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In the Shadow of Civil War

The interdependence of civil wars and conflicts between informal armed groups

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Summary

The complexity of contemporary armed conflicts has been widely acknowledged. Not least, the concurrence of civil wars and conflicts involving informal armed groups, such as militias, vigilantes, and communal groups, poses a serious challenge to peacemaking. Overlooking how conflicts are interwoven can render peacemaking interventions ineffective and complicate the conclusion of stable and comprehensive peace agreements. However, empirical research on internal armed conflicts has yet to produce an integrated theoretical and methodological approach to address the interdependence between different types of armed conflict. One impediment is that complexity is predominantly perceived as a given state rather than the sum of multiple interacting and non-linear processes.

This study adopts a network analytical framework and sets out to answer the question of how civil wars and conflicts between informal armed groups influence each other. In so doing, the network perspective contributes to the integration of macro-level and micro-level research in conflict studies. To shed light on the interdependence between different types of conflicts, the study conceptualizes armed conflicts within the same country as integrated into one overarching conflict network. The network consists of the state's security agencies as well as formal and informal non-state armed groups that are connected through relationships of conflict and cooperation. The distinction between formal and informal armed groups is based on their organizational characteristics. This conceptualization captures key sources of heterogeneity among non-state armed groups while keeping the framework theoretically and empirically tractable.

Focusing on short-term ripple effects, the main argument posits that a civil war outbreak sets in motion spatially contingent processes that mutually reinforce each other and, in sum, empower the formal and informal armed groups while constraining the government. The civil war forces the government to prioritize resources, leading to countervailing effects on conflicts between informal armed groups depending on their location relative to the civil war conflict zone. Inside the civil war conflict zone, conflicts between informal armed groups remain limited due to the disruption or regulation of everyday life. Outside the civil war conflict zone, the weakened state presence creates a power vacuum, contributing to the escalation and fragmentation of these conflicts. These developments alter the conflict network structure, generating feedback effects across conflicts. Specifically, the developments increase the resource pressure on the government and offer expansion opportunities for the formal armed groups involved in the civil war.

The study employs a mixed-methods social network analysis of the Nigerian case, combining a quantitative analysis of the network structure with a qualitative analysis tracing the underlying processes. Mixing methods thereby illuminates the co-constitution of structure and agency in conflict networks. The qualitative analysis draws from 118 interviews including participatory network drawings conducted during fieldwork in northern Nigeria and a variety of secondary sources from libraries in Nigeria, Switzerland, and the United Kingdom. To avoid confirmation bias and idiosyncrasy, the study assesses seven alternative explanations and probes the transferability to other cases.

The study contributes to the emerging third wave of civil war research by introducing a classification of non-state armed groups as formal and informal and a novel theoretical argument on the interdependence of civil wars with other types of collective violence. Integrating existing armed group typologies, the parsimonious distinction between formal and informal groups seeks to facilitate the accumulation and integration of knowledge on the plethora of groups operating in the shadow of civil war. Methodologically, this study demonstrates the value of mixed-methods social network analysis in conflict studies and introduces a new technique to identify specific informal armed groups in readily available quantitative conflict data based on spatial event clusters. Empirically, it offers a unique and comprehensive perspective on the Nigerian armed conflicts as one integrated network, building on original primary data.

Zusammenfassung

Die Komplexität zeitgenössischer bewaffneter Konflikte ist weithin anerkannt. Nicht zuletzt stellt das zeitgleiche Auftreten von Bürgerkriegen und Konflikten zwischen informellen bewaffneten Gruppen, wie Milizen, Bürgerwehren und kommunalen Gruppen, eine ernsthafte Herausforderung für die Friedensförderung dar. Wenn Verbindungen zwischen solchen Konflikten übersehen werden, können Friedensinterventionen unwirksam sein und der Abschluss stabiler und umfassender Friedensabkommen erschwert werden. Nichtsdestrotz hat die empirische Forschung zu innerstaatlichen bewaffneten Konflikten bislang noch keinen integrierten theoretischen und methodischen Ansatz hervorgebracht, um die Interdependenz zwischen verschiedenen Konflikttypen zu adressieren. Eine Schwierigkeit besteht darin, dass Komplexität meist als gegebener Zustand und nicht als Summe mehrerer interagierender und nichtlinearer Prozesse wahrgenommen wird.

Diese Studie verwendet einen netzwerkanalytischen Ansatz und geht der Frage nach, wie sich Bürgerkriege und Konflikte zwischen informellen bewaffneten Gruppen gegenseitig beeinflussen. Dabei trägt die Netzwerkperspektive dazu bei, Erkenntnisse von Makro- und Mikroansätzen in der Konfliktforschung zu integrieren. Um die Interdependenz zwischen verschiedenen Konflikttypen zu untersuchen, konzeptualisiert die Studie bewaffnete Konflikte innerhalb desselben Landes als Teile eines übergreifenden Konfliktnetzwerks. Das Netzwerk besteht aus den Sicherheitskräften des Staates sowie formellen und informellen nichtstaatlichen bewaffneten Gruppen, die durch Konflikt- und Kooperationsbeziehungen miteinander verbunden sind. Die Unterscheidung zwischen formellen und informellen bewaffneten Gruppen basiert auf ihren organisatorischen Merkmalen. Diese Konzeptualisierung erfasst wesentliche Quellen der Heterogenität zwischen nichtstaatlichen bewaffneten Gruppen und begrenzt gleichzeitig die theoretische und methodische Komplexität.

Das Hauptargument konzentriert sich auf kurzfristige Kaskadeneffekte von Bürgerkriegen. Es besagt, dass der Ausbruch eines Bürgerkriegs räumlich bedingte Prozesse in Gang setzt, die sich gegenseitig verstärken und in Summe die formellen und informellen bewaffneten Gruppen stärken, während sie die Regierung schwächen. Der Bürgerkrieg zwingt die Regierung dazu, Ressourcen zu priorisieren. Dies hat gegenläufige Auswirkungen auf Konflikte zwischen informellen Gruppen hat, je nach deren geographischen Überlappung mit dem Konfliktgebiet des Bürgerkriegs. Innerhalb des Konfliktgebiets bleiben Konflikte zwischen informellen Gruppen aufgrund der fundamentalen Unterbrechung oder Regulierung des Alltags der dort lebenden Menschen begrenzt. Außerhalb der Bürgerkriegskonfliktzone führt die geschwächte staatliche Präsenz zur Entstehung eines Machtvakuums, das zur Eskalation und Fragmentierung von Konflikten zwischen informellen Gruppen beiträgt. Diese Entwicklungen verändern die Struktur des Konfliktnetzwerks und erzeugen Rückkopplungseffekte über die verschiedenen Konflikte hinweg. Zum einen erhöhen diese Entwicklungen den Resssourcendruck auf die Regierung, zum anderen eröffnen sie den formellen bewaffneten Gruppen, die im Bürgerkrieg involviert sind, neue Möglichkeiten ihr Einflussgebiet zu erweitern.

Die Studie führt eine Mixed-Methods-Netzwerkanalyse der Konflikte in Nigeria durch und kombiniert eine quantitative Analyse der Netzwerkstruktur mit einer qualitativen Analyse der zugrunde liegenden Prozesse. Diese Methodenkombination ermöglicht es, die wechselseitige Konstitution von Struktur und

Handlungsfähigkeit in diesem Kontext zu beleuchten. Die qualitative Analyse stützt sich auf 118 Interviews, einschließlich partizipativer Netzwerkzeichnungen, die während der Feldforschung in Nordnigeria durchgeführt wurden, sowie auf eine Vielzahl von Sekundärquellen aus Bibliotheken in Nigeria, der Schweiz und Großbritanien. Um Bestätigungsfehler und eine übermäßige Anpassung der Theorie an Nigeria zu vermeiden, prüft die Studie sieben alternative Erklärungen und untersucht die Übertragbarkeit des theoretischen Arguments auf andere Fälle.

Die vorliegende Studie trägt zur aufkommenden dritten Welle der Bürgerkriegsforschung bei, indem sie eine Klassifizierung nichtstaatlicher bewaffneter Gruppen als formell und informell vorschlägt und ein neues theoretisches Argument über die Interdependenz von Bürgerkriegen mit anderen Arten von bewaffneten Konflikten entwickelt und empirisch untersucht. Durch die Einführung einer binären Unterscheidung, die bestehende Typologien bewaffneter Gruppen integriert, will die Studie zur Akkumulation und Integration von Wissen über die Vielzahl von Gruppen beitragen, die im Schatten von Bürgerkriegen operieren. Methodisch zeigt diese Studie den Mehrwert der Mixed-Methods-Netzwerkanalyse in der Konfliktforschung auf und führt einen neuen Ansatz ein, um informelle Gruppen in verfügbaren quantitativen Konfliktdaten anhand geographischer Ereigniscluster zu identifizieren. Empirisch bietet sie eine einzigartige und umfassende Perspektive auf die nigerianischen Konflikte als ein integriertes Netzwerk. Dies ist nicht zuletzt durch die Verwendung von neuen Primärdaten aus Konfliktgebieten in Nordnigeria möglich.

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Contents

Summary **i**

Zusammenfassung **iii**

Acknowledgments **v**

Contents **vii**

List of Figures **xiii**

List of Tables **xvii**

List of Acronyms **xviii**

1 Introduction **1**

1.1 A process perspective on conflict complexity 4

1.2 Using mixed-methods social network analysis to research interdependence 6

1.3 Contributing to the literature on internal armed conflict 8

1.4 Outline of the study 11

2 Literature review **13**

2.1 The state of research on internal armed conflicts 14

2.1.1 The development of research on internal armed conflicts in three waves 15

2.1.2 Dominant perspectives on armed third actors 19

2.1.3 Limitations of the current state of research 22

2.2 Existing approaches to the interdependence of internal armed conflicts 25

2.2.1 Links between the national and the local in peacebuilding research and practice 25

2.2.2 Direct and indirect relationships between rebel groups 28

2.2.3 Conflicts as social networks 30

2.3 Contributing to the advancement of the third wave 32

3 Theoretical framework **35**

3.1 Conceptual foundations 37

3.1.1 The state as the nominal regulator of social behavior 37
3.1.2 Distinguishing formal and informal non-state armed groups 38
3.1.3 The integration of internal armed conflicts in the overarching conflict network 42
3.2 The interdependence of civil war and conflicts between informal groups 45
3.2.1 Necessary and enhancing conditions 46
3.2.2 The prioritization of the civil war by the government 47
3.2.3 Regulation and disruption in the civil war conflict zone 48
3.2.4 The power vacuum outside the civil war conflict zone 51
3.2.5 Feedback effects across conflicts 52
3.3 Alternative explanations 55
3.3.1 Structural drivers of subnational variation in conflict violence 56
3.3.2 Agent-based alternative explanations 57
3.3.3 External influences on the conflict network 59

4 Research design **61**
4.1 A mixed-methods social network analysis of the Nigerian case 62
4.1.1 Mixed-methods social network analysis in a nutshell 62
4.1.2 The mixed-methods design of this study 65
4.1.3 The selection of Nigeria as an informative case 69
4.2 Quantitative component: data preparation and analytical methods 75
4.2.1 Data requirements and operationalization 76
4.2.2 Dealing with unattributed violent events 79
4.2.3 Disaggregating informal groups in ACLED 81
4.2.4 Describing and visualizing the conflict network 87
4.3 Qualitative component: data generation, coding, and analysis 91
4.3.1 Sampling of interview participants 92
4.3.2 Semi-structured interviews, graphic elicitation, and other sources 97
4.3.3 Coding qualitative data with directed content analysis 102
4.3.4 Process tracing of the candidate and alternative explanations 106

5 Formal and informal armed groups in the Nigerian conflicts **113**
5.1 The macro-historical context 115
5.2 Conflicts between the government and formal armed groups 118
5.2.1 The Niger Delta conflict: fighting for their share 118
5.2.2 The Boko Haram civil war: the rise of violent extremism 120
5.2.3 The Biafra conflict: the re-emergence of a separatist movement 125
5.3 Conflicts between informal armed groups 126
5.3.1 Ethnoreligious conflicts between sedentary communities 127
5.3.2 Farmer-herder conflicts and banditry 128

5.3.3 Electoral violence . . . 130
5.3.4 Classification of the involved armed groups . . . 131

6 The evolution of the Nigerian conflict network over time 135
6.1 The Nigerian conflicts through a network lens . . . 136
6.2 The uneven distribution of government fighting effort . . . 140
6.2.1 The government's reaction to the outbreak of the Boko Haram conflict . . . 142
6.2.2 The redistribution of the fighting effort after 2017 . . . 143
6.3 The escalation and fragmentation of conflicts between informal armed groups . . . 146
6.3.1 Increasingly severe conflicts between informal armed groups . . . 146
6.3.2 Fragmenting conflicts between informal armed groups . . . 148
6.4 Boko Haram's renewed expansion to the Northwest . . . 151

7 Conflict interdependence in northern Nigeria 155
7.1 Establishing the necessary conditions for northern Nigeria . . . 156
7.1.1 Resource competition between livelihood and ethnoreligious communities . . . 156
7.1.2 Limited conflict management by state and traditional institutions . . . 159
7.2 The allocation of resources according to the threat . . . 164
7.2.1 The prioritization of the Boko Haram conflict . . . 165
7.2.2 Shifts in the threat perception of the Nigerian federal government . . . 167
7.3 Nigeria's Northeast: the regulation and disruption of everyday life . . . 170
7.3.1 Civil war parties as regulators: Boko Haram, the CJTF, and the state . . . 171
7.3.2 The disruption of everyday life in contested and segmented territories . . . 174
7.4 Nigeria's Northwest: the expansion of bandits and vigilantes in a power vacuum . . . 179
7.4.1 The lack of government intervention due to resource shortage . . . 180
7.4.2 The escalation and fragmentation of conflicts between farmers, herders, bandits, and vigilantes . . . 184
7.5 Feedback effects: pressure on the government and opportunities for Boko Haram . . . 191
7.5.1 "So many crises everywhere" . . . 192
7.5.2 Cooperation between the violent extremists and the bandits . . . 194

8 Assessing alternative explanations and external validity 205
8.1 Alternative explanations . . . 205
8.1.1 Structural explanations for the subnational variation in violence in Nigeria . . . 206
8.1.2 Agent-based explanations for government and armed group behavior in Nigeria . . . 211
8.1.3 External sponsors and weapon proliferation from Libya . . . 217
8.2 Beyond Nigeria: probing the external validity . . . 220
8.2.1 The transferability to other cases . . . 221
8.2.2 The limits of transferability . . . 224

8.2.3 Broadening the scope . . . 226

9 Discussion **231**

9.1 Assessing the research strategy after implementation . . . 231

9.1.1 Validity of the evidence . . . 232

9.1.2 Strengths and limitations of the quantitative component . . . 236

9.1.3 Strengths and limitations of the qualitative component . . . 238

9.2 Revisiting the theoretical framework in light of the mixed-methods evidence . . . 242

9.2.1 Key findings across rival explanations, types of evidence, and cases . . . 242

9.2.2 Adding nuance to the theoretical framework . . . 248

10 Conclusion **255**

10.1 Advancing research on internal armed conflicts . . . 255

10.2 Avenues for future research . . . 258

10.3 The viability of social network analysis in conflict studies . . . 261

10.4 Practical implications for conflict management and resolution in Nigeria . . . 263

Bibliography **269**

A Supplementary material: Quantitative data and analysis **305**

A.1 Additional analyses of unattributed violent events . . . 305

A.2 Coding ACLED's political militias as formal and informal groups . . . 309

A.3 Alternative network layouts . . . 310

A.4 Robustness checks for the quantitative analysis . . . 312

A.4.1 Setting fixed DBSCAN thresholds for disaggregating informal groups . . . 312

A.4.2 Dropping all unattributed Boko Haram events . . . 317

A.4.3 Using the number of events as edge weight . . . 320

A.4.4 Comparing community detection algorithms . . . 323

A.5 Visualizations of the country-level networks . . . 325

A.6 Visualizations of the region-level networks . . . 336

B Supplementary material: Qualitative data and analysis **359**

B.1 Participant sampling . . . 359

B.2 Interview questionnaires . . . 360

B.2.1 Example questionnaire for a semi-structured interview . . . 360

B.2.2 Example questionnaire for a graphic elicitation exercise . . . 362

B.3 Directed content analysis . . . 363

B.3.1 Coding schemes . . . 364

B.3.2 List of analyzed interviews . . . 367

B.4 Ethics and positionality . . . 371

B.4.1 Ethical data generation in conflict-affected areas in Nigeria . . . 371
B.4.2 Reflections on my positionality . . . 375
B.4.3 Reflections on the positionality of the research assistants . . . 377

C Supplementary material: Curriculum Vitae of the author 379

List of Figures

3.1 Overview of the theoretical argument . . . 36
3.2 Mapping armed group examples on the formal/informal distinction . . . 39
3.3 Stylized conflict network with clusters and conflict zones . . . 43
3.4 Process within the civil war conflict zone . . . 49
3.5 Process outside the civil war conflict zone . . . 51
3.6 Feedback effects across and within conflicts . . . 53
3.7 Overview of the candidate and alternative explanations . . . 56

4.1 Overview of the mixed-methods research design . . . 66
4.2 Outline of the research process . . . 68
4.3 Civil wars and conflicts between informal groups (1989–2022) . . . 69
4.4 Map of Nigeria's geopolitical zones and research sites . . . 73
4.5 Map of events attributed to ACLED's "Fulani Ethnic Militia (Nigeria)" . . . 82
4.6 DBSCAN clustering for "Fulani Ethnic Militia (Nigeria)" . . . 83
4.7 K-means and DBSCAN clustering of banditry-related events . . . 85
4.8 Comparing the seasonality of events attributed to Fulani militias and bandits . . . 86
4.9 Sampling network . . . 95
4.10 Network drawing example . . . 99

6.1 The fighting effort of the government over time . . . 141
6.2 Evolution of the country-level network . . . 143
6.3 Regional networks in 2021 . . . 145
6.4 Network size over time . . . 147
6.5 The Northwest network 2018–2021 . . . 148
6.6 Cluster development over time . . . 150
6.7 Degree measures for informal groups over time . . . 150
6.8 Boko Haram's relationships to informal groups and civilians per geopolitical zone . . . 152

7.1 Map of cattle routes in Nigeria . . . 157
7.2 The mutual reinforcement of farmer-herder conflicts and banditry . . . 185

7.3 Comparing the target choice of bandits and JAS . . . 202
7.4 Comparing the modes of attack of bandits and JAS . . . 202

8.1 Map of Nigeria indicating the Myers Index (2006) . . . 207
8.2 Comparing the gold price and the number of violent events (2000–2021) . . . 209
8.3 Comparing the seasonality of events attributed to Fulani militias and Boko Haram (2000–2021) 216
8.4 Fatalities in Nigeria and Libya (2011–2021) . . . 219

9.1 Number of violent events per Nigerian geopolitical zone (2000–2023) . . . 247

A.1 Comparing the geolocation of attributed and unattributed events . . . 306
A.2 Country-level network in 2015 with Fruchtermann-Reingold layout . . . 310
A.3 Country-level network in 2015 with Kamada-Kawai layout . . . 311
A.4 Country-level network in 2015 with geographically rooted vertices . . . 311
A.5 Robustness of network size to different DBSCAN specifications . . . 314
A.6 Robustness of network fragmentation to different DBSCAN specifications . . . 315
A.7 Network visualization with different DBSCAN specifications . . . 316
A.8 Relative government fighting effort with and without unattributed Boko Haram events . . . 318
A.9 Country-level network in 2017 with and without unattributed Boko Haram events . . . 319
A.10 Relative government fighting effort with fatalities or violent events as edge weights . . . 321
A.11 Country-level network in 2021 with fatalities or violent events as edge weights . . . 322
A.12 Country-level network in 2000 . . . 325
A.13 Country-level network in 2001 . . . 326
A.14 Country-level network in 2002 . . . 326
A.15 Country-level network in 2003 . . . 327
A.16 Country-level network in 2004 . . . 327
A.17 Country-level network in 2005 . . . 328
A.18 Country-level network in 2006 . . . 328
A.19 Country-level network in 2007 . . . 329
A.20 Country-level network in 2008 . . . 329
A.21 Country-level network in 2009 . . . 330
A.22 Country-level network in 2010 . . . 330
A.23 Country-level network in 2011 . . . 331
A.24 Country-level network in 2012 . . . 331
A.25 Country-level network in 2013 . . . 332
A.26 Country-level network in 2014 . . . 332
A.27 Country-level network in 2015 . . . 333
A.28 Country-level network in 2016 . . . 333
A.29 Country-level network in 2017 . . . 334

A.30 Country-level network in 2018 . . . 334
A.31 Country-level network in 2019 . . . 335
A.32 Country-level network in 2020 . . . 335
A.33 Country-level network in 2021 . . . 336
A.34 Regional networks in 2000 . . . 337
A.35 Regional networks in 2001 . . . 338
A.36 Regional networks in 2002 . . . 339
A.37 Regional networks in 2003 . . . 340
A.38 Regional networks in 2004 . . . 341
A.39 Regional networks in 2005 . . . 342
A.40 Regional networks in 2006 . . . 343
A.41 Regional networks in 2007 . . . 344
A.42 Regional networks in 2008 . . . 345
A.43 Regional networks in 2009 . . . 346
A.44 Regional networks in 2010 . . . 347
A.45 Regional networks in 2011 . . . 348
A.46 Regional networks in 2012 . . . 349
A.47 Regional networks in 2013 . . . 350
A.48 Regional networks in 2014 . . . 351
A.49 Regional networks in 2015 . . . 352
A.50 Regional networks in 2016 . . . 353
A.51 Regional networks in 2017 . . . 354
A.52 Regional networks in 2018 . . . 355
A.53 Regional networks in 2019 . . . 356
A.54 Regional networks in 2020 . . . 357
A.55 Regional networks in 2021 . . . 358

List of Tables

3.1 Attributes to differentiate formal and informal armed groups 40

4.1 Coding rules for ACLED's 'Political militias' 78
4.2 Sampling of participant groups 93
4.3 Overview of the observable implications of the candidate explanation 109
4.4 Overview of the observable implications of the alternative explanations 111

5.1 Classification of the most relevant non-state armed groups in Nigeria 114

6.1 Operationalizing the theoretical concepts in the network analysis 137

8.1 Overview of the results for the alternative explanations 206

A.1 Comparing the characteristics of attributed and unattributed events 306
A.2 Comparing attributed and unattributed events for Boko Haram 307
A.3 Fatalities per year and known/unknown Boko Haram factions 308
A.4 Testing for the category of missingness of actor information 308
A.5 Manual re-coding of ACLED's political militias 309
A.6 Comparing community detection algorithms 324

B.1 Interviews per research site 359
B.2 Participant groups of the coded interviews 360
B.3 Coding scheme: theory codes 366
B.4 Coding scheme: actor and site codes 366
B.5 Coding scheme: meta codes 367
B.6 List of analyzed interviews 370

List of Acronyms

ACLED Armed Conflict Location & Event Data . . . 7

AQIM Al-Qaeda in the Islamic Maghreb . . . 199

CJTF Civilian Joint Task Force . . . 8

DDR Disarmament, Demobilization, and Reintegration . . . 119

DRC Democratic Republic of Congo . . . 4

DSS Department of State Services . . . 168

ESN Eastern Security Network . . . 113

FARC Fuerzas Armadas Revolucionarias de Colombia . . . 2

FCT Federal Capital Territory . . . 73

FGD Focus Group Discussion . . . 71

HDP Humanitarian, Development, and Peacebuilding . . . 93

ICRC International Committee for the Red Cross . . . 21

IDP Internally Displaced Person . . . 1

IEDs Improvised Explosive Devices . . . 196

IOM International Organization for Migration . . . 175

IPOB Indigenous People of Biafra . . . 72

IS Islamic State . . . 72

ISWAP Islamic State of the West African Province . . . 2

ISWAP-LC ISWAP-Lake Chad Faction . . . 80

JAS Jama'tu Ahlis Sunna Lidda'awati wal-Jihad . . . 2

LGA Local Government Area . . . 72

LTTE Liberation Tigers of Tamil Elam . . . 39

MAR Missing At Random . . . 79

MASSOB Movement for the Actualization of the Sovereign State of Biafra . . . 125

MCAR Missing Completely At Random 79

MEND Movement for the Emancipation of the Niger Delta 119

MJTF Multinational Joint Task Force 78

MNAR Missing Not At Random 79

NGN Nigerian Naira 187

NGO Non-Governmental Organization 27

PVE Preventing Violent Extremism 267

RDL Rassemblement pour la Démocratie et la Liberté 47

SAS Small Arms Survey 162

SNA Social Network Analysis 3

SPLM-IO Sudan's People Liberation Movement/Sudan's People Liberation Army-in Opposition 41

UCDP Uppsala Conflict Data Program 16

UK United Kingdom 62

UN United Nations 4

UNDP UN Development Programme 162

US United States of America 14

USD US Dollars 208

VGN Vigilante Group of Nigeria 114

Chapter 1

Introduction

Ishiyaku, the traditional ruler of a rural community in eastern Sokoto state, Nigeria, had come all the way from an Internally Displaced Person (IDP) camp close to Sokoto town to share his story with me.[1] It is a hot October day in the ancient capital of the Sokoto caliphate, located in the utmost northwestern corner of today's Nigeria. With the fan humming in the background, Ishiyaku explains how the bandits — militia groups operating in Nigeria's northern region — surrounded his village, summoned everyone, and demanded protection money exceeding by far the means of his community. After several rounds of negotiation between the bandits and the elders of the community, the community had to pay a sum so large that the community members had to sell much of their property. At least, calm seemed to have returned for a few months. Then, without warning, bandits attacked Ishiyaku's village and killed dozens of people, including Ishiyaku's father. Long before this incident, Ishiyaku had hiked to the nearest police station, alerting the officers to the bandits operating in the surroundings of his village. The police had visited the village once and were not seen again.

Ishiyaku's story is not an isolated case. The banditry crisis is devastating Nigeria's Northwest and Northcentral with thousands of killings and counter-killings, kidnappings, and pervasive sexual violence. Yet, Nigeria's security challenges are more than just banditry. Since 2009, violent extremist groups known as Boko Haram have been fighting with the government for national power. In the wake of this civil war, security has deteriorated in almost all regions of Nigeria. In particular, farmer-herder and ethnoreligious conflicts spread and got enmeshed with banditry. Most recently, the secessionist Biafra conflict in the country's Southeast reemerged. Within only 12 years, the 'giant of Africa' has been destabilized so fundamentally that national and international opinion pieces have discussed the potential failure of the Nigerian state (e.g., Beaumont 2021; Ogunro 2023; Rotberg and Campbell 2021).

[1] The name was changed to ensure the anonymity of the participant. Interview 506, traditional ruler, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

This study unpacks the described destabilization by theorizing and empirically analyzing the interdependence between civil wars and conflicts between informal armed groups.[2] The latter include varieties of bandits, local militias, vigilantes, armed communal groups, and so forth. Informal groups are armed groups that are deeply embedded in their communities, have unstable organizational structures, and do not explicitly identify as an *armed* group. In contrast, formal armed groups like the Fuerzas Armadas Revolucionarias de Colombia (FARC) have clear boundaries, a depersonalized structure, and a distinct identity as an armed organization. Formal groups include insurgents that fight for formal political power but also criminal gangs that seek to constrain rather than conquer the state (Lessing et al. 2015). The vast majority of conflicts involving informal armed groups take place in the shadow of civil wars and their levels of violence can sometimes even exceed the civil war (Wiehler and van Baalen 2024; *Priorities for the African Union* 2021, p. 9).

Despite the frequent concurrence of civil wars and conflicts between informal armed groups, it is not well understood how the two phenomena influence each other. In the Nigerian case, for example, the temporal correlation between the outbreak of the Boko Haram conflict and the subsequent escalation of conflicts between informal armed groups gives the impression that these phenomena are related.[3] However, a temporal correlation is not sufficient to come to this conclusion. For instance, there could be a common structural driver. Even if the correlation is not spurious, it remains open *how* the conflicts are linked to each other.

The outlined pattern is not unique to Nigeria. Banditry is increasing in Kenya's west while the army seeks to prevent Al-Shabaab from spilling over from Somalia in the north. The International Crisis Group warns that Cameroon's government might struggle to intervene in intensifying inter-communal conflict in the Far North region because the military is "overstretched fighting insurgents elsewhere" (*Curbing Feuds* 2024, p. 1). In Burkina Faso, the spillover of violence by violent extremists from Mali challenges the government and analysts raise concerns about a potential cooperation between the violent extremists and bandits in other parts of the country (de Montclos 2021; Nsaibia 2019).

Inspired by the aforementioned empirical observations, the present study poses the following research question: How do civil wars and conflicts between informal armed groups influence each other? Understanding the interdependence of civil war and conflicts between informal armed groups is critical from both a scientific and a practical point of view. Conflict research has long acknowledged the complexity of contemporary internal armed conflicts, that is, armed conflicts within the boundaries of a nation-state (Brosché et al. 2023). Civil wars are recognized as polity-level events with likely consequences for any other armed group operating within this polity (Sambanis and Schulhofer-Wohl 2019). Notwithstanding, empirical research on the processes producing the complexity of contemporary conflicts is still limited. Specifically, the impact of

[2] I define civil wars as high-intensity conflicts over formal political power between the government and at least one non-state armed group.

[3] Note that I use the colloquial name Boko Haram as an umbrella term for the factions Jama'tu Ahlis Sunna Lidda'awati wal-Jihad (JAS), Ansaru, and the Islamic State of the West African Province (ISWAP).

civil war on other conflicts — and vice versa — is not well understood (Krause 2019; van Baalen 2024). I follow other scholars from the so-called third wave of civil war research who seek to better understand the intersection of civil war and other types of collective violence (Staniland 2023).

From a practical point of view, the interdependence of civil war and conflicts between informal armed groups matters for conflict prevention, management, and resolution. Initial research from the peacebuilding realm suggests that civil wars exacerbate conflicts between informal armed groups (e.g., Autesserre 2010; Gray and Roos 2012; O'Bryan et al. 2017). However, these conflicts do not escalate everywhere and all at once. Understanding the when and where of these escalatory effects is critical to preventing them in the first place. Similarly, overlooking how conflicts are linked to each other can render interventions to manage or resolve them ineffective (Duursma 2022b). Not least, the inter-linkages complicate the conclusion of stable and comprehensive peace agreements (Autesserre 2010; Krause 2019). This study seeks to supply theoretically nuanced and empirically grounded insights to support peacemaking efforts in the future.

