports the regression results. In model 1, Igbo ethnicity carried the expected positive sign and was significant at the one percent level. This suggests that compared to non-Igbos, belonging to the Igbo ethnic group increases the likelihood of supporting secession. This is likely due to the high level of grievances among Igbos compared to members of the other major ethnic categories. As shown in models 2 and 3 respectively, Yoruba and Hausa/Fulani ethnicities both reduced the likelihood of supporting secession. The opposition towards secession among the Hausa/Fulani and Yoruba might be because the secession of Eastern Nigeria, which houses most of Nigeria's oil resource, would be a loss for them. This is especially plausible when one considers the fact that the Hausa/Fulani and Yoruba have been well represented in political power at the center since Nigeria's transition to civilian rule in 1999. Moreover, given the centralized nature of government in Nigeria, controlling power at the center is tantamount to controlling the country's vast oil wealth (Smith 2007, p. 192). It could also be that the Hausa/Fulani and Yoruba think secession is not the appropriate way for the Igbos to address their grievances.

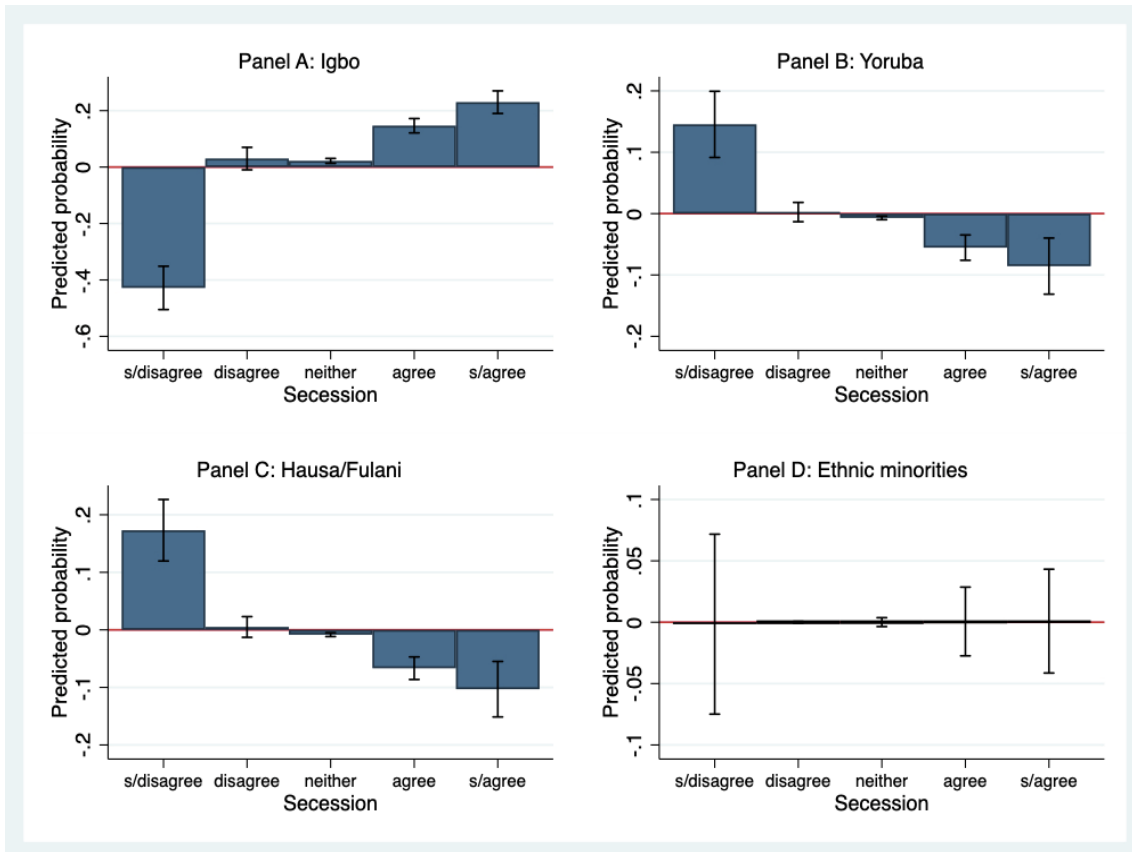


Figure 8: Average marginal effects of ethnicity on support for secession

Note: Panels A, B, C, and D show the effect of Igbo, Yoruba, Hausa/Fulani, and minority ethnicities respectively on the five ordinal categories of the dependent variable which measures support for secession among the Nigerian population. These results are based on the baseline regression models (i.e., models 1, 2, 3, and 4) reported in Table 2. Confidence intervals are at the 95 percent level.

Model 4 shows that belonging to a minority ethnic group had no statistically significant effect on support for secession. However, pooling the heterogeneous minority ethnic groups into a single category might be problematic because they differ considerably in terms of their relations with the Igbos and whether or not they are autochthonous to the spatial area within Biafran territory. As Lewis (2022) points out in a recent study, large ethnic groups in Eastern Nigeria like the Igbos and Ijaws are supportive of secession, while smaller ethnic groups like the Efik and Ibibio that will be dominated should the Eastern Region secede, oppose secession. In model 5 where I included the three major ethnic groups in the same model and used the ethnic minorities as the reference category, the results were consistent with those reported in the baseline models.

Figure 8 shows the predicted probabilities for the baseline models reported in Table 2—i.e., models 1, 2, 3 and 4. Unlike the predicted probabilities reported in Figure 7 where the effect size of the four explanatory variables was largest on the “strongly agree” response category of the dependent variable, the effect of ethnicity on support for secession was most salient in the “strongly disagree” response category of the dependent variable. Panel A shows that compared to non-Igbos, belonging to the Igbo ethnic group reduces the probability of a respondent “strongly disagreeing” with secession by 43 percent and increases the probability of him/her “strongly agreeing” with secession by 23 percent. Panels B and C show that belonging to the Yoruba and Hausa/Fulani ethnic groups increases the probability of “strongly disagreeing” with secession by 15 and 17 percent respectively.

2.7. Conclusion

Relying on the horizontal inequalities theory, this study examined the effect of perceived ethnic marginalization, perceptions towards Nigerian democracy, and socioeconomic condition on support from secession among members of the Igbo ethnic group. It also investigated how belonging to the Igbo, Yoruba, and Hausa/Fulani ethnic groups respectively influenced support for secession. Perceived ethnic marginalization at the group level and negative attitudes towards Nigerian democracy were found to positively correlate with support for secession. These results may be explained by the political exclusion of the Igbos in postwar Nigeria, as some commentators have argued (Uroko, Obinna, and Inibong 2022; Ojoko 2022; Njoku et al. 2022; Akubo 2021). Socioeconomic condition was measured at the household and communal levels. The household measure had no effect on support for secession but the communal measure did: socioeconomic condition at the communal level was found to positively correlate with support for secession. A plausible explanation for this finding is that Igbos feel that their association with Nigeria holds them back and they could

do better if they secede. Igbo ethnicity was also found to positively correlate with support for secession while Yoruba and Hausa/Fulani ethnicities reduced the likelihood of supporting secession.

It is unlikely that the Nigerian government would allow Eastern Nigeria to secede. The Nigerian government relies heavily on oil exports for its revenue, and the oil-rich Niger-Delta Region is located within the proposed Biafran territory. The Nigerian government may also be hesitant to allow Igbo secession because it might set a precedent, prompting other ethnic groups to make similar demands. Even if IPOB achieves its goal of seceding from Nigeria, it would have to contend with the problem of gaining the trust of the minority ethnic groups in Eastern Nigeria, many of which have distanced themselves from the movement (Godwin 2021; Wahab 2021). The persistence of IPOB despite the Nigerian government's heavy-handed approach towards the group, highlights the necessity for the government to adopt a non-violent approach in dealing with the group. Proscribing IPOB as a terrorist organization, which puts it at par with radical Islamist groups like *Boko Haram* and the Islamic State West Africa Province (ISWAP), is counterproductive. This cuts off the channel for dialogue, which could be a precursor to the peaceful resolution of the conflict.

Conflict of interest

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Appendix

Table A1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Support secession [†]	1404	2.473	1.474	1	5
Support secession ^{†#}	251	3.789	1.405	1	5
Ethnic marginalization	1436	0.806	0.961	0	3
Ethnic marginalization [#]	252	1.643	0.965	0	3
Democracy	1439	2.589	0.87	1	4
Democracy [#]	252	2.206	0.909	1	4
Igbo	1447	0.174	0.379	0	1
Hausa/Fulani	1447	0.256	0.437	0	1
Yoruba	1447	0.227	0.419	0	1
Ethnic minorities	1447	0.343	0.475	0	1
Deprivation index	1444	3.403	3.374	0	16
Deprivation index [#]	252	3.127	3.21	0	14
Literacy rate (LGA)	1584	64.352	25.029	12.366	97.572
Literacy rate (LGA) [#]	252	85.484	11.367	25.1	96.346
Political instability (LGA)	1584	11.241	24.939	0	184
Political instability (LGA) [#]	252	9.067	16.436	0	184
Age	1448	32.658	12.428	18	80
Age [#]	252	32.484	12.645	18	80
Gender	1448	0.501	0.501	0	1
Gender [#]	252	0.52	0.501	0	1

Note: All values are for the full sample except for those with the symbol # which are for the subsample of Igbo respondents, [†] denotes the dependent variable. Although the Afrobarometer dataset contains 1,600 potential observations, the variables in the table contain fewer observation because the relevant question was not asked to all the respondents. Moreover, I treated “don’t know” and “refused to answer” responses as missing, which may have exacerbated the problem of listwise deletion.

Table A2: Correlation between the variables (Igbo subsample)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Support secession	1.000							
(2) Ethnic marginalization	0.248	1.000						
(3) Democracy	-0.257	-0.295	1.000					
(4) Deprivation index	-0.058	-0.018	-0.016	1.000				
(5) Literacy rate (LGA)	0.249	0.090	-0.030	-0.127	1.000			
(6) Political instability	0.009	0.038	0.098	-0.025	0.048	1.000		
(7) Age	0.033	-0.042	-0.079	-0.007	0.168	-0.018	1.000	
(8) Gender	0.099	-0.015	-0.048	-0.017	0.002	0.045	0.182	1.000

Table A3: Correlation between the variables (Full sample)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Support secession	1.000											
(2) Ethnic marginalization	0.329	1.000										
(3) Igbo	0.418	0.400	1.000									
(4) Hausa/Fulani	-0.225	-0.220	-0.272	1.000								
(5) Yoruba	-0.156	-0.239	-0.253	-0.307	1.000							
(6) Ethnic minorities	0.001	0.084	-0.345	-0.419	-0.389	1.000						
(7) Democracy	-0.165	-0.199	-0.206	0.259	-0.063	-0.012	1.000					
(8) Deprivation index	0.059	0.085	-0.043	-0.058	0.009	0.079	-0.074	1.000				
(9) Literacy rate (LGA)	0.293	0.233	0.377	-0.682	0.308	0.044	-0.278	0.009	1.000			
(10) political instability	0.039	0.033	-0.046	-0.128	-0.044	0.192	-0.018	0.030	0.115	1.000		
(11) Age	-0.046	-0.025	-0.013	-0.004	0.057	-0.035	-0.018	0.038	-0.002	0.043	1.000	
(12) Gender	-0.019	0.044	0.008	0.011	-0.004	-0.013	-0.026	0.011	-0.007	0.011	0.138	1.000

Table A4: Ethnic distribution of respondents

Ethnic group	Frequency	Percent
Hausa/Fulani	371	25.62
Yoruba	328	22.65
Igbo	251	17.33
Ibibio	35	2.42
Kanuri	35	2.42
Ijaw	33	2.28
Tiv	26	1.80
Ikwere	25	1.73
Efik	24	1.66
Ebira	20	1.38
Idoma	19	1.31
Nupe	18	1.24
Igala	16	1.10
Isoko	10	0.69
Edo	10	0.69
Gwari	9	0.62
Kalabari	9	0.62
Jukun	7	0.48
Urhobo	4	0.28
Birom	3	0.21
Shuwa-Arab	1	0.07
Others	194	13.41
Total	1,448	100.00

Note: Based on the Round 7 Afrobarometer survey data (BenYishay et al. 2017) collected in 2017.

Table A5: Correlates of support for secession among non-Igbos

Support secession [†]	(1)	(2)	(3)	(4)	(5)	(6)
Ethnic marginalization	0.363*** (0.085)				0.317*** (0.084)	0.318*** (0.085)
Democracy		-0.052 (0.07)			0.042 (0.071)	0.043 (0.071)
Deprivation index			0.067*** (0.019)		0.055*** (0.02)	0.057*** (0.021)
Literacy rate (LGA)				0.009** (0.003)	0.008** (0.003)	0.007** (0.003)
Political instability						0.004 (0.004)
Age						-0.01*** (0.004)
Gender						-0.234* (0.13)
Intercept 1	-0.216*** (0.083)	-0.572*** (0.206)	-0.206** (0.1)	0.102 (0.228)	0.535 (0.33)	0.093 (0.348)
Intercept 2	1.268*** (0.096)	0.895*** (0.223)	1.272*** (0.125)	1.573*** (0.216)	2.047*** (0.321)	1.619*** (0.334)
Intercept 3	1.456*** (0.101)	1.08*** (0.228)	1.463*** (0.137)	1.76*** (0.216)	2.232*** (0.321)	1.806*** (0.334)
Intercept 4	2.567*** (0.159)	2.186*** (0.268)	2.562*** (0.2)	2.862*** (0.217)	3.368*** (0.317)	2.947*** (0.325)
Observations	1142	1144	1148	1144	1122	1122
Pseudo R²	0.01	0.00	0.006	0.005	0.019	0.023
Log pseudolikelihood	-1515.42	-1531.629	-1532.121	-1525.235	-1474.986	-1468.407
AIC statistic	3040.84	3073.257	3074.243	3060.47	2965.973	2958.814

Note: Clustered robust standard errors are in parentheses, [†] is the dependent variable which has five ordinal categories, *** p<0.01, ** p<0.05, * p<0.10. All models are estimated using ordered logit (Ologit) regression.

Table A5 reports the results of regression models showing the correlates of support for secession among non-Igbos. In model 1, where I considered only ethnic marginalization, it carried a positive sign and was significant at the one percent level, as was the case with the Igbo subsample of respondents. This suggests that non-Igbos who feel that members of their ethnic group are treated unfairly by the Nigerian government are more supportive of IPOBs secessionist goal. This might be because the shared feeling of marginalization makes them sympathetic to IPOB's plight. Model 2 shows that attitudes towards democracy among non-Igbos has no statistically significant effect on support for secession. This contrasts with the case of the Igbos where those who had positive attitudes towards Nigerian democracy were less supportive of secession. Model 3 shows that the household measure for socioeconomic condition—deprivation index—positively correlates with support for secession. The support

for secession among poor non-Igbos might be because they do not have much confidence in the Nigerian government, especially given that they already live in deprivation and do not have much to lose if the oil-rich Eastern Region secedes. It might also be because they feel that the Igbos might be able to improve their economic lot if they secede from Nigeria and for their own government.

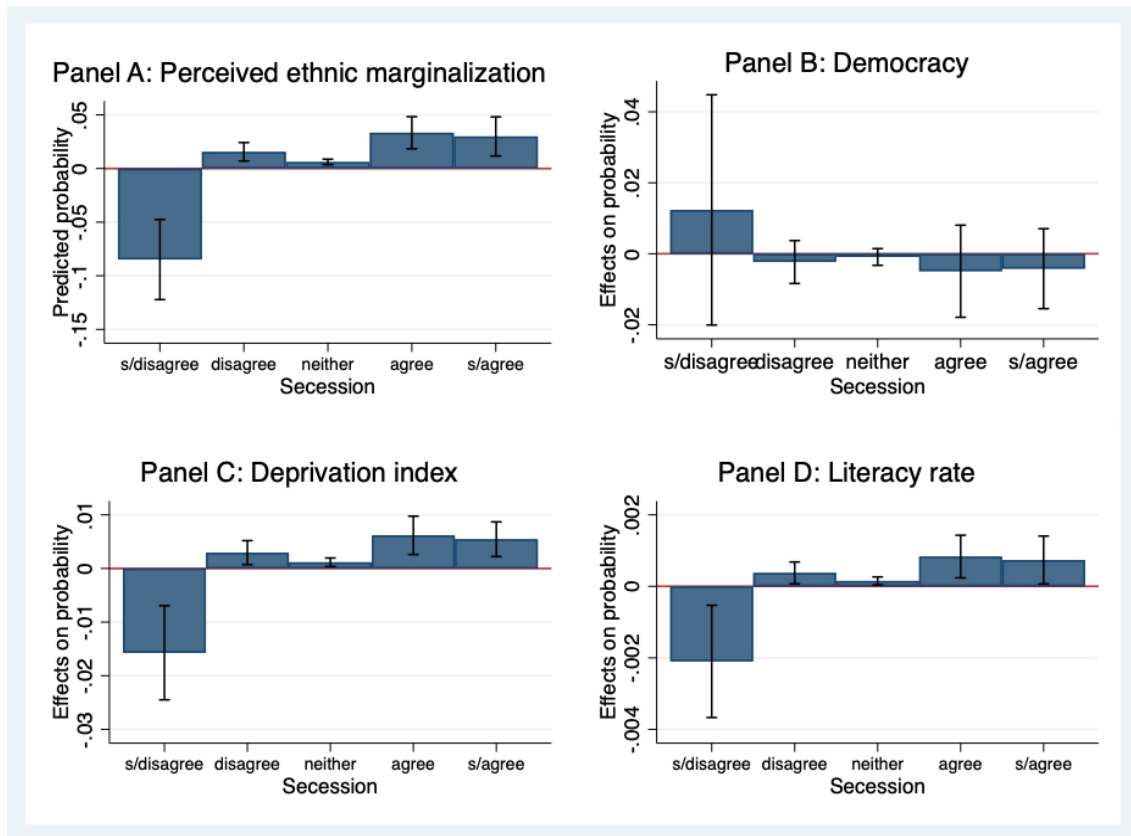


Figure A1: Average marginal effects of the explanatory variables on support for secession

Note: Panels A, B, C, and D show the average marginal effects of perceived ethnic marginalization, democracy, deprivation index, and literacy rate respectively on the five ordinal categories of the dependent variable which measures support for secession among non-Igbos. These results are based on the baseline regression models (i.e., models 1, 2, 3, and 4) reported in Table A5. Confidence intervals are at the 95 percent level.

In model 4, the communal measure for socioeconomic condition—i.e., literacy rate—carried a positive sign and was significant at the one percent level. This suggests that non-Igbo individuals residing in communities with a high level of economic development are more supportive of IPOBs secessionist goal. This is consistent with the result found

among the Igbos. The disparity between the results for the household and communal measures of socioeconomic condition indicates that effect of socioeconomic condition on support for secession depends on the level of aggregation. Moreover, these two variables do not measure the same thing. The correlation between the deprivation index and literacy rate for the non-Igbo subsample of respondents was 0.04. In model 5 where I added all the explanatory variables in the same model, the results were consistent with those in the baseline models. Model 6 shows that these results are robust to the inclusion of control variables for political instability and the demographic attributes of the respondents.

To illustrate the effect sizes of the regression results reported in table A5, I present the predicted probabilities for the baseline models—i.e., models 1, 2, 3, and 4—in Figure A1. A cursory look at the four panels shows that the effect size is largest for the “strongly disagree” response category of the dependent variable. This contrasts with the results based on the Igbo subsample of respondents where the magnitude of the effect was largest for the “strongly agree” response category (See Figure 7 in manuscript).