To answer the research question, I employ Social Network Analysis (SNA) because it is the ideal approach to come to terms with interdependence between conflicts theoretically and methodologically. SNA is "a way of looking at a problem" (Marin and Wellman 2014, p. 16) with implications for theory, measurement, and analytical methods. SNA assumes that social phenomena are best explained by focusing on the interactions and relationships between actors, not their isolated attributes (ibid., p. 4). The resulting web of relationships can be conceptualized and analyzed as a network. Critically, SNA can apprehend that the interaction between two actors has indirect effects on other actors in the network, mediated by the network structure. The theoretical appreciation of and the methodological ability to handle extra-dyadic dependencies makes SNA suitable for researching interdependence between conflicts.

Using SNA allows me to address another challenge that the research field on internal armed conflict is currently facing: the disconnection of macro- and micro-level research. When political science research on internal armed conflict gained traction at the end of the 1990s, studies focused predominantly on quantitative analyses of structural factors at the country level. This changed with the so-called second wave of civil war research which prioritized subnational dynamics during ongoing conflicts (Staniland 2023). Yet, the new wealth of research on micro-level conflict processes tends to be disconnected from the macro-level, and more research on the link between the two is needed (Balcells and Justino 2014; Cederman and Vogt 2017). SNA is ideal for filling this gap due to its focus on the co-constitution of structure and agency:[4] the structure of the conflict network enables and constrains the behavior of the armed groups, and their behavior inevitably changes the structure (cf. the structuration theory by Giddens 1985). I use a mixed-methods variant of SNA

[4]Agency is defined as "the capacity of socially embedded actors to appropriate, reproduce, and, potentially, to innovate upon received cultural categories and conditions of action in accordance with their personal and collective ideals, interests, and commitments" (Emirbayer and Goodwin 1994, pp. 1442–1443).

that is able to illuminate the network structure *and* the underlying processes.

Applying mixed-methods SNA to the internal armed conflicts in Nigeria yields the following main result. The civil war outbreak set in motion spatially contingent processes that mutually reinforced each other and, in sum, empowered the formal and informal armed groups while constraining the government. The civil war with Boko Haram forced the government to decide on its resource allocation at a time when conflicts between informal groups appeared limited and stable. Yet, the decision of the government to prioritize the Boko Haram conflict had countervailing effects throughout the country. Within the civil war conflict zone, conflicts remained limited due to the disruption or regulation of everyday life by the civil war parties. By contrast, the weakened state outside the civil war conflict zone exposed rural communities to a power vacuum, creating incentives for engaging in illicit economic activities and mobilizing self-defense groups. The resulting escalation and fragmentation of conflicts between informal armed groups fundamentally altered the structure of the conflict network, creating feedback effects across conflicts, including the civil war.

In the remainder of this introduction, I first situate my work in the conflict studies literature and summarize the core argument. Then, I introduce the mixed-methods research design which combines the description and visualization of the network structure with a tracing of the underlying processes, leveraging 118 interviews from field research in northern Nigeria. In the next step, I outline the theoretical, methodological, and empirical contributions of this study. I conclude the chapter with an overview of the manuscript structure.

1.1 A process perspective on conflict complexity

The complexity of internal armed conflicts has come to the forefront of empirical conflict research, not least due to contemporary conflicts in Libya, Syria, and the Democratic Republic of Congo (DRC). Indeed, the complex, system-like nature of many contemporary conflicts has been widely acknowledged, including by United Nations (UN) Secretary General António Guterres (Brosché et al. 2023). However, the theoretical and methodological tools to deal with this complexity have not yet become part of mainstream conflict studies (Cranmer and Desmarais 2016). Specifically, references to conflict complexity often take it as a given state rather than as the sum of multiple interacting and non-linear processes (Brosché et al. 2023). I concentrate on the interdependence of civil war and conflicts between informal armed groups to shed light on the emergence and development of these processes.

Empirical conflict studies have developed in two main waves, with a third wave emerging at the moment (Staniland 2023). I aim to contribute to this third wave, which is characterized by widening the focus from civil wars to the intersection of civil war with other types of collective violence (ibid.). In doing so, I build on the rich work of the second wave, which has broadened our understanding of civil wars as including not only the government and a rebel group but a variety of actors with dynamic relationships ranging from violent

contestation to cooperation. The actors that came into view included militias, vigilantes, criminal gangs, and communal groups (Schuberth 2015). I refer to such actors, which are neither governments nor rebel groups, as third actors in an adaption of Jentzsch (2022).

When researching third actors, scholars of the second wave have alternated between two extremes: On the one extreme, the actors are seen as subsumed under the dyadic civil war master cleavage, assuming that they are always associated with or against one side (e.g., Christia 2012; Kalyvas 2006). This was particularly the case in the militia literature (e.g., Carey et al. 2013; Clayton and Thomson 2016). On the other extreme, the actors are seen as completely dissociated from the civil war, assuming that their conflicts play out in isolation. This is the case for the research strand on communal conflicts, for example (e.g., Döring 2020; Elfversson 2015). I propose to focus on interdependence as a conceptual lens that bridges these two approaches. Interdependence means appreciating the differences between civil wars and conflicts between informal armed groups in terms of agency, issues, and operational logic while acknowledging that they influence each other.

I build on three research strands within the literature on armed conflict to develop my argument on the interdependence of civil war and conflicts between informal groups.[5] First, contributions by peacebuilding scholars on the link between national and local conflicts offer important insights into why civil wars can aggravate conflicts between informal groups. Second, research on the contentious and cooperative relationships of rebel groups appreciates the large number of actors active in many armed conflicts and draws attention to non-violent relationships. A few scholars in this strand have also emphasized extra-dyadic dependencies, i.e., the question of how the groups indirectly influence each other's behavior. Third, recent work that has applied SNA to internal armed conflict to methodologically deal with interdependence in conflict data. I follow these scholars in adopting SNA and enrich it with insights from the other two strands.

A challenge for all aforementioned research strands is the trade-off between embracing complexity and maintaining theoretical and empirical tractability. To address this challenge, I conceptualize internal armed conflicts taking place within the same country as embedded in one overarching conflict network. The network consists of the security agencies of the state and formal and informal armed groups linked through relationships of conflict and cooperation. I further contend that internal armed conflicts manifest themselves as network clusters in the social space and as conflict zones in the geographic space. Technically, network clusters are subsets of actors that interact a lot with each other and less with others. This conceptualization entails that different conflicts, like communal conflicts and civil wars, can be understood as interlinked network clusters. It is an empirical question of how closely interlinked the clusters are and whether the conflict zones

[5]Note that I use informal armed groups and informal groups interchangeably in the remainder of the manuscript. The distinction between formal and informal armed groups exclusively applies to non-state armed groups. Additionally, I substitute conflicts between informal armed groups with informal group conflicts for the ease of reading in some instances.

are separate or overlapping.

Building on this social network framework, I theorize the short-term ripple effects of the civil war on the conflict network. In essence, I argue that the civil war has countervailing effects on conflicts between informal armed groups depending on whether they are located within or outside the civil war conflict zone. This spatially dependent effect is connected to the government's prioritization of resources for the civil war. I suggest that the onset of the civil war pressures the national government to act. With coercive resources being finite, the government needs to optimize its resource allocation across active and latent conflicts. Due to the threat that a civil war poses to the state, the government is likely to prioritize this conflict, withdrawing resources from other areas. This has unintended ripple effects for informal armed groups and communities in contexts of resource competition and limited access to conflict management mechanisms. Inside the civil war conflict zone, the regulation and disruption of community life by the civil war parties reduce the incentives for violence. Outside the civil war conflict zone, the abrupt retreat of the state generates a power vacuum that results in the escalation and fragmentation of conflicts between informal groups. Without a ruling party enforcing order, already a few actors can set in motion vicious cycles of violence and counter-violence.

Over time, these developments change the structure of the conflict network, creating new opportunities and constraints for the conflict parties. Thereby, the conflict-specific processes create feedback effects for the entire conflict network, both within and across conflicts. Within the conflicts, the dynamics are partially self-reinforcing because the regulation and disruption of community life strengthen the formal armed groups, and the security dilemma perpetually increases the incentives for violence. Across conflicts, the escalation and fragmentation of informal group conflicts present the formal armed groups engaged in the civil war with an opportunity for expansion. They can seek to cooperate with the informal groups or to fill the power vacuum left by the state. Simultaneously, the escalation of violence outside the civil war conflict zone increases the pressure on the government's resources. If the government decides to reallocate resources, this would weaken its position in the civil war.

1.2 Using mixed-methods social network analysis to research interdependence

I develop and refine the theoretical argument in a mixed-methods SNA of the Nigerian case (2000–2021). Nigeria has been selected as a case because of the expected information gain (Fairfield and Charman 2022) as well as substantial and feasibility reasons. A central consideration was the concurrence of a high-intensity civil war with numerous conflicts between informal groups, which is a prerequisite for tracing the processes linking the two phenomena. I could furthermore leverage the sudden, localized emergence of the Boko

Haram conflict to trace the ripple effects for the whole conflict network. From the perspective of "real-world societal importance" (Toshkov 2016, p. 289), Nigeria has been selected because of the dramatic humanitarian consequences of the ongoing conflicts. 4.4 million people in Northeast Nigeria were gauged to be affected by critical food shortage in 2021 (Mbachu 2021) and, country-wide, 3.2 million people were estimated to be internally displaced due to conflict violence as of 2022 (*Nigeria* 2023a). There is, hence, an urgent need to inform conflict management and resolution efforts in this case.

SNA's theoretical and methodological tools are ideal for researching interdependence. Mixing methods mirrors the goal of this study, which is to integrate macro- and micro-level research and illuminate the co-constitution of structure and agency. The mixed-methods design has a quantitative and a qualitative component. Accordingly, the quantitative component traces the evolution of the network structure in Nigeria. It is descriptive in nature and establishes the outcome this study seeks to explain. The qualitative component explains the why and how of the structural evolution by tracing the underlying processes.

In terms of data, the quantitative analysis uses the event data by the Armed Conflict Location & Event Data (ACLED) project to visualize and calculate descriptive measures of the conflict network across the observational period. To be able to do so, I introduce a novel approach for disaggregating informal armed groups in the dataset. The off-the-shelf versions of the main quantitative conflict datasets have the limitation that informal groups are included at the level of their social identity, e.g., ethnicity or religion. To identify distinct groups within this social category, I identify spatial event clusters through unsupervised learning using the DBSCAN algorithm.

The qualitative analysis builds on 118 interviews, most of which were conducted in collaboration with three research assistants during three months of fieldwork in northern Nigeria. Study participants included government officials (civil servants and military officers), current as well as former members of armed groups, members of affected communities, representatives of livelihood interest groups, and various domain experts. Around one-third of the interviews employed a participatory network drawing exercise, during which the study participants visualized their understanding of the Nigerian conflict network. I complemented the primary data with numerous secondary sources, which I obtained from Nigerian libraries in Kaduna, Abuja, and Sokoto as well as from SOAS University in London. The latter has a rich collection of sources on Nigeria due to its focus on area studies and the British history of colonial rule.

The research design integrates deductive and inductive elements in one cohesive theoretical framework. The SNA as well as existing research on armed groups' relationships and peacebuilding provide a conceptual base and preliminary ideas about why and how conflicts between informal groups can escalate in civil war contexts. These deductive elements are enriched and refined with inductive insights derived from the data generated during the fieldwork in northern Nigeria. The inductive insights are critical for my understanding

of why we do *not* observe an escalation and fragmentation of conflicts between informal groups within the civil war area.

The iterative approach integrating deductive and inductive elements bears the risk of introducing confirmation bias by tailoring the argument and the corroborating evidence closely to each other. I follow recent work by Fairfield and Charman (2022) and Kapiszewski et al. (2022) in arguing that iterative research is not per se unable to make causal claims. Iterative procedures are the norm rather than the exception in social science research with qualitative data, and the inferential value of a piece of evidence is independent of the temporal moment of discovery in the research process (Fairfield and Charman 2022; Kapiszewski et al. 2022). Decisive is that the observable implications of the argument are systematically tested against alternative explanations (Zaks 2017). Concretely, I assess seven alternative explanations focusing on structure, agents, and external influences.

In the Nigerian case, I show that neither uneven state capacity nor variation in the deposits of lootable resources are sufficient to explain the escalation and fragmentation of conflicts outside the civil war conflict zone — not least because, as structural factors, they are unable to account for the spatiotemporal variation of violence. Similarly, the proliferation of weapons from Libya likely had less impact on the conflicts in Nigeria than often suggested. The informal groups also did not receive any external support which would explain the escalation and fragmentation of their conflicts. With regard to the limited conflicts between informal armed groups within the civil war conflict zone, it is noteworthy that this cannot be explained by the subsumption of these conflicts under the civil war cleavage. Based on the group constellation in this area, conflicts between informal groups would be expected between religious communities or between farmers and Fulani pastoralists. Yet, the recruitment patterns of Boko Haram and the pro-government Civilian Joint Task Force (CJTF) do not map onto these fault lines. Boko Haram recruited mostly Muslim Kanuri and the CJTF accepted members from any ethnic and religious community. I only encountered two isolated cases in which non-Kanuri communities would have joined Boko Haram to advance their position in conflicts with other communities.

1.3 Contributing to the literature on internal armed conflict

Researching the complexity of contemporary armed conflicts is challenging precisely because of the complex nature of the issue in question. These conflicts can involve hundreds of armed groups that relate to each other in multiple and highly dynamic ways. The behavior of these groups can only be explained through an interplay of multiple factors and fundamentally endogenous processes. In contrast to other realms of social interaction, armed conflict is especially difficult to explain and predict. Cederman and Weidmann (2017, p. 475) assert: “Conflict processes typically encompass an unwieldy set of actors interacting in surprising

and, by definition, rule-breaking ways. Such situations are characterized by fundamental and inherent complexity [...]." This study sets out to address this challenge with a network analytical approach that combines theory and evidence on structural patterns and micro-level processes. Consequently, the study makes several theoretical, methodological, and empirical contributions.[6]

I propose that my work advances theories on armed conflict in at least three ways. First, I suggest a novel theoretical argument on the interdependence of civil war and conflicts between informal groups, highlighting the ripple effects of civil war onset for the whole network of armed groups in the respective country. The argument speaks to the currently emerging third wave of civil war research that emphasizes the interaction of civil wars with other types of collective violence (Staniland 2023). It offers new insights into the dynamics of both civil war and informal group conflicts like communal conflicts. For civil wars, my work theorizes in detail how the interdependent strategic decision-making of civil war parties goes beyond the civil war in the narrow sense but includes the actions and reactions of informal groups. For communal conflicts, I can present an explanation for the spatiotemporal variation in their escalation in civil war contexts. I further develop theoretically how the dynamics of these conflicts impact the civil war. This is an important innovation as most research focused on how the civil war impacts these conflicts and not the other way around.

The second theoretical contribution is the conceptual distinction between formal and informal armed groups. This classification of non-state armed groups is parsimonious and still captures major differences in the organizational structure of these groups. I also offer a detailed description of how to implement this distinction with the commonly used ACLED dataset. This conceptual innovation was essential to appreciate the extreme variety of actors active in the shadow of civil war while keeping the complexity of the theoretical argument and the network analysis tractable. It adds important nuance to existing SNA of armed conflict, which treats all armed groups as one homogeneous population. In addition, the new classification shall facilitate the accumulation and integration of knowledge on third actors in internal armed conflicts. Research on third actors is currently fragmented across different theoretical perspectives, which look at these groups separately as militias, vigilantes, criminal gangs, or communal groups — even though the related groups can be very similar or even identical (Schuberth 2015).

Third, my theoretical argument addresses one of the central challenges in explaining social behavior: the interplay of structure and agency. By adopting a network analytical lens, I can trace how the structure of the conflict network and the reaction of the armed groups co-constitute each other. I can demonstrate how the evolving structure constrained the government but empowered the formal armed groups in the civil war.

[6] The relevance of these contributions and the quality of the study's results have been recognized with two international awards for conference paper versions of the qualitative and quantitative analysis. The qualitative analysis has been awarded the Best Graduate Student Paper Award by the Women Caucus of the International Studies Association. The quantitative network analysis has been awarded the John Sprague Award by the Political Networks section of the American Political Science Association.

These insights speak to calls for advancing the integration of macro-level and micro-level research in conflict studies (e.g., Balcells and Justino 2014).

This leads me to the methodological contributions of this study. Tracing the interplay of structure and agency was made possible by designing and implementing a mixed-methods SNA. To the best of my knowledge, this is one of the very first mixed-methods SNA in the field of empirical conflict studies (cf. Stys et al. 2022, for another example). Furthermore, combining a quantitative and a qualitative component yields the advantage of triangulating data and analytical perspectives, thereby increasing confidence in the validity of the results. In the case of this study, this combination enables me to identify shortcomings in the quantitative data like the underreporting of the emerging banditry crisis as well as biases and omissions in the interview data.

In addition, the mixed-methods design features methodological innovations in each of the components. In the quantitative component, I introduce an approach to identify distinct informal groups based on their spatial event patterns. I suggest two variants of this approach. First, clustering with the DBSCAN algorithm can identify these groups if no information on their location is available. Second, k-means clustering can assign events to groups for which the location of their main operating base is known. In the Nigerian case, this was possible by exploiting information on the camps of the main bandit groups provided by Hassan and Barnett (2022). In the qualitative component, I transferred and adapted a participatory network drawing exercise from the field of development cooperation to the study of armed conflict (Schiffer 2007). I conducted this exercise in 36 of the 118 interviews. This exercise asked the interlocutors about the actors involved in the conflict, how they are related to each other, and who is influential. This structured yet open method was ideal for combining deductive and inductive elements in theory development. Last but not least, I present a visualization of my interview sampling network, which is a new technique to facilitate the identification of sample biases, building on recent work by Woldense (2021).

Finally, the study contributes to our empirical understanding of the Nigerian conflicts, a case "emblematic" of the complexity of contemporary internal armed conflicts (Taft and Haken 2015, p. 133). The network approach, in combination with the newly generated data, grants a unique perspective on the interplay of the Boko Haram insurgency, ethnoreligious violence, farmer-herder conflicts, and banditry. First, the perspective is new in the literal sense of visualizing the conflict network with the disaggregated informal armed groups. Second, I generated new primary data on the ongoing violence in Nigeria's less-researched Northwest, following best practices in research ethics, sampling, interviewing, and transcription.[7] By virtue of combining vigilantes, bandits, and communal militias under the umbrella concept of informal groups I could shed light on the close intertwinement and mutual reinforcement of the conflicts in that region. Third, the network drawing exercise

[7]A description of the ethical considerations underlying the data generation and a reflection of my positionality and the positionality of research assistants are included in the appendix B.4.

elicited the study participants' integrated understanding of the Nigerian conflicts, which would unlikely have become apparent when employing semi-structured interviews only.

1.4 Outline of the study

The remainder of this study proceeds as follows: After situating my work in the literature (chapter 2), the theory chapter constitutes the heart piece of the manuscript (chapter 3). It introduces the classification of armed groups as formal and informal, conceptualizes internal armed conflicts as social networks, and proposes an argument on the interdependence of civil war and conflicts between informal groups. The chapter further includes an overview of the alternative explanations.

The subsequent research design chapter introduces the mixed-methods approach of this study, which mirrors the goal to better understand the interplay of structure and agency (chapter 4). The chapter explains how informal groups can be disaggregated through DBSCAN clustering and highlights the data generation efforts in conflict-affected areas in Nigeria. It further describes the systematic coding and analysis of the qualitative data and concludes with the observable implications of my theoretical argument and the alternative explanations, which are to be assessed in the process tracing.

Chapter 5–8 present the empirical evidence demonstrating the validity of the theoretical framework in the Nigerian case, assessing the alternative explanations, and probing the transferability of the theoretical argument to other cases. Chapter 5 embeds the case in its historical context and introduces the contemporary conflicts in Nigeria. Doing so, the case chapter demonstrates how the classification of armed groups as informal and formal can be successfully applied to a broad set of actors with very different trajectories and intentions. The chapter follows the literature on the Nigerian conflicts by introducing each Nigerian conflict and the involved groups separately. It thus stands in contrast to chapter 6 and chapter 7 where the core claim of this study is empirically demonstrated: that these conflicts are interdependent.

The quantitative analysis in chapter 6 visualizes and describes the conflict network over time, focusing on relationships of violent conflict. The qualitative analysis in chapter 7 unpacks this observation by providing evidence on the behavior of the government and the different non-state armed groups as well as their interdependent decision-making. This chapter also sheds light on cooperative relationships as a second relational channel creating interdependent behavior.

After addressing seven different alternative explanations with quantitative and qualitative evidence (chapter 8), chapter 9 critically discusses the research strategy and findings. First, I assess the validity of the evidence as well as the strengths and limitations of the quantitative and qualitative components. Second, I revisit the theoretical framework in light of the evidence and suggest potential theoretical implications. The

manuscript concludes by putting the findings of this study in the context of the literature and identifying avenues for future research (chapter 10). I further reflect on the viability of mixed-methods SNA for conflict studies. The study ends with highlighting implications for peacebuilding efforts in Nigeria.

Chapter 2

Literature review

This study is situated within the discipline of political science and speaks to the community of scholars conducting empirical research on armed conflict within the boundaries of a nation-state. This review focuses on the academic literature, enriched with contributions from the 'gray literature' between academia and practice when appropriate. It concentrates on the political science literature on civil war and internal armed conflict and complements it with work from other subfields like political economy, terrorism studies, and criminal studies. Note that contributions can speak to several categories or defy a clear assignment to certain research communities.

The study starts from the observation that the complexity of internal armed conflicts and the multitude of actors involved is widely acknowledged as an empirical fact (e.g., Carboni and Moody 2018; Quinn et al. 2019, p. 865; Wood and Kathman 2015, p. 167) but that the theoretical and empirical implications of this fact are not sufficiently addressed. Specifically, the majority of contributions in the field of conflict studies investigate a specific linear process at the micro-level such as the impact of foreign fighters on sexual violence (Doctor 2021), of peacekeeping on civilian targeting (Fjelde et al. 2019), and of conflict exposure on support for peace (Tellez 2019). Notwithstanding the valuable insights provided by this work, this approach stands in contrast to core assumptions of complexity studies, including the interdependence of a high number of components, multi-causality, and non-linearity such as feedback effects (Brosché et al. 2023, p. 7).

The study thus follows work in the newly emerging "third wave" of civil war research in scrutinizing the interdependence of civil war with other types of conflict and collective violence involving militias, vigilantes, and communal groups (Staniland 2023). Doing so, the study seeks to provide an integrated perspective on the interplay between structure and underlying micro-level processes, emphasizing the importance of feedback effects. The exclusive focus on micro-level processes, which remain disconnected from the bigger picture at the macro-level, has been identified as a shortcoming of the currently dominant research on the

micro-dynamics of armed conflict (Balcells and Justino 2014; Cederman and Vogt 2017).

In the following, I outline the evolution of research on internal armed conflict in three waves (Staniland 2023). The first wave is dominated by the quantitative, cross-national analysis of the structural determinants of conflict. Large parts of this research look at civil wars in the narrow sense of conflicts between the national government and a non-state challenger.[1] The second wave is characterized by the turn to micro-level processes and broadening the perspective beyond government-insurgent dyads. This has given rise to a rich strand of research on third actors, i.e., armed groups like militias and communal groups, which are neither insurgents nor government forces.[2] The third wave broadens the perspective further by theorizing the intersection of civil war with other types of collective violence. It further highlights the ambivalent relationships between non-state armed groups and the state that go far beyond conflict.

Based on the literature review, I propose that the notion of interdependence is a useful lens for understanding how civil war influences but does not determine conflicts between third actors and how the civil war parties react to the behavior of these third actors. I thus turn to three research communities that have explicitly engaged with the question of interdependence in civil war by focusing on the link between national and local conflicts, cooperative and violent relationships between rebel groups, and the SNA of internal conflicts. I combine key ideas of each research community in a complementary manner to contribute to the emerging third wave.

2.1 The state of research on internal armed conflicts

Empirical research on internal armed conflicts is a young discipline rooted in International Relations and Comparative Politics (Cederman and Vogt 2017, p. 1993). Due to its roots in International Relations and the dominance of political science scholars from the United States of America (US), the literature on internal armed conflicts is strongly influenced by the game theoretic bargaining framework (e.g., Fearon 1995; Walter 1997). The bargaining framework assumes that conflict can be explained through the strategic interactions of two actors maximizing gains, considering their preferences, capabilities, and the available information about the other side (Lacher 2020; Pearlman and Cunningham 2012). From this perspective, war is an irrational outcome that can be explained by the misrepresentation of private information (Fearon 1995). Assumptions about rational actors who strategically interact while competing over resources remain important theoretical underpinnings of the discipline, including for my own work, even though most contributions do not use formal models.

[1] I use the terms insurgents and rebel groups interchangeably for these non-state challengers, without implying a difference in their legitimacy.

[2] I adapt the term "third actors" from Jentzsch (2022), who uses it for community-initiated militias. I use the term more broadly for any armed group that is not part of the government and does not directly oppose the government over formal political power. For a related discussion of unaligned actors, see also Otto et al. (2020).

The discipline has experienced a "meteoric rise" in the last 25 years, not least spurred by the ethnic conflicts in the wake of the end of the Cold War in the 1990s (Lyall 2015; Staniland 2023). Since then, the research community has produced a wealth of research on the onset, dynamics, duration, and resolution of internal armed conflict. Before, research on armed conflicts focused on inter-state conflicts. Among others, this included research on the question of how warfare is linked to state formation (e.g., Hintze 1975; Tilly 1994) and nationalism (e.g., Holsti 1990; Posen 1993a). In the following, I discuss the three waves that characterize the development of the discipline. I then zoom in on how third actors — that is, armed groups that are not part of the civil war parties — are conceptualized in the literature. The section concludes by highlighting limitations of the current state of research.

2.1.1 The development of research on internal armed conflicts in three waves

Scholars typically divide the development of the research field into two waves, the first focusing on the quantitative analysis of country-level drivers for conflict onset and the second focusing on conflict processes at the subnational level, using a wider range of methodological tools (e.g., Lyall 2015; Sambanis and Schulhofer-Wohl 2019). I follow Staniland (2023, p. 196) in the observation that we currently see the emergence of a third wave of research, which widens the perspective to the intersection of civil war with other forms of collective violence and more complex "patterns of order." The present study speaks to this third wave.

The first wave focuses on structural drivers of civil wars, here understood as conflicts "between an incumbent government and a non-state challenger" (Cederman and Vogt 2017, p. 1993). During the first wave, research is marked by the debate about greed and grievance as the drivers of civil war. This was an important innovation as it countered the narrative of primordial ethnic hatred as the driver of conflict. Proponents of greed-based explanations prioritize economic incentives of war, highlighting the importance of resources and vertical, that is, individual level inequality (e.g., Blattman and Miguel 2010; Collier and Hoeffler 2004; Lujala 2010). In contrast, proponents of the grievance explanation emphasize the importance of grievances about horizontal, that is, group-level inequality including cultural and political marginalization (e.g., Cederman et al. 2011; Stewart 2008). At the same time, these scholars acknowledge that the opportunity to mobilize is equally an important precondition for armed conflict. A related debate under the label of New Wars focuses on the question of whether the supposedly economically driven, fragmented, intra-state conflicts that emerged during the 1990s are inherently different from former wars (Kaldor 2001; Münkler 2003).

Beyond onset, the first wave has produced important insights on the duration and termination of these conflicts (Cunningham et al. 2009; Fearon 2004). Considering the focus on ethnic self-determination conflicts, one central debate focuses on the effectiveness of power-sharing in contrast to partition (Cederman et al. 2015; Chapman and Roeder 2007; Sambanis 2004). Besides, research on peace agreements and peacekeeping

concentrates on the question under which conditions peace becomes durable (e.g., Derouen et al. 2009; Fortna 2004; Quinn et al. 2007; for a review, see Walter et al. 2021).

Methodologically, this wave was dominated by regression analysis of cross-national observational data. The "standard model of armed conflict" included variables like regime type, mountainous terrain, and ethnic exclusion (Carey et al. 2013, p. 254–255). These models were crucial in establishing the relevance of certain explanatory variables, primarily of the political exclusion of identity groups. Yet, the macro-level approach had limitations in explaining temporal variation in conflict onset and accordingly in predicting even major conflict events (Ward et al. 2010). This limitation was also rooted in the fact that civil wars were treated as "homogeneous over time and space" in cross-national large-n analyses (Kalyvas and Balcells 2010, p. 415). In combination with major advancements in conflict data availability, in particular, due to the data by the Uppsala Conflict Data Program (UCDP), this has led to a turn to subnational conflict dynamics and thus the emergence of the second wave (Cederman and Vogt 2017, p. 1998).

In addition to the availability of subnational data, the seminal work by Kalyvas (2003, 2006) and Wood (2003, 2008) has contributed to the emergence of the second wave by shifting the theories of the field to conflict processes rather than onset or termination. The second wave is much more differentiated with regard to the outcomes of interest, with smaller research communities focusing on specific issues like rebel governance and the internal working of rebel groups, for example. In line with privileging subnational conflict processes, contributions tend to shift the analytical focus to the micro-level and/or meso-level. Pepinsky (2019, p. 188) points out that this turn to the micro-level is not only a trend in empirical conflict research but in comparative politics more generally. As a result of the interest in mechanisms and more nuanced outcomes, scholars make use of a more diverse set of methods including qualitative comparative case studies (e.g., Krause 2018), process tracing (e.g., van Baalen 2024; Winward 2021), mixed-methods (e.g., Cohen 2016), and causal inference techniques (e.g., Schubiger 2021).

Following Cederman and Vogt (2017) and Staniland (2023), I identify three main trends in the second wave. The first trend is the focus on the spatiotemporal variation and dependencies of violence at the subnational level. The constellation of interest remains the state and a non-state challenger, but, in contrast to the first wave, the question is how fighting between these two actors plays out at the local level. Aas Rustad et al. (2011) pinpoint this idea in their paper title "All conflict is local." Accordingly, structural variables "such as population, terrain and distance from borders" are used to explain the occurrence and location of violent events within states (Cunningham et al. 2013, p. 517). Emphasizing the spatio-temporal dependencies between these events, scholars produce novel insights on the spatial diffusion of civil war (e.g., Hammond 2018; Zhukov 2012; Schutte and Weidmann 2011). With regard to methods, these analyses remain close to their national-level counterparts of the first wave, using sophisticated regression models on cross-sectional data (e.g., Weidmann 2011; Aas Rustad et al. 2011). Staniland (2023, p. 189) therefore calls this scholarship

the "reformed version" of the first wave.

The second trend is to focus on a much more diverse set of outcomes related to the processes during ongoing conflicts and on mechanisms to explain them. Accordingly, a broader set of actors is considered, going beyond the government-rebel dyad. The related work constitutes a fundamental departure from the research in the first wave. A key innovation is the organizational turn, breaking up the unitary actor assumption (Lacher 2020, p. 104). Concretely, the notion of armed groups as having a unified preference and acting accordingly is rejected as "empirically indefensible" (Hoover Green 2016, p. 629). Accordingly, scholars develop typologies to more systematically capture differences between rebel groups (e.g., Gutiérrez Sanín and Giustozzi 2010; Johnston 2008; Staniland 2014).

Consequently, scholars shed light on the inner workings of armed groups (Gates 2002), why they take on certain structures (Weinstein 2007), and the implications for their behavior (Cohen 2016; Hoover Green 2016, 2018; Lyall 2010). The new interest in the manifold behavior of rebel groups widens the perspective beyond violent interactions with the government to a more nuanced repertoire of violence (Gutiérrez Sanín and Wood 2017). For example, scholars seek to explain the engagement of armed groups in sexual violence (e.g., Dumaine et al. 2021; Krause 2020; Wood 2018), kidnapping (e.g., Welsh 2024), or forced displacement (e.g., Leimpek 2020; Steele 2017).

With a more nuanced understanding of the operational logic of armed groups and their behavior, scholarly interest furthermore shifts to understanding how armed groups relate to others — be it other armed groups, civilians, or the government. As a result, the almost exclusive focus on government-rebel dyads has been dissolving. With regard to the relationship with other armed groups, scholars focus on the fragmentation of rebel movements and variation in infighting and alliances between them (e.g., Bakke et al. 2012; Christia 2012; Cunningham et al. 2012). A small community of scholars has begun to use SNA to understand these relationships and their consequences better. In this study, I adopt a SNA lens and strongly build on the work of this community to better understand interdependence in internal armed conflicts.

With regard to civilians, research initially focuses on civilians as subjects of wartime institutions, commonly discussed under the label of rebel governance (e.g., Arjona 2016b; Revkin 2021; Mampilly 2011). Yet, soon others highlight the agency of civilians and their ability to resist (e.g., Kaplan 2017; Krause 2018; Osorio et al. 2021; Schubiger 2021). Using the words of Balcells and Stanton (2021), civilians are acknowledged as "independent and multi-faceted actors in conflict." Widening the focus beyond the government-rebel dyad consequently brings into view armed groups that did not belong to either side of the dyad, especially militias and communal groups.

The research on wartime institutions and militias reveals a much more ambivalent relationship between governments and armed groups than previously assumed. Instead of being antagonistic, scholars like Mitchell

et al. (2014) and Tapscott (2023) highlight that violence by non-state armed groups cannot only be tolerated but also instrumentalized. Similarly, scholars start to demonstrate empirically that the production of order and governance by the state and non-state armed groups is not an either/or question but a joint endeavor, creating "hybrid orders" (e.g., South 2018; Staniland 2017, 2022; Stepputat 2018).

For the literature on peacebuilding and peacekeeping, the turn to conflict processes and mechanisms equally means that attention shifted to the micro level, to the behavior of non-state armed groups, and to violence dynamics. The peacekeeping literature thrives, primarily focusing on the effectiveness of peacekeeping operations (e.g., Bara and Hultman 2020; Hultman et al. 2014; Johansson and Hultman 2019). Not least because of the coincidence with the so-called local turn in peacebuilding, the link between national and local conflicts comes into view (e.g., Autesserre 2010; Hellmüller 2018; Krause 2019). The related research is another theoretical perspective I consider a fruitful avenue to understand the interdependence of civil wars and other types of conflicts better.

The third trend — the prioritization of causal identification — increases the methodological richness of the second wave (Lyall 2015; Staniland 2023). Previous research has mostly used observational data, which has limitations in addressing endogeneity due to selection bias and reverse causality. Influenced by the field of economics, one response to these limitations has been the adoption of research designs that allow for causal inference by leveraging exogenous variation and the quasi-random assignment to treatment and control groups. Among others, scholars use instrumental variables (e.g., Condra et al. 2018; Dube and Vargas 2013; Duursma 2020), difference-in-difference designs (e.g., Schubiger 2021), matching (e.g., Smidt 2020), regression discontinuity (e.g., Crost et al. 2014), and natural experiments (e.g., Arjona 2016a) to make causal claims. In addition, field experiments (e.g., Blattman and Annan 2016) and survey experiments (e.g., Godefroidt and Langer 2023; Traunmüller et al. 2019) are leveraged for causal identification.

With saturation on process-related questions sinking in, the field seems to fragment further into specialized research communities while broadening the perspective beyond internal armed conflict in the narrow sense. Staniland (2023) sees in this development the emergence of a third wave, which looks into the intersection of armed conflict with other types of collective violence and fully embraces the versatile and oscillating relationships between non-state armed groups and the state. Similarly, Chen (2021, p. 391) diagnoses that "researchers are increasingly recognizing that the collective body of organized political conflict, which includes interstate conflict, intrastate conflict, non-state conflict, and one-sided violence against civilians, are interdependent events within the same system."

Scholars that can be associated with the third wave use the conceptual language and methodological approaches of civil war research but apply it to related or intersecting phenomena like electoral violence (Krause 2020; Uribe 2023), criminal violence (Dorff et al. 2023; Lessing et al. 2015), or lynching (Jung and

Cohen 2020; Nussio and Clayton 2024). Similarly, Bara et al. (2021) outline a research agenda on how to bring together research on civil war and post-conflict violence. My work speaks to this third wave as it investigates the interdependence of civil wars and conflicts between informal armed groups. In so doing, I draw directly from the rich research on third actors like militias, vigilantes, and communal groups produced by the second wave.

2.1.2 Dominant perspectives on armed third actors

The second wave of research on internal armed conflicts questions the state-centric approach to internal conflict as featured by the first wave (Sundberg et al. 2012, p. 351). As a result, scholars acknowledge that many non-state armed groups are neither part of the government nor of the rebels and that these third actors also engage in violence with each other. Together with rebel-infighting, these conflicts are commonly aggregated under the label non-state conflicts (ibid.). The label third actors is a general heading for a very heterogeneous set of groups. They differ in their goals, organizational structure, function, capacity, and potentially many more dimensions (Otto et al. 2020, p. 2).

Therefore, most scholars focus on a subset of the third actors, driven by their respective theoretical interests and perspectives. To my knowledge, there is only limited research that aims at classifying the totality of these third actors systematically. Accordingly, Schuberth (2015) criticizes that there is a lot of overlap between the existing perspectives, forestalling an unambiguous classification of the groups. I first review the main theoretical perspectives on third actors and then discuss how the few existing typologies distinguish between them. Based on research practice, I identify four main perspectives depicting the groups as militias, militarized criminal gangs, vigilantes, and communal groups.

First, there is extensive research on pro-government and anti-rebel militias (Jentzsch et al. 2015). As the terminology suggests, these groups are usually viewed in the context of civil wars, where they either align with the government or fight against rebels but are not necessarily under the control of the government or collaborating with it. They are also labeled civil defense militias (e.g., Agbiboa 2021; Clayton and Thomson 2016). Research predominantly investigates the emergence (e.g., Eck 2015) and effects of pro-government militias, including on violence against civilians and human rights violations (e.g., Carey et al. 2015; Mitchell 2004; Stanton 2015). Together with growing interest in the agency of civilians, anti-rebel militias increasingly come into view (e.g., Clayton and Thomson 2016; Jentzsch 2022; Schubiger 2021). Aliyev (2016) extends this binary distinction by state-parallel militias, i.e., militias that are so strong that they exist in parallel to the state and cannot be controlled by it. Furthermore, Barter (2013) suggests considering not only the relationship to the state but also the militia's offensive or defensive behavior.

Second, militarized criminal groups or gangs have also been considered in the literature on internal armed

conflicts. On the one hand, these groups are discussed in the context of the greed and grievance debate (Schuberth 2015, p. 301) and the related discourse of New Wars (Kaldor 2001; Münkler 2003) in the first wave of civil war research. Here, their opportunistic and apolitical motives are emphasized. On the other hand, notions about violence dynamics and rebel governance from the second wave are extended to militarized criminal groups or gangs (e.g., Cederström and Fleming 2016; Lessing 2021; Lessing et al. 2015; Schultze-Kraft 2019). Accordingly, the political nature of these groups, even if only implicitly, is highlighted.

Third, political science scholars show an emerging interest in vigilantes as armed groups created for security provision at the community level. In light of their security provision function, Bateson (2021) points out that vigilantes directly relate to questions of order, state formation, and governance, which lie at the heart of political science. Nonetheless, no coherent research community on these groups has been established so far (ibid., p. 925). This is changing with recent work by Jung and Cohen (2020), Moncada (2022), and Tapscott (2023). Their work emphasizes the embeddedness of vigilantes in historically grown relationships with state institutions (Tapscott 2023) and their importance in civil resistance against organized crime groups (Moncada 2022), among other things.

Fourth, there is a rich research strand on communal conflicts, that is, conflicts between groups loosely organized around social identity (Krause 2018, p. 18). Watson (2023, p. 2) criticizes that communal conflict has increasingly been used as a “catch-all term” for violence that does not fit the category of intra-state conflict. In addition, scholars questioned the conceptualization of communal conflict as detached from national-level politics and conflict and called for a more integrated perspective (Brosché and Elfversson 2012; Krause 2019; Watson 2023). One positive exception is Elfversson (2015) who sheds light on the question under which conditions governments intervene in communal conflicts.

Research on communal conflicts has developed around two clusters (Fjelde and Østby 2014, p. 740). In light of the interest in ethnic conflicts at the end of the 1990s, research looks at communal conflicts through the lens of mobilization around ethnic identities and elite manipulation thereof. Empirically, the focus is on urban riots in Africa and Asia, in particular India and Indonesia (e.g., Horowitz 2001; Tajima 2014; Varshney 2002). In the mid-2010s, the second wave of civil war research, with its focus on subnational conflict dynamics, gave communal conflict research a new impetus and led to the emergence of the second cluster. The availability of fine-grained subnational data led to a wealth of predominantly quantitative research on rural communal conflict with a focus on sub-Saharan Africa. These studies are similar to the civil war literature in their use of country-level covariates or subnational geographic correlates (Wig and Kromrey 2018). Substantially, this research highlights the importance of resource scarcity and potentially climate change (e.g., Benjaminsen and Ba 2021), grievances over marginalization (e.g., Fjelde and Østby 2014), and the mediating effect of traditional and state institutions (e.g., Eck 2014; Mustasilta 2019; Petrova 2022; Tajima 2014).

I now turn to typologies that seek to bridge these four perspectives. To start, Schuberth (2015) differentiates the third actors based on their "predominant dimension" – that is, the political, security, or economic dimension — into militias, vigilantes, and gangs. This approach is close to the four theoretical perspectives reviewed above. Schuberth (ibid.) further argues that these groups can take on the nature of quasi-states if they operate at a certain scale: militias create warlord states, vigilantes para-states, and gangs criminal fiefdoms.

Two alternative typologies by Lacher (2020) and Terry and McQuinn (2018) classify the groups based on their organizational structure and their embeddedness in communities. I consider the combination of structure and community embeddedness an important contribution, and I strongly build on their ideas in the development of my own classification (cf. chapter 3.1.2). The typology by Terry and McQuinn (2018) has been published in a report by the International Committee for the Red Cross (ICRC) and is very comprehensive, i.e., it covers any type of armed group including government actors. This is not surprising considering that global humanitarian actors like the ICRC have to interact with a whole variety of non-state armed groups during their activities and need an understanding of the differences between these groups to inform their work. Specifically, Terry and McQuinn (ibid.) differentiate between integrated state armed forces, centralized non-state armed groups, decentralized non-state armed groups, and community-embedded armed groups. The criteria used for this classification are "the locus and type of authority; the nature of the hierarchy; the nature of discipline; and the degree of social isolation" (ibid., p. 23).

Lacher (2020) focuses on non-state armed groups and provides a classification of the social embeddedness of non-state armed groups based on two criteria: the centralization of the command structure and the permeability of the group's boundary. Based on this, the author identifies four ideal types of armed group embeddedness: social embeddedness, encapsulation, mobilization, and formalization (ibid., p. 107). The typology builds on a critique of the assumption that armed groups are discrete organizations with a clear distinction between members and non-members.

Finally, conflict datasets like UCDP and ACLED make use of their own typologies when coding the data. For armed groups, ACLED differentiates between state forces, rebel groups, political militias, identity militias, and external forces (Raleigh et al. 2010). The main criterion to differentiate them is the goal of the organization. For example, while rebel groups want to "counter an established national governing regime by violent acts," political militias seek "the furtherance of a political purpose [... but not] the removal of national power" (*ACLED Codebook* 2019). The UCDP dataset on non-state conflict issues and actors differentiates formally and informally organized groups based on the criterion of whether the group has an announced name (von Uexkull and Pettersson 2018b).

2.1.3 Limitations of the current state of research

I identify three main limitations in the current state of research. First, the focus on the micro-level has produced a wealth of new insights, but it remains unclear how the mechanisms and empirical observations from the micro-level relate to the macro-level. Second, the plurality of armed actors beyond states and insurgent groups has been more appreciated in the last ten years, spurring whole new research communities on militias and communal groups, for example. Yet, the relationships of third actors to each other and the interdependence of their behavior with the civil war have not received a lot of attention so far. Third, existing typologies for third actors are either too specific and cannot capture the whole universe of third actors in a comprehensive manner, or they face conceptual shortcomings.

To start with the first limitation, researchers have raised concerns soon into the second wave of civil war research that the novel research on micro-level processes tends to be too disconnected from the macro level. Already ten years ago, Balcells and Justino (2014) published a piece dedicated to the question of how micro- and macro-level approaches in civil war research can be bridged. They find that the literature "tended to focus on two extreme poles, the individual level (i.e., the micro level) and the societal level (i.e., the macro level), and it has generally overlooked the connections between them" (ibid., p. 1353).[3] Similarly, Cederman and Vogt (2017, p. 2008) urge that civil war research needs to find a "middle course between over generalized macro models and myopic micro investigations" (see also, Autesserre 2014; Pepinsky 2019).

This disconnection between the micro and macro levels is substantially problematic as it underestimates the impact of the macro level on the micro-level processes and vice versa. Put differently, the co-constitution of structure and agency is not sufficiently accounted for. In addition, exclusively focusing on micro-level results impedes the accumulation of knowledge because it is less clear how findings speak to each other and to which degree they generalize. This is especially the case for methods-focused causal identification designs with limited theoretical embeddedness. Yet, despite the outlined calls to overcome this problem, research on the link between the macro and micro levels remains limited.[4] For example, Kalyvas (2003, 2006) provides rich theoretical ideas about these linkages and the question of how local and interpersonal conflicts align with the civil war through master cleavages. Yet, while his work spurred a lot of research on the micro-level processes, far less has been done on the link between the levels.

The second limitation this study seeks to address is the lack of research on the interdependence between civil wars and collective violence involving third actors like militias and communal groups.[5] As I have shown above, third actors are either completely subsumed under the civil war or considered completely independent. The former is specifically the case for the literature on militias which sees the raison d'être of these groups

[3]For exceptions, see Berti (2020) and Tajima (2014).
[4]For an exception, see Tajima (2014).
[5]For exceptions, see Krause (2019) and Nussio and Howe (2016).

relative to the civil war parties: either the groups are fighting for the government or against the rebels (Aliyev 2019). For the literature on vigilantes and communal groups, this is almost the opposite as these groups are normally considered separately from the civil war (e.g., Fjelde and Østby 2014; Koos and Neupert-Wentz 2019). If anything, other conflicts are included as controls in the statistical models (e.g., Döring 2020).

I follow Kalyvas (2019, 2023) in arguing that a more integrated understanding of different types of political violence is needed to advance the conflict studies field further. In the case of communal conflicts, Brosché and Elfversson (2012) have already called for more research on the link between communal and state-based violence twelve years ago. Nonetheless, there is still only limited research on this question (Krause 2019). An exception are Krause (2019) and van Baalen (2024) and other recent research on the link between national and local level peacebuilding, which is reviewed below. The dearth of research on conflict-type links is likely the result of the compartmentalization of the research field in the distinct research communities outlined above (Brosché et al. 2023, p. 3).

I conjecture that the two limitations — first, the disconnection of macro- and micro-level research and, second, the lack of research on the interdependence of conflict types — are linked to each other. For instance, the lack of research on the link between communal conflicts and civil wars is probably a result of the more general pattern that micro-level findings are not reconnected to the macro level. I appreciate that the communal conflict literature sheds light on the link to the national level through the lens of patronage networks and the manipulation of local tensions through national elites, e.g., in the context of elections (e.g., Varshney 2002; Brosché 2014; Wild et al. 2018). However, this research rarely illuminates the interplay with other conflicts.

The third limitation is the lack of a parsimonious, yet comprehensive classification that can capture differences between armed groups within and across conflicts and theoretical perspectives. Not least, this would foster the accumulation of knowledge on these third actors. One problem with the existing typologies is that they are still relatively complex, in some instances theoretically inconsistent, or not fully theorized. For example, the UCDP distinction between formal and informal organizations is simple and comprehensive at the same time (von Uexkull and Pettersson 2018b). This is a promising approach, but the authors do not theorize this distinction and just provide the rule for the operationalization, i.e., whether the group has a name. This is in line with the authors' goal to provide a dataset, not a theoretical framework.

Lacher (2020), in contrast, provides a theoretically grounded typology on the level of social embeddedness of armed groups. Yet, the question remains open whether and how this characteristic translates to armed group types and how they would be labeled. Also, it is not ideal that the main concept and one of the types have the same label, i.e., social embeddedness. If social embeddedness is one specific type and formalization is the other extreme, the underlying theoretical dimension cannot also be social embeddedness. In addition,

most of the labels of the typology seem to describe processes (mobilization, formalization, encapsulation), while social embeddedness is a state. Processes seem less suitable for differentiating group types due to their dynamic nature. Despite of this, the work by Lacher (2020) is an important contribution by advancing our understanding of the organizational boundaries of armed groups.

Last but not least, the typologies by Raleigh et al. (2010) and Schuberth (2015) rely on the goals of the actors, which can be difficult to observe, shift rather quickly, and are not necessarily mutually exclusive (Otto et al. 2020).[6] The latter is problematic as typologies should aim for mutually exclusive categories (Collier et al. 2012, p. 225). Assuming that one goal of armed group typologies is to understand their behavior, it is also not self-evident that the goals of the group translate into distinct behavioral patterns, given that research shows that criminal groups engage in governance and militias can also clash with government forces, for example. Besides, groups with similar goals can vary widely in their organizational characteristics, which have direct implications for their tactics and behavior. I, therefore, propose that the goals of armed groups should be treated as an empirical question and are not a suitable basis for differentiating between types.

To sum up, I argue that the literature on armed conflicts neglects the question of interdependence: between different levels of analysis as well as between different types of conflicts and armed groups. This has to be seen against the background of the young age of the research field. The turn to micro-level processes and the recognition of the diversity of armed groups beyond the government-rebel dyad have been major advances in the last ten years. It is only against the background of this groundbreaking research that interdependence can now be taken into account. Notwithstanding, there is a more fundamental tension between the "fast-changing, and inherently endogenous" nature of conflict dynamics (Cederman and Vogt 2017, p. 2008) and the predominant theoretical and methodological models in conflict research, which seek to identify causal effects between independent and dependent variables. The standard quantitative methods on observational data assume independence between observations and unidirectional causality, which is rarely given (Chen 2021; Cranmer and Desmarais 2016). Similarly, the trend to prioritize causal identification and related methods leaves little room for inherently endogenous processes of co-constitution and the underlying mechanisms. I therefore turn to three promising approaches in the field of conflict studies which put the issue of interdependence center-stage.

[6] To be precise, Schuberth (2015) talks about dimensions rather than goals. It remains somewhat unclear, however, what dimension means here, how it is different from goals, and how the simultaneous presence of economic and political dimensions, for example, is accommodated.

2.2 Existing approaches to the interdependence of internal armed conflicts

Research on interdependence in internal armed conflicts has been driven by two related empirical phenomena: the fragmentation and complexity of contemporary conflicts in Syria, Libya, and the DRC, to name a few, and the lack of effectiveness of peacebuilding and peacekeeping interventions in these settings. I identify three overlapping approaches to deal with this complexity in the literature. First, conflict resolution scholars and practitioners scrutinize the link between national and local conflicts to understand how interventions at one level affect the other. Second, research on the contentious and cooperative relationships between rebel groups draws attention to the importance of non-violent relationships and the indirect effects they can have. Third, scholars adopt a social network lens to fully appreciate the complex nature of these fragmented conflicts. I build on the latter by adopting a network analysis approach and enriching it with insights from the former two perspectives.

2.2.1 Links between the national and the local in peacebuilding research and practice

Scholars and practitioners in the peacebuilding field seek to understand how national and local conflicts mutually (de)stabilize each other and the consequences thereof for peacebuilding. Doing so, they build on insights from communal conflict research. Besides the empirical necessity of improving the effectiveness of peacebuilding, this research is associated with the so-called "local turn" in peacebuilding research and practice (e.g., Hellmüller 2018; Mac Ginty and Richmond 2013). The local turn is based on a critique of the dominant liberal peace paradigm, which targets national-level institutions following the imperative to (re)establish a Westphalian nation-state (Palmiano Federer 2019; Stepputat 2018).

The language around national and local conflicts is somewhat different from the civil war and communal conflict terminology used in the contributions reviewed above. In my understanding, these different terms mean similar things: national-level conflicts are civil wars fought over political control with the national governments, and local conflicts are fought over parochial issues between communities. The national-local terminology of this research strand is rooted in the liberal peace discourse prioritizing the national level and the peacebuilding practice community, which is organized around administrative levels of nation-states as well as peace process tracks, corresponding to the level of the involved stakeholders. For example, Track I peace processes are those involving the national elites (Lederach 1997; von Burg and Nagui 2018).

A central debate is the question of how national-level agreements and local peacebuilding relate to each other. In particular Autesserre (2010) has accelerated the discussion through her criticism of UN peacebuilding

efforts in the DRC. She argues that national and local conflicts mutually influence each other and that, hence, local conflicts have to be addressed in any peacebuilding effort. Her perception that local conflicts are unduly neglected is shared by scholars (Odendaal 2013; Manning 2003) and practitioners (O'Bryan et al. 2017; Gorur and Vellturo 2017). Some practitioner-oriented publications go even further and point to the potential of local agreements as a nucleus for national-level peace (e.g., Cavendish 2018; Wise et al. 2019). Yet, Piccolino (2019) and Krause (2019, p. 490), among others, caution that national peace agreements, or elite pacts, might be the pre-requisite for local peace. Brosché and Duursma (2018) and Duursma (2022b) add nuance to this debate by elaborating how the effect depends on how the actors at the local, national, and international levels relate to each other within and across levels.

This debate is directly related to the question of how national and local conflicts are linked, as this has implications for peacebuilding efforts. So far, research in this regard has mostly focused on the escalatory effects of national-level conflicts on local ones. It is argued that local conflicts turn violent because of the externalities of the national-level conflict. Related arguments rest on the assumption that national and local conflict parties are part of the same political, economic, and social system (Krause 2019, p. 483; Odendaal 2013, p. 32). One such externality is the destabilization of state authority, including at the local level, which creates security dilemmas in local settings (Krause 2019; Hazen 2013). As a response, communal groups become militarized, and simmering disputes escalate violently (Autesserre 2010). Weapon proliferation due to national-level conflict enhances such dynamics (Gray and Roos 2012; Krause 2019). Lastly, national-level conflict is assumed to lead to internal displacement, causing or exacerbating land conflicts between communal groups (Brosché and Elfversson 2012; Gray and Roos 2012; Hazen 2013).

Moreover, the formation of alliances between local and national-level actors is identified as a transmitter of conflict escalation from the national to the local level. Noteworthy, while authors from practitioner and gray literature emphasize that these alliances take place between armed groups (e.g., O'Bryan et al. 2017; Kleinfeld 2018; Samuel 2020b), many academic scholars rather focus on the links between the local groups and national elites (e.g., Autesserre 2010; Brosché 2014). For the latter, it can remain unclear whether these national elites include armed groups. I assume that this results from the dominant narrative in the communal violence literature emphasizing the role of manipulating political elites (e.g., Cavendish 2018; Brosché and Elfversson 2012). When local and national armed groups enter into alliances, this is usually described as military support: local groups are armed and trained (Autesserre 2010, p. 168). It enables the local groups to pursue their own agenda, and the armed groups gain influence on the ground as well as new recruitment bases (Autesserre 2010, p. 168; Kleinfeld 2018).

In contrast, far less is known about the de-escalation of local conflicts in the context of national-level conflicts. Peacekeeping research suggests that peacekeeping missions can curb violence in local conflicts even if they have originally been deployed to address the national-level conflict (e.g., Smidt 2020; O'Bryan

et al. 2017, p. 20; Boutellis et al. 2020). For example, Duursma (2022a) demonstrates that peacekeepers can facilitate the conclusion of local ceasefires through mediation and security provision. Recent work by van Baalen (2024) furthermore shows how rebels in Ivory Coast established law and order institutions in the area under their control, thereby preventing the violent escalation of communal conflict. Anecdotal evidence from other cases in sub-Saharan Africa supports this idea (Assanvo et al. 2019; Duursma and Gamez 2023).

The peacebuilding literature provides important insights into the repercussions of civil wars on local conflicts and eludes to potential mechanisms. However, I see two limitations in the current research. First, the outlined mechanisms remain relatively vague and generic, lacking an overarching framework that explains how and under which conditions these mechanisms are at play. This impression is shared by, among others, Brosché and Elfversson (2012) and Krause (2019), who call for more research on the impact of civil war on communal violence, and vice versa. For example, little empirical research exists on what shapes the incentives of national-level armed groups to enter into alliances with local groups and which ones they choose.

As a result, variation in the links between conflicts and the effects of civil war cannot be explained well. For example, weapon proliferation due to the civil war has been identified as contributing to an increase in local conflicts. Yet, weapon proliferation is a structural factor, and it is unclear where, when, and under which conditions it creates this effect. In some way, the research community switched from one extreme — the neglect of local conflict — to another — a generalized assumption of interwovenness. As Gorur and Vellturo (2017) point out, national and local conflicts *can* be interrelated but not all of them are.

The second point of critique is the reliance on the notion of the national and local levels. It is noteworthy that most scholars struggle to provide a positive conceptualization of the local, i.e., to provide a definition that goes beyond defining the local as non-national (Krause 2019, p. 479). In other cases, the definition of local remains rather tautologically, i.e., local is defined as subnational and vice versa (e.g., Gorur and Vellturo 2017) or as involving local actors and issues (Wise et al. 2019, p. 2; Pospisil 2019, p. 3).[7] This lack of a positive definition is rooted in the concept's relative nature. Specifically, the term local only has a meaning relative to something else in its totality. For example, local staff can be employees from a specific city for a Non-Governmental Organization (NGO) operating in one country or employees in a specific country in the context of international organizations.

Common to all definitions is the reliance on a scale-based notion that understands the national and the local as spatial or administrative levels (cf. Svoboda et al. 2018; Williams 2016; Manning 2003, p. 26). While the idea of spatial scales can be a useful analytical lens, it is often understood as describing ontological differences between conflicts, issues, and actors. This leads to a compartmentalization of conflict activities, issues, and actors, implying that they could be assigned exclusively to either level (see Williams 2016; Gorur

[7] For an exception, see Williams (2016, p. 44), who defines the local as "Relations between individuals and their immediate (sub-state) politico-geographic context."

and Vellturo 2017; Cox 2014, p. 140, for a discussion of this problem). This is a misleading perception considering that all violence materializes in the local (Aas Rustad et al. 2011) and that national actors can have stakes in local conflicts, especially in their communities of origin (Autesserre 2010). From this perspective, they do not only mobilize local actors in their struggle but are local *and* national actors at the same time. Furthermore, the notion of layers can imply that the local is nested in and hence determined and constrained by the national. Yet, the relationship is more complex, and the national and local constitute each other as part of one system (Angerbrandt 2011, p. 16; Odendaal 2013, p. 32). This is even more so the case in settings with weak state institutions, which are less well captured by the local-national dichotomy (see Williams 2016; Gorur and Vellturo 2017; Cox 2014, p. 140).

2.2.2 Direct and indirect relationships between rebel groups

With the second wave of civil war research, a new body of research emerged on the contentious and cooperative relationships between armed groups, mostly rebels, as well as on their extra-dyadic dependencies, i.e., the question of how they indirectly influence each other's behavior. This research is informative because it highlights the coexistence of a multitude of groups and their shifting relationships as observed in many contemporary conflicts. Accordingly, contributions on this topic emphasize the fragmentation, complexity, and system-like nature of these conflicts (e.g., Carboni and Moody 2018; Schricker 2017).

Against this backdrop of conflict fragmentation, scholars investigate when armed groups enter into direct relationships with each other, that is, when they fight and when they cooperate.[8] Cooperation and confrontation can be considered as two sides of the same coin, and explanations for one behavior imply explanations for the other. The concept of side-switching is used to describe changes in this behavior (e.g., Otto 2018; Seymour 2014). Cooperation is usually understood narrowly as being part of the military realm, including the formation of alliances, exchange of weapons and information, or joint attacks (e.g., Christia 2012; Cunningham et al. 2012; Topal 2024). An exception is Berti (2020) who highlights the cooperation of rebel groups in providing governance. Topal (2024, p. 4) identifies three main types of explanations for adversarial and cooperative relationships between armed groups: rational choice, ideology, and socio-organizational.

Rational choice explanations assume that the armed groups seek to optimize their military position in the conflict (e.g., Akcinaroglu 2012; Fjelde and Nilsson 2012; Nygård and Weintraub 2015). For example, this logic is captured by the concept of the minimum winning coalition, developed by Christia (2012). With regard to ideology, the basic tenet is that groups with the same ideology are more likely to cooperate while groups with ideological differences fight each other (e.g., Balcells et al. 2022; Blair et al. 2021; Gade et al. 2019a). However, Christia (2012) argues that ideology only matters for within-group relationships, and Phillips (2019)

[8]See, for example, Duursma and Fliervoet (2021), Fjelde and Nilsson (2018), and Schubiger (2023) for explanations of why conflicts or armed groups fragment in the first place.

proposes that groups with the same ideology still fight each other since they compete over the same resources and constituencies (see also, Cunningham et al. 2012). Socio-organizational explanations concentrate on the organizational characteristics of rebel groups (e.g., Otto 2018). One example is the work by Staniland (2012a), who argues that competition between insurgent factions of the same movement pushes the groups to use violence against each other. With regard to cooperation, Topal (2024) points out that the embeddedness of rebel groups in relationships with civilians and external sponsors shapes the type of cooperation they adopt.

The contributions reviewed focus on direct relationships between armed groups. More recently, research on the indirect effects of relationships and the interdependence of armed group decision-making — that is, extra-dyadic dependencies — has gained traction. Related research is not a coherent strand, however, but rather a particular perspective that is applied to various empirical phenomena. The common denominator between these contributions is the assumption that the behavior in one conflict dyad will shape the strategic considerations of other actors. Scholars show that this has implications for the onset of new conflicts (e.g., Bormann and Hammond 2016; Fjelde and Nilsson 2018; Lane 2016), their termination (e.g., Cunningham 2006; Akcinaroglu 2012), the likelihood of government concessions (e.g., Forsberg 2013), and battlefield decision-making (Cremaschi et al. 2020; Uzonyi and Reeder 2023).[9] For example, Pischedda (2018) demonstrates how the behavior of the government can open up a window of opportunity for rebel groups to engage in infighting. Finally, the work by Carboni and Moody (2018) is especially innovative because the authors integrate the idea of extra-dyadic dependencies with the level-thinking introduced in the previous section.