3. Violent conflict and hostility towards ethnoreligious outgroups in Nigeria

Abstract

This study examined the effect of exposure to violent conflict on hostility towards ethnic and religious outgroups among Nigeria's population and among its two major religious groups (i.e., Christians and Muslims). Violent conflict had a robust positive effect on outgroup hostility among the Nigerian population and among Christians. A plausible mechanism behind this finding is that the threat posed by violent conflict strengthens ingroup cohesion, erodes trust in outgroup members, and makes intergroup boundaries salient. This is especially so when the opposite party to the conflict constitutes a distinct cultural outgroup. The main conflict affecting Christians involves nomadic pastoralists of Fulani ethnicity, who are Muslims. Among Muslims, violent conflict rather had a weak positive effect on outgroup hostility that was not robust to alternative operationalizations of outgroup hostility. The null effect might be because the main conflict affecting Muslims—the *Boko Haram* insurgency—does not involve Christians. A significant number of Muslims are also affected by conflicts involving nomadic Fulani pastoralists.

Keywords: *Violent conflict, Conflict exposure, Outgroup hostility, Ethnicity, Religion, Nigeria.*

JEL classification: D74, J15, N37

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3.1. Introduction

A cursory look at Nigeria reveals that it has a dyadic structure comprising of a predominantly Christian Southern Region and a predominantly Muslim Northern Region. Although there are some overlaps between the two regions, the contrast between them is quite stark. The overlap between religion and ethnicity makes the fault line between the two regions even more salient.²⁷ This North-South bifurcation is apparent when one looks at Nigeria through the lens of the nine civilizations into which Samuel Huntington divided the world: Nigeria's Northern Region was associated with Islamic civilization, while the Southern Region was associated with African civilization (Huntington 1996).

This cultural divide has historical roots. Islam first came to Northern Nigeria between the eleventh and fourteenth centuries through the trans-Sahara trade between the Hausa people of Northern Nigeria and merchants from the Maghreb states. Besides the exchange of tangible commodities, there was also a diffusion of cultural and religious values (Falola & Heaton 2008, pp. 244-246). Islam gained a stronger foothold in the region between 1804 to 1808, when a cleric of Fulani ethnicity, Usman dan Fodio, launched a jihad against the rulers of the Hausa kingdoms. The jihad led to the establishment of the Sokoto Caliphate, which consisted of several emirates. The caliphate was in existence for a century until its conquest by British forces at the beginning of the 20th century (Kirk-Greene 1965, pp. 43-44). Although Christianity in Nigeria can be traced to the fifteenth century when Portuguese slave traders visited Nigeria's Southernmost parts, it was not until the 1840s that the religion started to gain a foothold, propagated by freed slaves from Sierra Leone and missionaries from the West (Falola & Heaton 2008, p. 87; Ogunsola 1974, pp. 3-5).

²⁷ Although Nigeria has 250 ethnic groups, it has three major ones: The Hausa/Fulani who are predominantly Muslim and mainly reside in Northern Nigeria. The Igbo and the Yoruba constitute the major ethnic groups in Southern Nigeria. The Igbos are predominantly Christian, while the Yoruba is evenly split between Muslims and Christians (Laitin 1986).

Christian missionary evangelization was concentrated in Southern Nigeria because the Muslim rulers in the Northern Region, in an effort to preserve their religious way of life, forbade Christian proselytization in the region (Albert 1996, pp. 88-89). The British government did not change much in Northern Nigeria after capturing it. They appropriated the existing institutions and even used the local Hausa language in administering the Northern protectorate. Conversely, the policies of Westernization and Christianization were pursued fervently in the Southern Protectorate because its population was more open to Western influence (Campbell & Page 2018, p. 78; Diamond 1988, p. 26; Coleman 1958, p. 333). After Nigeria's independence from British colonial rule in 1960, it remained divided along ethnic and religious lines. Commenting on the Northern-Southern dichotomy, Coleman (1958, p. 351) observed: "Certain basic underlying differences in history, culture, temperament, and levels of development and acculturation provided the classical setting for intergroup friction."

Nigeria's historical timeline is punctuated by ethnoreligious conflicts as evidenced by the Hausa-Igbo riots of 1945 (Plotnicov 1971), the Kano riots of 1953 between Northerners and Southerners (Albert, 1994), the pogroms of 1966 against members of the Igbo ethnic group, which led to the Biafran War from 1967 to 1970 (Achebe 2012; Ekwe-Ekwe 1990), the Kafanchan riots in Kaduna between Christians and Muslims in 1987 (Ibrahim 1989), the Kano riots of 1991 between Christians and Muslims (Albert 1996; Maier 1991), the Shariah Crisis in Kaduna between Christians and Muslims in 2000 (Angerbrandt 2011; Human Rights Watch 2003), the 2011 post-election violence, which had a religious undertone (Angerbrandt 2018), and the recurrent clashes between Christians and Muslims in Jos (Eke 2022; Krause 2019; Mustapha et al. 2018; Human Rights Watch 2006, 2001) amongst others. Ethnoreligious conflicts are not peculiar to Nigeria, they occur in several countries around the world. Examples include the conflict between members of the Sinhalese and Tamil ethnic

groups in Sri Lanka (DeVotta 2005; Ganguly 2004; Pradhan 2001), the conflict between Muslims and Buddhists in Myanmar (van Klinken et al. 2017; Schissler et al. 2017; Kipgen 2013), the violent clashes between Hindus and Muslims (Mitra & Ray 2014; Kausar 2006) and that between the Assamese and Bengalis (Sharma 2012; Darnell & Parikh 1988; Goswami 2001), both in India, the Nagorno-Karabakh conflict between Armenians and Azerbaijanis (German 2012; Özkan 2008), the Malay-Chinese conflicts (Fong & Ishak 2014; Soong 2008; Tan 2001) and the disputes between Muslims and non-Muslims (Fong & Ishak 2016), both in Malaysia, amongst others.

Ethnoreligious conflicts can lead to segregation, which in turn solidifies intergroup boundaries (Schaub 2014; Scacco & Warren 2021; Albert 1996). Some studies have recommended segregation as a strategy for mitigating interethnic conflicts because separating the conflicting groups eliminates the existing threat (Downes 2006; Tir 2005). Bollig (1993) has conducted a study among nomadic tribes in Kenya where he finds that interethnic ties via marriage and friendships does not lead to conflicting loyalties, neither does it attenuate the risk of interethnic conflict. Using a game theoretic approach, Larson (2016) has shown that interethnic cooperation could increase the risk of conflict, especially when cooperation is underpinned by the threat of retaliation. She pointed out that the speed of retaliation depends on the density of a group's network: information flows quickly within dense networks, and this makes it easy for retaliation to be meted out for misbehavior, which in turn makes the threats made by groups with dense networks credible. Conversely, groups characterized by sparse networks where information spreads slowly, find it hard to make credible threats because the slow diffusion of information within the network constrains group mobilization. This is problematic because it makes conflicts intractable. For instance, when a peace agreement between conflicting groups has been reached, it might take longer for this development to spread through a sparse network; attacks after the agreement could

be interpreted as unwarranted, which then triggers a new wave of violence. She cautions that “Uncareful efforts to promote peace by imposing cross-group ties can do more harm than good, especially if they are aimed at the most peripheral members of both groups.” (p. 470).

Some studies rather argue that intergroup contact is crucial in reducing ethnic conflicts. For instance, Eke (2022) has conducted a qualitative study in the city of Jos in Nigeria’s Middlebelt Region where he finds that when mutual distrust is present and ethnic groups perceive each other as threats, interethnic violence is likely to erupt even when both groups are completely segregated. This is because segregation “eliminate[s] opportunities for post-conflict reconciliation” (p. 2218) and hinders the rebuilding of interethnic trust. Furthermore, he asserts that even though partial segregation does not entirely eliminate the perceived threat from the outgroup, it nonetheless creates avenues for contact between the rival groups which serves as conduits for establishing trust and averting future conflict. Another key finding of his study is that when the leaders of the different groups engage in dialogue, this signals to the group members that the ethnic outgroup is not so threatening and disputes can be resolved amicably without recourse to violence. Rydgren et al. (2018) have conducted a study in Iraq where they find that people who spend time in ethnic heterogenous spaces are more likely to develop friendship ties across ethnic boundaries, be more tolerant towards people of other ethnic groups, and report higher levels of interethnic trust. Similarly, Kanas et al. (2017), relying upon large-N survey data collected from Muslim and Christian students in the Philippines and Indonesia, have found that interreligious friendships reduce hostility towards religious outgroups. These findings are congruent with the argument of Allport (1954) who contends that “separateness” heightens the risk of conflict because it leads to the exaggeration of intergroup differences.

Present-day Nigeria remains polarized along ethnic and religious lines (Tuki 2023; Agbiboa 2013). Nigerians define their identity “by affiliation to religious and ethnic groups

rather than the Nigerian state.” (Agbiboa & Maiangwa 2013, p. 281). The two major conflicts that have ravaged Nigeria during the past two decades—i.e., the *Boko Haram* insurgency and the violent clashes between nomadic pastoralists and resident communities—have taken a religious turn because of the distinct ethnoreligious identities of the conflict actors. Despite the persistence of violent conflicts in Nigeria, no study, to the best of my knowledge, has examined how these conflicts influence hostility towards ethnic and religious outgroups using representative survey data for Nigeria’s population and econometric techniques. Moreover, no study has examined the heterogeneous effects of violent conflict on outgroup hostility among Nigeria’s two major religious groups—i.e., Christians and Muslims. This study does so.

To measure outgroup hostility, I developed an additive indicator by combining the responses to two survey items probing the respondents’ willingness to have people from a different religion and people from a different ethnic group as neighbors. To measure exposure to violent conflict, I drew buffers with a radius of 30 km around the respondents’ dwellings using QGIS software and counted the total number of violent conflicts within them. I was able to do that because I relied on data obtained from Afrobarometer (BenYishay et al. 2017) and the Armed Conflict Location and Events Database (ACLED) (Raleigh et al. 2010), both of which are georeferenced. Causal identification stemmed from instrumenting conflict exposure with forest cover. The regression results show that among the Nigerian population and among Christians, exposure to violent conflict has a positive effect on outgroup hostility. A plausible mechanism behind this finding is that the threat of violent conflict strengthens ingroup cohesion, erodes trust in outgroup members, and makes intergroup boundaries salient. This is especially so when the opposite party to the conflict constitutes a distinct cultural outgroup. The main conflict affecting Christians involve nomadic pastoralists of Fulani ethnicity, who are Muslims. Among Muslims, violent conflict

had a weak positive effect on outgroup hostility that was not robust to alternative operationalizations of outgroup hostility. A possible reason for the null effect among Muslims is that the main conflict affecting them—the *Boko Haram* insurgency—does not involve Christians. Many Muslims have also been affected by conflicts involving nomadic Fulani pastoralists.

This study contributes to the broader literature on intergroup relations in the shadow of violent conflict (e.g., Schutte et al. 2023, 2022; Tuki 2023; Whitt et al. 2021; Calvo et al. 2020; Ferwerda et al. 2017). The subsequent sections are organized as follows: Section 2 discusses the trend of violent conflicts in Nigeria. Section 3 reviews the literature on the nexus between conflict and social cohesion and states the hypotheses. Section 4 operationalizes the variables that will be used to estimate the regression model and discusses the empirical strategy. Section 5 presents the regression results and discusses them, while Section 6 summarizes the paper and concludes.

3.2. Violent conflicts in Nigeria

Nigeria has witnessed a lot of violent conflicts during the past two decades. Data from ACLED (Raleigh et al. 2010) shows that Nigeria had a total of 18,781 incidents between 1997 to 2022, which makes it the country with the third highest incidence of violent conflict in Africa. Only Somalia and the Democratic Republic of Congo performed worse.²⁸ These incidents caused 98,877 fatalities. The distribution of violent conflict incidents varies across Nigeria's two regions: 68 percent of them occurred in Northern Nigeria while the remaining 32 percent occurred in the Southern Region. The conflicts are also spread unevenly across the years, with 9 percent of them occurring between 1997 to 2008, and the remaining 91

²⁸ Based on the ACLED dataset, I define violent conflicts as incidents categorized under any of the following three categories: Battles, Violence against civilians, and Explosions/Remote violence. This implies that I have excluded incidents categorized as Riots, Protests, and Strategic developments.

percent occurring between 2009 to 2022.

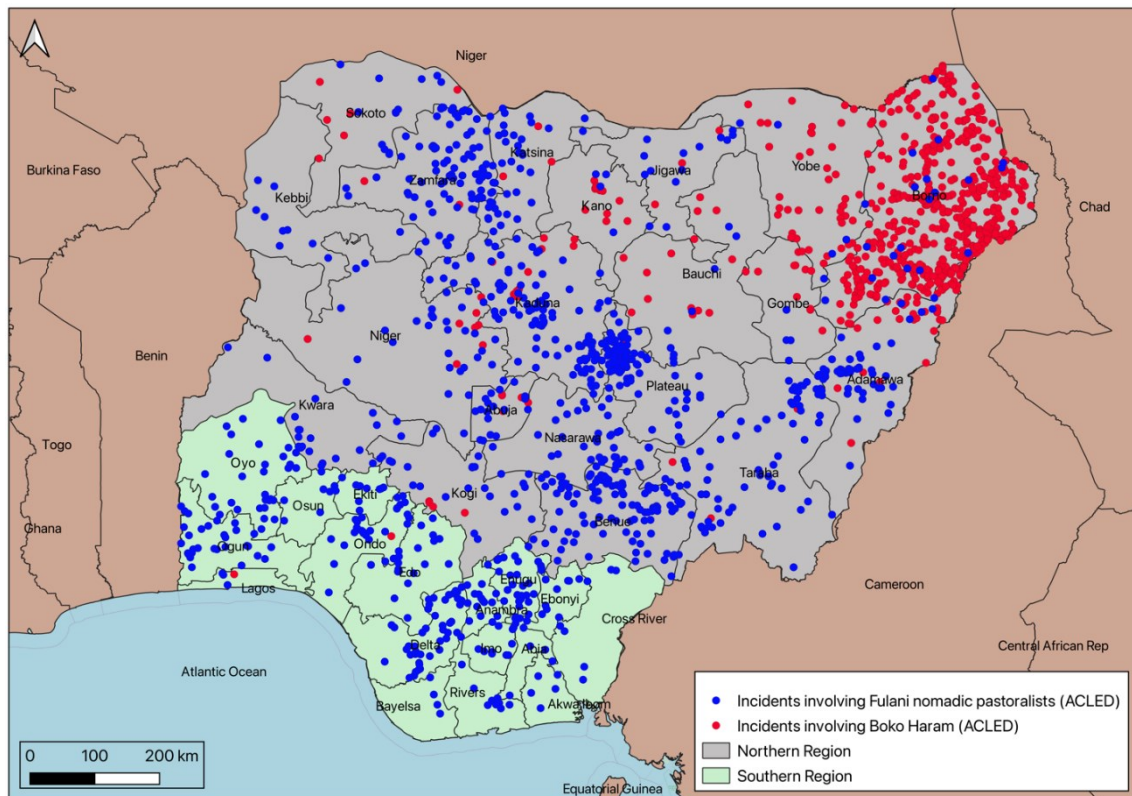


Figure 1: Incidents involving Boko Haram and nomadic Fulani pastoralists (1997–2022).

Note: The figure shows the administrative boundaries of the states that constitute Nigeria’s Northern and Southern Regions. The red dots show the geolocations of conflicts where at least one of the actors is *Boko Haram*. The blue dots show the geolocations of conflicts where at least one of the actors is a “Pastoralist” or belongs to the “Fulani” ethnic group. Most of the actors defined as pastoralists in the ACLED dataset are identified as “Fulani Ethnic militia,” which makes the two terms almost synonymous. Although Northern Nigeria has a predominantly Muslim population, there are a few states there like Benue and Plateau, where the population is predominantly Christian and Muslims constitute a small minority. These two states, which were not captured by the Muslim jihadists in the early 19th century, have the highest incidence of conflicts involving nomadic Fulani pastoralists. The shapefiles containing Nigeria’s administrative boundaries was developed by UNOCHA.

The two major conflicts affecting Nigeria are the *Boko Haram* insurgency and the violent clashes between Muslim nomadic pastoralists of Fulani ethnicity and resident communities (especially those involved in crop cultivation). A report by the Institute of Economics and Peace (2019, p. 21) noted: “In Nigeria, terrorist activity is dominated by Fulani extremists and Boko Haram. Together, they account for 78 per cent of terror-related incidents and 86 per cent of deaths from terrorism.” The incidence of violent conflict in

Nigeria can roughly be broken down into two epochs: Pre- and post-*Boko Haram* eras. The pre-*Boko Haram* era covers the period from 1997 to 2008 before the radical Islamist group, *Boko Haram*, started its insurgency. The post-*Boko Haram* era covers the years from 2009 onwards after *Boko Haram* launched its first attack. The *Boko Haram* insurgency ushered Nigeria into a phase of violence it had never witnessed. The ACLED data shows that between 2009 to 2022, there were 4,776 incidents where at least one of the parties to the conflict was *Boko Haram*. These incidents caused a total of 43,019 fatalities. Because *Boko Haram* attacks are concentrated in Northeastern Nigeria where the population is predominantly Muslim (see figure 1), most of the fatalities from these attacks are Muslims.

Nigerians tend to associate Muslims with extremism. The Round 7 Afrobarometer survey (BenYishay et al. 2017) conducted in 2017, and which is representative for Nigeria's population, had a question where respondents were asked about the degree to which they thought Muslims supported extremist groups. 26 percent of them chose the "none" response category, 37 percent chose the "some of them" response category, 24 percent chose the "most of them" response category, 7 percent chose the "all of them" response category, while the remaining 6 percent refused to answer the question. This suggests that 68 percent of Nigerians associate Muslims with extremism at least to some degree. Disaggregating the data based on religious affiliation revealed that compared to Muslims, Christians are more likely to associate Muslims with extremism: 84 and 48 percent of Christians and Muslims respectively associated Muslims with extremism at least to some degree.

The violent clashes between nomadic Fulani pastoralists and resident communities are the second major conflict affecting Nigeria. This conflict, which is primarily caused by competition over land and water resources due to droughts, has quickly taken a religious turn because of the distinct ethnic and religious identities of the opposing parties. Some reports have portrayed conflicts involving pastoralists as attacks on Christians by Muslims because

the pastoralists are Muslims and most of the communities where these conflicts are concentrated have predominantly Christian populations (Christian Association of Nigeria 2018, 2018a). Relying on large-N survey data collected from Kaduna, the state with the third highest incidence of farmer-pastoralist conflicts in Nigeria, Tuki (2023) found that Christians and Muslims view the conflict differently: 52 percent of Christians agree that farmer-pastoralist conflicts are caused by religion; only 17 percent of Muslims hold this view. The ACLED data shows that between 1997 to 2022, there were 2,416 violent conflicts where at least one of the actors was a pastoralist or belonged to the Fulani ethnic group. These incidents caused a total of 15,333 fatalities. As shown in figure 2, incidents involving nomadic Fulani pastoralists, unlike *Boko Haram* attacks, are spread across all of Nigeria's 36 states. This is due to the migratory nature of pastoralists in search of pasture for their livestock.

3.3. Theoretical considerations

Some studies have shown that exposure to violent conflict could foster social cohesion among ingroup members. In a study conducted in Nepal, Gilligan et al. (2014) found that communities exposed to violent conflict had higher levels of ingroup trust and prosocial behavior than those that were not. The mechanism behind this finding was that community members who were not socially oriented fled the conflict zone leaving behind those who were more socially oriented. Moreover, the common threat posed by conflict prompted community members to band together so they could better cope. Calvo et al. (2020) conducted a study in Mali where they found that conflict exposure had a positive effect on prosocial behavior. Although they acknowledged that social cohesion could foster post-conflict recovery, they pointed out that in the case of Mali this was problematic because increased social participation was observed only in family and ethnically homogenous associations—i.e., “inward-looking associations.” This reinforced kinship ties, made ethnic

fault lines salient, and heightened the risk of further conflict. Rohner et al. (2013) had a similar finding in a study conducted in Uganda where they found that conflict exposure strengthened cohesion within ethnic ingroups.