In conclusion, this literature provides valuable insights for this study by emphasizing the dynamic nature of armed group relationships and the importance of cooperative relationships — hence moving beyond violent conflict. Notwithstanding, most related contributions restrict the focus on groups directly involved in the civil war, and it is less clear whether and how these insights can be applied to the relationships between the civil war parties and third actors, including those that are less militarized like communal groups and vigilantes. Similarly, it remains open to how the interdependence between rebel groups translates into the interdependence of different types of conflicts.

In addition, conflict fragmentation, and complexity have insufficiently been conceptualized (Brosché et al. 2023). Conflict fragmentation is usually equated with the fragmentation of rebel groups or opposition movements (e.g., Bakke et al. 2012; Cunningham et al. 2012; Gade et al. 2019b). With regard to conflict complexity, Brosché et al. (2023) claim to be the first to provide a comprehensive definition, differentiating between actor, issue, and behavioral complexity. The aforementioned authors contend that there is a mismatch between the frequent references to complexity and the implementation of the concept in the theories and

[9] Extensive research exists on the spatial diffusion of violent events (e.g., Hammond 2018; Schutte and Weidmann 2011; Zhukov 2012) but this perspective is less relevant here due to my focus on interdependence between actors and conflicts, not events.

methods of conflict research. One challenge is that complexity is often perceived as a state or given condition rather than as the result of multiple, interacting processes. Therefore, I turn to the small but growing research community applying SNA to internal armed conflict. Social network scholars widen the focus beyond the civil war parties and leverage methodological tools more suitable to capture the much-cited system-like nature of armed conflict.

2.2.3 Conflicts as social networks

The fragmentation of internal conflicts, in some cases involving hundreds of different armed groups, gave rise to research adopting a SNA lens to understand how these many groups relate to each other and shape each other's behavior. Accordingly, these analyses build on cases like Syria (e.g., Gade et al. 2019a,b) or the DRC (e.g., König et al. 2017). Similar to the literature on rebel group relationships, network analysis research can take cooperative and violent relationships into account (e.g., König et al. 2017; Walther et al. 2020). In contrast to research on rebel group relationships, however, SNA of internal conflict usually have a more comprehensive perspective on the involved actors. They investigate internal conflicts in their totality of intertwined state-based and non-state conflicts, moving beyond government-rebel constellations.

The major innovation compared to non-network research is the development of formal arguments on extra-dyadic dependencies and their quantitative modeling. As Dorussen et al. (2016) points out, the adoption of dyadic models in conflict research was an important advancement in dealing with the relational nature of conflict. Yet, most dyadic quantitative analyses of conflict assume that the included dyadic observations are conditionally independent, which is questionable for armed groups fighting in the same country (Cranmer et al. 2012; Cranmer and Desmarais 2016).

Network analysis is a well established approach in the natural sciences and sociology, where it has been used since the 1960s (Dorussen et al. 2016, p. 284), but it is not a mainstream approach in conflict studies. If network analysis is used, it is mostly applied to inter-state conflicts and alliances rather than internal conflicts (e.g., Böhmelt 2009; Dorussen and Ward 2010; Maoz et al. 2006). For example, the Journal for Peace Research published a whole special issue on Networked International Politics (Dorussen et al. 2016). This is not surprising considering that the idea of an international *system* is a salient notion in International Relations. Similarly, terrorism studies made use of network analysis because it fits well to the conceptual importance of network structures for terrorist organizations (Asal et al. 2016; van der Hulst 2014; for reviews, see Larson 2021; Zech and Gabbay 2016).

The notion of complex systems is a related approach that has been developed in the natural sciences to deal with large systems characterized by nonlinearity, feedback effects, and hierarchical levels, among others (Ladyman et al. 2013). Complex systems as a conceptual and methodological lens are usually not applied

to conflict networks, probably also because conflict networks are comparatively small. An exception is the work by Brosché et al. (2023), Day (2022), and Day and Hunt (2023). That neither SNA nor complex system approaches are widely applied to internal conflicts can be explained by the fact that these are not mainstream methods taught in political science programs. Scholars can, therefore, lack the "confidence in or familiarity" with the related methods to use it in their own work (Gross and Jansa 2017, p. 195).

It has only been ten years since Metternich et al. (2013, p. 892) have claimed to be the first scholars "applying a theoretically and empirically integrated network analysis approach to the study of civil conflict." Since then, network analysis has been used by a small community (e.g., Gade et al. 2019b; Dorff et al. 2020; Walther et al. 2020).[10] The existing studies usually assume that the armed groups are the nodes of the network that are connected through violent or cooperative relationships.[11] Scholars have used the network structure as outcomes and as explanatory variables alike. Using the network structure as an outcome, scholars seek to explain the emergence of these networks, for instance, by asking who fights who or who cooperates with whom (e.g., Gade et al. 2019a,b). Using the network as an explanatory variable, they focus on the implications for the behavior of armed groups, especially, how much fighting effort they invest (e.g., Franke and Öztürk 2015; König et al. 2017; Metternich et al. 2013) or when they attack civilians (e.g., Dorff et al. 2022). Again differently, other studies seek to understand the development of networks over time (e.g., Dorff et al. 2020).

Network analysis is a fruitful approach to gaining a comprehensive perspective on internal conflicts and their interdependent dynamics. Interdependence beyond dyads lies at the heart of the research on conflict networks. By contrast, I see two limitations in the current use of SNA in conflict studies. First, most studies assume that all actors are homogeneous without differentiating between types of armed groups or conflicts (Chen 2021, p. 383). For instance, Dorff et al. (2020) and Walther et al. (2020) use networks that involve any armed group active in a certain geographic area. This risks overlooking major heterogeneity in the behavior of rebels and communal groups, for example. By ignoring differences across actors, the network approaches cannot (and do not want to) explain how different conflict types, like civil war and communal conflict, influence each other. Second, research on conflict networks is primarily methods-oriented. Not least due to the dominance of quantitative methods, little is known about the mechanisms that produce the outcomes of interest. For example, Dorff et al. (2020) find that violence in the Nigerian conflict network increased after Boko Haram had entered the network, including between many actors that are not directly related to the Boko Haram conflict. Yet, the authors cannot provide an explanation for this puzzling observation.

To conclude, the existing research on the link between national and local conflicts, contentious and

[10] This statement refers to the use of SNA as a theoretical *and* methodological approach. Earlier research highlighted the importance of social networks for mobilization in civil war, for example, but did not use SNA in the narrow sense of quantitative analysis (e.g., Fujii 2009; Parkinson 2013; for a review, see Larson 2021).

[11] An exception is the work by Themnér and Karlén (2020) who focus on the ego networks of ex-combatants.

cooperative relationships of rebel groups, and conflict networks provides highly valuable theoretical insights and methodological strategies to study the interdependence of internal armed conflicts. At the same time, each approach has its specific limitations. I thus develop an original theoretical framework that leverages their strengths in a complementary manner and evens out the respective limitations. Methodologically, I employ a mixed-methods SNA to bring the structural perspective together with insights into the underlying mechanisms. This way, I seek to contribute to the advancement of the third wave and shed light on the question of how civil wars influence other types of conflicts and vice versa.

2.3 Contributing to the advancement of the third wave

Research on internal armed conflicts has burgeoned since the early 2000s as a distinct research field nourished by insights from International Relations and Comparative Politics. Building on the tremendous advancements during the last 20 years, I identify three limitations of the current state of research: the disconnection of micro- and macro-level research, the unclear relationship between third actors and civil wars, and the lack of a comprehensive yet parsimonious classification of third actors. Following other scholars in the emerging third research wave of civil war research, I want to address these limitations by illuminating the interdependence between the macro and micro levels as well as between different types of conflict. To do so, I bring key insights from this literature review together in one theoretical framework.

I adopt SNA as the base of my conceptual framework and theoretical argument. Network analysis is suitable for my research question for four reasons. First, network analysis puts the focus on relationships and interactions between actors, rather than on the aggregation of actor attributes. This focus fits well with the dynamic and interactive nature of armed conflict. Second, network analysis rests on the idea that structure and agency co-constitute each other (Pantic et al. 2023). The assumption is that the structure, or patterns of relationships, constrain and enable the behavior of the actors but that this very behavior changes the structure. This makes network analysis suitable for illuminating the link between the macro and micro levels in conflicts. Third, network analysis is a theoretical and methodological approach specifically developed to deal with extra-dyadic dependencies. It is, hence, ideal to grasp the complex interdependencies in multi-actor conflicts. Fourth, network analysis is a flexible framework. Instead of assuming that conflicts are either separate or closely intertwined, varying degrees of integration can be captured, e.g., by identifying network clusters. Accordingly, actors do not need to be assigned to one conflict a priori. This is a key advantage in comparison to frameworks building on the distinction between the national and local levels, for example.

At the same time, I enrich the network perspective with insights from the other research strands. For one, conflicts are heterogeneous with regard to the involved actors and their behavior. I build on the existing research on third actors to differentiate groups based on their organizational characteristics. Moreover,

conflicts are shaped by many different interactions, not only violence. I, therefore, build on the literature on armed group relationships to include cooperation in my framework as another crucial relationship. Lastly, the literature on the link between national and local conflicts provides important insights into the mechanisms that link civil wars to conflicts between informal groups, e.g., the emergence of security dilemmas. Integrating these substantial arguments allows me to explain empirical patterns that previous, more inductive network analyses have identified (in particular Dorff et al. 2020; Walther et al. 2020).

To conclude, the study allows me to make three contributions to the literature. To start, I propose a theoretical argument on the interdependence of civil wars and conflicts between informal groups that explains spatiotemporal variation in this relationship. By doing so, I advance the mostly methods-oriented SNA of conflicts theoretically. I combine structural features of the country-level conflict network with existing knowledge of the micro-level behavior of non-state armed groups. The second contribution is a novel parsimonious classification of non-state armed groups as formal and informal, which still appreciates fundamental heterogeneity in their organizational structure. By providing a framework that comprehensively captures non-state armed groups, I hope to facilitate the accumulation and integration of knowledge on armed groups in internal conflicts, which is currently compartmentalized in research communities on militias, vigilantes, and communal groups. Last but not least, I make an empirical and methodological contribution by applying and refining the theoretical framework in a mixed-methods SNA of the Nigerian case. To the best of my knowledge, this is one of the first mixed-methods SNA with graphic elicitation in the field of empirical conflict studies (for another example, see Stys et al. 2022).

Chapter 3

Theoretical framework

How do civil wars and conflicts between informal armed groups influence each other? This research question has a structural and a procedural dimension: how does the structure of the respective conflicts change as a result of their mutual influence, and what are the underlying processes producing this change? To answer this question, I propose that all conflicts taking place within the boundaries of the same nation-state are integrated into one overarching conflict network – instead of being separate entities. The conflicts manifest themselves in social space as clusters of this network and in geographic space as conflict zones. Furthermore, I introduce a parsimonious classification of non-state armed groups as formal and informal. This allows me to capture heterogeneity in the dynamics of these interconnected conflicts while keeping the complexity of the framework tractable. The classification is based on three organizational dimensions of armed groups: structure, identity, and membership. The novel classification addresses a shortcoming of many conflict-related network analyses, namely that all non-state armed groups are assumed to behave in the same way (cf. literature review chapter 2.2.3). Based on these conceptual assumptions, I propose an argument on the interdependence of civil wars and conflicts between informal groups that emphasizes (1) the importance of the resource allocation by the government, (2) this resource allocation's implications for the behavior of the informal armed groups, and (3) feedback effects within and across conflicts.

In a nutshell, I argue that the outbreak of a civil war has spatially contingent, countervailing effects on conflicts between informal armed groups: conflict severity and fragmentation increase outside the civil war conflict zone but remain limited within. This spatially contingent effect is rooted in the prioritization of the civil war when the government allocates its resources. Within the civil war conflict zone, the increased regulation of community life by the civil war parties or its disruption due to high-intensity violence lowers the incentives to use violence for informal armed groups. Outside the civil war conflict zone, the sudden withdrawal of the state creates a power vacuum that leads to the escalation and fragmentation of conflicts

between informal groups. An overview of this argument is provided in Figure 3.1.

The outlined developments create feedback effects for the entire conflict network, within and across conflicts. Within the conflicts, the dynamics are self-reinforcing: In the civil war zone, the regulation and disruption of community life strengthen the formal armed groups, further lowering conflict severity and fragmentation. Outside the civil war zone, the power vacuum gives rise to a security dilemma, increasing conflict fragmentation and severity further. Across conflicts, the escalation and fragmentation of informal group conflicts outside the civil war zone offer the formal armed group involved in the civil war an opportunity to expand. At the same time, it increases the resource pressure on the government. Overall, my argument suggests that the civil war outbreak sets in motion multiple interacting and non-linear processes that, at least in the short term, strengthen formal and informal armed groups while weakening the government.

Source: Own figure.

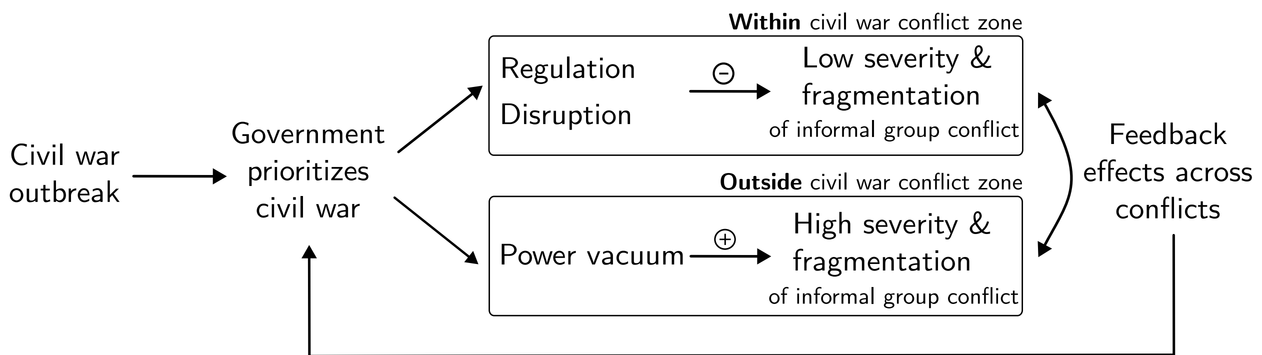


Figure 3.1: Overview of the theoretical argument

This study focuses on the short-term ripple effects of civil war outbreaks on the conflict network. The scope of the argument is contexts in which a civil war occurs, i.e., in which at least one formal group and the government fight with high-intensity violence over formal political power. For my argument to be applicable, the central government needs to be a relevant actor. I consider governments relevant if they have a "clear and continuous priority as wielder of force" (Tilly 1999, p. 181), notwithstanding if they are challenged violently in this priority. This means I exclude cases of state collapse like Libya or Somalia. Furthermore, two necessary conditions need to be given for the outlined argument to be at play at the subnational level: resource competition and limited or no access to conflict management mechanisms. The argument is particularly relevant — but not restricted to — settings in which the state is weak in terms of capacity and/or legitimacy (but still relevant) (Nussio 2023). The chapter proceeds in three steps: I first introduce the conceptual framework, including the distinction between formal and informal armed groups. Then, I develop the argument on the interdependence of civil wars and conflicts between informal groups. I conclude by introducing seven alternative explanations.

3.1 Conceptual foundations

The starting point of this study is the assumption that all internal armed conflicts that take place within the boundaries of the same nation-state are part of one overarching conflict network (cf. Brosché et al. 2023, p. 5). Combining and adapting conceptual elements from definitions by Wallensteen (2007) and Kalyvas (2006), I define internal armed conflicts as "a social situation in which a minimum of two [armed groups violently] strive to acquire at the same moment in time an available set of scarce resources" (Wallensteen 2007, p. 15) and in which the armed groups were "subject to a common authority at the outset of the hostilities" (Kalyvas 2006, p. 17). I understand resources in a broad sense ranging from tangible goods like raw material and land to intangible goods like access to institutions and political power. Internal conflicts can involve the government and at least one non-state armed group or non-state armed groups only. I further assume that the actors relate to each other through adversarial and cooperative relationships.

3.1.1 The state as the nominal regulator of social behavior

A state is an organization, consisting of various agencies and coordinated by the government as the executive authority, that strives for the creation of order and a monopoly on violence within its territory (Migdal 1988, p. 19).[1] The *aspiration* for the monopoly on violence does not mean that states are successful in achieving it as it is assumed in a Weberian model (Weber 1978). De facto, the state is in constant competition with other non-state actors and the monopoly on violence is nominal rather than substantial (Müller-Crepon et al. 2020; Pierskalla et al. 2019). Some states exercise control indirectly, e.g., by outsourcing violence to pro-government militias (Tapscott 2023, p. 211; Carey et al. 2013). Yet, no matter its internal practice and functioning, the state is recognized as a building block of the international system, and the state's aspiration for a monopoly has ipso facto consequences for its behavior. I further assume that governments, as the executive authority, adopt the goal to create order within the state territory and — by and large — act towards achieving this goal and ultimately preserving the state. The motivation of the government officials to do so can include values, nationalist beliefs, maintaining international recognition, and securing their own political survival (Bueno de Mesquita et al. 2003).

The creation and maintenance of order have an external and internal dimension (Tilly 1999). Externally, it requires protection against attacks by outsiders. Internally, it requires the ability of the state to regulate the behavior of its citizens, which is defined as influencing "social behavior by means of rules" (Nussio 2023, p. 6). In line with the aspired monopoly on violence, the state seeks to be the "ultimate arbiter of behavior within a polity" (Sambanis and Schulhofer-Wohl 2019, p. 9). Regulation means setting rules and ensuring their

[1] Note that I take the state as given and do not theorize how and why it historically emerged as an organization. Important is that practically all societies are, to some degree, exposed to a state.

implementation by minimizing rule transgressions. I assume that there will always be a pool of individuals or groups willing to transgress rules for their own advantage — no matter how strong the internalization of rules due to socialization and education is (Tajima 2014, p. 7; Nussio 2023). Even if the rule transgressions do not directly oppose the state, they undermine the government's claim to rule. The government has three options to minimize transgressions: prevent them through the adjudication of disputes, stop them through immediate enforcement of the rule, and punish them through prosecution. The latter two require the use of coercive resources, which are tangible and limited.

Non-state armed groups can also seek to establish order and, by extension, regulate behavior. The creation of order can be part of a political project competing with the state or for more pragmatic considerations like access to resources and preventing collaboration with the enemy (Mampilly 2011; van Baalen 2024). Yet, there are three main differences between the government and non-state armed groups. First, the territory in which the government wants to establish order is most often congruent with the territory of the nation-state. Recall that this is about the government's aspiration rather than its empirical performance. This can be the case for non-state armed groups too, but it is not necessarily so. Non-state groups might seek to control a smaller territory within the state territory or a transnational territory overlapping with other states.

Second, the state has the legal right to regulate behavior (Nussio 2023, p. 9), which, in combination with international recognition, creates access to resources and privileges that non-state actors do not enjoy. This includes the eligibility to take on foreign debt or to enter into military alliances. Third, due to these privileges, governments tend to have higher capacity than non-state armed groups and can project their power more easily across the state territory.[2] Specifically, security agencies in charge of executing violence for the government are under one integrated command structure, mobile throughout the state territory, and can extend the coercive resources over long distances, for example by using air power. In contrast, non-state armed groups usually have a smaller operative radius due to their limited capacity and reliance on civilian support networks. This said, non-state armed group is a very heterogeneous category. I now introduce more nuance by distinguishing non-state armed groups according to their formality.

3.1.2 Distinguishing formal and informal non-state armed groups

Many contemporary conflicts are complex in the sense that they consist of a multitude of different actors that are connected through shifting relationships. To deal with this complexity, I introduce the distinction between formal and informal non-state armed groups based on their organizational characteristics.[3] This distinction provides analytical leverage to capture a key source of heterogeneity in armed group behavior. At

[2] I acknowledge that there are exceptions to this pattern in extremely weak states like South Sudan.

[3] My use of the term informal armed group is different from the concept of informal militias as introduced by Carey et al. (2013). In their framework, formality applies to the relationship between the militias and the state, not the organizational features of the militias.

the same time, it is parsimonious enough to make the theoretical and empirical analysis of complex conflicts tractable. A typical example of formal groups are military-like insurgent groups like the FARC and the Liberation Tigers of Tamil Elam (LTTE) (Gutiérrez Sanín and Giustozzi 2010; Terry and McQuinn 2018). A typical example of informal groups are Javanese and Gayo self-defense groups in Indonesia (Barter 2013) or local militias that emerged in Libya after the ousting of Qaddafi (Lacher 2020).

Aiming for a parsimonious approach addresses the observation by Schuberth (2015) that, in the academic literature, similar informal groups are often artificially divided into militias, vigilantes, and gangs, depending on the theoretical angle. Figure 3.2 shows how some of the existing armed group types map on my binary distinction. My classification focuses on the organizational features of the groups rather than their offensive/defensive behavior or goals (e.g., Higazi 2008, p. 119; Krause 2018, p. 47). Both can shift quickly, overlap, and be difficult to observe. The offensive/defensive distinction is problematic because it often implies a normative evaluation. Also, Higazi (2008, p. 123) conjectures that the distinction might be "rather a semantic than an actual difference." In contrast, organizational characteristics are stickier and relatively easy to observe. I will return to the question of how goals and armed group types are related to each other in the next section.

Source: Own figure.

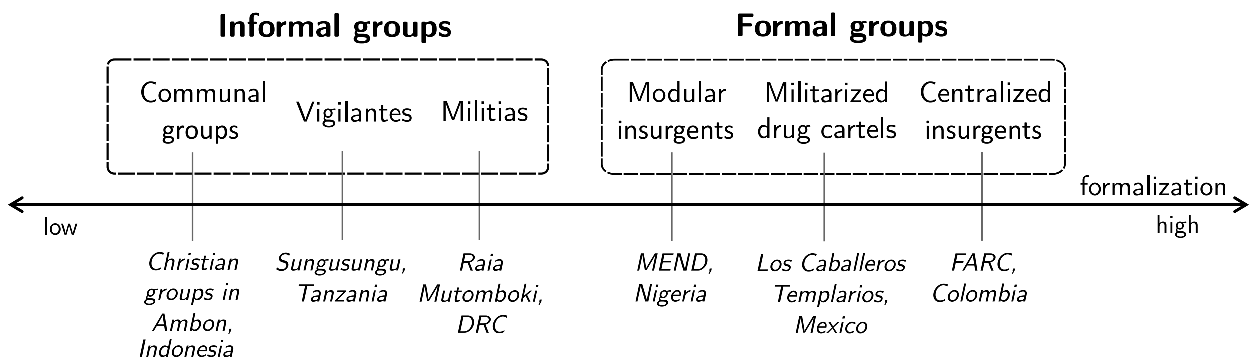


Figure 3.2: Mapping armed group examples on the formal/informal distinction

Building on existing typologies of armed groups and inductive insights from the case study, I propose that the formality of non-state armed groups can vary along three organizational dimensions: structure, identity, and membership. I define non-state armed groups as formal if they have stable and depersonalized structures, explicitly identify as an *armed* group, and/or have non-permeable boundaries, i.e., there is a clear distinction between combatants and civilians. Table 3.1 provides an overview of the three dimensions, the respective attributes, and a non-exhaustive list of indicators. Armed groups are broadly defined as autonomous groups that dispose of weapons to advance group-related objectives. This definition excludes spontaneously formed groups, which emerge for single events, e.g., during riots or lynching.

Dimension	Attribute	Possible indicators
Structure	Stable, depersonalized structures	Generic names of organizational positions; clear and hierarchical division of roles; group structure endures over longer periods of time, including leadership change
Identity	Explicit self-identification as an armed organization	Use of a specific name for the armed group; use of uniforms and symbols
Membership	Non-permeability of organizational boundary	Full-time mobilization; distinction of civilians and combatants; social and spatial isolation of fighters

Table 3.1: Attributes to differentiate formal and informal armed groups

The first attribute describes whether the group has a stable hierarchy and division of roles (Gutiérrez Sanín 2019; Gutiérrez Sanín and Giustozzi 2010). In formal armed groups, the roles have generic labels and are not tied to specific individuals. As a result, the structures tend to be stable during leadership transitions. Importantly, a stable, depersonalized structure is not the same as a centralized structure. An organizational structure can be depersonalized and stable and at the same time decentralized, for example in a cell-like structure (Johnston 2008). In contrast, informal groups have a more fluid command structure and can depend on certain personalities (Krause 2018, p. 31).

The second attribute captures whether the group has an explicit identity as an armed group, which is distinct from their community or ethnic identity. Formal armed groups explicitly identify themselves as armed organizations, using group names, uniforms, and other symbols, whereas informal armed groups do not. This criterion is prominent in the communal conflict literature, describing communal groups as “informal organizations without announced names” (Petrova 2022, p. 4; similarly, Brosché and Elfversson 2012). UCDP uses the name as a key criterion to differentiate between formal and informal groups in non-state conflicts (von Uexkull and Pettersson 2018a,b).

Finally, the permeability of the organizational boundaries describes whether an organization is a discrete entity separate from its community of origin (Krause 2018; Lacher 2020). Members and non-members are clearly distinguishable. With informal groups, the boundaries are permeable and there is no clear separation between members and non-members and, accordingly, between civilians and combatants (Krause 2018, p. 21). Members are mobilized part-time and continue living in their community. This is different in comparison to formal armed groups, whose members prioritize their organizational ties over their social relationships to their communities of origin (Lacher 2020). This does not rule out that they maintain close support relationships with these communities, however. Permeable boundaries are frequently mentioned for anti-rebel militias and civilian defense groups (Barter 2013; Clayton and Thomson 2016; Jentzsch 2022). One implication is that

these groups are less mobile geographically (Clayton and Thomson 2016).

I use family resemblance as the connecting logic between these three attributes. The classification into formal and informal groups describes ideal types and thus encounters the so-called gray zone problem, i.e., the problem that many empirical cases do not fit as neatly into this classification as the FARC and the Javanese self-defense groups (Goertz 2006, p. 29). Family resemblance addresses this issue and allows to obtain a sufficiently large extension to capture the full variety of armed groups.[4] Family resemblance means that organizations do not have to fulfill all three attributes in order to be classified as either formal or informal but only two of them (ibid., p. 36). Consequently, an organization is considered formal if it meets at least two of the three attributes, while an informal group lacks these attributes or has no more than one. As a result, formal armed groups share many similarities in pair-wise comparison but no single attribute is necessarily shared among all of them (Davis 2005, p. 32; Goertz 2006, p. 29).

Armed groups can transition between the two categories over time. For example, informal groups at the communal level might turn into formal insurgent groups challenging the state, as observed in Nigeria's Niger Delta (Ebiede 2017b). The FORGE project by Braithwaite and Cunningham (2020) aims to trace precisely such developments by including pro-government militias and ethnic groups as the predecessors of formal rebel groups. In the same way, it seems plausible that formal groups can turn informal, for example, when the group is militarily weakened, and fighters return to their community of origin but continue to operate occasionally. I leave it for future work to theorize when and how these transitions occur.

The binary distinction of non-state armed groups is a simplification. On the one hand, I make a dichotomous distinction between formal and informal groups while the underlying phenomenon — formality — is continuous. For this study, a dichotomous distinction was required to make the theoretical and empirical analysis feasible. Yet, my distinction still offers more analytical grip than existing categories that aggregate very heterogeneous groups under one category. This is especially the case for militias. The term has been used for community-embedded self-defense groups up to high-capacity organizations at par with state militaries (e.g., Aliyev 2016; Jentzsch 2022). In addition, future work can easily adapt the conceptual foundations laid out in this study to a continuous conceptualization of formality as I foreshadow in Figure 3.2.

On the other hand, the dichotomy at the group level simplifies variation within organizations. Armed groups can have a formally organized core and leadership, while the lower ranks remain embedded in their communities of origin and are more akin to informal groups. For example in South Sudan, informal groups like the White Nuer conflate with formal insurgent groups like the Sudan's People Liberation Movement/Sudan's People Liberation Army-in Opposition (SPLM-IO) (Wild et al. 2018). However, depending on the specific

[4]From a set logic perspective, the extension of family resemblance concepts increases with the intension, i.e., with the number of attributes, while the extension decreases for essentialist concepts building on a necessary and jointly sufficient logic (Goertz 2006, p. 45).

case, such a constellation might be well accommodated by my conceptual framework by conceptualizing these cases as cooperation between formal and informal groups. I return to this issue in the discussion chapter 9.2.2. To conclude, relying on organizational characteristics is a parsimonious way to classify non-state armed groups as formal and informal. I now turn to the question of how these groups are related to each other and to the government in the conflict network.

3.1.3 The integration of internal armed conflicts in the overarching conflict network

The core assumption of this study is that internal armed conflicts are interconnected in one conflict network. The conflict network consists of state and non-state armed groups that share adversarial and cooperative relationships. Since I focus on *internal* armed conflicts, the boundary of the conflict network are the borders of the nation-state. I refer to the overarching network as the country-level conflict network. Internal conflicts that are part of this conflict network manifest themselves as clusters in social space and conflict zones in geographic space. Within the conflict network, strategic interdependence applies, i.e., "some unit(s)'s actions affect the marginal utilities of the alternative actions for some other(s)" (Franzese and Hays 2008, p. 745); even if two actors are not directly linked to each other.

Figure 3.3 provides a stylized representation of the conflict network. The government (star), the formal groups (triangles), and the informal groups (squares) are linked to each other and thus part of the same network. The solid lines indicate relationships of conflict, while the dotted lines indicate conflict-related cooperation. The clusters and conflict zones are shown as gray boxes within the overarching conflict network.

Since armed conflict is the research subject of this study, I concentrate on the military dimension of the conflict network, expressed in violent adversarial relationships. Adversarial relationships are relationships of armed conflict, which means that two or more actors compete for the same set of resources with violent means, including, but not being restricted to, one-sided attacks, clashes, or remote violence (cf. Gutiérrez Sanín and Wood 2017, for a conceptual discussion of the repertoire of violence in armed conflict). Yet, conflict is only one type of relationship. De facto, armed groups (and social actors more generally) are connected through a variety of different relationships that enable and constrain behavior through their interplay (Kivela et al. 2014, p. 204). I therefore also take conflict-related cooperation into account, which has been shown to significantly shape armed group behavior (e.g., Christia 2012; Gade et al. 2019a). Conflict-related cooperation means that I only take cooperative relationships into account that take place between armed groups and that relate to the conflict, for example, joint attacks, the sharing of information, training, and the supply of weapons (Otto et al. 2020, p. 3). I do not consider cooperative relationships as a full-fledged network that exceeds the conflict network.

Source: Own figure.

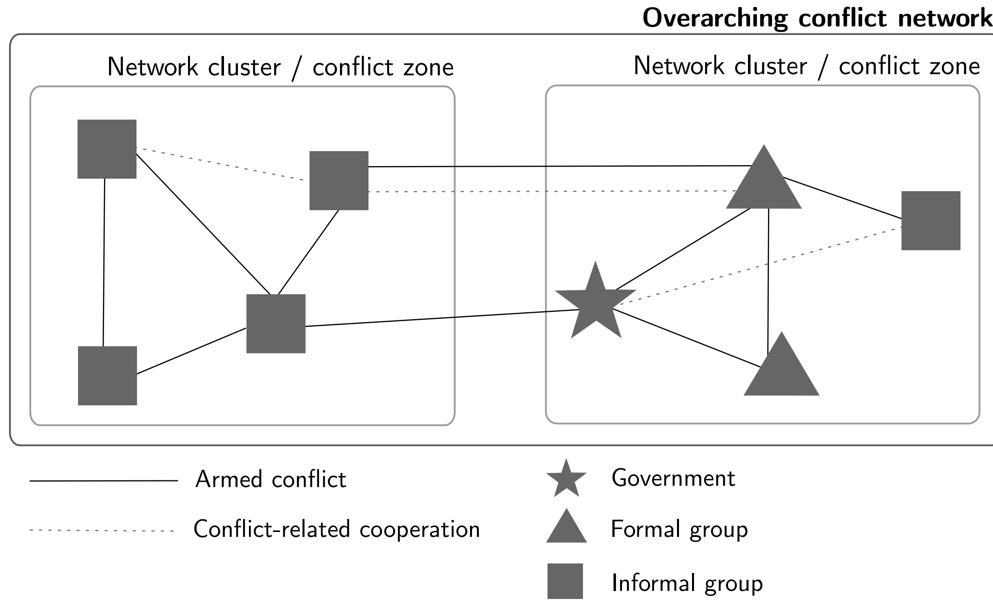


Figure 3.3: Stylized conflict network with clusters and conflict zones

I define cooperation as the adaptation of behavior by two or more actors based on the (anticipated) preferences of the respective other with the goal of creating an individual gain for each actor. Cooperation is, hence, a positive-sum interaction and can be tacit or explicit (Schmidt 2010). Adaptation of behavior is broadly defined and includes the coordination of activities as well as the exchange of tangible and intangible goods, among other things. An explicit, formalized form of cooperation is military alliances. I furthermore consider co-option a specific form of cooperation, during which one actor provides incentives, such as economic benefits, to another in order to ensure cooperation by increasing the related gains (cf. Fjelde and De Soysa 2009).

The boundaries of the network have to be drawn with regard to (1) the actors, (2) the relationships, and (3) the temporal scope. The specification of the network boundary is a long-acknowledged challenge of SNA (Laumann et al. 1989).[5] I focus on country-level networks due to my focus on internal conflicts and the central role national governments play in my theoretical argument. The national boundary also reflects the political significance of international borders. I thus use the borders of the nation-state as the boundary-specification criterion and include all armed groups that are involved in a violent event on the state territory. This is in line with established practices of SNA of armed conflict (e.g., Gade et al. 2019b; Metternich et al. 2013). Using violent events to define the included actors results in temporal boundaries that correspond to the beginning and end of internal armed conflict. As introduced at the beginning of this section, the network's relationships can be either adversarial or cooperative.

[5]The underlying assumption of boundary specification is that the social network of interest is usually not congruent with the researched network, making the drawing of an artificial boundary necessary (Laumann et al. 1989, p. 78).

The internal conflicts manifest themselves as clusters in the conflict network and thus in social space. Clusters are defined as subsets of actors that have dense conflict relationships with each other but only limited relationships with others (Borgatti et al. 2022, p. 199). I propose that actors who fight over the same set of resources, as it is my definition of armed conflict, fight a lot with each other but less with others. They hence form a cluster. Nevertheless, there can still be relationships across clusters, which link the actors in the different conflicts to each other. In contrast to the dominant approach in conflict research, these conflicts are thus not treated as discrete, separate entities. It is the added value of SNA to model this tension of distinct, yet interconnected conflicts theoretically and methodologically.

At the same time, internal conflicts cluster in geographic space because the conflict relationships materialize in the use of physical violence (Flint et al. 2009). I refer to these geographic clusters of violence as conflict zones, i.e., as the area where involved armed groups use direct (as in: not remote) violence against each other or against civilians with the goal of influencing the behavior of their adversary. A conflict zone is hence the "representation of the geographic distribution of conflict" (Kikuta 2022, p. 99). Similar to network clusters, conflict zones can be separate from each other or overlap. In principle, they could also be congruent, although this seems empirically unlikely.

The activities defining armed groups' relationships are linked to their capacity and conditioned by geographic space to varying degrees. Violent engagement requires the physical presence of members of an armed group and, if the engagement is supposed to be more than a one-time event, the enduring presence of a significant number of members. Armed groups need to have the capacity to second these members and control them over this distance. This has the implication that the capacity difference between state and non-state actors manifests itself, among other things, in their differing geographic mobility. For the security agencies of the state, it is easier to engage in violence over larger distances, not least due to the availability of the air force and the integrated command structure. In contrast, cooperative relationships are less conditioned on geographic space. Thus, they are a means for non-state armed groups to extend their influence over longer distances, even if they lack the capacity to do so violently.

Finally, it is necessary to define which internal armed conflicts qualify as civil wars and which ones as conflicts between informal armed groups. I define civil wars based on the involved actors, their goals, and the intensity as it is the standard approach in conflict studies (e.g., Cederman and Vogt 2017; Gleditsch et al. 2002; Sambanis and Schulhofer-Wohl 2019). From a network-analytical point of view, civil wars are network clusters dominated by the government and formal armed groups, which use high-intensity violence to fight over formal political power. Doing so, the formal groups put in question the sovereignty of the government (Sambanis and Schulhofer-Wohl 2019). Since the sovereignty of the government requires social and territorial control (Jentzsch and Steele 2023), a civil war is by definition also a struggle over territorial control (see also, Berti 2020, p. 2). The cluster and conflict zone on the right-hand in Figure 3.3 corresponds to the

civil war. Conflicts between informal groups are conflicts dominated by informal groups. Such a conflict is represented on the left-hand in Figure 3.3. Here, I do not make any assumptions about the level of intensity or group goals. This category can include communal conflicts, for example, but is broader since my definition of informal groups goes beyond communal groups.

To clarify the relationship between group type and goals, I suggest that formal groups may or may not seek formal political power over (parts of) the state territory but informal groups almost never do so (e.g., Carboni and Moody 2018; Jentzsch 2022; Schuberth 2015). Instead, informal groups tend to follow more parochial goals like improving the well-being of their community, countering marginalization, or securing economic gains. This does not rule out the possibility that informal groups want to influence politics and policies through their violent behavior. Influence-seeking is different from striving for formal political power as it does not question the sovereignty of the government. However, I consider the relationship between goal and group type an empirical tendency rather than a defining characteristic. A common example of formal groups that do not seek political power is militarized criminal groups in Latin America. While they fall under my definition of formal groups, their goal is to constrain the state rather than to capture it (Bara et al. 2021; Lessing et al. 2015). Similarly, state-parallel militias are formal groups that do not want to capture government power (Aliyev 2016).

In conclusion, the conceptual framework developed in this section provides the analytical scaffold to shed light on the question of how civil wars and conflicts between informal groups influence each other. Specifically, the network analytical approach allows me to bring together the structural changes in the conflict network, triggered by the outbreak of the civil war, with the reactive behavior of the armed groups, which in turn influences the structure. I have introduced a critical distinction between formal and informal groups that allows me to efficiently capture heterogeneity among non-state armed groups, thereby extending previous network analyses of internal conflict. In addition, the analytical combination of social and geographic space enables me to develop a spatially contingent argument on the interdependence of civil wars and conflicts between informal groups. Before I turn to this argument in detail, I lay out the necessary and enhancing conditions and describe the government's resource allocation problem, which affects the whole conflict network and is the starting point of my argument.

3.2 The interdependence of civil war and conflicts between informal groups

To better understand the interdependence of civil wars and conflicts between informal groups, I focus on the consequences of a civil war outbreak for the severity and fragmentation of informal group conflicts and

the resulting feedback effects. Feedback effects across conflicts emerge because the severe and fragmented informal group conflicts create new opportunities and constraints for the civil war parties. Concretely, I argue that conflicts between informal groups become more severe and fragmented outside the civil war conflict zone but not within. Figure 3.1 at the beginning of this chapter provided an overview of the processes producing this variation. Conflict severity refers to the level of violence (van Baalen 2024) and the size of the network. Fragmentation describes a situation in which a high number of actors oppose each other while no actor is able to dominate the fighting (Bakke et al. 2012; Lacher 2020). In the conflict network, fragmentation manifests itself as a high number of conflict clusters. The severity and fragmentation increase either because existing conflicts escalate and the involved groups splinter or because new conflicts emerge and new armed groups mobilize (Fjelde and Nilsson 2018, p. 553; van Baalen 2024, p. 7).

3.2.1 Necessary and enhancing conditions

The argument presented in this study only applies to areas within the country where communities have a latent motivation to engage in violent conflict. Therefore, two necessary conditions need to be given at the subnational level: resource competition and limited access to conflict management mechanisms. Competition over tangible and intangible resources is ubiquitous in any society. It can be rooted in the scarcity of a resource, e.g., employment opportunities, or in narratives about the entitlement to a specific resource, e.g., indigenous rights to land. In its most severe form, resource competition directly threatens the survival of the competing parties, for instance, in the case of competition over water and land resources. Since resource competition is widespread and inevitable, societies establish non-violent regulatory procedures to adjudicate the resulting disputes (*Methodology* 2022). These procedures can be provided by the state as part of its aspiration to create order and regulate behavior or by non-state parties like traditional or religious institutions or armed groups.

I argue that violence can become a means to secure resources if access to efficient or effective conflict management mechanisms is not given. Theoretically, I am agnostic about *why* these mechanisms are lacking; decisive is that they are. A lack of conflict management mechanisms does not mean that the related institutions have completely collapsed. It is sufficient if such mechanisms are not available for specific issues or actors. Resource scarcity and lack of conflict management are mutually reinforcing. When resource competition is severe, functioning conflict management mechanisms are more important due to the escalation potential of the competition. When conflict management is not available, control over resources becomes more important as they can translate into the direct capability to ensure one's claims.

In addition to these two necessary conditions, a weak state context enhances the relevance of my argument. A weak state has not failed, and the government is still a relevant actor. Yet, its capacity and legitimacy

are low (Nussio 2023). Low capacity means that weak states have fewer coercive resources at their disposal. Low legitimacy means that individuals are less likely to comply with rules out of internalization and social control (Müller-Crepon et al. 2020; Tajima 2014). Any state, no matter how strong, needs coercive resources to create and maintain order. These coercive resources are finite. Therefore, the optimal allocation of these limited resources poses a challenge to any state when challenged by non-state armed groups. Yet, weak states do not only have fewer coercive resources but also need more of them because rule transgressions are more likely if the state is not perceived as legitimate. Strong states are more resilient but ultimately face the same problem when attacked by strong and multiple challengers.

3.2.2 The prioritization of the civil war by the government

The resource allocation problem of the government is a permanent condition, which describes that the government disposes of an ultimately finite set of coercive resources, which it needs to allocate in an optimal manner to maintain order throughout the territory. The resources of the government are finite but not fixed. This means that the state can seek to increase its resources by raising its military budget, for example, or by taking on foreign debts. While this can mitigate the resource allocation problem, it does not solve it: ultimately, state resources are finite. In the context of armed conflict, non-state armed groups challenge the government's ability to maintain order, either by attacking the state directly or by undermining its claim to rule through their use of violence indirectly.

The severity of the resource allocation problem varies depending on the quantity and quality of challenges that the state faces. As soon as there is more than one challenger, the resource allocation problem intensifies as the government has to divide its resources across groups, limiting its ability to react to each of them (Lane 2016; Bormann and Hammond 2016). Uzonyi and Reeder (2023, p. 18), for example, describe how the Rassemblement pour la Démocratie et la Liberté (RDL) in Chad used the opportunity that the government was involved in fighting in the east of the country to attack the capital. In addition, the activity of non-state armed groups can exacerbate the resource allocation problem even without directly challenging the state. When non-state armed groups control territory, the resource extraction of the government diminishes.

As a result, the government needs criteria to decide which challengers to prioritize in the allocation of resources. Assuming that regime survival is a central goal, the perceived level of threat to the regime should be a key consideration (Tajima 2014, p. 9). I define the threat level as the combination of the potential impact and the probability of this impact materializing. In terms of potential impact, governments should be in particular worried about formal groups that strive for formal power over (parts of) the state territory and who are ideologically distant to the government (Staniland 2022). The economic value of the threatened state territory can also play a role. Their success would then severely harm or even end the rule of the government

up to questions of individual survival (Straus 2015, p. 26). In terms of probability, formal groups are more likely to be successful than informal groups because they tend to have higher military and mobilization capacity and are mobile due to their organizational features (Gutiérrez Sanín 2019; Heger et al. 2012). Based on the threat level, the government therefore likely prioritizes civil wars, i.e., formal armed groups seeking to control territory, in its resource allocation.

Resource allocation has a spatial dimension, as coercive resources are tangible, and conflicts cluster in space. This means that the allocation of resources to the civil war implies an uneven geographic distribution of resources in favor of the civil war conflict zone. Also, other resources from the humanitarian and development sector, including those by international actors, are likely redistributed towards the civil war conflict zone. The skewed distribution of resources in favor of the civil war is not a problem per se if areas receiving fewer resources are stable and calm. Yet, when resource competition creates disputes in these areas and conflict management mechanisms are unavailable — the necessary conditions for my argument — the skewed allocation can have ripple effects on the whole conflict network.

3.2.3 Regulation and disruption in the civil war conflict zone

The civil war conflict zone is a theater of contestation over territorial control. This contestation fundamentally changes the life of communities in the conflict zone who have to choose between flight, accommodation, or resistance (Kaplan 2017; Revkin 2021; Turkoglu and Weber 2023). I propose that depending on the type of territorial control — integrated, segmented, or contested — community life is either regulated by the civil war parties or disrupted. In either case, the incentives to engage in violent conflict are reduced, resulting in the low severity and fragmentation of conflicts between informal groups. An overview of this argument is provided in Figure 3.4.

I differentiate between three types of territorial control.[6] Integrated territorial control refers to a situation in which a civil war party controls a larger contiguous area, which allows it to establish order (Jentzsch and Steele 2023, p. 454; Kalyvas 2006, p. 88). Segmented territorial control describes a situation in which the civil war parties each have control over small, distinct parts of the state territory, leading to a patchwork structure (Kalyvas 2006, p. 88). Contested territorial control refers to a situation in which the conflict parties fight each other violently and no side is able to assert itself.[7] These types of territorial control are not static but can shift over time.

[6] For simplicity, I assume in the following that territorial control implies social control. In line with Jentzsch and Steele (2023), I acknowledge that social and territorial control are empirically not always congruent, but I leave it to future work to theorize the implications for my argument.

[7] Note that I use the term 'contested' differently from Kalyvas (2006, p. 88), who considers segmented and fragmented control as two specific types of contested control. I use the term more narrowly for situations of active fighting.

Source: Own figure.

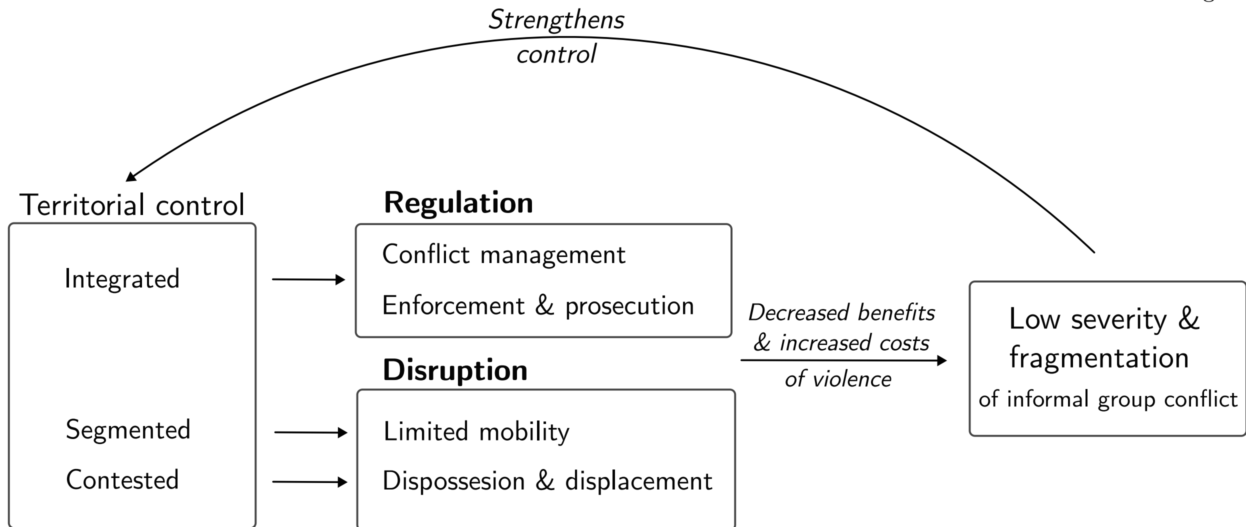


Figure 3.4: Process within the civil war conflict zone

Any of the three types of territorial control has consequences for the lives of the communities and for potential conflicts between informal armed groups in the civil war zone. Recall that informal armed groups are mobilized from and embedded in their communities of origin. The situation of the community, therefore, has direct implications for the emergence and behavior of informal armed groups. The presence of the necessary conditions — resource competition and the unavailability of conflict management mechanisms — implies that the communities in the civil war conflict zone have a latent motivation to engage in violent conflict. Yet, in all three types of territorial control, the costs of violence increase and/or the benefits of violence decrease. I now lay out the reasoning for all three types in detail.

In situations of integrated control, the civil war parties can establish order, including the external dimension of repelling challengers from the outside and the internal dimension of regulating behavior. As I have outlined before, state and non-state groups have a variety of motives to create and maintain order ranging from ideology to practical considerations like preventing the collaboration with the adversary or collecting taxes. Therefore, non-state armed groups usually have an interest in at least some limited form of order even if they are not legitimacy-seeking.[8] Also, state actors should have an enhanced interest in creating order in the civil war conflict zone, for example, to prevent collaboration with the non-state armed group or to mitigate the identification problem of counterinsurgency operations (Kalyvas 2006, p. 89; Lyall 2010); exceeding their general interest in maintaining order in the state territory. Here, the government's decision to prioritize the civil war is relevant: the allocated coercive resources increase the government's ability to do so.

As a consequence, the communities remaining in an area of integrated control — because they could not or did not want to flee — are subsumed under the rule and regulation of the civil war parties and protected

[8]For the differentiation of legitimacy-seeking and legitimacy-indifferent non-state armed groups, see van Baalen (2024).

against attacks from external actors. I argue that the civil war parties engage in the three core activities of regulation: dispute adjudication, enforcement, and prosecution. Dispute adjudication means that conflict management mechanisms become available and provide a channel for the communities to solve their disputes non-violently. The benefits of using violence decrease (van Baalen 2024, p. 4). Enforcement and prosecution, on the other hand, mean that rule transgressions, including the use of violence, become more costly. This is even more the case in civil war contexts, where the executing actors have no or only limited accountability and, depending on their ideology, use severe physical violence to punish transgressions.

In situations of segmented or contested control, pre-civil war community life is fundamentally disrupted. With disruption, I mean the radical change in social and economic structures as well as the everyday routines of a community. If control is segmented, mobility poses a risk to the communities. When crossing areas controlled by different armed groups, civilians could be mistaken for collaborators of the other side. Communities furthermore face an information problem as it can be difficult to anticipate where the lines of control run and which rules apply in which areas. Communities can seek to navigate these risks by hiding during armed group operations (Eubank (2008), cited in Turkoglu and Weber (2023)) or by changing their mobility patterns. Depending on the type of conflict, urban settlements might provide some protection against being caught in crossfire or exposed to kidnapping, extortion, or robbery. In contrast, traveling to other locations to trade or attend remote farmland can be a life-threatening endeavor.

If control is contested, communities are exposed to high-intensity violence. As a result, communities can be dispossessed or displaced. With dispossession, I refer to a condition in which the community has lost (almost all) their property, for example, because the settlement has been raided or destroyed as collateral damage (cf. Watson 2023, p. 11). Displacement can either be initiated by the community, for instance, when the frequency, closeness, and indiscriminate nature of violence is perceived as an unbearable risk (Turkoglu and Weber 2023); or can be the result of coercive population control by the civil war parties (Leimpek 2020; Steele 2017). Either way, displacement often means that communities are torn apart because individuals choose different paths to flee or that they have to reassemble in a new location, e.g., in a camp for refugees or IDPs. Often, communities lose their means of livelihood when they flee, not least if they were involved in agriculture and dependent on land.

As a consequence of the disruption of community life, conflict issues become less salient, and the perceived benefits of violence decrease. Conflict issues like access to land, water, and markets or the appointment to local offices lose their significance if the community is displaced or does not dare to leave the urban settlement. Hence, violent conflict between informal groups should be rare. At the same time, the disruption of everyday life can also create new conflicts since resource scarcity increases. However, I conjecture that the disruption impedes mobilization and lowers opportunities for spontaneous outbursts of violence, for example, because communities are scattered across different locations after their displacement. Put differently, the costs of

violence also increase. Which of these tendencies prevails remains an empirical question.

The two processes outlined, the regulation and disruption of everyday life, are potentially self-reinforcing. The successful regulation of community life allows the conflict parties to extract resources and information, among other things, increasing their capacity and legitimacy (Stewart 2018). For example, groups can tax the population and reinvest the gained capital into weaponry. This effect should be relatively larger for formal armed groups than for the government, which can rely on resource extraction outside the conflict zones. In addition, the disruption of everyday life might allow formal armed groups to recruit among displaced individuals with limited licit economic opportunities and conflict-related grievances (Rüegger 2019), increasing the groups' capacity. These effects then feed back into the civil war as the groups can employ their strengthened capacity and legitimacy in this conflict. I now turn to the dynamics outside the civil war conflict zone, where I expect the converse effect on the conflicts between informal groups.

3.2.4 The power vacuum outside the civil war conflict zone

Civil wars can contribute to the severity and fragmentation of conflicts between informal groups outside the civil war conflict zone. This is an unintended externality of the prioritization of the civil war by the government. Outside the civil war conflict zone, the prioritization of the civil war creates a sudden power vacuum, which makes violence a cheaper means for informal groups to address disputes and make profit. Once a few groups use violence, a security dilemma is triggered, leading to the decentralized mobilization of self-defense groups and increasing the incentives to use violence further. An overview of this argument is provided in Figure 3.5.

Source: Own figure.

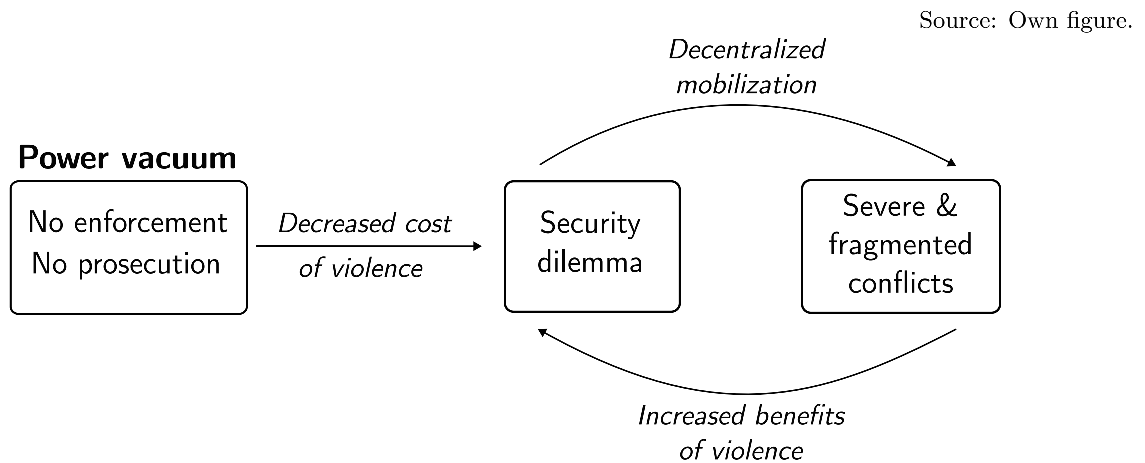


Figure 3.5: Process outside the civil war conflict zone

The process is set in motion in contexts where there is resource competition, and there are no conflict management mechanisms (the necessary conditions). The civil war can reinforce resource competition

indirectly, for instance, via the influx of IDPs or an economic downturn. Under such conditions, the state has a critical function in making the use of violence costly by enforcing rules and prosecuting transgressions. However, when the government concentrates the coercive resources on the civil war, this ability to enforce rules and prosecute their violation is impaired (Krause 2019, p. 484). As a result, violence is not only one of the few available means of addressing disputes, it is also less costly.

In such a context, a few groups using violence are sufficient to destabilize the situation because their behavior triggers a security dilemma producing severe and fragmented conflicts (Posen 1993b).[9] It is irrelevant whether the groups do so out of opportunistic or grievance-related motives. As soon as some informal groups use violence, others have incentives to mobilize, increase their violent capabilities, and eventually use them preemptively because they cannot rely on the state to protect them (Barter 2013, p. 89; Jentzsch 2022). This means the groups are operating in a context similar to an anarchic environment and prioritize their own survival (Blair et al. 2021, p. 3).

I argue that mobilization and arming are spontaneous, reactive, and uncoordinated processes during which communities adapt to their immediate security environment. As a result, many small, informal groups emerge rather than a larger, more centralized formal group. Once these groups form and use violence, the perceived insecurity of other communities and already existing informal groups increases. Following the same logic, they mobilize and increase their capabilities (Autesserre 2010; Carboni and Moody 2018, p. 472). A security dilemma is thus a self-reinforcing dynamic.

The outlined process only emerges due to the relatively sudden removal of the state as a key actor. The absence of the state does not necessarily lead to conflict. It is the mismatch between the expected state intervention and its failure to materialize that leads to violence (Tajima 2014). If the state had been unavailable for a long time, non-state institutions would have emerged and replaced it (ibid.). Similarly, a non-state armed group could take over the functions of the state and create order (cf. Arjona 2016b; Mampilly 2011, among others). However, if the actor who normally provides order — in this case, the state — is suddenly absent, there will be an interim period of a power vacuum. This does not preclude that this power vacuum is filled in the future as I elaborate in the next section.

3.2.5 Feedback effects across conflicts

The strengthening of formal armed groups through the regulation and disruption of community life within the civil war conflict zone, as well as the security dilemma outside the civil war conflict zone, are feedback

[9] The security dilemma, as developed and applied to ethnic conflicts by Posen (1993b), describes a situation in which the actors primarily seek to improve their own security and to deter potential attacks by others, yet thereby unintentionally reduce their security. Their motivation is mostly defensive. In contrast, I assume that informal groups might well operate with offensive goals, e.g., to compensate for perceived injustices.

effects reinforcing the dynamics *within* the respective conflicts. In addition, there are feedback effects *across* conflicts with repercussions for the whole conflict network. I identify and discuss two cross-conflict feedback effects in detail: increased resource pressure on the government and expansion opportunities for formal armed groups. An overview of this argument can be found in Figure 3.6.

The resource allocation problem of the government is a permanent condition and the government needs to constantly reevaluate its priorities. The emergence of severe and fragmented conflicts between informal groups outside the civil war conflict zone undermines the attempts of the government to secure the monopoly on violence. Even if the groups do not attack the state directly, they erode its claim to rule and the performance of core functions like the provision of public goods (Carboni and Moody 2018, p. 471). At the same time, the civil war continues to pose a major threat to the government. In short, the resource pressure on the government increases, and the resource allocation problem becomes more severe.

Source: Own figure.

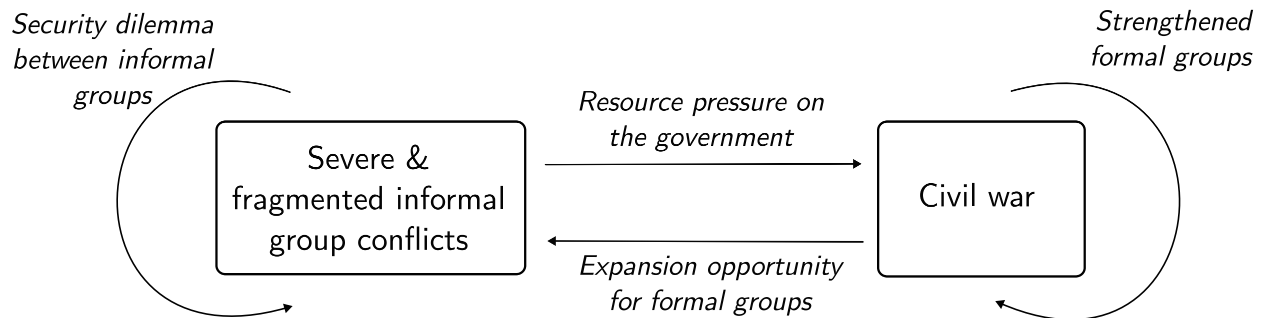


Figure 3.6: Feedback effects across and within conflicts

I argue that the government intervenes in the escalating informal group conflicts, too, but with less resource-intense means than in the civil war. Since the civil war continues to directly threaten the government's survival, the government should be hesitant to redistribute resources away from it. Less resource-intense means include the employment of remote and indiscriminate violence as well as non-kinetic policies that do not require many coercive resources to implement. Remote violence, like air bombardments, is cheaper because it does not require the permanent deployment of security agencies. The government has a distinct advantage in that it can project violence over long distances without the stationing of personnel on the ground. Similarly, indiscriminate violence against civilians is used by governments if they lack the ability and resources to differentiate between armed actors and civilians (Kalyvas 2006). Detrimental to the government's intention, however, indiscriminate violence has been shown to further increase violence by creating new grievances and reducing collective action problems (Lyall 2009). Still, even low-resource strategies are likely to reduce the government's capacity in the civil war.

Another feedback effect emerges because the escalating conflicts between informal groups offer an expansion

opportunity to the formal armed groups involved in the civil war. They can exploit the resource allocation problem of the government to ultimately improve their relative position in the civil war, not least because their organizational structure makes them relatively mobile. The informal group conflicts offer them a "low-risk/high-opportunity attraction" (Idler and Tkacova 2023, p. 2): the risk is low because the government is absent and hence unlikely to defeat the group in these areas; the opportunity is high because the formal groups can enhance their capacity through additional recruitment and income. In addition to these pull factors, there are also push factors that can motivate formal armed groups to expand their influence. For example, the groups might use this opportunity if they are under pressure in their core territory.