Conflict has also been found to erode social cohesion. Weidmann and Zürcher (2013, p. 3) found that violent conflict fostered divisions in Afghan communities because it “could introduce shifting loyalties to the fighting parties and thus introduce new internal cleavages.” Relying on survey data collected from members of the Tamil ethnic group in Sri Lanka, Greiner and Filsinger (2022) found that men who had been victims of sexual violence during the Sri Lankan Civil War were distrustful of both members of their ethnic group and the ethnic outgroup—i.e., the Sinhalese. Conversely, women who had been victims of sexual violence were distrustful of their ethnic ingroup and had higher levels of trust in the ethnic outgroup. They explained the erosion of ingroup trust on the grounds that “The conflict was characterized by a climate of distrust due to denunciations and betrayal within Tamil communities with harmful consequences for in-group cohesion.” (p. 2). Using representative survey data for Pakistan, Ahmad and Rehman (2022) found that exposure to terrorist attacks correlated negatively with interpersonal trust. Rohner et al. (2013) had a similar finding in Uganda where they found that conflict exposure reduced generalized social trust. In a study conducted in Nigeria, Tuki (2023) showed that exposure to conflicts involving nomadic Fulani pastoralists led to distrust in both members of the Fulani ethnic group and Muslims. This was because the Fulani pastoralists were Muslims and the population conflated Fulani ethnicity with being Muslim. Similarly, Kanas et al. (2017), in a study conducted among Muslim and Christian students in Indonesia and the Philippines found that the experience of interreligious violence leads to hostility towards religious outgroups.

When the perpetrators of violence belong to a distinct cultural outgroup (e.g., based on ethnicity or religion), ingroup members might associate the entire outgroup with violence

even if only a few of them were involved in the act, a phenomenon that Hall et al. (2021) referred to as the “better safe than sorry approach.” This is associated with the concept of prejudice which Allport (1954, p. 7) defined as “an aversive or hostile attitude towards a person or group, simply because he belongs to that group, and is therefore presumed to have the objectionable qualities ascribed to the group.” In a similar vein, Lickel et al. (2006) developed a theory to explain the psychological mechanisms underlying retributive violence. Vicarious retribution, they observed, “occurs when a member of a group commits an act of aggression toward members of an outgroup for an assault or provocation that had no personal consequences for him or her, but did harm a fellow ingroup member.” (Lickel et al. 2006, pp. 372-373). They pointed out that when an act of aggression occurred, people who were not directly involved in the conflict tried to make sense of it by construing it in terms of the broader ingroup-outgroup dichotomy between the conflict actors. If an ingroup-outgroup distinction was salient, they would then interpret the event in a way that was favorable toward their ingroup and encouraged retaliation against members of the outgroup. However, when ingroup-outgroup distinctions could not be extrapolated from the initial act of aggression, people were likely to interpret it as a personal dispute between two individuals. This reduced the likelihood of retaliation.

Ahmed (2019) has shown how the terrorist attack that occurred in the US on September 11th 2001 altered perceptions towards British Muslims in the UK. The ensuing “War on Terror” policy shifted the British government’s focus from the diverse Asian identity of British Muslims to their religious identity, which portrayed them as a “suspect community” and associated them with terrorism. Like she concisely put it, “it is the Muslim in British Muslim which now shapes the concrete policies which govern British Muslims.” (Ahmed 2019, p. 593). Ferwerda et al. (2017) conducted an experimental study in the US where they found that the association of Muslim refugees with terrorism reduced support

for refugee resettlement both within the US and within the communities where the participants resided. Their analysis also showed that exposing subjects to counter frames that challenged the portrayal of refugees as threats had no statistically significant effect on support for refugee resettlement. This indicates that negative attitudes towards cultural outgroups, once formed, tend to persist.

In a study conducted in Kenya, Schutte et al. (2022) found that indiscriminate violence caused fear of religious outgroups, strengthened ingroup cohesion, and led to increased calls for residential segregation along religious lines. Moreover, they found that attacks perpetrated by Islamist insurgents led to distrust in Muslims. In another study conducted in India, Schutte et al. (2023) found that conflict not only caused prejudice towards religious outgroups and strengthened ingroup cohesion, but also increased support for extremist activities perpetrated by ingroup members. Using experiments, Obaidi et al. (2018) have shown that the perceived cultural threat posed by Muslims leads to increased support for the persecution of the Muslim outgroup among the Swedish and Danish populations. They also found a similar effect among Muslims who view Western culture as decadent and a threat to Islam. Conversely, Whitt et al. (2021) conducted an experimental study in Syria, Bosnia and Kosovo where they found that hostile attitudes towards outgroups tend to change following productive interactions between the two groups. This is consistent with the premise of the contact hypothesis put forth by Allport (1954), which asserts that intergroup contact, conditional upon cooperation towards a common goal and equality between the groups, reduces prejudice.

Returning to the Nigerian case, I expect conflict exposure to have a positive effect on outgroup hostility, especially because of how polarized the country's population is along ethnic and religious lines, coupled with the huge importance that Nigerians attach to their ethnoreligious identities. This facilitates the construction of ingroups and outgroups.

However, there might be heterogeneous effects among Christians and Muslims: Among Muslims, it is likely that exposure to violent conflict would have no effect on hostility towards ethnoreligious outgroups. This is because the main conflict affecting Muslims—i.e., the *Boko Haram* insurgency—does not involve Christians. Moreover, a significant number of Muslims are affected by the violent clashes involving nomadic Fulani pastoralists who are also Muslims. The common religion of Islam between the conflict actors thus makes it difficult for Muslims to establish ingroup-outgroup distinctions. Among Christians, however, conflict exposure is likely to have a positive effect on outgroup hostility because the major conflict affecting them involves nomadic Fulani pastoralists who are Muslims. Because the conflict actors belong to different religious groups, it becomes easy to establish ingroup-outgroup distinctions. Moreover, nomadic Fulani pastoralists tend to be perceived as a “suspect community” with a high predisposition toward violence (Tuki 2023a; Ejiofor 2022; Eke 2020). I will test the following hypotheses:

H1: *Among Nigerians, conflict exposure leads to hostility towards ethnoreligious outgroups.*

H2: *Among Christians, conflict exposure leads to hostility towards ethnoreligious outgroups.*

H3: *Among Muslims, conflict exposure has no effect on hostility towards ethnoreligious outgroups.*

3.4. Data and methodology

This study relies on the Round 7 Afrobarometer survey data (BenYishay et al. 2017) collected in 2017.²⁹ The dataset consists of 1,600 observations and is representative for Nigeria’s population. Respondents were drawn from each of Nigeria’s 36 states and the federal capital territory—Abuja. Of Nigeria’s 774 local government areas (LGAs) (i.e., municipalities), data were collected from 147 of them. Respondents were at least 18 years old, with males and

²⁹ To access the Afrobarometer dataset and the survey questionnaire visit: <https://www.afrobarometer.org/>

females equally represented in the sample. Table A1 in the appendix reports the summary statistics of the variables that were used to estimate the regression models.

Operationalization of the variables

Dependent variable

Outgroup hostility. This is an additive indicator that measures the respondents' willingness to have people from other religions and other ethnic groups as neighbors. It was derived by combining the responses to the following two questions: "For each of the following types of people, please tell me whether you would like having people from this group as neighbors, dislike it, or not care: (a) People of a different religion? (b) People from other ethnic groups?" The responses were measured on a five-point ordinal scale ranging from "1 = strongly like," to "5 = strongly dislike." The additive indicator ranges from 2 to 10, with higher values denoting a higher level of outgroup hostility and vice versa.³⁰ I treated "don't know" and "refused to answer" responses as missing observations. I applied this rule to all variables derived from the Afrobarometer survey.

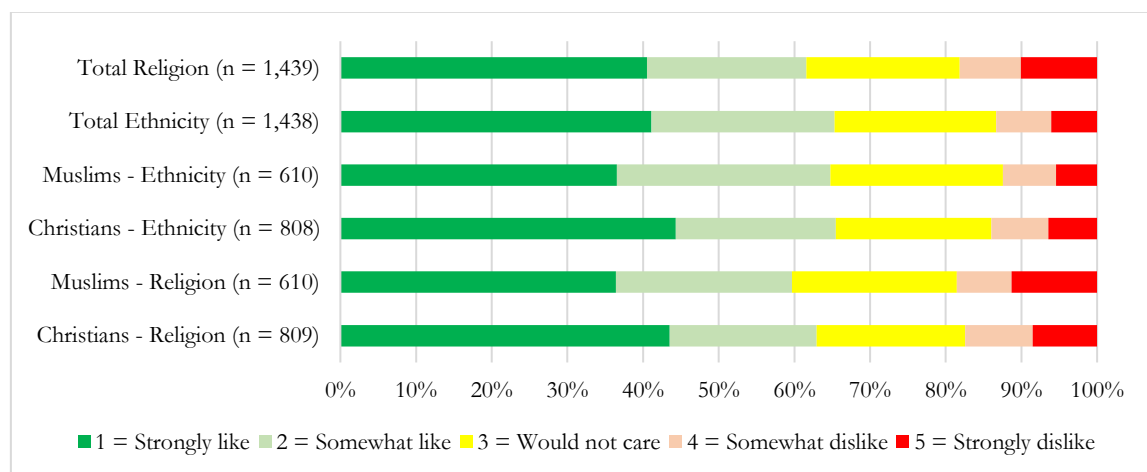


Figure 2: Hostility towards ethnic and religious outgroups

³⁰ In the original Afrobarometer dataset, higher ordinal values denote a lower level of outgroup hostility and vice versa. For easy interpretation of the regression results, I inverted the ordinal values assigned to the response categories by subtracting each of them from 6; this allows higher (lower) values to denote a higher (lower) level of outgroup hostility.

Note: The y-axis shows the total number of respondents in the full sample, and the number of Muslim/Christian respondents who had answered the relevant questions regarding their willingness to have people from a different religion and ethnic group as neighbors. The x-axis shows the percentage of respondents who chose a particular response category.

The two survey items had a Cronbach Alpha statistic of 0.84, which shows internal consistency. The two items also had a correlation of 0.72, which highlights the close association between ethnicity and religion in Nigeria. As shown in the first two bar charts from the top of Figure 2, Nigerians have a slightly higher level of hostility towards religious outgroups than ethnic outgroups. Christians are slightly less hostile towards people of a different ethnic group than Muslims. Muslims are slightly more hostile towards people of a different religion than Christians. Both Christians and Muslims are more hostile towards people of a different religion than people of a different ethnic group.

Explanatory variable

Violent conflict. This measures the total number of violent conflict incidents within the 30 km buffer around the respondents' dwellings. I developed the buffers using QGIS software. This was possible because I relied upon data obtained from Afrobarometer (BenYishay 2017) and ACLED (Raleigh et al. 2010), both of which are georeferenced. Based on the ACLED dataset, I define a violent conflict as any incident that falls under any of the following three categories: Battles, Violence against civilians, and Explosions/Remote violence.³¹ Although the ACELD dataset is available starting from 1997 and is updated in real time, I excluded conflict incidents that occurred after 2016. This lags the explanatory variable since the dependent variable is measured in 2017. I considered all the conflict incidents within the buffer from 1997 to 2016 because I am particularly interested in the cumulative effect of violent conflict. Some studies have shown that memories from past conflicts tend to persist

³¹ To access the ACLED dataset visit: <https://acleddata.com/>

and could shape action in the present (Wagoner & Brescó 2016; Tint 2010).

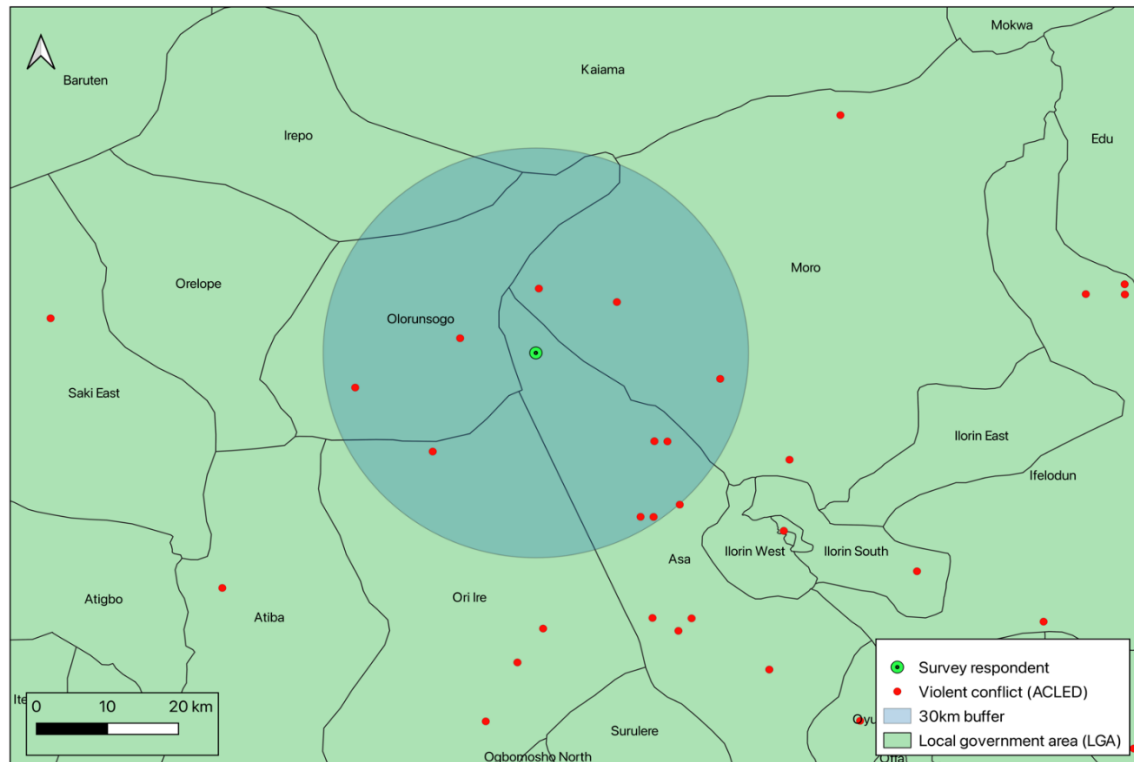


Figure 3: Measuring exposure to violent conflict

Note: Using a single respondent for a demonstrative purpose, the figure shows the 30 km buffer around his/her dwelling. It also shows the geolocations of the violent conflicts and the local government area (LGA) (i.e., municipality) administrative boundaries.

Buffers are a more efficient way of measuring exposure to violent conflict than the LGA administrative boundaries. This is because the spatial area occupied by each buffer is unique for each respondent and allows for more variation in the conflict exposure variable. If I had measured conflict exposure at the LGA level, I would have associated all the respondents residing within a particular LGA with the total number of conflict incidents there, which presumes that all respondents residing within a particular LGA are exposed to the same level of violence. This would have been inefficient because incidents in a contiguous LGA might be nearer to a respondent's dwelling than those in the particular LGA where he/she resides. As shown in figure 3, the respondent resides in Asa LGA, yet conflicts in Moro, Olorunsogo, and Ori Ire LGAs are closer to his/her dwelling than some incidents in Asa LGA. Another challenge that comes along with working with Nigeria's administrative

boundaries (especially those at the lower levels) is that they are not clearly defined. In fact, there were a few observations where respondents residing close to Nigeria's national border were more exposed to conflicts in the contiguous countries of Cameroon, Chad, Benin, and Niger than incidents within the particular Nigerian state or LGA where they reside. The use of buffers, which disregards administrative boundaries, attenuates these problems. 96 percent of the respondents had at least one violent conflict incident within the 30 km buffer around their dwellings. 31 percent of them had at least 50 incidents.

Control variables

I considered some control variables for socioeconomic condition, population size, the respondents' educational level and their demographic attributes. I discuss the control variables and the rationale for their inclusion in the regression models below:

Population size. This measures the total number of people residing within the 30 km buffer around the respondents' dwellings in 2016. I controlled for population size because it could confound the relationship between violent conflict and outgroup hostility. The dispersion pattern of a population could influence the risk of conflict. When the population is scattered along the edges of a country rather than being concentrated in an area, for instance due to a rough geographical terrain, this limits the capacity of the state to exert control over the polity, which in turn increases the risk of conflict (Herbst 2000; Collier & Hoeffler 2000). The size of the population might also be proxying the level of urbanization. Some studies have found that populations in urban centers have a higher level of outgroup trust than those in rural areas (Xu 2021; Delhey & Newton 2005). Since the raw population dataset is gridded, I computed the relevant statistic for the buffers using QGIS software. The raster data for the

population variable was obtained from Worldpop at the University of Southampton.³²

Nighttime light. This measures the mean annual nighttime light pixels within the 30 km buffer around the respondents' dwellings in 2016 (Ghosh et al. 2021). This variable, which proxies the level of economic activity, is often used when sub-national accounting data is unavailable (see Florida et al. 2012; Mellander et al. 2015; Weidmann & Schutte 2017). Slow economic growth has been found to increase the risk of conflict (Collier 2008). Economic decline and rising inequality have also been found to negatively correlate with outgroup trust. This is because people become risk averse and associate interactions with outgroup members with higher risk (Stewart et al. 2020; Delhey & Newton 2005). I computed the relevant statistic for the buffers using QGIS software because the raw nighttime light dataset is gridded. The pixel range for this variable is from 0 to 63, with higher values denoting a higher level of economic activity and vice versa. Source: Earth Observation Group database.³³

Prevalence of stunting. This measures the proportion of children under the age of 5 within the 30 km buffer around the respondents' dwellings who were classified as stunted in 2013 (Bosco et al. 2017). The prevalence of stunting reflects the inability of the households residing within the buffer to access nutritious food, potable drinking water, and the other necessities that are required to live decent and healthy lives. Some studies have shown that poverty increases the risk of conflict by reducing the opportunity cost of joining a rebel group (Von Uexkull 2014; Do & Iyer 2010; Collier 2008). Poverty has also been found to negatively correlate with social trust (Gereke et al. 2018; Alessina & La Ferrara 2000). This might be because financial pressures crowd out prosocial behavior, thus instigating opportunistic

³² To access the population dataset visit: <https://www.worldpop.org/>

³³ To access the nighttime light dataset visit: <https://eogdata.mines.edu/products/dmsp/>

behavior among poor people. Moreover, in situations where a host community is poor, outgroup members, say migrants for instance, might be perceived as potential competitors for the limited resources, opportunities, and social protections provided by the state, which then leads to hostility towards the outgroup. Moreover, the host population might attribute blame to outgroup members for their poor socioeconomic condition, as has been the case with the xenophobic violence directed toward migrants in South Africa (Gordon 2015; Everatt 2011; Choane et al. 2011). Since the raw dataset is gendered and also gridded, I computed the relevant statistic within the buffers for both males and females using QGIS software and then took the average. Unlike the datasets for violent conflict, nighttime light, and population size, which are available for Nigeria and the contiguous countries bounding it, the prevalence of stunting dataset is available for only Nigeria. This implies that for the 120 respondents (i.e. 7.5 percent of the 1600 observations) whose buffers encroached into the contiguous countries, I computed the relevant statistic for only the buffers' spatial area within Nigeria's administrative boundary. Source: Worldpop Development and Health Indicators database.³⁴

Household deprivation. This is an additive indicator that measures the socioeconomic status of the household to which the respondent belongs. It was derived by adding the responses to the following five questions: “Over the past year, how often, if ever, have anyone in your family: (a) Gone without food to eat? (b) Gone without enough clean water for home use? (c) Gone without medicines or medical treatment? (d) Gone without fuel to cook your food? (e) Gone without cash income?” The responses were measured on a scale with five ordinal categories ranging from “0 = never” to “4 = always” The additive indicator ranges from 0 to 20, with higher values denoting a higher level of deprivation. The five items

³⁴ To access the prevalence of stunting dataset visit: <https://hub.worldpop.org/geodata/summary?id=1268>

had a Cronbach Alpha statistic of 0.81, which shows internal reliability. The mechanisms through which household deprivation influences violent conflict and outgroup hostility are akin to those enumerated for the “prevalence of stunting” variable. What distinguishes these two variables is the level of aggregation.³⁵

Educational level. This measures the educational attainment of the respondents on a nine-point ordinal scale ranging from “0 = no formal schooling” to “9 = postgraduate.” People who are educated might be more accommodating towards outgroups than their uneducated counterparts because education exposes them to diverse ideas (Ferwerda et al. 2017; Jenssen & Engesbak 1994). Education could reduce the risk of violent conflict by increasing the opportunity cost of rebel participation (Collier & Hoeffler 2000).