At least two strategies to expand the influence seem plausible: territorial control or cooperation with informal groups. First, formal armed groups can aim for territorial control by asserting themselves as a new ruling actor. That way, they are effectively replacing the state by filling the power vacuum. To establish itself as the new ruling party, a formal armed group first needs to oppose the informal groups violently, but once it establishes itself as a new regulator, violence between informal groups should decrease. Whether formal groups seek to gain territorial control in these areas depends on their goals, capacity, and relationship with the communities residing there. The goals determine whether the group is interested in controlling this specific territory at all. Fighting over territorial control in an area far away from the civil war conflict zone requires a substantial amount of resources. Note that the groups' resource wealth also depends on their ability to regulate behavior and tax in the territory under their control in the civil war conflict zone. Finally, the community-embeddedness of informal groups implies that fighting against them most likely leads to violence against civilians. Formal groups are less likely to fight against informal groups if this entails using violence against their own constituencies and thus audience costs (Balcells and Stanton 2021, p. 53).

Second, formal armed groups can seek to cooperate with informal groups to exert their influence indirectly. Cooperation with formal armed groups likely strengthens the operational capacity of the informal groups, thereby exacerbating those conflicts further. Even if only a few informal groups are involved in the cooperation, knowledge can be assumed to diffuse quickly due to the organizational features of these groups, including permeable boundaries and flat hierarchies (Horowitz 2010). Formal groups have an incentive to pursue cooperation with informal groups if it provides them with access to resources or if the subsequent escalation pushes the government to relocate its resources away from the civil war conflict zone, similar to opening up a second front in inter-state wars. Rebel groups evaluate not only their position relative to the government but also their embeddedness in the broader conflict environment and leverage it strategically (Akcinaroglu 2012; Uzonyi and Reeder 2023). The situation offers itself to cooperation because the absent state cannot prevent the contact and transaction between the groups (Blair et al. 2021, p. 4). In addition, cooperating with informal groups tends to be a more resource-efficient strategy than pursuing territorial control and is hence attractive for formal groups with limited resources.

Choosing cooperation as the strategy furthermore requires that informal armed groups are receptive to it. Cooperation is a two-sided relationship, and informal groups will only enter into such a relationship if the benefits outweigh the costs. Cooperation implies risks like breeding one's own competitor, infiltration, or attracting unwanted government attention. To mitigate these risks, groups are more likely to cooperate with others sharing the same ideology or religion as this creates trust and social control (Gade et al. 2019a; Horowitz 2010, p. 42). Even if risks remain, informal groups can agree to cooperation if the benefits of short-term cooperation outweigh uncertain long-term costs. One of such short-term benefits is innovation through the adoption of new tactics — an important asset in a conflict environment with constant existential threats (Horowitz 2010; Horowitz et al. 2018).

Undoubtedly, the discussion of increased resource pressure and expansion opportunities does not exhaustively cover potential feedback effects on the conflict network. Mirroring the problem of infinite regress in historical analysis (Slater and Simmons 2010), the theorizing of evolving feedback effects in networks runs into a problem of 'infinite progress,' in the sense of an almost infinite number of potential future developments. For example, one can speculate about the consequences of these two cross-conflict feedback effects on the civil war dynamics. If both the government and the formal armed groups shift their attention away from the civil war conflict zone, this would weaken their presence and could lead to an increase in informal conflicts within this zone. Ultimately, this could lead to a merging of the different conflicts into one. In contrast, the formal armed groups could also be successful with their strategy of expansion, gain strength, and topple the government, which is increasingly thin-spread. These very different speculations highlight the persisting challenge of forecasting armed conflict (Cederman and Weidmann 2017).

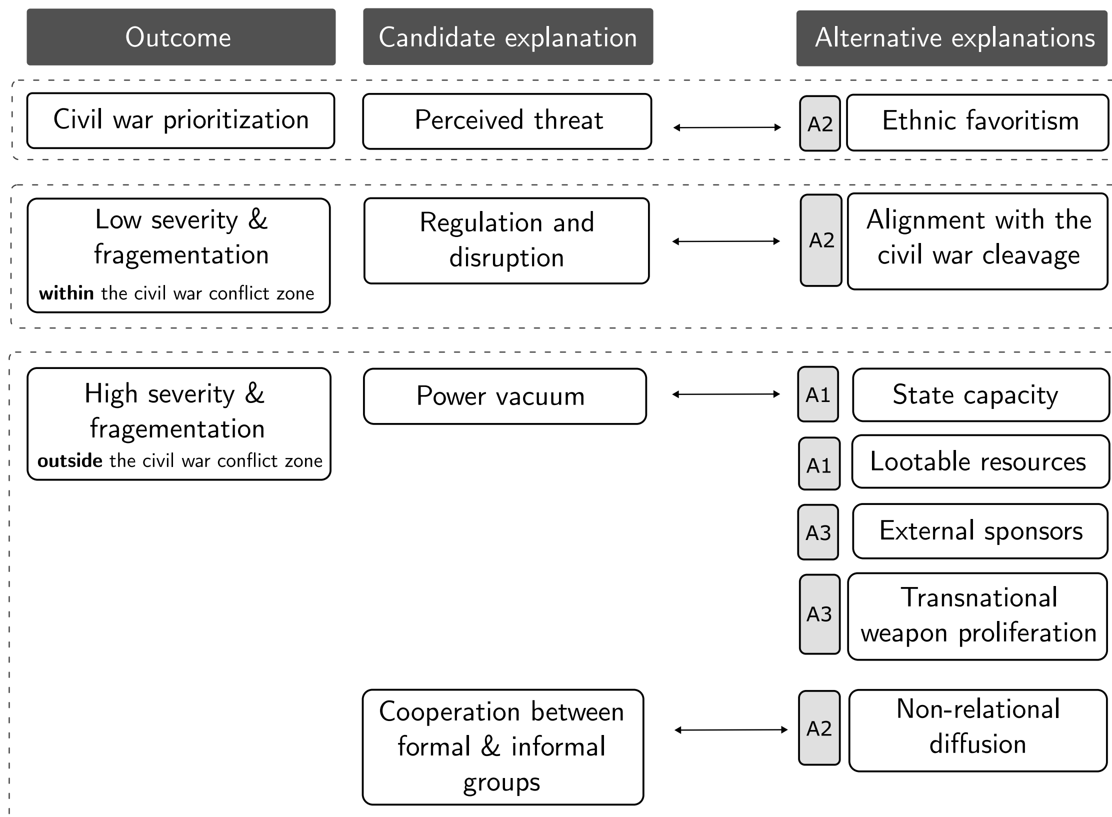
In sum, civil wars and conflicts between informal groups mutually influence each other in various, countervailing ways. This is due to a combination of the network-level resource allocation problem of the government and conflict-zone specific interactions between the government and formal and informal armed groups. The developments in the conflict zones give rise to feedback effects within and across conflicts. Put differently, the network structure shapes how these micro-level processes evolve and is at the same time co-constituted by these processes. Nevertheless, the argument presented in this chapter — the candidate explanation — is only one of many explanations. I now elaborate on seven alternative explanations, which will be evaluated in comparison to the candidate explanation.

3.3 Alternative explanations

The conflict research literature offers several alternative explanations for the subnational patterns of violence suggested by the candidate explanation and the behavior of the state and non-state actors. Specifying credible alternative explanations is critical for an iterative research design that is at risk of confirmation

bias. Confirmation bias describes the inference problem that the argument is developed in tandem with the evidence, which inevitably supports the argument. This problem can be mitigated by specifying and testing alternative explanations. Only if the alternative explanations are not supported can confidence in the candidate explanation be corroborated. I develop and assess seven alternative explanations, following the advice by Bennett and Checkel (2015b, p. 23) to "cast the net widely." I group these explanations according to their focus on structural drivers of the subnational variation in violence, on the agency of the government and the non-state armed groups, and external influences on the conflict network (ibid.). Figure 3.7 offers an overview of how the alternative explanations relate to the different elements of the candidate explanation.

Source: Own figure.



Note: A1 = Structural alternative explanations, A2 = Agent-based alternative explanations, A3 = external-influences alternative explanations.

Figure 3.7: Overview of the candidate and alternative explanations

3.3.1 Structural drivers of subnational variation in conflict violence

The social network-oriented explanation proposed emphasizes the interplay between structure and agency and prioritizes the relationships between actors in their explanatory power. This stands in contrast to the first wave of post-Cold War conflict research that demonstrated the importance of structural factors for the outbreak and continuation of violent conflict (Staniland 2023). Based on the literature, I identify

two structural factors as especially relevant for explaining subnational variation in conflict violence: state capacity and lootable resources. Since my argument focuses on internal conflicts, structural factors need to vary at the subnational level to explain variation in violence. From the perspective of these structural explanations, the escalation and fragmentation of informal group conflict simultaneously to the civil war are the result of structural variation and independent from the civil war, rendering the temporal covariation a mere coincidence.

One potential explanation for the escalation of conflicts between informal groups is variation in state capacity. Scholars have linked state capacity to armed conflict because armed groups can more easily mobilize in weak states (e.g., Fearon and Laitin 2003). Similarly, anocracies have been identified as being in particular conflict-prone because their undemocratic repression creates grievances while they lack autocracies' ability to repress (e.g., Hegre et al. 2001). Early contributions on this topic emphasized the coercive capacity of states, but more recent publications shifted the focus to social control (Müller-Crepon et al. 2020) and public spending (Fjelde and De Soysa 2009), among others. My argument is in line with this research by assuming that civil wars lead to an uneven distribution of coercive state capacity in space, which in turn contributes to an increase in conflict. However, my argument differs fundamentally because I emphasize short-term shifts in state capacity rather than long-term variation.

Second, the escalation and fragmentation of conflict could be related to the subnational variation in the deposits of lootable resources. The related literature on the so-called resource curse tends to agree that the availability of natural lootable resources is associated with a higher risk of armed conflict (Ross 2015). The seminal and long-debated study by Collier and Hoeffler (2004) has emphasized economic opportunism as the mechanism underlying this observation. This perspective has been challenged, and alternative explanations have pointed to the link of resources to mobilization capacity, grievances, and rebel groups' dependency on civilian support (Humphreys 2005; Mampilly 2011; Østby et al. 2009). More recent work leveraging causal inference techniques has furthermore emphasized the link between fluctuation in resource prices and rebel behavior, including increased fighting (Dube and Vargas 2013; Sánchez de la Sierra 2020). For the purpose of specifying the alternative explanations for this study, I am agnostic about the mechanisms and focus on the general claim that resource availability is associated with increased conflict.

3.3.2 Agent-based alternative explanations

I differentiate three agent-based alternative explanations concerned with the preference formation of the government and the cooperation between non-state actors. To start, the resource allocation of the government could be related to armed politics and ethnic favoritism rather than the threat perception. I have proposed that the perceived threat is a central criterion for the resource allocation of the government. By contrast,

scholars have cautioned against over-emphasizing military and strategic considerations when explaining the relationship between the state and non-state armed groups. Instead, the relationship should be seen through a much more political or economic lens (De Waal 2015; Staniland 2012b, 2017). Whether the state decides to enter into open violent conflict with some groups instead of co-opting or tolerating them is better explained by the economic or ethnic ties that the government elites share with these groups. Similarly, communal conflict scholars have long emphasized the role of elites in manipulating ethnic conflict, including due to their personal relationships to ethnic constituencies (e.g., Elfversson 2015; Krause 2018; Varshney 2002). I identify ethnic favoritism or bias on the government side as a common denominator of these explanations. In combination with the observation that ethnicity is an important dimension of politics in Africa and beyond (e.g., De Luca et al. 2018; Franck and Rainer 2012), I assess the alternative explanation that ethnic favoritism is driving the allocation of resources rather than the threat perception.

Furthermore, I seek to investigate whether conflicts between informal groups escalate because of the non-relational diffusion of tactics and technology from the civil war. Non-relational diffusion refers to diffusion through observation and distribution of information without direct contact, for example through (social) media (Bakke 2013, p. 35; Gilli and Gilli 2019). In contrast, the candidate explanation proposes that formal and informal groups cooperate directly across conflicts due to the expansion opportunity the informal group conflicts offer to the formal armed group. Knowledge thus spreads as a result of relational diffusion.[10] Non-relational diffusion, however, would imply that the network structure and the relationships between groups are less relevant and that the mere concurrence of conflicts is sufficient for mutual reinforcement.

The last agent-based alternative explanation concerns the absence of conflicts between informal groups within the civil war conflict zone. In the candidate explanation, I propose that this is the result of the regulation and disruption of everyday life. One well-established alternative explanation is that conflicts between informal groups are subsumed under the civil war because the conflict cleavages between communities are integrated into the master cleavage of the civil war (Kalyvas 2003, 2006). This means that these conflicts are fought out violently but masked by the civil war. They would not be absent but rather take on a new form. This is different from my argument that the civil war changes the cost-benefit calculations of violence for the communities and, therefore, makes the escalation of conflicts between them less likely. The incorporation of community conflicts into the civil war has been reported for conflicts in Mali, Greece, and South Sudan, for example (Benjaminsen and Ba 2021; Kalyvas 2006; Krause 2019).

[10] I adopt the differentiation into relational and non-relational diffusion from Bakke (2013, p. 35). The author also introduces mediated diffusion via third parties as a third type of diffusion. I consider this a specific case of relational diffusion as it implies direct contact between agents.

3.3.3 External influences on the conflict network

The conceptual framework uses the borders of the nation-state to specify the network boundary. This risks that the theory is flawed by the problem of "methodological nationalism" in social sciences (Rössel 2012). This problem describes the reduction of political phenomena on the processes taking place within the boundaries of a nation-state, down-playing the importance of international and transnational influences and relationships, e.g., through cultural identities, economic ties, and population overlap (Emirbayer 1997, p. 295).

I adopt two alternative explanations to assess the relevance of external influences on the conflict network: external sponsors and transnational weapon proliferation. Instead of the security dilemma, external sponsorship could explain the fragmentation of conflicts between informal groups and the high levels of violence against civilians. Recent work by Rickard (2022) demonstrates that armed groups are more likely to fragment when they receive fungible and exchangeable support from outsiders. Salehyan et al. (2014) show that armed groups that receive external support use more violence against civilians because they are less dependent on civilian support.

Transnational weapon proliferation has been identified as an inciting factor for non-state conflicts (e.g., Gray and Roos 2012). Transnational weapon proliferation, particularly of small arms and light weapons, can impact a conflict context as an external shock that leads to a simultaneous increase in violence across conflicts. This questions the importance of interdependence between the different conflicts as put forward in the candidate explanation. It has been identified as a central challenge of diffusion research to differentiate simultaneous changes in units of analysis due to a common driver from those due to diffusion processes between them (Forsberg 2014). It is thus important to assess the impact of weapon proliferation in comparison to the more endogenous processes my theory suggests.

To conclude, there are at least seven alternative explanations that could plausibly explain the outcomes my candidate explanation predicts. I now turn to the mixed-methods research design guiding the empirical analysis of the candidate and the alternative explanations. As part of the research design, I specify the observable implications for all explanations outlined in this chapter to be able to evaluate their explanatory power relative to each other (Bennett and Checkel 2015a, p. 23). Only two explanations, weapon proliferation and lootable resources, are relevant in the Nigerian case. However, they are insufficient to explain the observed patterns of violence if not combined with insights from my theoretical argument.

Chapter 4

Research design

The study employed a mixed-methods SNA of a single case — the Nigerian conflict network (2000–2021) — to develop and refine a theoretical argument on the interdependence of civil war and conflicts between informal groups. A mixed-methods SNA is an ideal approach for shedding light on the interdependence of conflicts and the interplay of the macro and micro levels. Quantitative SNA can capture the evolution of the structure of the conflict network by analyzing and visualizing the patterns of relationships over time. Yet, based on a purely quantitative analysis, it remains unclear why and how the structures changed in this way. Qualitative SNA is, therefore, a critical complement to trace the processes that produced the structural changes. In addition, mixed-methods research designs increase confidence in the results by triangulating methodological perspectives and data sources.

The study leveraged deductive and inductive reasoning in an iterative manner. The quantitative component was built on the deductively derived conceptual framework and was descriptive and exploratory in nature. The qualitative component was built on theoretical insights from the conflict studies literature, in particular on research on the link between national and local conflicts. The latter emphasizes the violence-inciting impact of civil wars on conflicts between informal groups. Less is known, however, about the temporal and spatial variation of this escalatory effect. Inductive insights were therefore instrumental for theorizing why informal group conflicts do *not* escalate within the civil war conflict zone. Integrating the deductive and inductive insights into a coherent theoretical framework then allowed me to carve out the feedback effects of these countervailing developments for the conflict network. This is a critical extension of existing work.

To start, the chapter outlines the main assumptions of SNA and the added value of combining quantitative and qualitative methods. It introduces the specific research design of this study and justifies the selection of Nigeria as an informative case. It then turns to the quantitative component, which describes the evolution of the Nigerian conflict network based on ACLED. It is a central contribution of this study to show how

ACLED can be used for SNA concerned with informal groups, which are not well captured by large-n conflict datasets. I offer guidance on how the distinction between formal and informal groups can be implemented for ACLED with minimal manual coding effort. Due to data availability, the quantitative analysis only analyzed the violent relationships.

For the qualitative component, the chapter describes how I generated the qualitative data corpus, including 118 interviews, participatory network drawings, newspaper articles, and secondary sources from libraries in Nigeria, the United Kingdom (UK), and Switzerland. In so doing, I present a novel way to gauge the risk of bias in an interview sample by assessing the diversity of access points. Concretely, I demonstrate the added value of visualizing the sampling network, i.e., my personal network of relationships through which I recruited the study participants, building on recent work by Woldense (2021). Moreover, I explain how I cleaned and coded the resulting data corpus using directed content analysis (Schreier 2014). The directed content analysis was critical for the iterative theory development. The chapter concludes by elaborating on the process tracing that I invoke to demonstrate the empirical validity of the developed candidate explanation in comparison to seven alternative explanations. To this end, I also introduce the observable implications for the candidate and alternative explanations, jointly referred to as the rival explanations.

4.1 A mixed-methods social network analysis of the Nigerian case

SNA is a meta-approach — "a way of looking at a problem" (Marin and Wellman 2014, p. 16) — with implications for theory, measurement, and analytical methods (Dorussen et al. 2016). SNA can be quantitative or qualitative.[1] Combining the two methods provided me with a comprehensive perspective of the network structure and how it is co-constituted by the behavior of the armed groups. I adopted a sequential multi-strand design in which the descriptive, quantitative SNA establishes the outcome that the qualitative component seeks to explain. The Nigerian case is suitable for implementing this design due to the simultaneous presence of a civil war and several conflicts between informal armed groups, as well as preliminary indications of their interdependence.

4.1.1 Mixed-methods social network analysis in a nutshell

The central idea of SNA is that social phenomena emerge through interactions between multiple actors. Accordingly, social science theories *and* methods need to capture this relational aspect, specifically the patterns and qualities of relationships (Froehlich et al. 2020, p. 245). The idea is implemented conceptually

[1] It is controversial whether purely qualitative SNA even falls under the concept of SNA. Such studies do not capture the structure of the network, which is considered an essential element of the network perspective or paradigm. For example, Hollstein (2014a, p. 19) claims that formal analysis of network structures would be the prerequisite for "any kind of valid statements about social networks," which would seek to go beyond metaphors.

by representing social phenomena as networks in which nodes are tied together by one or more types of relationships (Marin and Wellman 2014, p. 11). Nodes can be individuals, collective actors, or anything that can have a relationship, including animals, organisms, and objects. The distinct relational perspective of SNA implies that the network structure, i.e., the “totality” of direct and indirect dyadic relationships (Hollstein 2014a, p. 6), shapes the behavior of the actors, while the behavior of the actors constitutes the network structure.

SNA differs from mainstream approaches in political science. Quantitative approaches tend to aggregate individual attributes to explain an outcome (Marin and Wellman 2014, p. 4; Crossley and Edwards 2016, par. 3.1), and assume that monadic or dyadic observations are conditionally independent (Cranmer and Desmarais 2016; Pomeroy et al. 2019, p. 2). The latter is not plausible, however, for data with incidence relationships, which means that dyads intersect with each other (Brandes et al. 2013, p. 9). Qualitative approaches can be better positioned to capture the dynamic nature of intersecting relationships due to the richness of qualitative data and their in-depth focus on one or a few cases. Still, qualitative studies lack a comprehensive perspective on relationship patterns for the whole case of interest and, by extension, face limitations in capturing the impact of these patterns (Pantic et al. 2023, p. 190).

SNA is a fruitful approach to answering my research question because it can capture the interdependence of conflicts and bridge macro- and micro-level explanations. The relational approach enabled me to conceptualize internal conflicts as distinct yet integrated into one overarching network (cf. theory chapter 3.1). This offers a more nuanced perspective than assigning the conflicts exclusively to the national- or local level (cf. Cox 2014, pp. 140–141). The co-constitution of structure and actor-level behavior inherent in SNA allowed me to theorize how the government and non-state armed groups are not only influenced by the structure of the conflict network but also shape it through their behavior. Concretely, I was able to describe the impact of the civil war on the informal group conflicts and the resulting feedback effects of these conflicts on the conflict network. In addition, the visualization techniques of SNA allowed me to convey the significance of the structural changes to the reader beyond numerical and textual descriptions.

The first SNA were conducted in anthropology, sociology, and social psychology in the 1960s until a distinct scientific community emerged in the 1970s (Crossley and Edwards 2016, par. 4.4; Borgatti et al. 2009; Fienberg 2012). The mathematical foundations were developed in parallel and are rooted in graph theory (Hollstein 2014a, p. 7; Crossley and Edwards 2016, par. 1.4). By now, the discipline underwent a “mathematization” (Hollstein 2014a, p. 7), with quantitative methods being the dominant approach (see also, Pantic et al. 2023, p. 188). Therefore, most methodological innovations stem from computer science and statistical physics (Aleta and Moreno 2019; Brandes et al. 2013; Fienberg 2012). However, a growing community of scholars has argued in favor of combining quantitative and qualitative methods for SNA (e.g., Crossley and Edwards 2016; Hollstein 2014a; Campana and Varese 2022).

Combining quantitative and qualitative methods in multi- or mixed-methods research designs has a long tradition outside SNA. Following Hollstein (2014a, p. 11), I consider a research design as mixed-methods if (1) both numerical and textual network data are used, (2) quantitative, mathematical as well as qualitative, interpretive analysis methods are applied, and (3) either data or methods are integrated, i.e., "systematically link[ed] or relate[d]," at least at one stage of the research process.[2] The key advantage of mixed-method research designs is to use the strengths of one method to even out the weaknesses of the other, leading to "superior" results (Johnson and Onwuegbuzie 2004, p. 17). Furthermore, they allow for the triangulation of data by using different types of data and a variety of sources (Beitin 2012, p. 615). If an argument is corroborated across data types and sources, this increases the confidence in the validity of the results.

The advantages of combining quantitative and qualitative methods also apply to mixed-methods SNA. Using qualitative methods enriches the dominant quantitative approach to SNA by putting emphasis on the agency of the actors and thus the processes that shape the network structures (e.g., Hollstein 2014a, p. 20; Pantic et al. 2023; Edwards 2010). Without considering qualitative data, which is able to illuminate the perceptions and choices of actors (Pantic et al. 2023, p. 188), it is hardly possible to understand how and why network structures emerge and change (Hollstein 2014b). Nevertheless, without considering quantitative data, the overarching structure and patterns of relationships, which shape the agency of the actors, would be missed (Pantic et al. 2023, p. 190) and it would remain unclear whether the observed micro-level interactions indeed have structural consequences (Crossley and Edwards 2016, par. 5.6). Mixed-methods SNA is further recommended for exploratory, theory-building oriented research objectives (Hollstein 2014a, p. 22,b), which resonates well with the goals of this study.

Mixed-methods research has been criticized during the paradigm debate between (post-)positivists and constructivists for relying on contradicting and incommensurable assumptions which, a priori, prevent scholars from drawing meaningful conclusions across methods (Johnson and Onwuegbuzie 2004, p. 14; Crossley and Edwards 2016, par. 1.2; Fairfield and Charman 2022). Mixed-methods scholars, in contrast, adopted pragmatism as a third paradigm. Pragmatism reconciles the ontological, epistemological, and methodological assumptions underlying (post-)positivism and constructivism (Bellotti 2014, p. 23) and, based on this reconciliation, proposes that one should select those methods that provide the most insights on the research question (Johnson and Onwuegbuzie 2004, p. 15).

Pragmatists suggest that, while there is an observable world external to the researcher, the observations will always be mediated by the sensational experience and conceptual assumptions of the observer (Beach

[2] Multi- and mixed-methods research are distinguished based on the degree of integration of quantitative and qualitative methods. Multi-methods research uses both but only sequentially. Mixed-methods research integrates the two methods during the research process. There is no agreement on how much integration is required for a design to count as mixed-methods research. I consider my own research mixed-methods, as I will elaborate below, and will refer to mixed-methods research for reasons of simplicity throughout this chapter.

2021, p. 8905; Bellotti 2014, p. 30). There is "no true knowledge" (Bellotti 2014, p. 30). This said, an agreement among a group of people on falsifiable theories, formalization, and description of the social world is possible (ibid., p. 30). Pragmatists further point to major commonalities between the qualitative and quantitative research paradigms, which facilitate the mixing of the two (Johnson and Onwuegbuzie 2004, pp. 15–16; Kuckartz 2014, p. 43). Quantitative and qualitative methods are often considered as corresponding to specific world views and/or epistemological assumptions, while pragmatists argue that this is not necessarily the case (Kuckartz 2014, p. 43). Instead, different methods merely provide different "vantage points" on the same phenomenon (Crossley and Edwards 2016, par. 2.7).

4.1.2 The mixed-methods design of this study

I applied a sequential, multi-strand mixed-methods design with one quantitative and one qualitative component to a single case. An overview of the research design is provided in Figure 4.1. Sequential means that the qualitative and quantitative components of the study build upon each other in their results (Hollstein 2014a, p. 14). Multi-strand means that I completed two separate research cycles, in which I generated and/or analyzed data and made inferences (ibid., p. 11). The quantitative and qualitative components were integrated at three points, indicated through the respective number in Figure 4.1. First, the results of the quantitative component on the evolution of the conflict network constituted the outcome that the qualitative part sought to explain. Second, the qualitative component informed the conceptualization and operationalization of formal and informal armed groups in the quantitative analysis. Third, the insights gained from the quantitative and qualitative components were integrated into one theoretical framework in an iterative research procedure.

A single-case study is a study that "examine[s] multiple pieces of evidence about a single unit" (Toshkov 2016, p. 285). In this study, focusing on a single case means analyzing one country-level conflict network that integrates multiple internal armed conflicts taking place on the territory of the same nation-state. I follow the common approach to use the geographically bounded entity of the nation-state to define what a case is (Riofrancos 2021) (see also the discussion on the network boundary specification problem in the theory chapter 3.1.3).

I focus on a single case due to the goal of theory-building and the feasibility constraints inherent to mixed-methods SNA. Single-case studies have the advantage that they allow for an in-depth understanding of the processes that lead to the outcome of interest. They are, therefore, suitable to explain the developments of the specific case and generate a new theoretical argument that is intended to be generalizable across space and time (Riofrancos 2021, p. 109; Pepinsky 2019, p. 188; Toshkov 2016, p. 285). Mixed-methods SNA is furthermore so demanding in terms of data collection and quality (Huisman and Krause 2018) as well as the skills of the researcher (Johnson and Onwuegbuzie 2004, p. 21) that a single-case study approach is justifiable

from a feasibility perspective. In focusing on a single case, I follow existing statistical network analyses of internal conflict (e.g., Metternich et al. 2013; Gade et al. 2019b).

Source: Own figure.

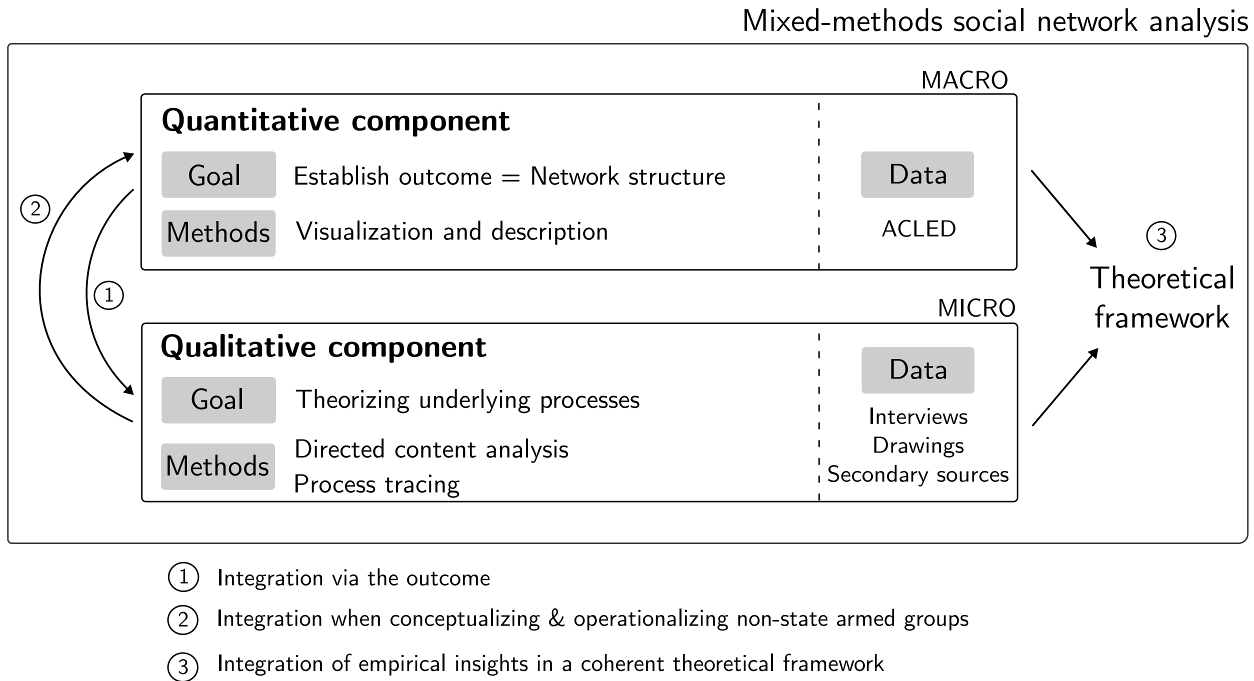


Figure 4.1: Overview of the mixed-methods research design

Single-case studies face a tension between internal and external validity. A strength of single case studies, especially if quantitative and qualitative methods are combined, is the high internal validity of the argument (Pepinsky 2019, p. 193). At the same time, the external validity, i.e., the transferability and generalizability of the argument, remains unknown.[3] I mitigate this problem by specifying the scope, necessary, and enhancing conditions of my argument (Beach 2021, p. 8902) and by probing the transferability of my argument (cf. external validity chapter 8.2). In addition, I suggest that the internal validity of an argument is the precondition of its applicability to other cases, that is external validity, and should hence be prioritized. It is also expedient to differentiate the transferability of the conceptual framework and of the theoretical argument. While the generalizability and transferability of the latter are difficult to gauge based on a single case, an inherently consistent conceptual framework is likely a useful theoretical lens for other cases.

The combination of the quantitative and qualitative components was essential for this study. The quantitative component of the mixed-methods design seeks to answer the structural dimension of the research question: how does the conflict network develop after the civil war breaks out? Accordingly, the quantitative

[3]Transferability focuses on how well a theoretical argument travels to specific other cases. This is different from generalizability, where the focus lies on the applicability of an argument to the whole population (Maxwell and Chmiel 2014).

component describes and visualizes the structure of the country-level network throughout the observational period, building on ACLED (Raleigh et al. 2010). The description focuses on three aspects: the distribution of the government fighting effort as an approximation of the resource allocation, the development of the informal group conflicts, and the subsequent reaction of formal armed groups involved in the civil war. The methodological approach of the quantitative component is described in detail in section 4.2 below.

The qualitative component aims to answer the procedural dimension of the research question: how do underlying processes result in the structural changes identified in the quantitative component of the research design? The processes of interest "involve a long sequence of decisions, actions, [and] institutional patterns" whose traces can hardly be captured without qualitative methods (Seawright 2016, p. 57). The methodological approach of the qualitative component to trace these processes is described in section 4.3 below. Without the qualitative component, the insights gained from the quantitative component would have been limited. Yet, without the bird's-eye view of the structure of the conflict network, the development of a comprehensive theoretical argument including feedback effects across conflicts, would not have been possible.

The research design was implemented in an iterative manner to refine existing theoretical arguments and extend them with novel insights. Iterative means that I iterated between deductive and inductive theory development and empirical analysis. The research process is outlined in Figure 4.2. I started with developing a deductive conceptual framework of internal conflicts as parts of country-level conflict networks. This step also included the conceptualization of formal and informal armed groups. I used this framework to conduct a descriptive quantitative analysis of the Nigerian conflict network. This analysis revealed a puzzling spatial variation: after the civil war broke out, conflicts between informal groups escalated and fragmented primarily outside the civil war conflict zone. To explain this variation, I conducted a directed content analysis that starts from a deductive coding scheme and extends it inductively during the coding process. The empirical validity of the theoretical argument resulting from the directed content analysis was then demonstrated in a process-tracing analysis and by probing the external validity.

The outlined research process is common for qualitative research that "iterates among theory development, data collection, and data analysis" (Bennett et al. 2022, p. 302) — although in many instances reported as linear and deductive "post facto" (Fairfield and Charman 2022, p. 580). Indeed, Kapiszewski et al. (2022, pp. 653, 666) claim that iteration is common practice among qualitative researchers but frequently not reported in presentations or publications because of the fear of rejection. However, a purely deductive approach is often not reasonable for qualitative research. The exposure of a research design 'to the field' can be rendered impossible for practical reasons or unexpected but crucial insights would need to be deliberately ignored. Prohibiting adjustments for the sake of a pure deductive research process would unduly hamper scientific progress (ibid.).

Source: Own figure.

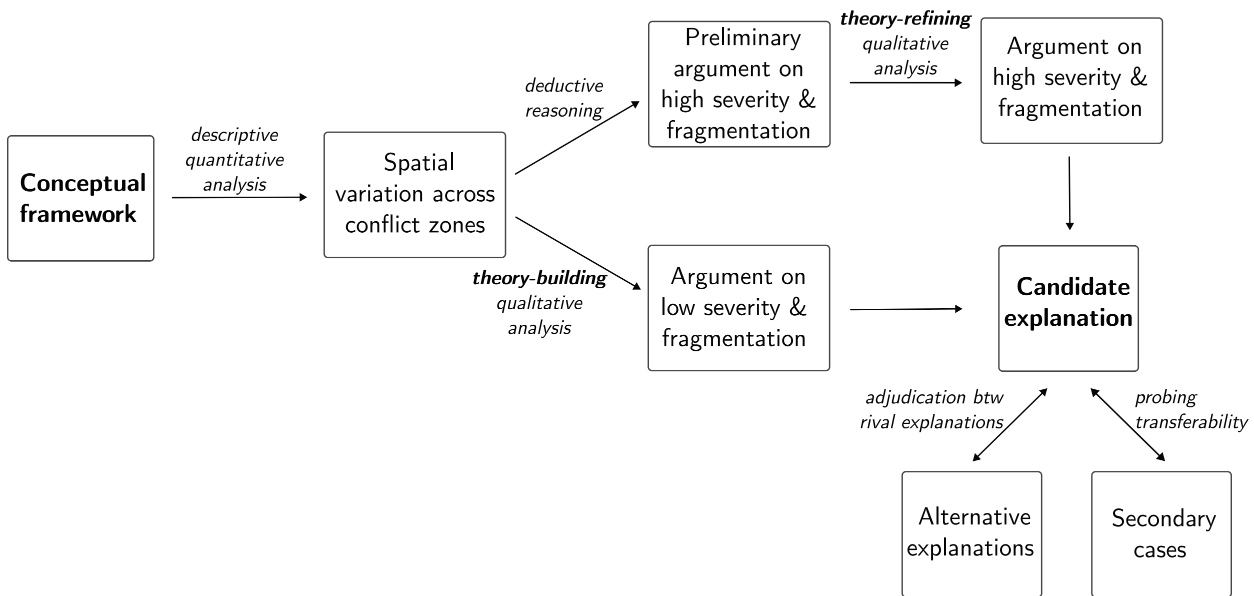


Figure 4.2: Outline of the research process

Nevertheless, two potential limitations of iterative theory development need to be addressed: confirmation bias and idiosyncrasy. Confirmation bias refers to the challenge that the evidence used to develop an argument will inevitably support it (Kapiszewski et al. 2022, p. 657). Therefore, positivist researchers with a frequentist understanding of social science, in particular King et al. (1994), advocate that empirical evidence corroborating the argument can never increase our confidence in its validity. It can merely be illustrative. I argue in favor of a more nuanced stance following Bennett et al. (2022, p. 303) and Fairfield and Charman (2019, p. 160). The authors argue that the informative value of evidence is independent of its point in time of discovery — be it before or after one developed an argument. Instead, confirmation bias needs to be addressed by systematically testing the candidate explanation against a variety of alternative explanations. I do this in the qualitative component as part of the process tracing.

Idiosyncrasy refers to the risk that the argument is tailored so closely to one specific case that is not generalizable (Kapiszewski et al. 2022, p. 657). To address this risk, I connect the inductively gained insights to concepts and arguments already existing in the conflict studies literature. This ensures their relevance beyond the Nigerian case. For example, I can build on research on rebel governance when theorizing my observation that the civil war parties regulate the behavior of communities under their rule. In addition, I probe the transferability of my argument based on secondary data. For the cases in which the transferability of my argument seems limited, I critically discuss how the theory could be extended to accommodate these limitations.

4.1.3 The selection of Nigeria as an informative case

The Nigerian conflict network (2000–2021) has been selected as an informative case for scientific and substantive reasons (Toshkov 2016, p. 289; Fairfield and Charman 2022). The population of cases to choose from is defined as contexts in which at least one civil war takes place and the national government is a relevant actor. Informal group conflicts do not need to be given for a case to be included in the population because interdependence can also mean that the presence of the civil war *precludes* the emergence of other conflicts. Figure 4.3 shows the prevalence of countries with either (1) only civil war(s), (2) only conflict(s) between informal groups, or (3) both types of conflicts at the same time according to UCDP (Davies et al. 2023; Gleditsch et al. 2002; Sundberg et al. 2012).[4] Figure 4.3 shows that the majority of conflicts between informal groups concur with civil wars, particularly during the last ten years. This also underlines the relevance of the research question. The second category, contexts with informal group conflict only, is excluded from the population of cases because I am focusing on the ripple effects of civil wars. The same applies to cases where the central government completely collapsed, such as Libya or Somalia, since my scope conditions require the government to be a relevant actor.

Source: Own figure based on UCDP data by Davies et al. (2023), Gleditsch et al. (2002), and Sundberg et al. (2012) and code adapted from Sebastian van Baalen.

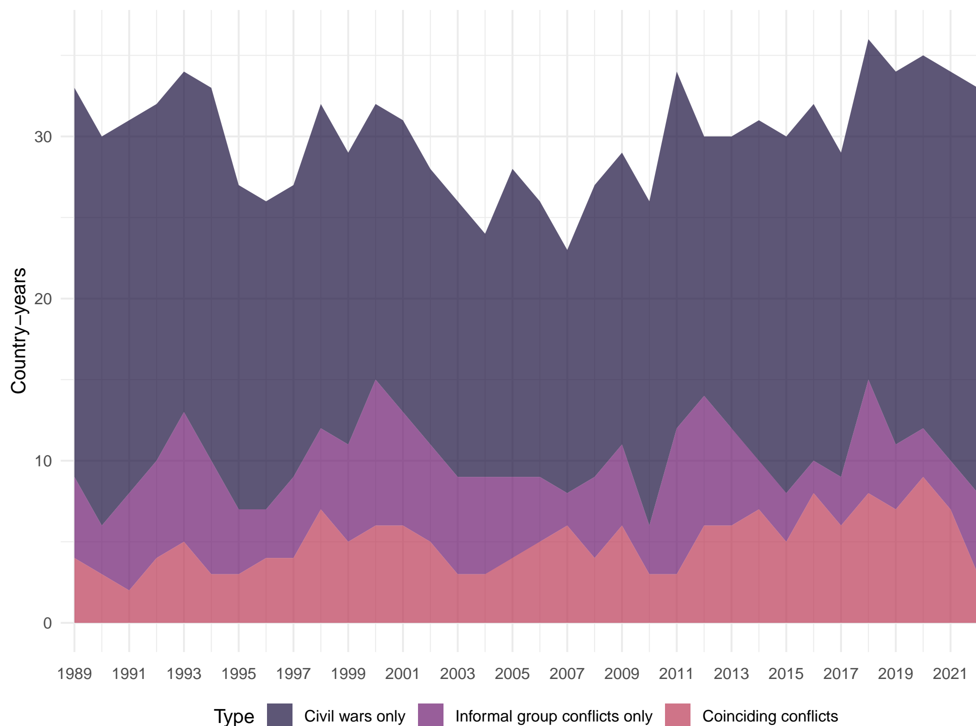


Figure 4.3: Civil wars and conflicts between informal groups (1989–2022)

[4]I operationalize a conflict as informal if UCDP codes the organizational level of the involved non-state dyad(s) as informal (Pettersson 2023; Sundberg et al. 2012). Civil wars are UCDP intra-state conflicts coded with the accumulated severity level "war" (Davies et al. 2023; Gleditsch et al. 2002).

In terms of scientific reasons for the case selection from the outlined population, I followed the proposition of Fairfield and Charman (2022) to maximize expected information gain, i.e., to select a case that allows us to learn as much as possible about the phenomenon of interest. This is a more pragmatic approach than is usually advanced. The authors justify this by suggesting that existing case selection strategies are too numerous, fragmented, overlapping, and, as a result, contradictory. Often, the recommended strategies build on unrealistic assumptions like an extensive knowledge of the population of cases and the equal accessibility of all cases (ibid., pp. 551–622).

I identified four criteria to gauge the potential information gain of a case: (1) the presence of civil war *and* informal group conflict, (2) preliminary indications that the two types of conflict influence each other, (3) observability of the processes of interest, and (4) feasibility. First, interdependence between conflict types can be theoretically relevant in cases where only the civil war is active. As I show in this study, the civil war might be instrumental in explaining why conflicts between informal groups are absent. Despite this, the empirical relevance of interdependence is uncertain, and selecting such a case might result in minimal information gain. Therefore, I focus my case selection on cases where a civil war and conflict(s) between informal groups coincide. This is the case in Nigeria but also in many other contexts, including South Sudan, Mali, Indonesia, India, and the DRC.

Second, the expected information gain should be even larger in cases in which preliminary evidence points to the relevance of interdependence (cf. Beach and Pedersen 2018, p. 848). Therefore, I prioritized cases in which secondary sources report instances of co-variation in violence across conflicts. This is the case in Nigeria for which Dorff et al. (2020) find in their network analysis that the violence level significantly increased after Boko Haram emerged and that this effect also holds for conflict dyads that are not directly related to Boko Haram (see also Weezel 2016, for a similar observation). Cooperation between armed groups seems to play a role in Nigeria, too. For instance, sources suggest that vigilante groups cooperate with the government (Weeraratne 2017) and Boko Haram with the bandits (Samuel 2020b). By contrast, the potential for interdependence between conflicts is less clear for India and Indonesia, for example. In addition, I assume that cases that are referred to as complex in research and public discourse often involve several interdependent conflicts. Nigeria seems promising because it has been described as “a typical complex and heterogeneous state” (Anugwom 2019, p. 43) or even as “emblematic” for complexity (Taft and Haken 2015, p. 133). Other conflicts often referred to as complex are Syria and the DRC. This hunch was confirmed after I had already selected Nigeria as a case by a study by Brosché et al. (2023), according to which Nigeria is, in some years, the second most complex case after the Syrian civil war.

Third, the observability of processes underlying the phenomenon of interest can vary across cases. Interdependent network processes are likely endogenous and difficult to separate from each other. In Nigeria, I can exploit the *sudden* outbreak of a civil war (the Boko Haram conflict) in one area of the country (Borno

state in the Northeast) to trace the ripple effects on the country-level network. The suddenness of the conflict outbreak was emphasized by several study participants and stands in sharp contrast to the reputation of Borno state as the ‘home of peace’ — a slogan that is even displayed on the car number plates.[5] From the perspective of observability, it is also conducive that Boko Haram began as an urban non-violent Islamist sect in a Muslim-dominated area. As a result, the Boko Haram conflict is similar to an exogenous shock to the rural conflicts and the Muslim-Christian clashes in the Middle Belt. Last but not least, it is another advantage in terms of observability that the internationalization of the Nigerian conflict is relatively low (Duursma et al. 2019; Twagiramungu et al. 2019). This includes the fact that no international peacekeeping mission operates in Nigeria, which could confound the relationship between civil wars and conflicts between informal groups. The limited internationalization was one reason why I did not select Mali, where the presence of a UN peacekeeping mission, French military, and Wagner troops would have decreased the observability.

Finally and fourth, feasibility is directly related to information gain. If conducting research is not possible for practical reasons or only to a limited degree, the information gain is reduced (Fairfield and Charman 2022, p. 579). In the case of this study, feasibility criteria were the official language (English), security considerations (stable urban centers accessible via air travel), and access to institutions and individuals who would be able to support my research endeavor. Nigeria met all these feasibility criteria. By contrast, the language criterion excluded many of the conflicts in the Sahel and the DRC. In short, Nigeria seemed very promising in terms of information gain and, hence, scientific reasons for case selection.

From a substantive perspective, i.e., taking into account the “real-world societal importance” (Toshkov 2016, p. 289), Nigeria has been selected because of the need to understand the *ongoing* conflicts better to inform conflict management and resolution policy and practice. The Nigerian conflicts have dramatic humanitarian consequences, exacerbating preexisting needs due to poverty and lack of public service provision (*Northwest Nigeria* 2023). For example, 4.4 million people were gauged to be affected by critical food shortage in Northeast Nigeria in 2021 (Mbachu 2021) and 3.2 million people were estimated to be internally displaced due to conflict as of 2022 (*Nigeria* 2023a). More than 70% of households in the Northwest have needs regarding water, sanitation, and hygiene (*Northwest Nigeria* 2023). Research on the conflicts in the Northwest and Northcentral is particularly needed as they receive far less attention from academia and the humanitarian sector — although six times more civilians have died in farmer-herder and banditry violence than in the Boko Haram conflict as of 2018, according to a study by the International Crisis Group (*Stopping Farmer-Herder Violence* 2018, p. i).

Due to its population size and political significance, the conflicts in Nigeria have the potential to destabilize the wider region (Campbell and Page 2018; Wiehler and Malefakis 2024). Analysts worry that

[5] E.g., Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 465, IDP Northeast Focus Group Discussion (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

violent extremists in Mali, Burkina Faso, Niger, and Northeast Nigeria might become interlinked via the informal groups in Northwest Nigeria. This would imply that these groups had an integrated corridor spanning large parts of West Africa under their control and could expand their operations towards coastal countries in West Africa more easily (Adebajo 2023; Zenn 2020a). More generally, Nigeria is part of a regional dynamic that is very concerning: West Africa is the center of the activities of Islamic State (IS) outlets since the group had been pushed back in Iraq and Syria (Dahiru 2023).

A detailed background on the Nigerian case is provided in the next chapter 5. For the research design, I only introduce the link between the Nigerian geopolitical zones and the main conflicts, as this influenced the design of the quantitative SNA as well as the site selection for the qualitative component. Nigeria is divided into six so-called geopolitical zones that correspond to the settlement areas of the largest ethnic groups (Figure 4.4). The Northwest and Northcentral are commonly depicted as being dominated by Hausa-Fulani, while the Kanuri are the majority group in the Northeast. The Southwest is associated with the Yoruba, the Southeast with the Igbo, and the Southsouth with the Ijaw. This said, more than 250 different ethnic groups reside in Nigeria.[6] Geopolitical zones are not official administrative units but have a strong political significance and are a common point of reference.[7]

The Nigerian conflicts roughly correspond to the six geopolitical zones. The Boko Haram civil war is concentrated in the Northeast. Banditry and livelihood conflicts between farmers and herders are most prevalent in the Northwest. Similar livelihood conflicts occur in the Northcentral but take on a stronger ethnoreligious dimension there. Similarly, ethnoreligious riots are most common in the Northcentral. The Niger Delta conflict over the redistribution of oil revenues to the communities affected by extraction is concentrated in the Southsouth. The conflict over the secession of Biafra between Indigenous People of Biafra (IPOB) and the government re-emerged recently in the Southeast. The Southwest has been spared from major conflicts, but livelihood conflicts and banditry seem to spill over. That said, linking the geopolitical zones to specific conflicts is an approximation, and not least the livelihood and ethnoreligious conflicts are spatially more diffuse.

[6] There is no agreement on the exact number of ethnic groups in Nigeria, not least because of the varying definitions used. The indicated numbers range between 52 and 394 ethnic groups but 250 seems to be the most commonly indicated number (Ejiogu 2011, p. 26).

[7] Formally, Nigeria is divided into states (2nd tier of government) and the 3rd-tier units called Local Government Area (LGA).

Source: Own figure based on data by Ordu (2023).

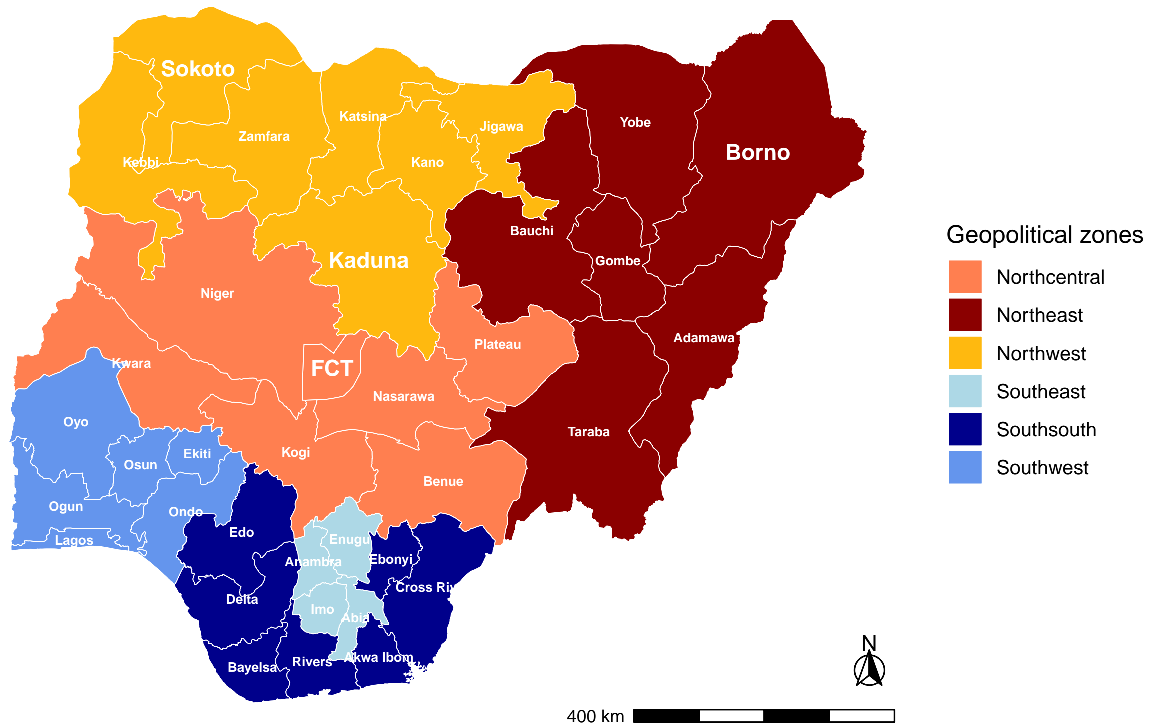


Figure 4.4: Map of Nigeria's geopolitical zones and research sites

Having settled on Nigeria as the case, I had to specify the temporal scope of the case study and decide on specific research sites for the field research as part of the qualitative component. I specified the observational period to 2000–2021. 2000 is the year after Nigeria's transition to a democratic political system after decades of military rule. This transition can be considered the starting point of internal armed conflict in Nigeria after a stable period since the end of the Biafra civil war in 1970 (Krause 2018). 2021 is the year in which I completed the field research. For 2022 and 2023, I would have had far less information at my disposal, introducing a problematic imbalance for the before- and after-field research period.

The quantitative component traces the evolution of the conflict network for the whole country, i.e., across the six geopolitical zones. The qualitative component requires to zoom-in on specific sites within the country. I have selected Maiduguri in Borno state, Northeast Nigeria, Sokoto and Kaduna towns in the eponymous states, Northwest Nigeria, and the capital Abuja, in the Federal Capital Territory (FCT), Northcentral Nigeria. The sites are indicated through larger font sizes on the map in Figure 4.4. I adopt the concept of 'sites' — instead of sub-cases — from Riofrancos (2021). The author defines a research site as a temporally

and geographically bounded entity, in which macro-level processes manifest themselves and are co-constituted at the same time. This perspective resonates well with the theoretical framework of this study. Indeed, the conflicts in Maiduguri, Kaduna, and Sokoto are neither distinct nor independent sub-cases. They are interlinked and shaped by the same macro-level processes, for example, by the resource allocation of the government (Riofrancos 2021).[8]

The selection of sites sought to maximize the information gain, i.e., it followed the same logic as the case selection. For the sites, feasibility in terms of security was critical. To gain insights into the interdependence between the civil war and conflicts between informal groups, I selected one site in the civil war conflict zone (Maiduguri), two sites in the areas affected by informal group conflict (Kaduna and Sokoto), and the capital where many government agencies, political interest groups, research institutions are based (Abuja).

Maiduguri in Borno state was selected because Borno can be considered the epicenter of the Boko Haram conflict and thus of the civil war (Idler and Tkacova 2023). Maiduguri is relatively safe because of the strong military presence. Most international actors operate from here. Maiduguri hosts many IDPs, members of the CJTF, and Boko Haram dissidents, making interviews with affected communities and armed group members possible without leaving the urban areas. Ultimately, I could not travel to Maiduguri due to a security incident just before my departure. Instead, I conducted remote interviews, and the research assistant carried out interviews independently.

To generate data on informal group conflicts, I decided to focus on the Northwest because it has been most impacted by the escalating banditry crisis in recent years. Kaduna was selected because it is one of the states most heavily affected by informal group violence (according to ACLED, Raleigh et al. 2010). The state has a long history of Muslim-Christian clashes in urban and rural areas. More recently, forest areas became a stronghold for banditry groups who regularly attack herder and farmer communities, including ethnic-minority groups. Sokoto state is less affected by conflict than Kaduna, but the LGAs bordering the neighboring Zamfara state saw a steep increase in banditry in the last years. Zamfara state played a key role in the emergence of the banditry crisis but is highly insecure. I hence choose Sokoto as a safer base to investigate the dynamics in that area.

In summary, I developed a mixed-methods SNA design that empirically demonstrates how the conflict structure and the underlying processes influence each other. The design is applied to the case of Nigeria, which has been affected by several concurrent armed conflicts with the first indications of interdependence between them. The insights from the Nigerian case are used to develop a novel theoretical argument in an iterative process combining deductive and inductive elements. I now detail the methodological strategies of

[8]The notion of interlinked sites is different from comparative perspectives such as the case-within-a-case approach (Mills et al. 2012). A comparative logic normally assumes that cases are independent and that we can hence learn by comparing the independent developments in two or more cases. This logic contradicts the idea of an interconnected network.

the quantitative and qualitative components.

4.2 Quantitative component: data preparation and analytical methods

The quantitative component of the research design describes and visualizes the conflict network building on the deductively developed conceptual framework. The goal of the quantitative analysis is to carve out the immediate ripple effects of the civil war outbreak for the conflict network as well as potential feedback effects. Thus, the quantitative analysis is descriptive and exploratory and shall not test specific hypotheses. Specifically, I combine the visualization of the country- and region-level networks with descriptive measures of their properties. With regional networks, I refer to facets of the country-level network for each geopolitical zone. Using both regional and country-level networks is a simple and efficient way to incorporate geographic space in the analysis.

This section first elaborates on the demanding data requirements of SNA and how I can operationalize the relevant concepts using dyadic event data. ACLED has been selected as the main data source due to the fine-grained information it provides at the event level. Nevertheless, ACLED's utility for SNA of informal groups is limited if using the dataset "off-the-shelf" (Bauer et al. 2017, p. 1546). I discuss the three most important limitations and my strategies to address them in turn: the blurred distinction between informal groups and civilians, the prevalence of unattributed events, and the aggregation of informal groups. These challenges flow from the concept of informality because it is difficult to observe and document groups that do not use uniforms or labels and have permeable boundaries, blending in with their communities of origin. The section concludes with an explanation of how I visualize the network and calculate descriptive measures, including which algorithms I used for the network layout and clustering. Overall, the quantitative component enables me to provide a unique and more nuanced perspective on the Nigerian conflict network than previous quantitative SNA of this case.

Note that I only focus on violent relationships because suitable quantitative data on conflict-related cooperation has not been available. Therefore, I assess the cooperative relationships in the qualitative analysis of the underlying processes, where I could build on interviews, network drawings, and secondary sources. Existing quantitative datasets on armed group cooperation are mostly restricted to formal armed groups and employ a narrow understanding of cooperation as military alliances or joint operations (e.g., Blair et al. 2021; Otto et al. 2020). ACLED provides information on "associated actors" for some events, but this is a heterogeneous category that sometimes specifies the characteristics of a group rather than indicating a

cooperating armed group.[9] It would equally only capture joint operations, but no other forms of cooperation. Coding cooperative relationships myself was not possible since qualitative secondary sources usually do not specify which informal groups cooperated, e.g., which of the hundreds of vigilante or banditry groups received training and/or weapons.

4.2.1 Data requirements and operationalization

Quantitative network analysis of conflicts requires data about discrete actors and the quality and quantity of their shifting relationships. Accordingly, SNA demands rich and fine-grained data. I selected ACLED by Raleigh et al. (2010) because it is, to my knowledge, the only conflict dataset available for the Nigerian case that provides sufficiently detailed information on the actors and their relationships. The UCDP data, for example, does not cover most of the banditry-related violence in Northwest Nigeria due to their coding conventions. Furthermore, UCDP does not include events that cannot be attributed to any actor (Bauer et al. 2017). Lacking actor information is a common problem for conflict data; however, excluding these observations from the start does not allow me to assess the potential biases. Country-specific sources like the Nigeria Security Tracker (Campbell 2021) or the data by Partners for Peace (*Peace maps* 2021) are more extensive in the events covered than ACLED but lack information critical for the SNA. For example, the Partners for Peace data does not provide sufficient information on who is involved in the respective events.

I operationalized the network by using ACLED's dyadic event data. In network terminology, the actors are called vertices, and the relationships connecting them to each other are called edges. In this analysis, I concentrated on annual networks of armed groups active on Nigerian territory. The armed groups — the vertices — are the main actors included in the dyadic events. The conflict relationships — the edges — were operationalized by the groups' joint participation in at least one violent but not necessarily lethal event. Thus, the edges are undirected. Since I theoretically excluded groups that emerged spontaneously for a single event, protests and riots were dropped from the analysis. I further dropped events that had an insufficient spatial resolution.[10] The latter concerned only 352 of 13,852 dyadic events.[11]

The relationships were weighted by the number of fatalities resulting from the joint event(s). For example, if fighting between JAS and ISWAP killed 30 people in a year, ISWAP and JAS were coded as sharing an edge with a weight of 30. Since the edges need to be unequal to zero by definition, violent events with zero fatalities were coded with a weight of 0.5. I decided to use fatalities rather than the number of joint events as the edge weight because of the strong discrepancy in the lethality of violence across dyads, which would have

[9] For example, one associated actor of Fulani Militias is "Pastoralists (Nigeria)," but based on the event descriptions, this does not seem to refer to a distinct group but specifies that the Fulani in question followed a pastoralist lifestyle.

[10] ACLED provides a measure of certainty for the geolocation of an event. All events that could only be attributed to a state — the first administrative unit and the coarsest spatial resolution in the ACLED data — were excluded.

[11] 13,852 is the number of events in the ACLED dataset for Nigeria between 2000 and 2021 after dropping the riot, protest, non-dyadic, and non-violent events, which are beyond the scope of this study.

been discounted otherwise. I conducted a robustness check using the number of joint events, demonstrating that the identified trends in the network evolution and the government fighting effort remain stable for the different operationalizations of the edge weight (cf. appendix A.4.3).

Conceptually, the conflict network only includes the armed groups as vertices. By contrast, when operationalizing the network in ACLED, I also included civilians because the permeability of the boundaries of informal groups implies that a clear distinction between armed groups and civilians is often not possible. As a result, ACLED often codes clashes between informal armed groups as violence against civilians. For example, conflicts between religious groups in the Middle Belt can be coded as attacks of the respective groups on civilians rather than as dyadic events between Muslims and Christians. Similarly, violence by the government against civilians might, in some cases, be targeting informal groups. A potential solution could be to assign civilians to informal groups based on their ethnic identity. Unfortunately, this information is not available in ACLED.[12] Ethnic communities can also not be inferred from event clusters as this would presume strong geographic segregation, which does not seem plausible. Another option is to drop the civilians from the dataset. However, this would disintegrate parts of the network into isolated vertices and render indirect relationships, like in the Muslim-Christian example, invisible.