Demographic covariates. This includes the age, gender, and religious affiliation of the respondents. Religious affiliation is measured using a dummy variable that takes a value of 1 if the respondent identifies as Christian and 0 if Muslim. I derived the binary variable by collapsing the various Christian and Muslim denominations into singular categories. Gender is measured using a dummy variable that takes the value of 1 if the respondent is male and 0 if female.

Empirical strategy

The general form of the model to be estimated could be expressed thus:

$$y_i = \beta_0 + \beta_1 \text{Violent conflict}_{1997-2016} + \beta_2 X'_i + e_i \quad (1)$$

Where y_i is the dependent variable which measures hostility towards ethnic and religious outgroups for respondent i , X'_i is a vector of control variables that have been discussed in

³⁵ Including “prevalence of stunting” and “household deprivation” in the same model did not lead to multicollinearity because the correlation between them was -0.06

the preceding section, β_0 is the intercept, β_1 and β_2 are the coefficients of the explanatory and control variables respectively, and e_i denotes the error term.

While the model estimates the effect of conflict exposure on outgroup hostility, the reverse is also possible: People with a high level of outgroup hostility might be those who are exposed to violent conflict. This leads to the problem of reverse causality. To mitigate this problem, I have lagged the explanatory variable by considering only conflict events that occurred before 2017 since the dependent variable is measured in 2017. However, omitted variable bias might still be a problem because there might be some variables in the error term that influence outgroup hostility which I may not have controlled for in the regression model. To address this problem, I adopted an instrumental variable approach and estimated the model using two-stage least squares (2SLS) regression.

I used forest cover as an instrumental variable for violent conflict. I expect that forest cover would plausibly not directly influence hostility towards ethnic and religious outgroups, except through the mechanism of violent conflict. Some studies have shown that forest cover could increase the risk of conflict by providing strategic military advantages to insurgent groups (Schaub & Auer 2022; Do & Iyer 2010). In the state of Borno, which is located in Northeastern Nigeria, *Sambisa Forest* has served as a fortress for *Boko Haram* insurgents. In 2014, *Boko Haram* insurgents kidnapped over 200 girls from a boarding school in the town of Chibok and held them captive in the forest (Kayode 2014; Grill & Selander 2014). In 2021 gunmen abducted about 300 girls from a boarding school in the state of Zamfara and held them hostage in the forest. The girls were later released after negotiations between the state government and the abductors (Akinwotu 2021).

To measure forest cover, I computed the proportion of land area within the 30 km buffer around the respondents' dwellings that consists of forests. More specifically, I derived the forest cover variable by dividing the total forest pixels within the 30 km buffer by the

total land cover pixels. The raw dataset was obtained from the Global Land Cover (GlobCover) database, which classifies the land area across the globe into 22 categories (Bontemps et al. 2011).³⁶ I define forests as pixels ranging from classes 20 to 120. I relied on the 2009 version of the GlobCover dataset, which is the most recent. Since the raw dataset is gridded, I computed the relevant statistics for the buffers using QGIS software.

3.5. Results and discussion

First-stage regressions

Table 1: Association between forest cover and violent conflict

Violent conflict [#] ϕ	(1) All data	(2) North	(3) South	(4) All data	(5) All data
Forest cover [#]	-34.281*** (11.983)	44.645*** (15.742)	-222.468*** (17.276)		339.491*** (58.777)
(Forest cover) ^{2#}				-42.075*** (10.254)	-327.394*** (50.43)
Constant	88.418*** (7.658)	13.732 (8.593)	249.504*** (12.366)	85.069*** (4.963)	-1.74 (15.812)
Observations	1592	772	820	1592	1592
R-squared	0.005	0.01	0.169	0.01	0.031

Note: ϕ is the dependent variable, standard errors are in parenthesis, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. # denotes variables measured using buffers with a radius of 30 km. All models are estimated using ordinary least squares (OLS) regression.

Table 1 presents the results of ordinary least squares (OLS) regression models examining the relationship between forest cover and violent conflict. In model 1, forest cover was significant at the one percent level and carried a negative sign. This result is incongruent with my a priori expectation that forest cover increases the risk of conflict. However, this *anomalous* finding might not necessarily be wrong, especially when Nigeria's topography and the distribution of violent conflicts across the country are considered. As was mentioned in section 3, over two-thirds of all violent conflicts that occurred in Nigeria between 1997 to 2022 were in the Northern Region, while the remaining one-third were in the Southern

³⁶ To access the GlobCover dataset and the codebook/validation report visit: http://due.esrin.esa.int/page_globcover.php

Region. The Northernmost part of Nigeria is proximate to the *Sahara Desert* and has a dry climate. The land there is also arid with sparse vegetation. The southernmost part of Nigeria is contiguous to the Atlantic Ocean, and a large swathe of the land area there falls within the rainforest vegetation zone. The amount of rainfall and vegetation cover in Nigeria increases as one moves southwards from the north.

Given this background, the negative correlation between forest cover and the incidence of conflict in model 1 should not be surprising. The forests in Northern Nigeria might be more hospitable for insurgents because they are not as dense as those in Southern Nigeria. If this logic holds, then I should find a positive correlation between forest cover and violent conflict when I estimate a model using the subsample of respondents residing in Northern Nigeria. Conversely, I should find a negative correlation between forest cover and violent conflict when I estimate a model using the subsample of observations in Southern Nigeria because the denseness of the forests in the Southernmost parts of the region would make them inhospitable for insurgent groups. As shown in model 2 which was estimated using the subsample of respondents in Northern Nigeria, forest cover carried a positive sign and was significant at the one percent level. In model 3, which was estimated using the subsample of observations in Southern Nigeria, forest cover carried negative sign and was also significant at the one percent level.

Given the above patterns, it is possible that a quadratic specification might better capture the relationship between forest cover and violent conflict. This is because both vegetation extremes—its total absence and abundance—pose a military disadvantage to insurgent groups, which in turn reduces the risk of violent conflict. If this is indeed the case, then the square of forest cover should carry a negative sign when violent conflict is regressed against it. This suggests an inverse quadratic relationship akin to an inverted “U”. As shown in model 4, this is the case. This finding is consistent with that of Chow and Han (2023). I

estimated a final model where I included both forest cover and its square in the same model. As shown in model 5, the negative sign accompanying the square of forest cover persists. Taking into consideration Nigeria's climate, vegetation cover, and the spatial distribution of violent conflicts across the country, I used both forest cover and its square as instrumental variables.³⁷

Second-stage regressions

Table 2: Effect of violent conflict on outgroup hostility I (Full sample & religious subsamples)

Outgroup hostility ^φ	Full sample		Religious subsamples		
	(1)	(2)	(3) Xtian	(4) Muslim	(5) Muslim
Violent conflict [#]	0.004** (0.002)	0.025*** (0.007)	0.046*** (0.012)	0.007 (0.009)	0.002* (0.001)
Nighttime light [#]		-0.429*** (0.117)	-0.857*** (0.204)	-0.099 (0.117)	-0.037 (0.034)
Prevalence of stunting [#]		3.734*** (1.221)	-3.007 (1.89)	4.49* (2.376)	3.318*** (0.989)
Household deprivation		0.022 (0.016)	0.014 (0.022)	0.04* (0.022)	0.041* (0.024)
Log Population size [#]		-0.01 (0.134)	0.245 (0.209)	-0.069 (0.25)	0.047 (0.137)
Educational level		-0.188*** (0.038)	0.00 (0.057)	-0.196*** (0.051)	-0.181*** (0.044)
Religious affiliation		0.395* (0.235)			
Gender		-0.339*** (0.13)	0.043 (0.175)	-0.899*** (0.177)	-0.905*** (0.182)
Age		-0.009 (0.005)	-0.008 (0.007)	-0.005 (0.008)	-0.003 (0.006)
Constant	4.828*** (0.127)	3.768** (1.737)	1.99 (3.378)	4.394* (2.554)	3.394* (1.82)
Estimation method	2SLS	2SLS	2SLS	2SLS	OLS
Observations	1437	1406	806	600	600
R-squared	0.132			0.177	0.193
Durbin statistic	9.235***	12.954***	16.806***	0.312	
Wu-Hausman statistic	9.1***	12.721***	16.44***	0.3	
Sargan statistic	0.092	0.002	1.773	3.103*	
Basman statistic	0.09	0.002	1.702	3.0*	

Note: ϕ is the dependent variable, # denotes variables measured using buffers with a radius of 30 km, standard errors are in parenthesis, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are estimated using two-stage least squares (2SLS) regression, except for model 6 which is estimated using ordinary least squares (OLS) regression. All models contain fixed effects for the respondents' ethnic groups. Only the second-

³⁷ I also estimated some 2SLS regression models where I used either forest cover or its square as instrumental variables. The second-stage regression results were consistent with those I have been reported in section 5.2. I do not report these regression results in the paper.

stage regressions are reported here.

Table 2 reports the second-stage regression results of models examining the effect of conflict exposure on hostility towards ethnoreligious outgroups. In model 1—the baseline model—I included only the explanatory variables and fixed effects for all the ethnic groups.³⁸ Violent conflict was significant at the five percent level and carried the expected positive sign. This supports Hypothesis 1 which states that among the Nigerian population, exposure to violent conflict leads to hostility towards ethnoreligious outgroups. This is likely because Nigeria's population is polarized along ethnic and religious lines, coupled with the huge importance that they attach to their ethnic and religious identities. Moreover, conflict exposure fosters ingroup cohesion, erodes trust in outgroup members, and makes ingroup-outgroup boundaries salient.

In model 2 where I added the control variables, violent conflict retained its positive sign and its significance level increased to one percent. The effect size also increased from 0.004 to 0.025. To check whether endogeneity was indeed present, I conducted a test. As shown in the lower panel of the table, the Durbin and Wu-Hausman statistics were both significant at the one percent level, which indicates that the use of an instrumental variable estimation technique was appropriate. To check for the suitability of the instrumental variables, I conducted a test for over-identifying restrictions—since I have two instrumental variables and only one endogenous variable, which makes the model over-identified. Both the Sargan and Basmann statistics were statistically insignificant, which suggests that the instrumental variables are appropriate.

To check for heterogeneous effects based on religious affiliation, I estimated models using the Christian and Muslim subsamples of respondents. As shown in model 3 which was

³⁸ Table A2 in the appendix shows the ethnic distribution of the respondents in the Afrobarometer dataset

estimated using the Christian subsample of respondents, violent conflict carried a positive sign and was significant at the one percent level. This is consistent with Hypothesis 2 which states that among Christians, exposure to violent conflict leads to hostility towards ethnoreligious outgroups. A plausible reason for this finding is that the major conflict affecting Christians involves nomadic Fulani pastoralists who are Muslims. Because the parties to the conflict belong to different religious groups, it becomes easy for ingroup-outgroup distinctions to be made. This explains why conflicts involving nomadic Fulani pastoralists are often viewed through a religious lens (Parsons 2023; Christian Association of Nigeria 2018, 2018a). The different religious affiliations of the parties to the conflict makes it easier for ingroup-outgroup distinctions to be established. Put differently, the existence of a religious cleavage makes the “othering” of Muslims easy. Moreover, the Round 7 Afrobarometer survey dataset shows that compared to Muslims, Christians are more likely to associate Muslims with extremism. Such perceptions catalyze polarization and make Christians hesitant to have people of a different ethnicity and religion as neighbors. The size of the coefficient in model 3 is larger than that in model 2, which suggests that conflict exposure has a larger effect on outgroup hostility among Christians compared to the larger Nigerian population. A point worth re-emphasizing is that the operationalization for outgroup hostility employed in this study does not imply violence towards cultural outgroups, but rather the willingness to have members of the outgroup as neighbors. In model 4, which was estimated using the Muslim subsample of respondents, violent conflict was statistically insignificant. A closer inspection of the results shows that the Durbin and Wu-Hausman statistics were both insignificant. This suggests the absence of endogeneity. Moreover, both the Sargan and Basman statistics were significant at the 10 percent level, which indicates the unsuitability of the instrumental variables. Ordinary least squares (OLS) regression would thus be more fitting for estimating the relevant relationship. As shown in

model 5, which was estimated using OLS regression, violent conflict carried a positive sign and was significant at the 10 percent level. However, the effect size was very small compared to that in model 3 which is based on the Christian subsample of respondents. This suggests that the bulk of the positive effect of conflict exposure on outgroup hostility found among the Nigerian population (i.e., models 1 and 2) is driven by Christians. The weak positive effect among Muslims might be because the main conflict affecting them—the *Boko Haram* insurgency—does not involve Christians. A significant number of Muslims are also affected by the violent clashes involving nomadic Fulani pastoralists who are also Muslims. The common religion of Islam shared by the parties to the conflict makes it difficult for ingroup-outgroup boundaries to be established. Moreover, since the major conflicts affecting Muslims does not involve Christians, it thus becomes illogical for Muslims to be hostile towards Christians. Put differently, the absence of a religious cleavage between the conflicting parties makes “othering” and the attribution of blame to an outgroup difficult, hence the weak effect of violent conflict on outgroup hostility among Muslims.

Robustness check

It is possible that the positive effect of violent conflict on outgroup hostility among the Nigerian population (i.e., models 1 and 2 in table 2) is influenced by the way the dependent variable was operationalized. To check whether conflict exposure influences hostility towards ethnic and religious outgroups differently, I disaggregated the dependent variable and estimated models using its respective components. Table 3 reports the results. Models 1 and 2 examine the effect of violent conflict on hostility towards religious outgroups only. In model 1—the baseline model—violent conflict carried a positive sign and was significant at the five percent level. This suggests that among the Nigerian population, exposure to violent conflict leads to hostility towards religious outgroups. Violent conflict retained its positive

sign and its significance level increased to one percent in model 2 where I added the control variables.

Table 3: Effect of violent conflict on outgroup hostility II (Full sample)

Outgroup hostility ^φ	Religion		Ethnicity	
	(1)	(2)	(3)	(4)
Violent conflict [#]	0.002** (0.001)	0.014*** (0.004)	0.002** (0.001)	0.011*** (0.004)
Nighttime light [#]		-0.236*** (0.066)		-0.194*** (0.059)
Prevalence of stunting [#]		2.149*** (0.687)		1.618*** (0.62)
Household deprivation		0.007 (0.009)		0.015* (0.008)
Log Population size [#]		-0.006 (0.076)		-0.00 (0.068)
Educational level		-0.098*** (0.022)		-0.092*** (0.02)
Religious affiliation		0.176 (0.132)		0.22* (0.119)
Gender		-0.217*** (0.073)		-0.124* (0.066)
Age		-0.006** (0.003)		-0.003 (0.003)
Constant	2.552*** (0.072)	1.98** (0.977)	2.286*** (0.065)	1.738** (0.882)
Estimation method	2SLS	2SLS	2SLS	2SLS
Observations	1439	1408	1438	1407
R-squared	0.116		0.118	
Durbin statistic	9.083***	12.01***	6.578**	9.91***
Wu-Hausman statistic	8.95***	11.787***	6.470**	9.711***
Sargan statistic	0.317	0.05	0.018	0.163
Basmann statistic	0.311	0.049	0.018	0.158

Note: ϕ is the dependent variable, # denotes variables measured using buffers with a radius of 30 km, standard errors are in parenthesis, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are estimated using two-stage least squares (2SLS) regression. All models contain fixed effects for the respondents' ethnic groups.

Models 3 and 4 examine the effect of violent conflict on hostility towards ethnic outgroups only. In model 3—the baseline model—violent conflict carried a positive sign and was significant at the five percent level. This indicates that among Nigerians, exposure to violent conflict leads to hostility towards ethnic outgroups. In model 4 where I added the control variables, violent conflict retained its positive sign and its significance level increased to one percent. The effect size of violent conflict on hostility towards religious and ethnic outgroups are identical (at least in the baseline models), which might be because of the close association between ethnicity and religion in Nigeria.

Table 4: Effect of violent conflict on outgroup hostility III (Religious subsamples)

Outgroup hostility ^φ	Religion			Ethnicity		
	(1) (Xtian)	(2) (Muslim)	(3) (Muslim)	(4) (Xtian)	(5) (Muslim)	(6) (Muslim)
Violent conflict [#]	0.025*** (0.007)	0.004 (0.005)	0.001 (0.001)	0.021*** (0.006)	0.003 (0.005)	0.001 (0.001)
Nighttime light [#]	-0.464*** (0.113)	-0.05 (0.067)	-0.02 (0.022)	-0.393*** (0.105)	-0.051 (0.061)	-0.018 (0.02)
Prevalence of stunting [#]	-2.17** (1.044)	2.738** (1.356)	2.163*** (0.623)	-0.836 (0.972)	1.807 (1.235)	1.182** (0.565)
Household deprivation	-0.001 (0.012)	0.022* (0.013)	0.023* (0.013)	0.015 (0.011)	0.019* (0.011)	0.019* (0.012)
Log Population size [#]	0.111 (0.115)	-0.039 (0.143)	0.018 (0.079)	0.134 (0.108)	-0.027 (0.13)	0.035 (0.072)
Educational level	0.019 (0.031)	-0.109*** (0.029)	-0.102*** (0.025)	-0.02 (0.029)	-0.089*** (0.026)	-0.081*** (0.022)
Gender	-0.019 (0.097)	-0.514*** (0.101)	-0.517*** (0.102)	0.062 (0.09)	-0.39*** (0.092)	-0.393*** (0.092)
Age	-0.005 (0.004)	-0.005 (0.004)	-0.004 (0.004)	-0.003 (0.004)	-0.00 (0.004)	0.001 (0.004)
Constant	1.262 (1.866)	2.269 (1.458)	1.777* (1.041)	0.729 (1.737)	2.079 (1.326)	1.546 (0.945)
Estimation method	2SLS	2SLS	OLS	2SLS	2SLS	OLS
Observations	807	601	601	806	601	601
R-squared		0.187	0.198	0.008	0.124	0.142
Durbin statistic	14.998***	0.23		13.32***	0.329	
Wu-Hausman statistic	14.639***	0.221		12.973***	0.316	
Sargan statistic	1.232	4.236**		1.958	1.142	
Basman statistic	1.182	4.103**		1.88	1.1	

Note: ϕ is the dependent variable, [#] denotes variables measured using buffers with a radius of 30 km, standard errors are in parenthesis, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. All models are estimated using two-stage least squares (2SLS) regression, except for models 3 and 6 which are estimated using ordinary least squares (OLS) regression. All models contain fixed effects for the respondents' ethnic groups.

I conducted another robustness check where I estimated some models using the religious subsamples of respondents and the ethnic and religious components of outgroup hostility. Table 4 reports the results. In models 1, 2, and 3, the dependent variable measures hostility towards religious outgroups only. In model 1 which was estimated using the Christian subsample of respondents, violent conflict carried a positive sign and was significant at the one percent level. This indicates that among Christians, conflict exposure leads to the hostility towards people of a different religion. Moreover, this provides further support for Hypothesis 2. In model 2 which was estimated using the Muslim subsample of respondents, violent conflict was statistically insignificant. The Durbin and Wu-Hausman statistics were both insignificant, which suggests that endogeneity was not present and the

use of an instrumental variable approach to estimate the model was inappropriate. I thus re-estimated the model using OLS regression. As shown in model 3, violent conflict remained statistically insignificant. This suggests that among Muslims, conflict exposure has no effect on hostility towards people of a different religion. This is consistent with Hypothesis 3.

In models 4, 5, and 6, the dependent variable measures hostility towards ethnic outgroups only. In model 4 which was estimated using the Christian subsample of respondents, violent conflict carried the expected positive sign and was significant at the one percent level, which indicates that among Christians, exposure to violent conflict has a positive effect on hostility towards ethnic outgroups. The size of the coefficient does not differ much from that in model 1, which further highlights the close association between ethnicity and religion in Nigeria. In model 5, which was estimated using the Muslim subsample of respondents, violent conflict was statistically insignificant. Because the Durbin and Wu-Hausman statistics were both statistically insignificant, I re-estimated the model using OLS regression. As shown in model 6, violent conflict remained statistically insignificant, which indicates that among Muslims, conflict exposure has no effect on hostility towards ethnic outgroups. This supports Hypothesis.

3.6. Conclusion

This study examined the effect of exposure to violent conflict on hostility towards ethnoreligious outgroups among the Nigerian population and among its two major religious groups (i.e., Christians and Muslims). Causal identification stemmed from instrumenting conflict exposure with forest cover. The regression results showed that among the Nigerian population and Christians, conflict exposure had a robust positive effect on outgroup hostility. A plausible explanation for this finding is that the threat of violent conflict fosters cohesion among ingroup members, erodes trust in outgroup members, and makes intergroup

boundaries salient. This is especially so when the opposite party to the conflict constitutes a distinct cultural outgroup. Because the main conflict affecting Christians involves nomadic Fulani pastoralists who are Muslims, it becomes easy for ingroup-outgroup distinctions to be established. Among Muslims, violent conflict had a weak positive effect on outgroup hostility that was not robust to different operationalizations of outgroup hostility. This null effect among Muslims is likely because the main conflict affecting them—i.e., the *Boko Haram* insurgency—does not involve Christians. Moreover, a significant number of Muslims are affected by conflicts involving nomadic Fulani pastoralists. The common religion of Islam shared by the parties makes the establishment of ingroup-outgroup boundaries arduous.

The regression results also showed that religion is closely associated with ethnicity in Nigeria, and the population tends to conflate the two. This is problematic because it makes intergroup boundaries more salient, which in turn heightens the risk of conflict. If the Nigerian government intends to reduce violent conflict and outgroup hostility, it would have to adopt a policy that tackles these two factors simultaneously because each one reinforces the other. For instance, the government could reduce the incidence of violent conflict by equipping its security agencies with the requisite skills and equipment needed to respond promptly and effectively to conflict situations, while simultaneously pursuing policies that foster social cohesion and elevate a shared national identity over ethnic and religious identities, e.g., by encouraging inter-ethnic and inter-religious dialogue. However, I must also acknowledge that the latter recommendation might be difficult to achieve because it is not uncommon for the Nigerian elites to exploit the ethnic and religious divisions among the population for political gain.

Conflict of interest

None.

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Appendix

Table A1: Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Outgroup hostility ^φ	1437	4.389	2.351	2	10
Outgroup hostility (religion)	1439	2.261	1.331	1	5
Outgroup hostility (ethnicity)	1438	2.13	1.202	1	5
Violent conflict [#]	1592	67.886	106.807	0	475
Nighttime light [#]	1592	3.1	5.191	0	20.104
Prevalence of stunting [#]	1592	0.331	0.147	0.136	0.634
Household deprivation	1440	4.935	4.11	0	20
Log Population size [#]	1592	14.032	1.116	11.536	16.39
Educational level	1445	4.513	2.155	0	9
Religious affiliation	1428	0.569	0.495	0	1
Gender	1448	0.501	0.5	0	1
Age	1447	32.658	12.428	18	80
Forest cover	1592	0.599	0.223	0.056	0.985
(Forest cover) ²	1592	0.408	0.26	0.003	0.969

Note: ϕ is the dependent variable which is derived by adding “Outgroup hostility (religion)” and “Outgroup hostility (ethnicity),” # denotes variables measured using buffers with a radius of 30 km. Although the Afrobarometer dataset has 1,600 potential observations, the variables in the table contain fewer observations because not all respondents were asked the relevant questions. Also, I treated all “don’t know” and “refused to answer” responses as missing observations which may have exacerbated the problem of listwise deletion.

Table A2: Ethnic distribution of respondents

Ethnic group	Frequency (n)	Percent
Hausa	322	22.24
Igbo	251	17.33
Yoruba	328	22.65
Fulani	49	3.38
Ibibio	35	2.42
Kanuri	35	2.42
Ijaw	33	2.28
Tiv	26	1.80
Ikwere	25	1.73
Efik	24	1.66
Ebira	20	1.38
Idoma	19	1.31
Nupe	18	1.24
Igala	16	1.10
Isoko	10	0.69
Edo	10	0.69
Gwari	9	0.62
Kalabari	9	0.62
Jukun	7	0.48
Urhobo	4	0.28
Birom	3	0.21
Shuwa-Arab	1	0.07
Others	194	13.41
Total	1,448	100.00

Note: Based on the Round 7 Afrobarometer survey data collected in 2017.

4. Pastoral conflicts and (dis)trust in the Fulani and Muslims: Evidence from Nigeria using an instrumental variable approach.

Abstract

Even though the incidence of conflicts between Fulani nomadic pastoralists and sedentary communities in Nigeria have risen significantly during the last decade, no study has examined how these conflicts influence distrust in members of the Fulani ethnic group and the larger Muslim population. Using novel survey data collected from Kaduna, the state with the third highest incidence of pastoral conflict out of Nigeria's 36 states, this study seeks to fill this gap. The regression results show that among the population in Kaduna, exposure to pastoral conflict has a positive effect on distrust in members of the Fulani ethnic group and Muslims. Disaggregating the data based on religious affiliation revealed a pattern: Exposure to pastoral conflict had a positive effect on distrust in the Fulani and Muslims only among Muslim respondents. The positive effect found among Muslims suggests that pastoral conflict erodes ingroup cohesion. This is likely due to the shared religion of Islam between the Muslim sedentary population and Fulani nomadic pastoralists. The null effect among Christians might be because even in the absence of pastoral conflicts, Christians were already distrustful of Muslims due to the long history of animosity between the two religious groups. Pastoral conflicts thus simply fit into pre-existing religious cleavages.

Keywords: *Pastoral conflict, Farmer-herder conflict, Trust, Fulani, Religion, Kaduna, Nigeria*

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4.1. Introduction

For over a decade, Nigeria has been contending with violent clashes between nomadic pastoralists and sedentary communities (especially those engaged in crop cultivation). Although such conflicts are common across Africa, especially in the Sahel region, Nigeria stands out because a disproportionate number of them happen there. Data from the Armed Conflict Location and Events Database (ACLED) (Raleigh et al. 2010) shows that between 1997 and 2022, there were over 7,500 conflicts in Africa in which at least one of the parties was a pastoralist. These incidents spanned 38 countries and Nigeria alone accounted for 31 percent of them. Among Nigeria's 36 states, Kaduna, the case study for this research, accounted for 11 percent of the over 2,300 incidents that occurred in the country during this period, making it the state with the third highest incidence of pastoral conflicts. The majority of these incidents were violent in nature, with 90 percent of them causing at least one fatality.³⁹

One attribute of pastoral conflicts in Nigeria is their tendency to escalate from the individual to the communal level (Gbadamosi 2022; Olumide 2022; Sahara Reporters 2022). The conflict might start with a disagreement between a farmer and herder as a result of livestock (especially cattle) straying into farmland and destroying crops. This disagreement might then turn violent, leading to the death or injury of one of the parties. It could also result in the killing of livestock. This fuels resentment among members of the associated ethnic and religious groups, especially the group that incurs the greatest loss. Revenge, when it is sought, will typically be meted out at the communal level and along ethnic and religious lines (Aljazeera 2023; Wuyo 2021; Sahara Reporters 2021, 2021a; Blueprint 2018). Another factor that adds an additional layer of complexity to pastoral conflicts in Nigeria is the uniqueness and identifiability of the pastoralists: they are Muslim and belong to the Fulani ethnic group.

³⁹ The operationalization of pastoral conflicts used here captures incidents where pastoralists were the perpetrators as well as those where they were the victims.

The high incidence of pastoral conflicts across Nigeria has strained the relationship between nomadic pastoralists and many sedentary communities, leading to the formation of paramilitary organizations. In 2020, six state governors in the predominantly Yoruba western region of the country formed the Western Nigeria Security Network (WNSN), also known as *Amotekun*, to address rising insecurity in the region (Aneazoronye 2020; Campbell and McCaslin, 2020). In the predominantly Igbo eastern region of the country, the Indigenous People of Biafra (IPOB), a movement that has been agitating for the secession of Nigeria's eastern region to create the Republic of Biafra, established the Eastern Security Network (ESN) (Campbell 2021). The Nigerian federal government has voiced its opposition to the establishment of such paramilitary organizations on the grounds that they undermine the federal security agencies (Adebayo 2020; Ojo 2020).

Pastoral conflicts have also deepened already existing religious cleavages across the country. Reports by the Christian Association of Nigeria (CAN) portray pastoral conflicts as attacks on Christians by Muslims. Nigeria's former president, Muhammadu Buhari, who is Muslim and a member of the Fulani ethnic group, was criticized for his failure to proscribe Fulani pastoralists who perpetrate violence as terrorists and bring them to justice (Christian Association of Nigeria 2018, 2018a).⁴⁰ Conversely, a popular Muslim cleric, Sheik Ahmad Gumi, has cautioned against labelling all pastoralists as criminals and urged the federal government to establish a Ministry of Nomadic Affairs to look into the grievances of pastoralists. Moreover, he has noted that pastoralists have also been victims of violent attacks and cattle theft (Tauna 2022; Sahara Reporters 2022a). He established an organization called Nomadic Rights Concern (NORIC) to protect the rights of pastoralists and facilitate the peaceful resolution of conflicts between pastoralists and sedentary communities (Opejobi 2022; Yaba 2022).

Although some studies have been conducted on pastoral conflicts in Nigeria (e.g., Lenshie et al 2021; Vanger & Nwosu 2020; Ajala 2020), with some focusing on how sedentary communities

⁴⁰ Muhammadu Buhari was in office from May, 2015, to May, 2023.

perceive nomadic Fulani pastoralists (e.g., Ejiofor 2022; Eke 2020; Chukwuma 2020; Higazi 2016), none, to the best of my knowledge, has specifically examined the effect of exposure to pastoral conflicts on distrust in members of the Fulani ethnic group and the larger Muslim population using large-N survey data, nor the heterogeneous effects of pastoral conflicts on distrust among members of Nigeria's two major religious groups—i.e., Muslims and Christians. This study seeks to fill these gaps using novel survey data collected from the state of Kaduna in 2021 as part of the 'Transnational Perspectives on Migration and Integration (TRANSMIT)' research project.

In this study, I focus specifically on how the sedentary population perceive members of the Fulani ethnic group and the larger Muslim population. I do so for the following reasons: First, the survey dataset is centered on the sedentary population. Second, the measure for exposure to pastoral conflict matches the geolocations of the respondents to the conflict incidents in the locale where they reside. It would be difficult to do this for pastoralists because of their nomadic nature. Third, blame for pastoral conflicts is often attributed to nomadic pastoralists because farmlands are immobile and it is often livestock that strays and destroys crops. An open question in the TRANSMIT survey where respondents were asked about the main cause of pastoral conflicts confirms this pattern. Lastly, religion and ethnicity overlap to a great extent in Nigeria, leading to a scenario where pastoral conflicts are viewed through a religious lens because the Muslim identity of the nomadic Fulani pastoralists.

This study finds that among the population in Kaduna, exposure to pastoral conflict leads to distrust in both members of the Fulani ethnic group and the larger Muslim population. This might be indicative of a contagion effect whereby the population in Kaduna conflates members of the Fulani ethnic group with the larger Muslim population because of the common religion of Islam which they share. However, disaggregating the data based on religious affiliation revealed a pattern: Among Muslims, exposure to pastoral conflict had a positive effect on distrust in both members of the Fulani ethnic group and Muslims. Among Christians, however, pastoral conflict was statistically insignificant. The positive effect found among Muslims suggests that exposure to

pastoral conflict weakens ingroup cohesion, leading to distrust in both the Fulani and Muslims. This might be because of the common religion of Islam shared by the nomadic Fulani pastoralists and the Muslim sedentary population. The null finding among Christians might be because even in the absence of pastoral conflicts, Christians in Kaduna already have a high level of distrust in Muslims due to the long history of animosity between members of the two religious groups (Ibrahim 1989; Angerbrandt 2018; Suberu 2013). This leads to a scenario whereby pastoral conflicts fit into pre-existing religious cleavages.

This study contributes to the broader literature on the nexus between conflict and trust (e.g., Tuki 2024; Schutte et al. 2022; Kijewski and Freitag 2018; Rohner et al. 2013, 2013a). The rest of this study is organized as follows: Section 2 reviews the literature on the relationship between conflict and trust. It also states the hypotheses. Section 3 introduces the data, operationalizes the variables that will be used to estimate the regression models and discusses the empirical strategy. Section 4 discusses the regression results, while Section 5 summarizes the study and concludes.

4.2. Theoretical considerations

The effect of conflict goes beyond material losses. Rohner et al. (2013) have developed a theory that posits that conflict has the capacity to erode trust, which in turn leads to further conflict. As they concisely put it, “a war today carries the seed of distrust and future conflict.” (Rohner et al. 2013, p. 1,115). They have recommended inter-ethnic trade as an effective strategy for fostering intergroup trust and mitigating the risk of conflict. They have also advocated for policies that focus on changing beliefs regarding outgroup members and on elevating national identity over ethnic identity, as these could foster empathy, tolerance, cooperation, and social cohesion, thereby increasing the likelihood for peaceful coexistence.

In another publication, Rohner et al. (2013a) tested their theory using survey data for Uganda. Their regression results confirmed their theoretical proposition: An increase in the incidence of violence and fatalities had a negative effect on trust in other Ugandans, made ethnic cleavages salient, and increased the risk of further conflict. Analyzing survey data covering the

Nigerian population, Tuki (2024) found that exposure to violent conflict made Nigerians hesitant to have people of a different ethnicity and religion as neighbors. He explained this finding on the grounds that the threat posed by violent conflict strengthened cohesion within ingroup members and eroded trust in outgroup members. He also noted that this was especially the case when the opposite party to the conflict constituted a distinct cultural group. The negative correlation between conflict and trust has been corroborated by studies conducted in Tajikistan (Cassar, Grosjean, and Whitt 2013), Kosovo (Kijewski and Freitag 2018), Kenya (Schutte et al. 2022), and Nepal (De Juan and Pierskalla).

Some studies have highlighted the tendency for the actions of individuals to be attributed to the larger group to which they belong. This is tied to the concept of “vicarious retribution” which, Lickel et al. (2006, pp. 372–373) argued, “occurs when a member of a group commits an act of aggression toward members of an outgroup for an assault or provocation that had no personal consequences for him or her, but did harm a fellow ingroup member.” Usually, the outgroup members who are victims of the reprisal attack are attacked not because they had been involved in the initial provocation, but rather because of their belonging or perceived belonging to the same group as the individual(s) involved in the initial provocation. The concept of entitativity—i.e., the degree to which the outgroup is perceived as a coherent and homogenous unit—is central to vicarious retribution. “If the outgroup is perceived to be highly unified, then other members of that group are more likely to be blamed and targeted for retribution for the provocative acts of an individual group member.” (Lickel et al. 2006, p. 379).

Some studies have provided support for the concept of vicarious retribution. Hanes and Machin (2014) conducted a study in the UK where they found that hate crimes against Asians and Arabs (predominantly Muslims) soared in the period after the July 7th terrorist attack that hit London in 2005, and the September 11th (9/11) terrorist attack that hit the US in 2001. They argued that the media framed the attacks in a way that portrayed Muslims negatively, which led to unfavorable attitudinal changes towards Muslims in UK society. This subsequently morphed into

direct hostilities toward Muslims. Moreover, they found that even a year after these attacks had happened, the incidence of hate crimes against Muslims remained high. In another study carried out in the UK, Ahmed (2019) found that the 9/11 terrorist attack caused the British government to shift its attention from the Asian identity of British Muslims to their religious identity. Similar studies highlighting prejudice towards Muslims and Sikhs in the wake of the 9/11 terrorist attacks have been conducted in The Netherlands (González et al. 2008), United States (Singh 2013; Disha et al. 2011; Ahluwalia 2011), and Australia (Goel 2010).

Returning to the case of Kaduna: Not all members of the Fulani ethnic group are pastoralists. Even though the Fulani are predominantly Muslims, they constitute only a fraction of Nigeria's Muslim population. Yet, there is a tendency for the actions of the violent minority to be used as a yardstick for judging the entire group. Given the close association between religion and ethnicity in Kaduna, coupled with the fact that nomadic pastoralists belong to a distinct ethnic and religious group, I expect that among the population in Kaduna, exposure to pastoral conflict would have a positive effect on distrust in both members of the Fulani ethnic group and the larger Muslim population. This leads to the first hypothesis that this study seeks to test:

H1: *Among the population in Kaduna, exposure to pastoral conflict has a positive effect on distrust in members of the Fulani ethnic group and Muslims.*

However, the effect of pastoral conflict on distrust in the Fulani and Muslims might vary between Muslims and Christians due to the long history of Muslim-Christian conflicts in Kaduna. Like Nigeria, Kaduna has a predominantly Christian Southern Region and a predominantly Muslim Northern Region; paralleling the country as a whole, the peoples in both regions differ ethnically. In fact, some movements like the Southern Kaduna People's Union (SOKAPU) have been agitating for the creation of a new state in Southern Kaduna. These groups often frame their claims in ethnoreligious terms. According to Angerbrandt (2015, p. 236), "Southern Kaduna is less a geographical entity than an identity concept referring to those ethnic groups in Kaduna State that share the Christian religion and are unified against what they identify as Hausa–Fulani [Muslim] dominance." In terms of religious composition, Kaduna's population is almost evenly split between

the two religious groups, with Muslims being slightly more numerous. In the 'TRANSMIT' dataset, upon which this study relies, Muslims and Christians were represented in the ratio 56:44.

The relationship between Christians and Muslims in Kaduna, especially in the political and socioeconomic spheres, has been very competitive and to some extent adversarial (Ibrahim 1989; Angerbrandt 2018; Suberu 2013). In 2000, the then governor of the state, who was Muslim, introduced Sharia law. This move was strongly supported by Muslims but vehemently opposed by the Christian population, leading to violent clashes between both religious groups that left over two thousand people dead (Human Rights Watch 2003; Angerbrandt 2011). The religious cleavage was again accentuated during the post-election violence in 2011. The incumbent president, a Christian from Nigeria's predominantly Christian Southern Region, was declared the winner of the presidential elections. Supporters of the opposition candidate who was a Muslim from Nigeria's Northern Region, disagreed with the election results. Though deemed by observers to be one of Nigeria's fairest and most transparent elections, it was followed by a wave of violence in the Northern Region, where the opposition candidate had won resoundingly. Muslim supporters of the opposition candidate systematically targeted and killed Christians and burned churches. In Kaduna's predominantly Christian neighborhoods, Christians retaliated by killing Muslims and burning mosques. The death toll was in the hundreds (Human Rights Watch 2011).⁴¹

The ethnoreligious fault lines in Kaduna have historical roots dating back to the precolonial period. Until its capture by the British in 1903, most of Nigeria's Northern Region was part of an Islamic caliphate, which was comprised of several emirates. The predominantly Muslim northern part of Kaduna at that time was the Zaria Emirate, while the predominantly Christian southern region comprised of pagan tribes. Slavery was crucial to the functioning of the Muslim emirates, especially for the cultivation of staple and cash crops. Slaves were also bartered for horses, guns,

⁴¹ Other Christian-Muslim conflicts in Kaduna include the Kafanchan Crises of March 1987, the Zangon Katab Riots of February 1992, and the Zangon Katab Riots of May 1992 among others. A common thread in these conflicts is reprisals—a scenario where people were attacked not necessarily because they were directly involved in the initial provocation, but rather, because of their ethnoreligious identity (see Suberu 2013, pp. 42–44).

and other durable goods. Muslims were forbidden from enslaving fellow Muslims due to the brotherhood they shared under a common religion; thus, the pagan tribes who did not embrace Islam (i.e., unbelievers) were frequently raided and captured as slaves by jihadists (Van Beek 1988; Suberu 2013). The pagan tribes in southern Kaduna, who did not appreciate being enslaved, often fought against jihadist incursions and emirate expansion. Some of the peoples in southern Kaduna emigrated to the Jos Plateau, a highland that proved difficult for the jihadists to capture due to the strategic military advantage it provided and the skill that the tribes on the Jos Plateau possessed in warfare (Morrison 1982). Majority of these pagan peoples eventually embraced Christianity as a form of resistance against domination by the Muslim emirates (Vaughan 2016). Some studies have shown the tendency for the past to encroach into the present and shape it (Besley and Reynal-Querol 2014; Nunn and Wantchekon 2011; Nunn 2007).

The ethnoreligious divide in Kaduna predates the advent of violent pastoral conflicts. Relying on data obtained from the Armed Conflict Location and Events Database (ACLED), Tuki (2023) shows that violent pastoral conflicts rarely occurred before 2009. Given the Muslim identity of nomadic Fulani pastoralists, pastoral conflicts tend to fit into pre-existing religious cleavages. The way these conflicts are experienced, and the interpretations ascribed to these experiences appear to be shaped by religion. The TRANSMIT survey had a question where respondents were asked about the extent to which they thought pastoral conflicts were caused by religion and the adverse effects of climate change (i.e., droughts): 34 percent of the population agreed that pastoral conflicts were caused by religion, while 22 percent agreed that they were caused by droughts. Disaggregating the data based on religious affiliation revealed a religious pattern: 52 and 17 percent of Christians and Muslims respectively agreed that pastoral conflicts were caused by religion. 18 and 26 percent of Christians and Muslims respectively agreed that pastoral conflicts were caused by droughts. This suggests that Christians are more likely than Muslims to ascribe pastoral conflicts to religion. This is likely due to the religious difference that exists between the Christian sedentary

population and the Muslim nomadic pastoralists, which makes ingroup-outgroup distinctions easy to establish.

Because of the common religion of Islam shared by the Muslim sedentary population and nomadic pastoralists, I expect that among Muslims, exposure to pastoral conflict would erode ingroup cohesion, leading to distrust in both members of the Fulani ethnic group and the larger Muslim population. Among Christians, however, exposure to pastoral conflict might have no effect on distrust in the Fulani and Muslims because even in the absence of pastoral conflicts, Christians are already distrustful of Muslims and the Fulani by virtue of their Muslim identity. This is because of the long history of Christian-Muslim animosity in the state. This implies that pastoral conflicts simply fit into the mold of pre-existing religious cleavages. The discussion so far leads to the last set of hypotheses that this study seeks to test:

H2: *Among Muslims, exposure to pastoral conflict has a positive effect on distrust in both members of the Fulani ethnic group and Muslims.*

H3: *Among Christians, exposure to pastoral conflict has no effect on distrust in both the Fulani and Muslims.*

4.3. Data and methods

Sampling strategy

As part of the Transnational Perspectives on Migration and Integration (TRANSMIT) research project, the WZB Berlin Social Science Center, Berlin, Germany conducted a survey in the state of Kaduna in 2021.⁴² 1,353 households were interviewed. To select the interview locations, multi-stage clustered random sampling was employed. Four of the 23 local government areas (LGAs) (i.e., municipalities) in Kaduna (i.e., Giwa, Birnin Gwari, Kauru, and Zangon Kataf) were unsafe for the enumerators to conduct interviews in due to the high risk of intercommunal conflict and banditry, hence they were excluded from the sampling frame.

Grid cells of 5 x 5 km, which were called precincts, were developed using QGIS software. These precincts were overlaid on a shapefile of the administrative boundaries of Kaduna's

⁴² For more information on the TRANSMIT project visit: <https://www.projekte.hu-berlin.de/en/transmit>

senatorial districts and LGAs.⁴³ Each precinct was comprised of smaller 0.5 x 0.5 km grid cells. Precincts were randomly drawn with replacement, with probabilities corresponding to the population sizes within them. From each of the selected precincts, smaller 0.5 x 0.5 km grid cells were randomly selected with probabilities corresponding to the population size within them. The smaller grid cells were drawn without replacement. Within each of the smaller grid cells, an average of 12 households were interviewed. The households were selected using a random walk approach. The interviewee within the household, who was selected for the individual component of the survey, was chosen using a simple random draw. Respondents were at least 15 years old. Before minors were interviewed, consent was sought from the household head. The minor was interviewed only if he/she also granted consent. Respondents were informed that participation in the survey was voluntary and they could opt out of the interview at any time.

To ensure that the exclusion of the four LGAs did not skew the sample, the sample was stratified according to the population size in the senatorial districts. Samples were drawn within each of the senatorial districts in relation to their respective population shares. Due to the difficulty in obtaining recent population estimates from official government sources—because Nigeria’s last population census was conducted in 2006—the population used for the sampling was obtained from the 2020 Worldpop gridded dataset (Bondarenko et al. 2020).⁴⁴

The variables that will be used to estimate the regression models are discussed below.

Table A1 in the appendix presents the summary statistics for these variables.

Operationalization of the variables

Dependent variables

Distrust Fulani. This measures the degree to which respondents distrust members of the Fulani ethnic group. It was derived from the question, “How much do you trust people of the Fulani ethnic group?” with responses measured on a scale with five ordinal categories ranging from “0 =

⁴³ Each state in Nigeria comprises of 3 senatorial districts, each senatorial district comprises of LGAs.

⁴⁴ To access the Worldpop population data visit: <https://www.worldpop.org/>

trust completely” to “4 = do not trust at all.” I treated “don’t know” and “refused to answer” responses as missing. I applied this rule to all variables derived from the survey data.

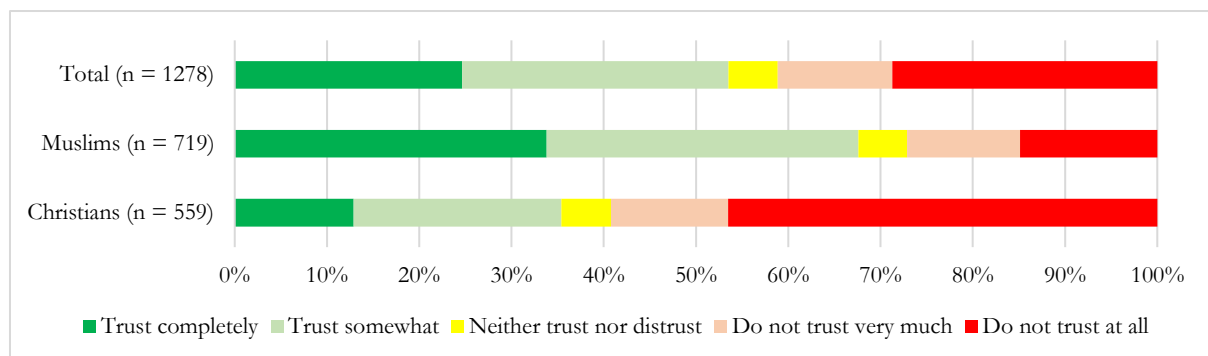


Figure 1: Distrust in Fulani

Note: The y-axis shows the total number of respondents and the subsamples of Muslim and Christian respondents who were asked the relevant question about distrust in members of the Fulani ethnic group. The x-axis shows the percentage of respondents associated with the various response categories.

As shown in Figure 1, 41 percent of the population chose either the “do not trust at all” or the “do not trust very much” response categories. Disaggregating the data based on religious affiliation revealed that Christians are more distrustful of the Fulani than Muslims. 60 percent of Christians chose either the “do not trust at all” or “do not trust very much” response categories, compared to 27 percent among Muslims. The lower level of distrust among Muslims is likely because of the common religion of Islam shared with the Fulani, who are predominantly Muslims. The 53 respondents in the dataset who belonged to the Fulani ethnic group were all Muslims. 81 percent of the Muslim subsample belonged to the Hausa ethnic group, and all members of the Hausa ethnic group were Muslims. The Hausa have lived alongside the Fulani for centuries and have intermarried to a great extent, which makes the two ethnic groups culturally proximate (Diamond 1988, p. 21).⁴⁵

Distrust Muslims. This measures the extent to which respondents distrust Muslims. It was derived from the question, “How much do you trust Muslims?” with responses measured on an ordinal scale with five categories ranging from “0 = trust completely” to “4 = do not trust at all.”

⁴⁵ Table C1 in the appendix shows the distribution of the respondents based on ethnicity.

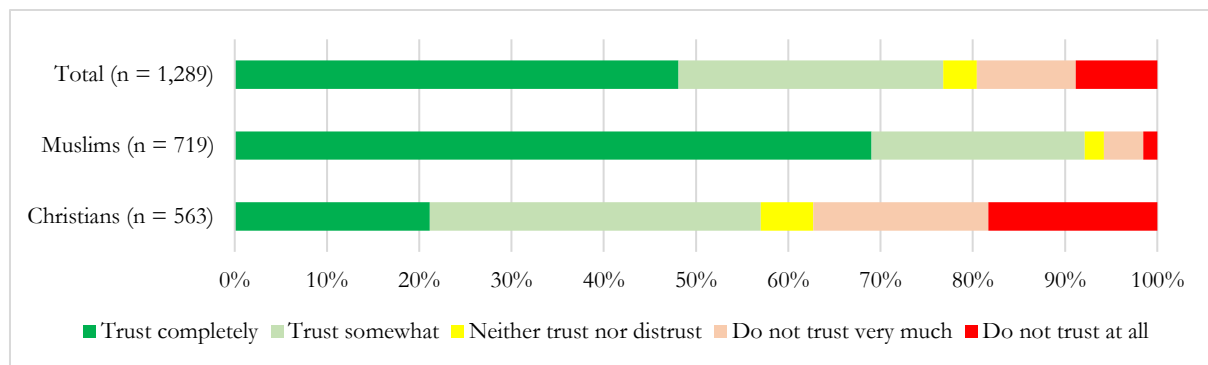


Figure 2: Distrust in Muslims

Note: The y-axis shows the total number of respondents and the subsamples of Muslim and Christian respondents who were asked the relevant question about distrust in Muslims. The x-axis shows the percentage of respondents associated with the various response categories.

As shown in Figure 2, 20 percent of the population chose either the “do not trust at all” or “do not trust very much” response categories, which is 21 percentage points lower than the estimate for distrust in the Fulani. This suggests that the population in Kaduna has more trust in the larger Muslim population than members of the Fulani ethnic group. Disaggregating the data based on religious affiliation shows that only 6 percent of Muslims chose the “do not trust at all” or “do not trust very much” response categories, which is also 21 percentage points lower than the estimate for distrust in the Fulani. This is not surprising because people generally have more trust in members of their in-group (Brewer 1999; Allport 1954). The estimate for the Christians was 37 percent, which is 23 percentage points lower than the estimate for distrust in the Fulani. This indicates that Christians also have more trust in the larger Muslim population than members of the Fulani ethnic group. Suffice it to add that the correlation between the variables measuring distrust in the Fulani and Muslims was 0.55.

Explanatory variable

Pastoral conflict. This measures the extent to which respondents are exposed to pastoral conflicts. Relying on data obtained from the Armed Conflict Locations and Events Database (ACLED) (Raleigh et al. 2010), I define a pastoral conflict as any incident where at least one of the actors or

associated actors is a pastoralist or belongs to the Fulani ethnic group.⁴⁶ I was able to employ this operationalization because the ACLED dataset contains information about the ethnicity and occupation of the actors involved in the conflict. Most conflict actors who were “pastoralists” were also “Fulani,” which makes the two terms identical.⁴⁷ It is imperative to stress that this operationalization captures both events perpetrated by pastoralists against sedentary communities and those where pastoralists were victimized.

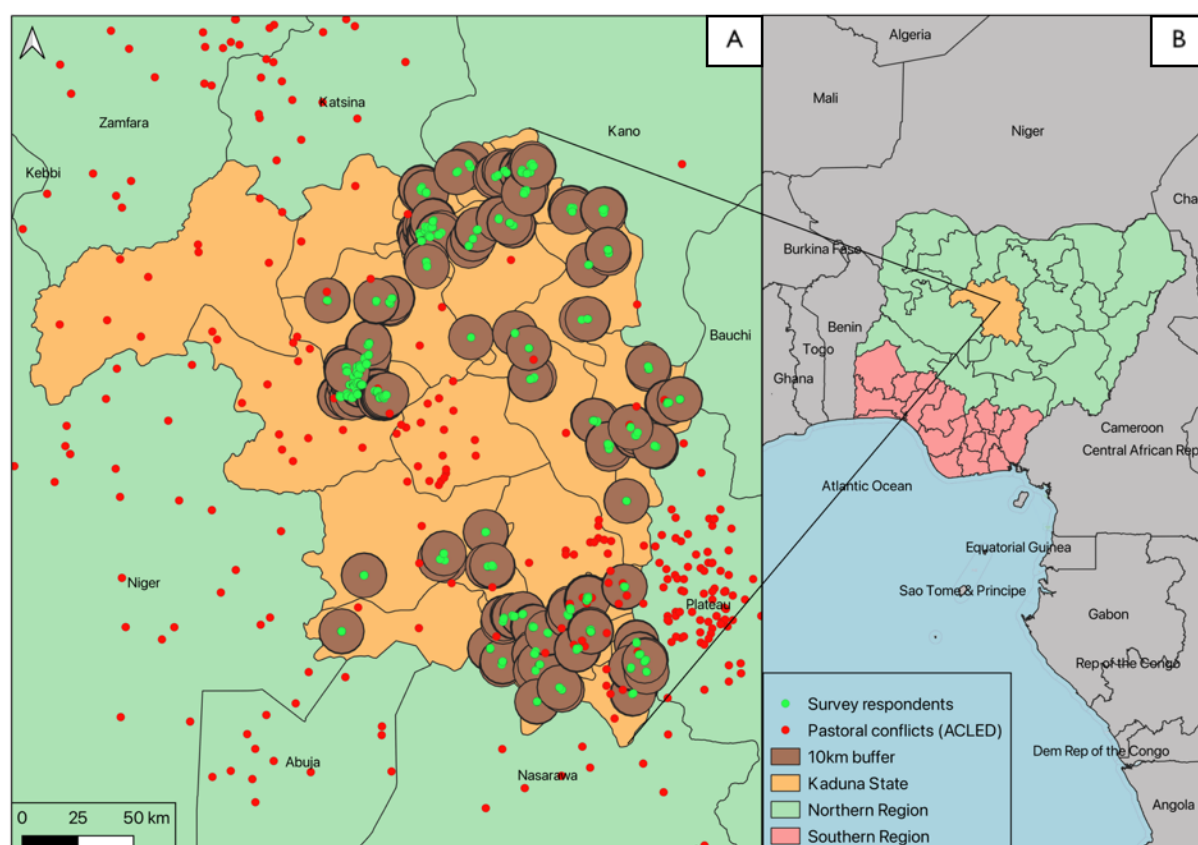


Figure 3: Measuring exposure to pastoral conflict

Note: Panel A shows the geolocations of pastoral conflicts in Kaduna State, the geolocations of the survey respondents, and the 10 km buffer around their dwellings. It also shows administrative boundaries for the 23 local government areas (LGAs) (i.e., municipalities) that constitute Kaduna. Panel B shows the state of Kaduna, Nigeria’s two major regions (i.e., the Northern and Southern Regions) and the countries surrounding Nigeria.

⁴⁶ To access the ACLED dataset visit: <https://acleddata.com/>

⁴⁷ Alongside the large-N survey data upon which this study relies, the WZB Berlin Social Science Center, Germany, conducted a parallel survey in Kaduna in which nomadic pastoralists were specifically targeted. A total of 255 pastoralists were interviewed. Except for three pastoralists who belonged to the Hausa ethnic group, all of them were Fulani. Moreover, all the pastoralists were Muslims.

To develop the measure for exposure to pastoral conflict, I used QGIS software to draw buffers with a radius of 10 km around the dwellings of the respondents and counted the total number of conflict incidents within the buffers (see Figure 3). I was able to do that because I relied on the TRANSMIT and ACLED datasets, both of which are georeferenced. The higher the number of incidents within the buffer, the higher the level of exposure to pastoral conflicts and vice versa.⁴⁸ I considered all incidents that occurred within the buffer from 1997 to 2020. The start date of 1997 was chosen because the ACLED dataset begins from that year. I excluded incidents that occurred after 2020 because the dependent variable is measured in 2021. This lags the explanatory variable and attenuates the potential problem of reverse causation. Moreover, I am particularly interested in the cumulative effect of pastoral conflict on distrust. This is because the memory of past conflicts has been found to persist and influence actions in the present (e.g., Tuki 2024a; Odak and Benčić 2016; Tint 2010).

The use of buffers is a more efficient way of measuring exposure to pastoral conflict than administrative boundaries, according to the LGA. The latter limits the amount of variation in the conflict exposure variable, since all respondents within the same LGA will be associated with the total number of incidents there. This assumes that they are equally exposed to pastoral conflict, which is not necessarily the case. Moreover, respondents residing close to the border of an LGA might be more exposed to incidents in a contiguous LGA than those in the particular LGA where they reside, as these incidents might be closer to their dwellings. Buffers, which are unique for each respondent and independent of administrative boundaries, attenuate these problems. 60 percent of the 1,353 respondents had at least one incident within the 10 km buffer around their dwelling.

Control variables

⁴⁸ I developed two alternative measures for exposure to pastoral conflicts: In the first, I considered only incidents that caused at least one fatality. In the second, I constructed the variable using buffers with an alternative radius of 5 km. I used both variables to conduct a robustness check.

Victimization. This is a dummy variable that takes a value of 1 if the respondent or a household member has experienced any form of violence during the past decade and 0 otherwise. It was derived from the question, “During the last 10 years, have you or your close family members been affected by violence? By ‘affected’ I mean (a) You or your close family or were threatened by violence. (b) You or one of your close family members was injured or killed or (c) Your home or property was destroyed by an attacker.” Of the 1,298 respondents who were asked this question, 232 of them had been victimized, which translates into one in six respondents.

Household income. This measures the capacity of the total income of the household to meet the needs of its members. It was derived from the question, “Which of the following statements best describe the current economic situation of your household?” with the responses measured on an ordinal scale with five categories ranging from “money is not enough for food” to “we can afford to buy almost anything.” Some studies have shown that poverty increases the risk of conflict (Do and Iyer 2010) and erodes trust (Gereke et al. 2018).

Demographic attributes. This includes the respondents’ religious affiliation, gender, and age. Gender takes the value of 1 if the respondent is female and 0 if male. Religious affiliation takes the value of 1 if the respondent is Muslim and 0 if Christian. All the respondents were either Muslims or Christians. Muslims and Christians were represented in the sample in the ratio 56:44.

Empirical strategy

The general form of the regression model to be estimated can be expressed thus:

$$\gamma_i = \beta_0 + \beta_1 \text{pastoral conflict}_{1997-2020} + \beta_2 \varphi'_i + \mu_i \quad (1)$$

Where γ_i is the dependent variable which measures respondent i 's level of distrust, φ'_i is a vector of control variables measuring victimization, socioeconomic condition, and the respondents’ demographic attributes, β_1 and β_2 denote the coefficients of the explanatory and control variables respectively, β_0 is the intercept, and μ_i is the error term. Endogeneity might be a problem in the regression model due to omitted variable bias. To mitigate this, I adopted an instrumental variable

approach and estimated the model using two-stage least squares (2SLS) regression. I used drought and the distance to the state governor's house to instrument exposure to pastoral conflict. This specification is underpinned by the assumption that the instrumental variables would plausibly not influence distrust in members of the Fulani ethnic group and Muslims directly, but rather through the mechanism of pastoral conflicts.

Some studies have identified drought as the root cause of pastoral conflicts. A report by the International Crisis Group (2017) asserts that drought and desertification have degraded pasturelands in Nigeria and dried water sources, forcing pastoralists to move southwards in search of these. Nigeria's northernmost region is proximate to the Sahara Desert, while the southernmost region is proximate to the Atlantic Ocean. The amount of rainfall and vegetation cover increases as one moves from the north towards the south. This southward movement by pastoralists puts them at loggerheads with sedentary communities engaged in crop cultivation, especially when cattle stray into farmlands and destroy crops. Using representative data for Africa, Eberle et al. (2020) have also shown that rising temperatures indeed increase the risk of conflict between sedentary farmers and nomadic pastoralists.

Some studies have examined the effect of natural disasters like earthquakes and floods on trust (e.g., Fleming et al. 2014; Toya and Skidmore 2014). Hence, one might argue that droughts, which are also disasters, might bypass the mechanism of conflict and have a direct effect on trust. However, most of these studies tend to conflate cooperative behavior with trust, which are two different things. While trust is an attitudinal measure, cooperative behavior is a behavioral measure (Greiner and Filsinger 2022). Drought also differs from the aforementioned forms of natural disasters because it is often subtle and has a slow onset. Moreover, during the period under consideration in this study (i.e., 1997 to 2021), Kaduna has not experienced any severe form of drought to the degree that it will be classified as a natural disaster—as in the case of Somalia for instance (Maruf 2023; Hujale 2022).

The rationale for using the distance to the state governor's residence as an instrumental variable is hinged on the argument that the ability of a government to exert control over its territory diminishes the farther one moves away from the administrative center (Le Billon 2001). Based on this premise, I expect that the risk of pastoral conflicts will increase the farther one moves away from the state governor's residence. However, the reverse is also plausible: Pastoralists might be wary of insecurity and cattle theft in the remote/rural areas, and this might prompt them to graze their livestock on lands and water sources closer to the administrative center. This could lead to increased competition for resources in areas near the administrative center, which in turn increases the risk of conflict. Suffice it to add that one in three pastoralists in Kaduna have been victims of cattle theft during the past five years.⁴⁹ The plausibility of both mechanisms makes it difficult to have an *a priori* expectation of the sign that the distance to the state governor's residence would take in the first-stage regression.

One could argue that the distance to the state governor's residence does not adequately proxy state capacity. Some studies have shown that politicians might treat districts with a higher proportion of their co-ethnics or co-religionists preferentially in the provision of public goods than the other districts (e.g., Beiser-McGrath et al. 2021; Das et al. 2011; Bentancourt and Gleason 2000). Conversely, some studies have found that politicians do not necessarily favor their co-ethnics or co-religionists. They might even treat districts with a lower share of their co-ethnics and co-religionists preferentially as a strategy to win their support during elections (Bhalotra et al. 2014). However, in the case of Kaduna, this might not be the case because the society is very polarized along religious lines and people tend to vote strictly along ethnoreligious lines—irrespective of the credentials of the political aspirants (Ostien 2012). Given this context, political benefits might not accrue to a governor for being preferential towards districts where the majority of the population is not his/her co-ethnics or co-religionists.

⁴⁹ This estimate is based on a survey of pastoralists in Kaduna (n = 255) conducted by the WZB Berlin Social Science Center, Berlin, Germany, in 2021.

From 1997 to 1999 when Nigeria was under a military dictatorship, the state of Kaduna had two military administrators, both of whom were Muslims. Since Nigeria's transition to civilian rule in 1999 up to the present, seven gubernatorial elections have been held in Kaduna. Despite the significant Christian population in the state, a Christian has been elected into office only once. In 2010, the elected governor, who was a Muslim, was appointed as Nigeria's vice president, allowing his deputy, who was a Christian, to become the governor. Although the Christian governor narrowly won the 2011 gubernatorial elections, his victory was strongly challenged by some Muslims. He died in a plane crash a year into office and his deputy, who was a Muslim, took over (The Nation 2012). Executive power at the center of the state has for the most part of Kaduna's history resided with Muslims.

If politicians in Kaduna do indeed favor their co-religionists in the provision of security, then there should be a lower incidence of violent conflicts in local government areas (LGAs) (i.e., municipalities) with a predominantly Muslim population.⁵⁰ However, this is not the case. A look at all violent conflicts in Kaduna—irrespective of the ethnicity or occupation of the actor—between 1997 and 2021 shows that the three LGAs with the highest incidence of conflict have a predominantly Muslim population (i.e., Chikun, Kaduna North, and Igabi).⁵¹ This suggests that the state government might not necessarily be preferential in the provision of security across the various LGAs. This does not preclude the possibility of the government being preferential in the provision of other public goods like infrastructure or social amenities.

I discuss the instrumental variables below:

⁵⁰ There are no official statistics on the religious composition of the population in the various LGAs in Kaduna from official government sources, so I used the religion of the LGA chairman as a proxy. This implies that if an LGA chairman is a Muslim (Christian), then I presume that the LGA over which he presides has a predominantly Muslim (Christian) population. It is possible to infer the Chairman's religion from his name because Nigerians typically bear religious names. This approach has been used by Laitin (1982) and Ostien (2012).

⁵¹ Based on the ACLED dataset (Raleigh et al. 2010), I define violent conflict as an incident that falls under any of the following three categories: Battles, Violence against civilians, and Explosions/Remote violence.

Drought. I used the Standardized Precipitation-Evapotranspiration Index (SPEI) (Vincente-Serrano et al. 2010) as a measure for drought. The SPEI index is a gridded dataset that measures the incidence and severity of drought in a place over a period of time. Both precipitation and temperature were considered in its computation. Although its theoretical limits are from $-\infty$ to $+\infty$, it typically ranges from +2.5 to -2.5, with higher values denoting more wetness and vice versa. Since the average value of the SPEI index is 0, it thus captures the degree to which climatic conditions deviate from the normal average. The raw data is in 0.5 x 0.5-degree spatial resolution. Each grid cell is associated with a unique SPEI value. The data is available on a monthly basis from 1900 to 2020. I computed the average SPEI drought index at the centroid for each of the grid cells within Nigeria's administrative boundary from 1997 to 2020 (See Panel A of Figure 4 for a visualization). I summed the values at each of the centroids and then took the average. The period from 1997 to 2020 corresponds to the period under which I considered pastoral conflicts.⁵²

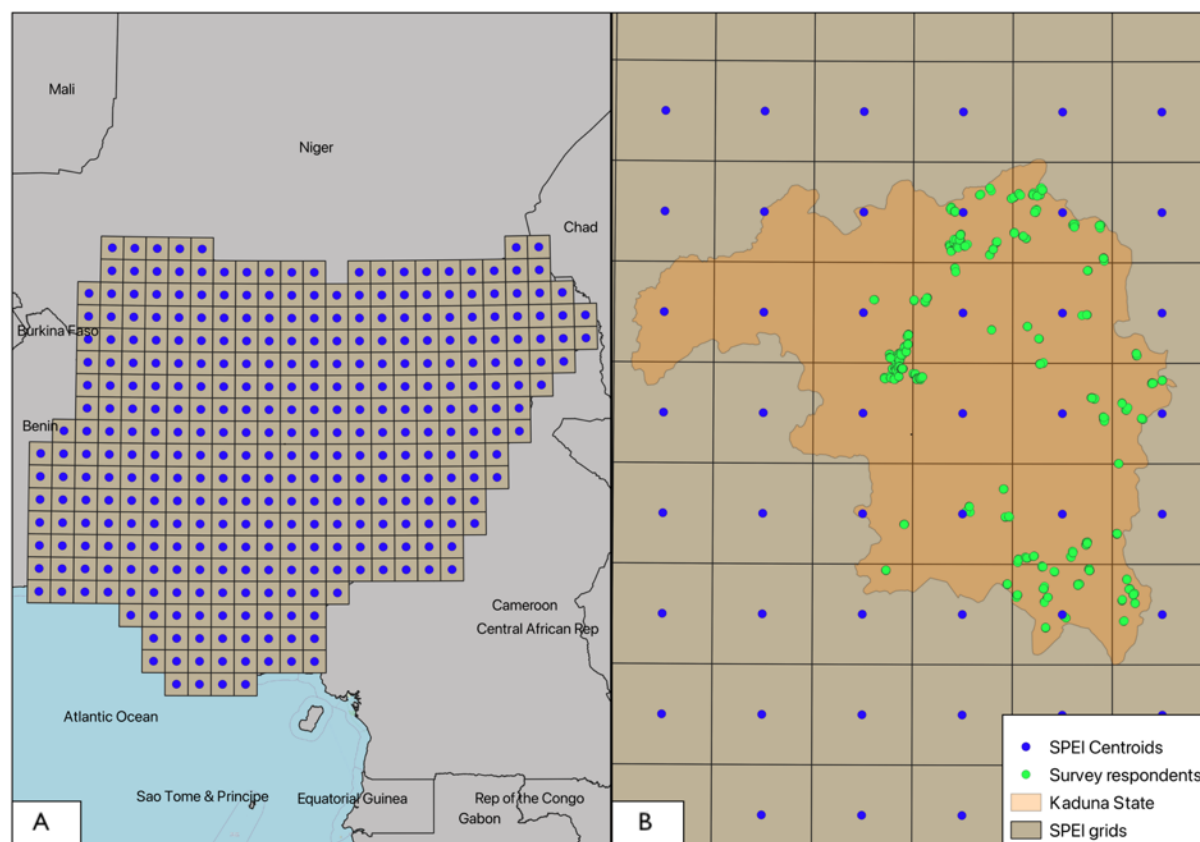


Figure 4: Determining the SPEI drought index around the respondents' dwellings.

⁵² To access the SPEI dataset visit: <https://digital.csic.es/handle/10261/268088>

Note: Panel A shows the 0.5 x 0.5-degree SPEI grid cells within Nigeria and the centroids of each of the grid cells. Panel B shows the geolocations of the survey respondents and the administrative boundaries of Kaduna State alongside the various grid cells and the centroids.

To determine the SPEI index values around the respondents' dwellings, I matched their geolocations to the nearest SPEI centroid. The matching was done using QGIS software. Since the centroids are equidistant from each other, it goes that the respondents' dwellings will be located within the grid of the nearest SPEI centroid (see Panel B of Figure 4). The raw SPEI dataset was in netCDF format. I extracted the index values at the centroids using R Studio. Version 2.7 of the SPEI index was used.

Distance to Governor's house. Using QGIS software, I computed the distance from the respondents' dwellings to the state governor's residence in kilometers and as-crow-flies (see Figure 5 for a visualization).

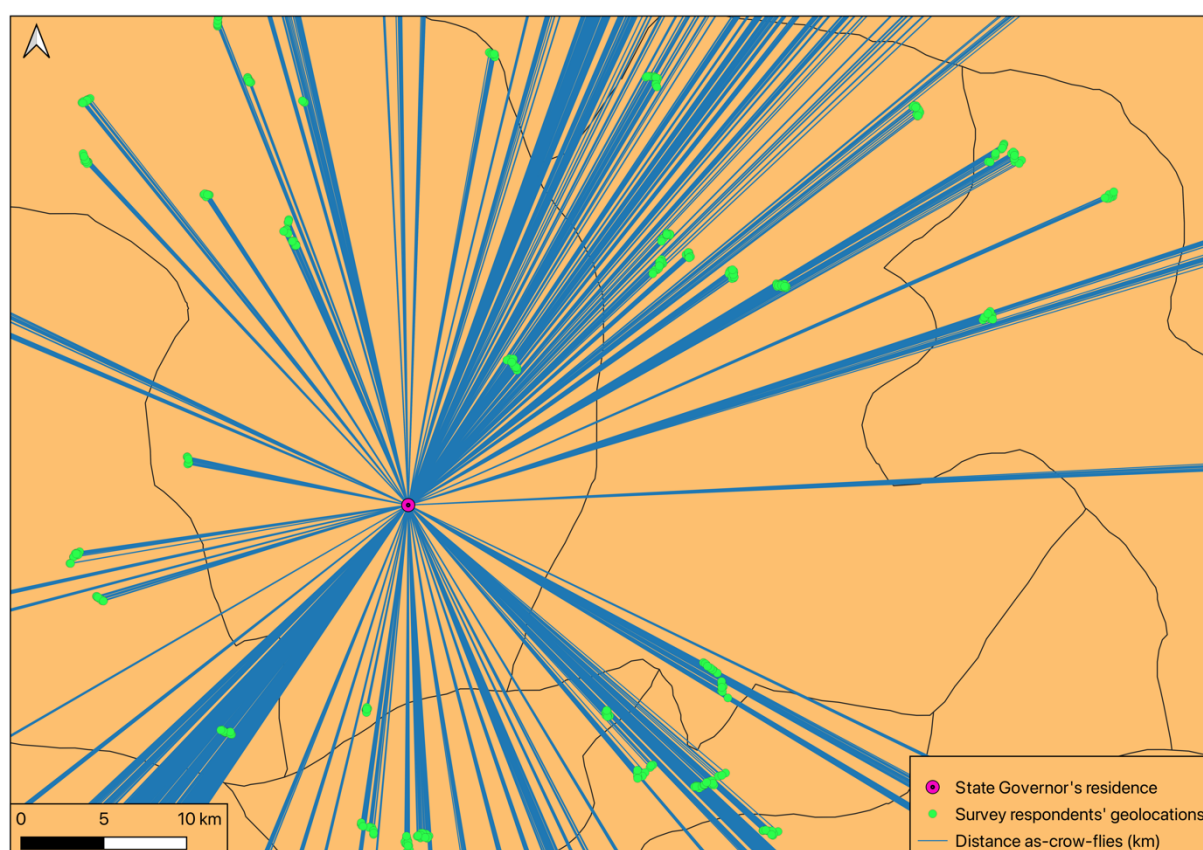


Figure 5: Measuring distance to the state governor's house

Note: The figure shows the geolocation of the state governor's residence and the distance as-crow-flies from this feature to the respondents' geolocations.

4.4. Results and discussion

First-stage regressions

Table 1 reports the results of ordinary least squares (OLS) regression models examining the association between the instrumental variables (i.e., drought and distance to state governor's house) and pastoral conflict. The values of the SPEI drought index for Kaduna range from -0.229 to -0.002. Since both extremes fall below the normal average of 0, this allows for an easy interpretation of the results such that higher values denote more wetness and vice versa.

Table 1: Association between the explanatory and instrumental variables

Pastoral conflict ^Φ	(1)	(2)	(3)
SPEI drought index	-18.711*** (2.242)		-37.139*** (2.169)
Distance to governor's house		-0.033*** (0.003)	-0.052*** (0.003)
Constant	2.453*** (0.253)	6.866*** (0.26)	5.081*** (0.258)
Observations	1353	1353	1353
R-squared	0.049	0.11	0.269

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10. Φ is the dependent variable. All models are estimated using ordinary least squares (OLS) regression.

In model 1 where I considered only the SPEI drought index, it carried the expected negative sign and was significant at the one percent level, which indicates that more wetness is associated with a lower incidence of pastoral conflict. Put differently, dry spells are positively correlated with a higher incidence of pastoral conflict. In model 2 where I considered the distance to the state governor's residence, it carried a negative sign, which suggests that the incidence of pastoral conflict decreases the farther one moves away from the administrative center. This is congruent with the argument that pastoralists prefer to graze their livestock on lands closer to the administrative center for security reasons. In model 3, where I included both instrumental variables in the same model, the results were consistent with those in the preceding baseline models.

Second-stage regressions

Table 2 reports the results of regression models examining the effect of pastoral conflict on distrust in members of the Fulani ethnic group. In model 1 where I considered only pastoral conflict, it

carried a positive sign and was significant at the one percent level. This supports Hypothesis 1 which states that among the population in Kaduna, exposure to pastoral conflict has a positive effect on distrust in members of the Fulani ethnic group. To check whether endogeneity was indeed present, I conducted a test. The Durbin and Wu-Hausman statistics were 66.94 and 66.05 respectively, both of which were significant at the one percent level. This indicates that endogeneity was indeed present and the use of instrumental variable regression was appropriate. Since there were two instrumental variables and only one endogenous variable, this made the model overidentified. To determine the suitability of the instrumental variables, I conducted a test for overidentifying restrictions. The Sargan and Basmann statistics were 25.06 and 25.5 respectively. Both statistics were significant at the one percent level, which suggests that the instrumental variables are valid. The model had a Cragg-Donald F-statistic of 244.6, which exceeds the threshold of 10 specified by Stock et al. (2002) for inferences based on the 2SLS estimator to be reliable. Furthermore, the F-statistic is greater than the critical values even when the Wald test at the 5% level has a rejection rate of 10%, 15%, 20%, or 25 percent. This allows me to reject the null hypothesis that the instruments are weak.

Table 2: Effect of pastoral conflict on distrust in members of the Fulani ethnic group

Distrust Fulani ^Φ	Full sample		Religious subsamples	
	(1)	(2)	(3) Muslims	(4) Christians
Pastoral conflict	0.097*** (0.015)	0.051*** (0.014)	0.035*** (0.012)	0.062 (0.055)
Victimization		0.11 (0.114)	0.039 (0.17)	0.128 (0.173)
Household income		-0.014 (0.047)	-0.015 (0.057)	0.00 (0.081)
Muslim affiliation		-0.967*** (0.178)		
Gender		-0.012 (0.086)	-0.309*** (0.11)	0.343** (0.137)
Age		-0.01*** (0.003)	-0.009** (0.004)	-0.014*** (0.005)
Constant	1.51*** (0.079)	3.291*** (0.695)	1.777*** (0.196)	2.589*** (0.322)
Ethnic group FE	No	Yes	No	No
Observations	1278	1278	719	559
R-squared		0.125	0.008	
F-statistic (first-stage)	244.601***	233.719***	577.346***	11.541***

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10, Φ is the dependent variable. All models are estimated using two-stage least squares (2SLS) regression.

In model 2, I added the control variables and fixed effects for the respondents' ethnicities into the model. The fixed effects account for the influence of ethnicity on distrust in the Fulani and Muslims. Moreover, this makes it possible to isolate the effect of religious affiliation on distrust because religion and ethnicity overlap significantly in Nigeria. Although pastoral conflict retained its positive sign and remained significant at the one percent level, the size of the coefficient dropped from 0.097 to 0.05. Among the control variables, only Muslim affiliation and age were statistically significant. Muslim affiliation carried a negative sign, which suggests that Muslims are less likely to distrust the Fulani than Christians. Put differently, Christians are more distrustful of the Fulani than Muslims. This is expected because the Fulani are mostly Muslims and people generally tend to trust members of their religious ingroup than religious outgroup members. The negative sign accompanying age indicates that the older people get, the less distrustful they are of the Fulani.

To check for heterogeneous effects among the population, I disaggregated the data based on religious affiliation. In model 3, which was estimated using the Muslim subsample of respondents, pastoral conflict carried the expected positive sign and was significant at the one percent level. This supports Hypothesis 2 which is underpinned by the argument that the shared religion of Islam between the sedentary population and Fulani pastoralists leads to the erosion of ingroup trust. In model 4, which was estimated using the Christian subsample of respondents, pastoral conflict was statistically insignificant. This supports Hypothesis 3 which states that among Christians, exposure to pastoral conflicts would have no effect on distrust of the Fulani. This might be because even in the absence of pastoral conflicts, Christians are already distrustful of the Fulani by virtue of them being Muslims, coupled with the long history of Muslim-Christian animosity in Kaduna State. This leads to a scenario whereby pastoral conflicts simply fit into the mold of pre-existing religious cleavages. Suffice it to add that the results reported in Table 2 are robust to alternative operationalizations of pastoral conflicts where I considered only incidents within the 10 km buffer that caused at least one fatality and a different buffer size with a radius of 5 km (See Tables A5 and A8 in the appendix).

Next, I examine the effect of pastoral conflict on distrust in Muslims. Table 3 reports the regression results. In model 1 where I considered only pastoral conflict, it carried the expected positive sign and was significant at the one percent level. This provides further support for Hypothesis 1 which states that among the population in Kaduna, exposure to pastoral conflicts has a positive effect on distrust in Muslims. A point worth highlighting is that the effect size, as evidenced by the coefficient, was smaller than that for the Fulani., which suggests that exposure to pastoral conflict leads to the loss of a larger amount of trust in the Fulani than Muslims. To check whether endogeneity was present, I conducted a test. The Durbin and Wu-Hausman statistics were 75.79 and 76.96 respectively, both of which were significant at the one percent level. This suggests that endogeneity was indeed present and the use of an instrumental variable regression was appropriate. To check for the suitability of the instrumental variables, I carried out a test for overidentifying restrictions. The Durbin and Wu-Hausmann statistics were 47.77 and 49.49 respectively, both of which were significant at the one percent level. This indicates that the instrumental variables are valid. Furthermore, the model had Cragg-Donald F-statistic of 247.45, which is greater than the critical values when the Wald test at the 5% level has a rejection rate of 10%, 15%, 20%, or 25 percent. This allows me to reject the null hypothesis that the instruments are weak.

Table 3: Effect of pastoral conflict on distrust in Muslims

Distrust Muslims ^Φ	Full sample		Religious subsamples	
	(1)	(2)	(3) Muslims	(4) Christians
Pastoral conflict	0.081*** (0.013)	0.02* (0.011)	0.014** (0.007)	0.077 (0.054)
Victimization		0.09 (0.087)	0.006 (0.099)	0.094 (0.165)
Household income		0.057 (0.036)	0.065* (0.034)	0.102 (0.078)
Muslim affiliation		-1.159*** (0.137)		
Gender		0.174*** (0.066)	-0.112* (0.065)	0.525*** (0.132)
Age		0.00 (0.002)	0.006† (0.002)	-0.01** (0.005)
Constant	0.695*** (0.066)	1.322** (0.534)	0.191* (0.114)	1.388*** (0.317)
Ethnic group FE	No	Yes	No	No
Observations	1289	1289	726	563

R-squared		0.244	0.024	
F-statistic (first-stage)	247.452***	236.741***	591.227***	11.14***

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10, Φ is the dependent variable. All models are estimated using two-stage least squares (2SLS) regression.

In model 2 where I added the control variables and fixed effects for the respondents' ethnicities, pastoral conflict retained its positive sign, but its significance level dropped to 10 percent. Among the control variables, only Muslim affiliation and gender were significant. The negative sign accompanying Muslim affiliation suggests that Muslims are less distrustful of Muslims than Christians. In other words, Christians are more distrustful of Muslims than Muslims. The positive sign accompanying gender indicates that women are more distrustful of Muslims than men. To check for heterogeneous effects, I also disaggregated the data based on religious affiliation. In model 3, which is based on the Muslim subsample of respondents, pastoral conflict carried a positive sign and was significant at the five percent level. This provides further support for Hypothesis 2 that among Muslims, exposure to pastoral conflict leads to distrust in Muslims. A plausible reason for this is the erosion of trust in ingroup members. The effect size, as evidenced by the coefficient, is smaller than that reported in model 3 in Table 2, which suggests that among Muslims, exposure to pastoral conflict leads to the loss of a larger amount of trust in the Fulani than Muslims in general. In model 4, which is based on the Christian subsample, pastoral conflict was statistically insignificant, providing further support for Hypothesis 3 that among Christians, exposure to pastoral conflict has no effect on distrust in Muslims. Suffice it to add that the results reported in Table 3 are robust to alternative operationalizations of pastoral conflict where I considered only incidents that caused at least one fatality and a different buffer size with a radius of 5 km (see Tables A6 and A9 in the appendix).

4.5. Conclusion

This study examined the effect of pastoral conflicts on distrust in members of the Fulani ethnic group and the larger Muslim population in the Northern Nigerian state of Kaduna. The regression results showed that among the population in Kaduna, exposure to pastoral conflict has a positive effect on distrust in both the Fulani and Muslims. This suggests that members of the Fulani ethnic

group are being conflated with the larger Muslim population. Disaggregating the data based on religious affiliation showed that, among Muslims, exposure to pastoral conflict also has a positive effect on distrust in the Fulani and Muslims. A reason for this is that exposure to pastoral conflict weakens ingroup cohesion by eroding Muslims' trust in both the Fulani and the larger Muslim population to which Fulani belong. Among Christians, however, exposure pastoral conflict had no effect on distrust in either the Fulani or Muslims. This might be because even in the absence of pastoral conflicts, Christians are already distrustful of Muslims—given the long history of animosity between the two religious groups in Kaduna. This leads to a scenario whereby pastoral conflicts simply fit into the mold of pre-existing religious cleavages.

Taken together, these results suggest that religion is important in understanding the dynamics of how people respond to pastoral conflicts and the conditions under which these conflicts, which are primarily about competition over land and water resources, turn religious.

Conflict of interest

None.

Ethical approval:

Ethical approval for the survey conducted in Nigeria was granted by the WZB Berlin Social Science Center Ethics Review Committee (Application No.: 2020/3/101) and the National Health Research Ethics Committee of Nigeria (NHREC).

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Appendix

Table A1: Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Distrust Fulani	1278	1.917	1.595	0	4
Distrust Muslims	1289	1.035	1.32	0	4
Victimization	1298	0.179	0.383	0	1
Household income	1298	0.978	0.921	0	4
Pastoral conflict (10 km)	1353	4.124	5.856	0	19
Pastoral conflict (10 km) (1 fatality)	1353	3.618	5.09	0	17
Pastoral conflict (5 km)	1353	1.803	3.801	0	13
Muslim affiliation	1298	0.561	0.496	0	1
Gender	1321	0.557	0.497	0	1
Age	1321	34.391	14.004	15	85
SPEI drought index	1353	-0.089	0.069	-0.229	-0.002
Distance to governor's house (km)	1353	82.31	58.333	0.841	191.407

Table A2: Distribution of respondents based on ethnic group

Ethnic group	Frequency	Percent
Birom	5	0.39
Ebira	1	0.08
Edo	2	0.15
Fulani	53	4.08
Gwari	25	1.93
Hausa	594	45.76
Ibibio	2	0.15
Idoma	12	0.92
Igala	13	1.00
Igbo	17	1.31
Ikwere	2	0.15
Isoko	1	0.08
Itsekiri	1	0.08
Jukun	1	0.08
Kagoma	26	2.00
Bajju	21	1.62
Kanuri	2	0.15
Kataf	20	1.54
Nupe	2	0.15
Tiv	6	0.46
Urhobo	2	0.15
Yoruba	20	1.54
Others	470	36.21
Total	1,298	100.00

Note: The data is based on the Transnational Perspectives on Migration and Integration (TRANSMIT) survey conducted in the state of Kaduna in 2021.

Table A3: Distribution of pastoral conflicts across Nigeria's states (1997–2020)

State	Frequency	Percent	Cumulative
Abia	4	0.21	0.21
Adamawa	93	4.82	5.02
Akwa Ibom	4	0.21	5.23
Anambra	16	0.83	6.06
Bauchi	8	0.41	6.47
Bayelsa	2	0.10	6.58
Benue	317	16.42	22.99
Borno	20	1.04	24.03
Cross River	5	0.26	24.29
Delta	81	4.19	28.48
Ebonyi	8	0.41	28.90
Edo	22	1.14	30.04
Ekiti	11	0.57	30.61
Enugu	26	1.35	31.95
Federal Capital Territory (Abuja)	16	0.83	32.78
Gombe	3	0.16	32.94
Imo	10	0.52	33.45
Jigawa	26	1.35	34.80
Kaduna	222	11.50	46.30
Kano	3	0.16	46.45
Katsina	58	3.00	49.46
Kebbi	9	0.47	49.92
Kogi	44	2.28	52.20
Kwara	9	0.47	52.67
Lagos	7	0.36	53.03
Nassarawa	115	5.96	58.98
Niger	40	2.07	61.06
Ogun	23	1.19	62.25
Ondo	27	1.40	63.65
Osun	3	0.16	63.80
Oyo	22	1.14	64.94
Plateau	338	17.50	82.44
Rivers	5	0.26	82.70
Sokoto	13	0.67	83.38
Taraba	133	6.89	90.26
Yobe	2	0.10	90.37
Zamfara	186	9.63	100.00
Total	1,931	100.00	

Note: Based on the Armed Conflict location and Events Dataset (ACLED) (Raleigh et al. 2010).

Pastoral conflicts with one fatality (10 km buffers)

Table A4: Replicating the results in Table 2 using only pastoral conflicts that caused at least one fatality

Distrust Fulani ^Φ	Full sample		Religious subsamples	
	(1)	(2)	(3) Muslims	(4) Christians
Pastoral conflict	0.118*** (0.018)	0.062*** (0.017)	0.041*** (0.014)	0.075 (0.074)
Victimization		0.105 (0.115)	0.038 (0.17)	0.119 (0.182)
Household income		-0.013 (0.047)	-0.015 (0.057)	0.002 (0.083)
Muslim affiliation		-0.965*** (0.179)		
Gender		-0.015 (0.087)	-0.309*** (0.11)	0.335** (0.138)
Age		-0.01*** (0.003)	-0.009** (0.004)	-0.015*** (0.005)
Constant	1.485*** (0.082)	3.28*** (0.697)	1.776*** (0.196)	2.583*** (0.348)
Ethnic group FE	No	Yes	No	No
Observations	1278	1278	719	559
R-squared		0.12	0.007	
F-statistic (first-stage)	222.894***	206.598***	575.055***	8.119***

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10, Φ is the dependent variable. All models are estimated using two-stage least squares (2SLS) regression.

Table A5: Replicating the results in Table 3 using only pastoral conflicts that caused at least one fatality

Distrust Muslims ^Φ	Full sample		Religious subsamples	
	(1)	(2)	(3) Muslims	(4) Christians
Pastoral conflict	0.099*** (0.015)	0.024* (0.013)	0.017** (0.008)	0.097 (0.074)
Victimization		0.088 (0.087)	0.006 (0.099)	0.078 (0.176)
Household income		0.057 (0.036)	0.065* (0.034)	0.106 (0.081)
Muslim affiliation		-1.158*** (0.137)		
Gender		0.173*** (.066)	-0.113* (0.065)	0.514*** (0.135)
Age		0.00 (0.002)	0.006*** (0.002)	-0.01** (0.005)
Constant	0.673*** (0.068)	1.318** (0.535)	0.191* (0.114)	1.363*** (0.35)
Ethnic group FE	No	Yes	No	No
Observations	1289	1289	726	563
R-squared		0.242	0.024	
F-statistic (first-stage)	225.587***	209.415***	589.287***	7.765***

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10, Φ is the dependent variable. All models are estimated using two-stage least squares (2SLS) regression.

Pastoral conflicts within 5 km buffers

Table A6: Replicating the results in Table 1 using buffers with a radius of 5 km

Pastoral conflict (5 km) ^Φ	(1)	(2)	(3)
SPEI drought index	-5.766*** (1.484)		-14.379*** (1.54)
Distance to Gov't house		-0.017*** (0.002)	-0.024*** (0.002)
Constant	1.288*** (0.168)	3.207*** (0.173)	2.516*** (0.183)
Observations	1353	1353	1353
R-squared	0.011	0.069	0.125

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10. Φ is the dependent variable. All models are estimated using ordinary least squares (OLS) regression.

Table A7: Replicating the results in Table 2 using buffers with radius of 5 km

Distrust Fulani ^Φ	Full sample		Religious subsamples	
	(1)	(2)	(3) Muslims	(4) Christians
Pastoral conflict	0.196*** (0.036)	0.115*** (0.031)	0.069*** (0.024)	0.053 (0.165)
Victimization		0.135 (0.114)	0.027 (0.171)	0.206 (0.152)
Household income		-0.064 (0.048)	-0.047 (0.058)	-0.034 (0.084)
Muslim affiliation		-1.034*** (0.184)		
Gender		0.03 (0.088)	-0.284** (0.111)	0.359*** (0.137)
Age		-0.01*** (0.003)	-0.009** (0.004)	-0.014*** (0.005)
Constant	1.562*** (0.081)	3.21*** (0.705)	1.807*** (0.194)	2.772*** (0.326)
Ethnic group FE	No	Yes	No	No
Observations	1278	1278	719	559
R-squared		0.106	0.009	0.001
F-statistic (first-stage)	95.674***	101.895***	138.674***	4.023**

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10, Φ is the dependent variable. All models are estimated using two-stage least squares (2SLS) regression.

Table A8: Replicating the results in Table 3 using buffers with radius of 5 km

Distrust Muslims ^Φ	Full sample		Religious subsamples	
	(1)	(2)	(3) Muslims	(4) Christians
Pastoral conflict	0.159*** (0.03)	0.048** (0.023)	0.031** (0.014)	0.124 (0.168)
Victimization		0.1 (0.087)	0.003 (0.099)	0.176 (0.148)
Household income		0.035 (0.037)	0.05 (0.035)	0.047 (0.082)
Muslim affiliation		-1.189*** (0.14)		
Gender		0.191*** (0.067)	-0.102 (0.065)	0.559*** (0.134)
Age		0.00 (0.002)	0.006*** (0.002)	-0.01** (0.005)
Constant	0.749*** (0.068)	1.279** (0.539)	0.2* (0.113)	1.531*** (0.329)
Ethnic group FE	No	Yes	No	No
Observations	1289	1289	726	563
R-squared		0.235	0.015	
F-statistic (first-stage)	94.701***	103.169***	139.559***	3.734**

Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.10, Φ is the dependent variable. All models are estimated using two-stage least squares (2SLS) regression.

5. Concluding remarks

There is a dearth of quantitative studies on the ethnoreligious dimension of violent conflicts in Nigeria. Relying on large-N survey data and econometric techniques, this dissertation is an attempt to fill this gap. Chapter 2 finds that perceived ethnic marginalization, negative attitudes toward Nigerian democracy, and socioeconomic condition at the communal level are positively correlated with support for secession among members of the Igbo ethnic group. Chapter 3 finds that among the Nigerian population and Christians, exposure to violent conflict leads to hostility towards ethnoreligious outgroups. Among Muslims, however, conflict exposure has no effect on hostility towards ethnoreligious outgroups. This is likely because the common religion of Islam shared by the conflict actors makes the establishment of ingroup-outgroup distinctions difficult. In Chapter 4, which is based on novel survey data collected from the Northern Nigerian state of Kaduna, I find evidence that among the population in Kaduna and Muslims, exposure to pastoral conflict leads to distrust in both members of the Fulani ethnic group and the larger Muslim population. The positive effect found among Muslims might be because the common religion of Islam shared by the sedentary population and nomadic pastoralists leads to the erosion of ingroup trust. Among Christians, however, exposure to pastoral conflict has no effect on distrust in the Fulani and Muslims. The null effect might be because even in the absence of pastoral conflicts, Christians are already distrustful of Muslims due the long history of Christian-Muslim conflicts in the state, coupled with the fact that members of the Fulani ethnic group are nested within the larger Muslim population. This suggests that pastoral conflicts tend to fit into pre-existing religious fault lines.

The results from chapters 3 and 4 that are based on the Christian subsample of respondents contradict each other: Chapter 3 shows that exposure to violent conflict makes Christians hesitant to have Muslims and people of a different ethnic group as neighbors, while chapter 4 shows that exposure to pastoral conflicts has no effect on distrust in the Fulani and Muslims among Christians in Kaduna. This might be because the results in chapter 3 are based on the Christian population in

Nigeria (i.e., those resident in the Northern and Southern Regions), while the results in chapter 4 are based on only Christians in Northern Nigeria. Reanalyzing the data used in chapter 3, I find that conflict exposure has no effect on outgroup hostility among the subsample of Christians who are resident in Northern Nigeria. This is consistent with the findings in chapter 4. Conversely, I find a positive effect of violent conflict on outgroup hostility among Christians who are resident in Southern Nigeria. This suggests that Christians in Northern Nigeria differ from their co-religionists in Southern Nigeria. The same probably applies to Muslims. Future research needs to pay close attention to this distinction.

Taken together, my dissertation suggests that violent conflicts in Nigeria do have an ethnoreligious dimension. Religious affiliation influences the experience of violent conflict and the interpretations ascribed to these experiences. My dissertation also shows that the religious fault lines in contemporary Nigeria have historical roots. Current conflicts in Nigeria cannot be fully grasped without reference to Nigeria's past because the present and the past are inseparably entangled. While that the topic of religion is contentious, especially in a country like Nigeria where the population is polarized along religious lines, its neglect in the analysis of violent conflicts prevent a holistic understanding of the problem. If viable solutions to address the problem of violent conflicts are to be found, every dimension of the conflict needs to be scrutinized.

What then are the policy implications of these findings? How can the risk of violent conflicts be reduced? To recommend a suitable policy intervention, it is important to understand how these conflicts are perceived by different cultural groups. Any policy that ignores the perceptions of the local population might worsen the problem instead of ameliorating it. An example is the Nigerian government's policy aimed at establishing grazing reserves in all of Nigeria's 36 states in an effort to sedentarize nomadic pastoralists and reduce the risk of pastoral conflicts. Though well-intentioned, the populations in the predominantly Christian Middlebelt and Southern Regions of the country vehemently opposed this policy because they see it as a land-grabbing strategy geared towards the Islamization of Nigeria (Ejiofor 2023, 2022). This underscores

the dire importance of fostering intergroup trust as a strategy for reducing the risk of violent conflict and ensuring the effective implementation of conflict-mitigating policies.

Intergroup trust can be fostered by implementing programs that encourage interreligious dialogue. This should be pursued as a long-term strategy, as it takes time to build trust and change people's perceptions. The task of trust-building should not be the responsibility of the Nigerian government alone, but also that of religious and traditional authorities. This is because Nigerians have more trust in religious and traditional authorities than the government. Data from the Round 9 Afrobarometer survey conducted in 2022 shows that 46 percent of Nigerians do not trust the president at all. 52 percent of the population do not trust the parliament/national assembly at all. Similarly, 52 percent of the population do not trust the police at all. However, when asked how much they trust religious leaders, only 14 percent of the population chose the "not at all" response category. Likewise, only 20 percent of the population chose the "not at all" response category when asked how much they trust traditional leaders. While religious and traditional authorities cannot replace the formal government, conflict-mitigating policies might be more likely to succeed if the government works together with these informal authorities.

This dissertation relied mainly on survey data, which is not without its limitations. Selection bias, reporting bias, and memory bias are some common problems associated with survey data. Selection bias was probably more salient in Chapter 4 where I examined the effect of pastoral conflicts on distrust in Muslims and members of the Fulani ethnic group. Because of the sensitivity of the question regarding trust in the Fulani, a sizeable number of respondents refused to answer the question compared to the preceding questions where they were asked about trust in their family members and neighbors. Moreover, it is possible that the way the questions were phrased might have elicited certain responses. However, in the case of the TRANSMIT data, these limitations were mitigated to some extent because I was involved in the development of the survey instrument and the data collection process. Based on reports obtained from the pretest and pilot survey, I was able to modify the survey instrument accordingly before the main data collection exercise. The

cross-sectional nature of the data is another limitation that applies to all the empirical chapters in this dissertation. This prevents me from examining changes in the relevant relationships over time. Future research can examine these relationships using panel data.

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