Consequently, I included civilians as 'auxiliary' vertices in this analysis and leave it to future research to develop a more sophisticated approach. I specified civilians at the level of the LGAs. Civilians are included at the country-level in ACLED as "Civilians (Nigeria)." Including civilians at the country-level would not have been very insightful, however, as this would have created one large vertex that aggregates all violence against civilians in the country. This would not have been substantially meaningful and annul the interpretability of the network structure. I thus decided to use the smallest administrative unit available in ACLED, the LGA, to approximate communities as fine-grained as possible.

The network's spatial boundaries are the borders of Nigeria, and its temporal boundaries are the calendar years between 2000 and 2021. I only included actors who are involved in at least one event on the territory of the Nigerian state. I have set the temporal resolution to the annual level because conflict networks are sparse, i.e., the vertices are connected through a low number of edges, and a higher temporal resolution would have made the description and visualization difficult. The annual resolution, in turn, is still fine-grained enough to show meaningful variation over the years.

Finally, a key contribution of this study is the classification of armed groups as informal and formal. To operationalize this distinction, I combined the ACLED variable on actor types, information from the ACLED event description, and manual coding.[13] The most relevant groups were classified based on primary and

[12]Combining ACLED and the ethnic one-sided violence dataset by Fjelde et al. (2021) could have been an interesting avenue to address this problem, but the temporal coverage of the dataset ends in 2013.

[13]ACLED also differentiates the domestic, in this case Nigerian, government and "external/other forces." I have aggregated these external forces with the Nigerian government because — at least in the Nigerian case — this category concerned mostly the

secondary sources in chapter 5. For the remaining groups, I coded all ACLED "rebel groups" as formal and all ACLED "identity militias" as informal. ACLED defines rebel groups as "political *organizations*" [emphasis by the author] which are "known by a specific chosen name" (*ACLED Codebook* 2019) — characteristics which are at least very similar to the suggested attributes of formal armed groups. In a similar vein, informal groups are described as "*groups* organized around a collective, common feature including community, ethnicity, region, religion or, in exceptional cases, livelihood" (ibid.). Actors coded as identity militias in ACLED usually do not have a name besides the ascribed ethnic group. This category is thus relatively close to my understanding of informal groups.

The ACLED category "political militia" is more ambivalent, however, as it captures a diverse set of militia groups that are either used for political purposes or engage in organized crime. I hence developed my own coding rules to classify these groups as formal or informal. This concerns 66 of the more than 940 actors included in ACLED for Nigeria. The coding rules are described in Table 4.1. The coding of political parties and unions was the most delicate, as the related events do not necessarily fall within this study's scope. As Fubara (2023b) points out, political elites either mobilize violence specialists or their ethnic and/or party supporters for electoral violence. Supporters who participate in spontaneous events do not meet my armed group definition. I therefore dropped the events that can be attributed to unorganized party supporters based on the event description. However, if the event descriptions speak of militias rather than supporters, I included them and coded them as informal groups, because they are loosely organized and do not have an identity as a distinct armed group (ibid.).

	Actor	Rule
1	Political Parties, Unions & Associations	All political militias with "party," "congress," "union," or "association" in their name are classified as informal. If the event description speaks of members or supporters, the event is dropped.
2	Cults and confraternities	All political militias with "cult" or "confraternity" in their name, as well as those identified as cults based on case knowledge (e.g., Vikings) are coded as formal (for the justification, see case chapter 5.2.1).
3	Militia (*specification*)	All political militias with this naming structure, for example, Militia (Ndigbara) named after their leader or Militia (Students), are coded as informal because they do not identify with a proper name.
4	Any other group	Groups that are not covered by the first three rules and that are involved in less than five events between 2000 and 2021 are dropped. Those involved in five or more events (eight groups in total) are manually coded based on secondary sources. Table A.5 in the appendix provides a justification for each case.

Table 4.1: Coding rules for ACLED's 'Political militias'

international troops involved in the Multinational Joint Task Force (MJTF), which fights the non-state armed groups together with the government.

4.2.2 Dealing with unattributed violent events

The challenge, and often impossibility, of attributing violent events to specific armed groups is common in quantitative studies of political violence (Bauer et al. 2017; Fortna et al. 2022). In the ACLED data on Nigeria, approximately 30% of the observations (4,367 out of 13,852) are attributed to "unidentified gunmen" (or similar categories). Similarly, almost 50% of the Boko Haram events after 2015 cannot be attributed to a specific faction (1,176 out of 2,450). This phenomenon has been labeled the "Boko Haram disaggregation problem" by Warner and Lizzo (2021). The authors present a list of reasons internal and external to the group why the events are seldom attributed and why it is so difficult to solve the problem methodologically. I have decided to drop the completely unattributed events and re-assign the fatalities of the unidentified Boko Haram factions.

The standard strategies of dealing with unattributed events in quantitative conflict studies are to either include them nonetheless, drop them, or impute the information based on the known event characteristics (Bauer et al. 2017), including by merging several existing conflict data sets (Donnay et al. 2019; Fortna et al. 2022). Including them without attribution is impossible for this type of SNA, which by definition requires identified actors as vertices. Imputing the actors would have been preferable to simply dropping the events, but this was not possible. The main reason is that the actor attribution is Missing Not At Random (MNAR) rather than Missing Completely At Random (MCAR). MCAR means that the observations with missing actor information are a random sample of the main data (Bauer et al. 2017). If this was the case, the events could either have been dropped without introducing bias, or the actors could have been randomly imputed.

However, it is well established that missing values in conflict data are systematic and correlate with conflict characteristics, e.g., the event size measured by fatalities (Dawkins 2020). The non-randomness of the missing values is confirmed for the Nigerian case. Comparing the characteristics of events that are attributed and unattributed events shows that attributed events are more likely to be deadlier, to be battles, and to include the government, but less likely to have civilian targets (cf. Table A.1 in the appendix). There are also notable differences across regions. While only around half of the events are attributed in Nigeria's Northwest, the share of attributed events is much bigger in the Northeast. This might be due to the media attention to the Northeast because of the Boko Haram conflict, or the fact that events by violent extremist groups are more easily identifiable than those of the informal groups active in the Northwest. A logistic regression of these event attributes on the availability of actor information clearly shows that these event attributes are highly statistically significant with all p-values <0.005 (Table A.4 in the appendix).

Multiple imputations can still be possible for non-random missings if they are Missing At Random (MAR), i.e., if the reasons for the missing values are observable. This requires a theoretical model of the *observable* reasons for missing actor information that is the *same* for all types of actors (Bauer et al. 2017). For example,

Bauer et al. (2017) introduce such a model for militant violence in Pakistan. It is impossible to introduce this for the Nigerian case, however, because it seems highly unlikely that the reasons for missing values are the same for all actors. Groups opposing the government have very different reasons for claiming responsibility for attacks than informal groups involved in communal conflict, for example. This means the actor information is MNAR because the absence of this information is due to unobserved correlates (ibid.). This makes multiple imputations impossible, as the actor information, which is not observable, is needed to know which model to apply for imputation ("a clear chicken-and-egg problem," ibid., p. 1544). A simple imputation based on geographic area is also not possible as the areas of operations of the armed groups overlap. In short, because neither imputation nor inclusion without this information is possible, dropping the events remained the only possibility.

It was justifiable to drop the unattributed events and continue using this data for three reasons. First, I aggregated the data to the annual level, making the network structure less sensitive to missing information at the event level. As long as one event is correctly attributed, the respective dyad is included in the annual network. Second, a higher number of fatalities makes it significantly less likely that the actor information is missing (cf. Table A.4 in the appendix). While events with missing actor information averaged 2.5 fatalities, attributed events had an average of 7.5. Since I used the number of fatalities as the weight for the edges, the events dropped were at least less relevant. The deadlier events that make a bigger difference in the edge weight were more likely to be included in the analysis. Third, I compared the geographic spread of the events with and without actor information to make sure that I did not exclude actor(s) completely by dropping the unattributed events. This would have threatened the validity of the network analysis. I would have been worried if there had been distinct geographic clusters of unattributed events, as this could have indicated a group not covered by ACLED. This was not the case (cf. Figure A.1 in the appendix).

I followed a different strategy for the events that could not clearly be attributed to one of the Boko Haram factions.[14] Here, I redistributed the number of fatalities among the dyads with the known Boko Haram factions at the annual level. I decided to attribute one-third of the fatalities to JAS and two-thirds to ISWAP. This was to account for the fact that, according to the attributed events, ISWAP was almost constantly more lethal than JAS during the five years after the groups' split (cf. Table A.3 in the appendix). In contrast to the completely unattributed events, the number of fatalities does not significantly correlate with the missing information on the Boko Haram faction (Table A.4 in the appendix).[15]

[14] Note that ACLED changed the name of ISWAP to ISWAP-Lake Chad Faction (ISWAP-LC) after March 2019 because the so-called IS integrated the Islamic State Greater Sahara Faction operating in Mali, Niger, and Burkina Faso, and the Nigerian ISWAP into one overarching group called ISWAP. ACLED therefore started using the name ISWAP-LC to denominate the ISWAP faction operating in Nigeria (*ACLED Coding Boko Haram* 2021). I follow this naming convention but attribute all events taking place in 2019, i.e., also before March 2019, to the renamed ISWAP-LC since it is the same actor, just labeled differently. Without this step, ISWAP and ISWAP-LC would be treated as two distinct groups in the quantitative analysis in 2019.

[15] The information on the faction is also not MCAR, however, as other variables like government involvement and civilian targets are significantly correlated.

The risk of coming to a substantially wrong conclusion is lower than for completely unidentified events since the events can be attributed to one of two or three groups rather than one of hundreds. Also, the two groups are in structurally similar positions in the network: they are part of the same cluster and oppose similar actors. Dividing the fatalities between them is unlikely to change the network structure fundamentally. The worst-case scenario is that the edges of the respective Boko Haram factions are relatively over- or underweighted. Dropping these events, on the other hand, would have dramatically downplayed violent extremist violence after 2016 when JAS and ISWAP split. For example, in 2017, 11 events were attributed to JAS, 95 to ISWAP, but 2,492 (96%) to either of the two (cf. Table A.3 in the appendix for the number of unattributed Boko Haram events per year). As a result, the Boko Haram violence would be systematically underestimated from 2016 onward. To demonstrate this claim, I have included an analysis of the government fighting effort and a network visualization example without these unattributed events in the appendix A.4.2.

4.2.3 Disaggregating informal groups in ACLED

The distinction between formal and informal groups is crucial for this study but challenging to implement. Specifically, the aggregation of informal groups at the country- or state-level poses a challenge for SNA because it requires data on specific groups and their relationships. Concretely, ACLED aggregates many social identity groups at the country level, e.g., "Fulani Ethnic Militia (Nigeria)," and some militias at the state level, e.g., "Sokoto Communal Militia (Nigeria)" in the case of Sokoto state. Including these actors as they are coded in the raw data in the network analysis would have meant that they are included as one 'super vertex,' which is very violent and related across all regions of Nigeria. This would have been substantially wrong and misleading since a unified actor such as *the* Fulani Militia does not exist. To illustrate the difficulties of including informal groups in this manner, Figure 4.5 shows the wide geographic spread of events assigned to "Fulani Ethnic Militia (Nigeria)" in ACLED. In addition, the aggregation of groups at different levels, i.e., state level vs. country level, is problematic because the network position of groups would be strongly dependent on ACLED's coding rules.

To deal with the outlined problems and disaggregate the ACLED actors, I suggest an approximation of informal armed groups based on spatial event clustering. Clustering is an unsupervised learning technique that detects unknown subgroups in data (James et al. 2013, p. 373). My assumption is that informal armed groups are constrained in the territorial extent of their operations due to their entrenchment in the local communities. This means their operations cluster in the surroundings of their communities of origin and do not spread throughout the country. Therefore, instead of attributing all events to one group, sub-groups are differentiated based on their area of operation. Clustering has the key advantage of not relying on administrative boundaries to determine sub-groups but is informed by behavioral patterns. For example,

bandits in the west of Zamfara state also raid villages in the east of neighboring Sokoto state.[16]

Source: Own figure based on data by Ordu (2023) and Raleigh et al. (2010).

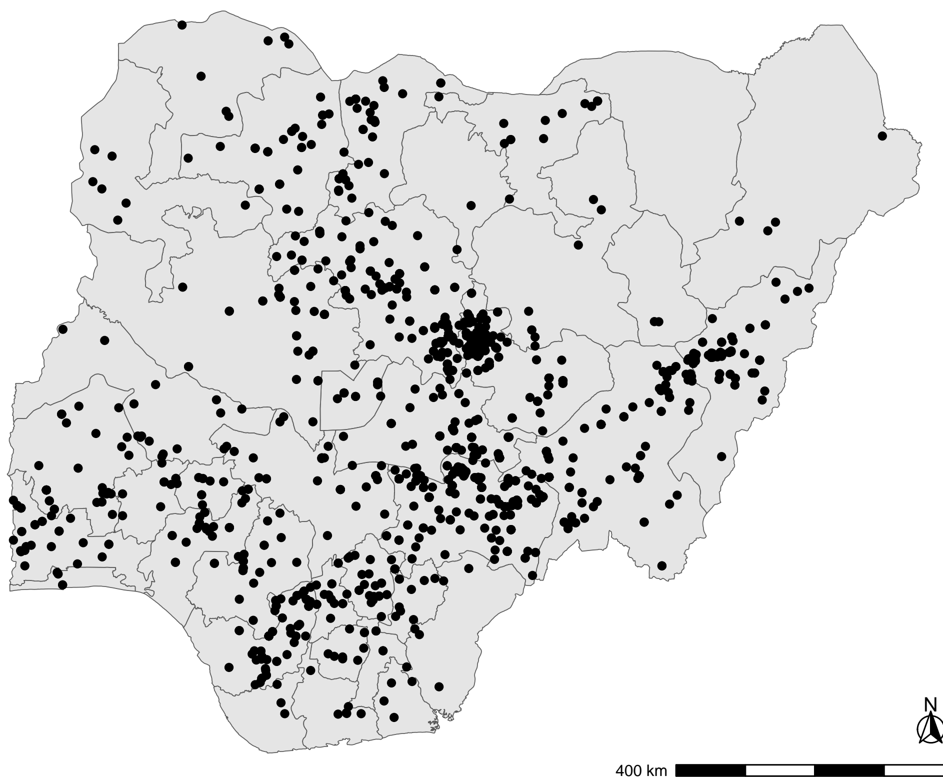


Figure 4.5: Map of events attributed to ACLED's "Fulani Ethnic Militia (Nigeria)"

For the clustering, I used the DBSCAN algorithm, which is based on the idea that clusters are "areas, which satisfy [a] minimum density, and which are separated by areas of lower density" (Schubert et al. 2017, p. 2). DBSCAN is a non-parametric approach, which means that the number of clusters does not need to be determined beforehand (Sander 2010). Technically speaking, the algorithm assesses each data point with regard to its neighboring points. The neighboring points are defined by specifying the distance threshold r, the radius. All points that are within the specified radius are neighbors. If the number of neighbors exceeds a pre-determined minimum density threshold k, the points are considered a cluster. This procedure is repeated for all points. A point can also be assigned to a cluster even though the direct neighbors do not meet the density threshold as long as one neighbor is part of a cluster. Such points are called border points (Schubert et al. 2017). Points that cannot be assigned to any cluster are considered noise. Due to the outlined procedure, the DBSCAN algorithm can identify organic shapes rather instead of minimizing the distance to one centroid. Organic shapes are appropriate for capturing the movements of armed groups. For instance, DBSCAN can deal with the mobility of pastoralists moving along a cattle route as long as the

[16]Interview 506, traditional ruler, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

events meet the pre-specified density and distance thresholds.

I conducted the DBSCAN clustering for all informal groups active in at least four Nigerian states (14 groups in total). I specified the density and distance thresholds for each group individually based on visual inspection of the results and the reduction of noise. Figure 4.6 demonstrates this approach for the Fulani militia, assigning the events attributed to the group to 38 clusters. The map shows all events assigned to the Fulani militia as dots, and all dots of the same color have been assigned to the same cluster by the DBSCAN algorithm. Each cluster corresponds to a number and I renamed the group accordingly: Fulani-14 in the network analysis refers to the Fulani involved in the event cluster number 14. The red, isolated dots spread out across the country are events that could not be assigned to any cluster, the noise, and have been dropped from the analysis (174 of 1,628 events). In the case of the Fulani, I decided on a minimum number of events per cluster of 5 (the density threshold) and a maximum distance of 0.25 degree latitude/longitude, approximately 27km, between two violent events (the radius). These thresholds have been determined inductively by comparing several cluster specifications.

Source: Own figure based on data by Ordu (2023) and Raleigh et al. (2010).

Distance threshold r = 0.25 degree | density threshold k = 5

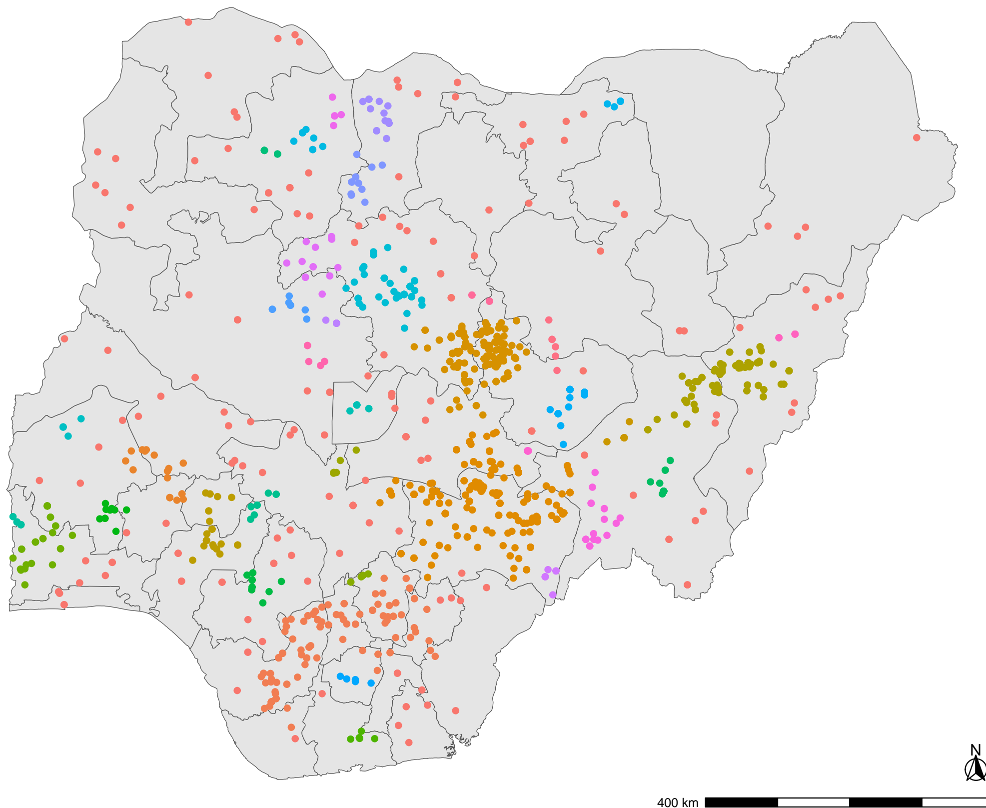


Figure 4.6: DBSCAN clustering for "Fulani Ethnic Militia (Nigeria)"

Inferring informal groups from spatial event clusters has clear limitations. On the one hand, assigning

events to clusters is based on mathematical optimization and not based on training on exogenously given, true cluster assignments. Nevertheless, this approach is a more nuanced solution than the standard practice in SNA, i.e., to use the actors as they have been categorized by ACLED (e.g., Dorff et al. 2020; Walther et al. 2020). Robustness checks show that the results from the quantitative analysis are robust to the different specifications of the DBSCAN algorithm (cf. appendix A.4.1). Changing the DBSCAN density and distance thresholds influenced the number of groups identified, but the temporal trends in network growth and fragmentation remained very similar.

In the case of the banditry-related events, I was able to leverage the location of bandit camps as seeds of spatial event clusters. This increases my confidence that the identified event clusters correspond to actual groups. ACLED does not explicitly code bandits, but when banditry violence in the Northwest escalated in 2018 and then spread to the Northcentral, ACLED began to include the mentioned state-level militias for the Northwest and, less often, the Northcentral (i.e., Sokoto Communal Militia, Zamfara Communal Militia, etc.). Due to the geographic and temporal intersection with the banditry crisis as well as the event descriptions related to these groups, I assume that events assigned to these militias are banditry-related events. The information on the location of the banditry camps is taken from a report by Hassan and Barnett (2022). Their report includes a map that indicates LGAs in Northwest Nigeria, where bandit camps are located.[17] They identify 18 different camps with the respective bandit leader(s). I assume that bandit leaders documented on the map are the most known and likely powerful ones. Taking these main camps as the base for the group clustering should result in a fair approximation of the most significant groups.

I implemented this approach by calculating the centroids of events within camp-LGAs. I then assigned the events that occurred in LGAs for which no camp has been indicated to these centroids by minimizing the distance.[18] The camp map by Hassan and Barnett (ibid.) only covered the Northwest, but banditry-related events are listed for the Northcentral too. I clustered banditry-events in states that are not adjacent to a state with camp-LGA separately, using DBSCAN. Figure 4.7 shows the events in the camp-LGAs as solid circles and the assigned events as empty circles in the same color. The events assigned with DBSCAN are indicated as solid squares.

[17] LGAs are the 3rd-tier administrative units in Nigeria and are comparatively small: there are 774 LGAs in the whole country, which means that the resolution of the map is high.

[18] Technically, I predicted the membership of events to the seed LGAs using the k-means clustering algorithm. K-means clustering instead of DBSCAN is appropriate in this case because I assume that the groups are based in the camps and start from and return to the camps for their operations.

Source: Own figure based on data by Hassan and Barnett (2022), Ordu (2023), and Raleigh et al. (2010).

Distance threshold r = 0.4 degree | density threshold k = 3

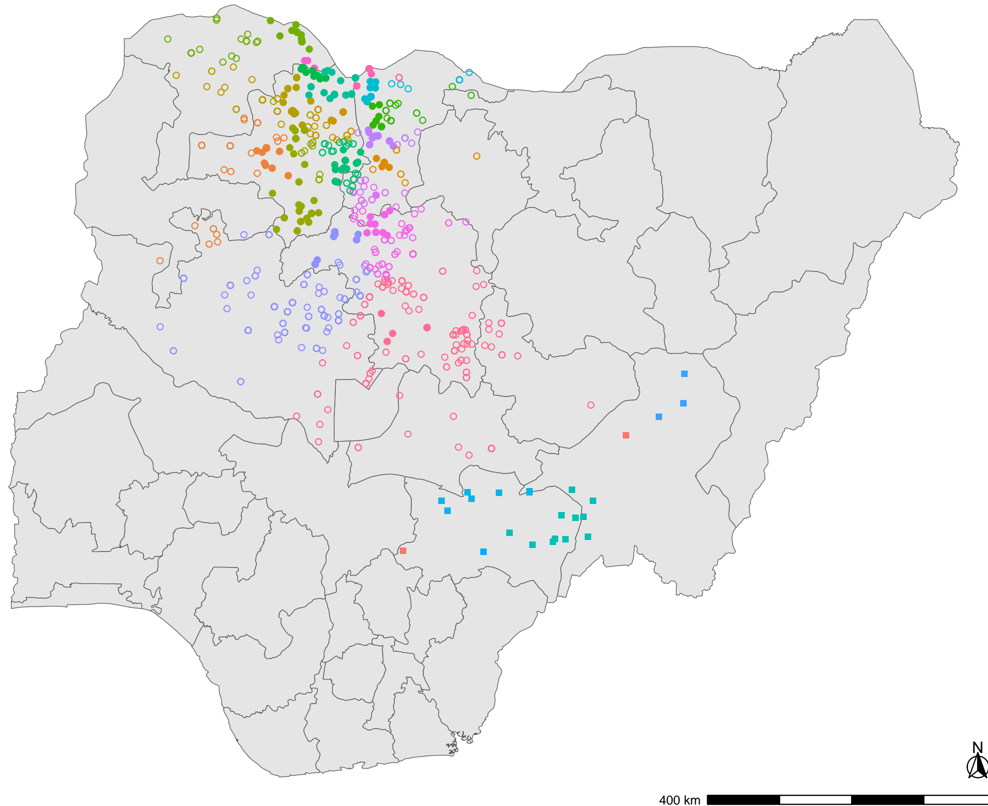


Figure 4.7: K-means and DBSCAN clustering of banditry-related events

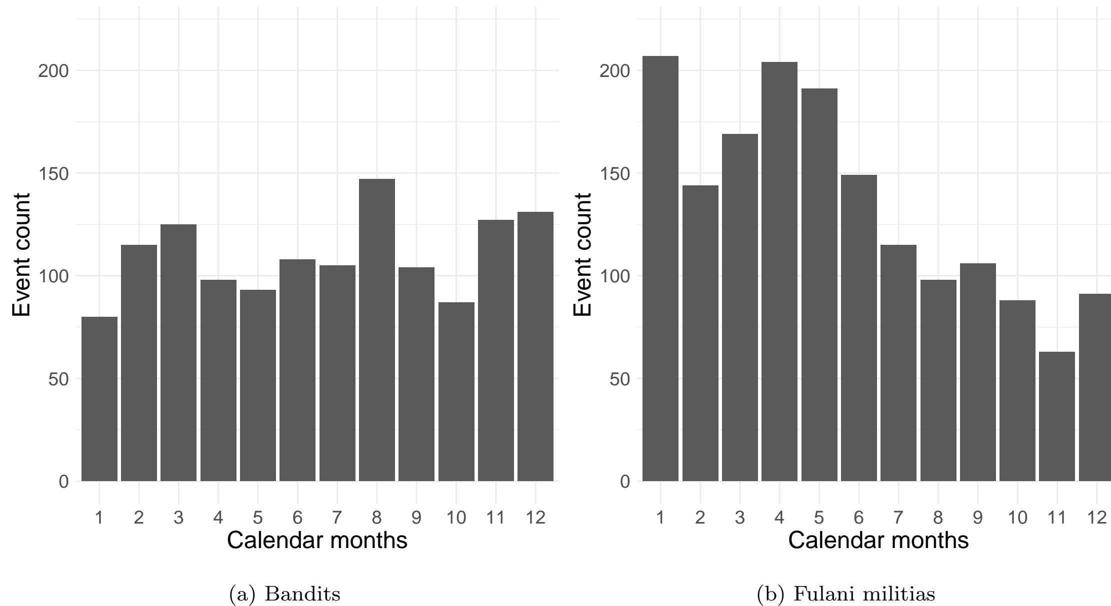
The distinction between Fulani militias and bandits is not clear cut since farmer-herder conflicts and banditry are interwoven with each other, and a substantial share of bandits identify as Fulani (cf. case chapter 5.3.2). The two conflicts are often equated in the Nigerian public discourse, and I do not expect media reports — the raw data of ACLED — to differentiate reliably between events involving Fulani militias and bandits. One indication of an insufficient separation of bandits and Fulani militias in the ACLED data is the coding over time. The banditry-related communal militias are only coded from 2018 onward. Yet, banditry in its modern form is supposed to have been increasing earlier, since 2010, with a first peak in 2015 (*Herders against farmers* 2017; Rufa'i 2018b). I assume that ACLED attributed earlier banditry-related events to the Fulani militias or left them unattributed.

I decided to maintain the Fulani and bandits as separate groups starting in 2018 for three reasons, beyond the normative concern of reproducing the narrative that 'All Fulani are bandits' by merging them together in my analysis. The groups tend to follow different motivations: the bandits operate similarly to organized crime groups that generate income through abduction for ransom and looting, while the Fulani militias are pastoralists involved in farmer-herder conflicts. The difference in motivation is reflected in the diverging

seasonality of their activities (cf. Figure 4.8). Violence involving Fulani militias is peaking during the dry season in the first half of the year, while the activity level of the bandits is relatively stable throughout the year. It is further notable that Fulani are hardly involved in abductions according to ACLED. However, this observation needs to be interpreted cautiously. It could also be an artifact of the ACLED coding: since bandits are known for abductions, abduction events are probably more likely to be assigned to them. Finally, Figure 4.6 and Figure 4.7 show that the groups vary a lot in their geographic spread. Overall, it seemed preferable to attribute some of the events incorrectly instead of concealing the outlined behavioral differences between the groups by aggregating them.

In sum, doing a comprehensive quantitative SNA that includes formal and informal groups is inherently challenging due to the large number of unattributed events and the aggregation of informal groups at the country level. To address this, I carefully assessed the characteristics of the unattributed events and reassigned those related to the Boko Haram factions. I introduced a novel approach to disaggregate informal armed groups based on event clustering. Since the analysis focuses on annual networks, I aggregated the event data to the calendar year and country- or region-level. These efforts leave me with a country-level dataset spanning 22 years with 3,115 year-level dyads and 1,358 actors, in contrast to 13,852 dyadic events and 943 actors in the off-the-shelf ACLED event data. I now elaborate on how I used this data to describe and visualize the Nigerian conflict network.

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) Bandits

(b) Fulani militias

Figure 4.8: Comparing the seasonality of events attributed to Fulani militias and bandits

4.2.4 Describing and visualizing the conflict network

The quantitative SNA aims to uncover the evolution of the network structure over time in an exploratory way. The focus of the analysis lies, hence, on the description and visualization of this evolution. Building on the conceptual framework, the quantitative analysis shall shed light on three specific aspects: the distribution of the government fighting effort as an approximation of the resource allocation, the development of conflicts between informal armed groups, and the reaction of the formal armed groups involved in the civil war to these developments. I conducted the analyses in R using the igraph package by Csárdi and Nepusz (2006).

Descriptive measures and visualization complement each other. The visualization of data with incident relationships is a key strength of SNA. Network visualizations can represent complex patterns in data that could hardly be grasped by descriptive measures alone and thereby enable theory development (Molina et al. 2014, p. 306). At the same time, descriptive measures provide additional information on the data's structural features, which might not be easily detectable with the bare eye in a visualization. I hence combined the two by using the descriptive measures as parameters in the visualizations and juxtaposing network visualizations and figures with descriptive measures.

The visualization and description of the networks is based on annual networks (calendar years) at the country and region levels. Country-level networks are critical for capturing how the totality of internal conflicts taking place in the same context relates to each other. The regional networks based on Nigeria's geopolitical zones are used as an approximation of the conflict zones. The conceptual framework of this study has a spatial dimension because I assume that conflicts cluster not only in social space but also in geographic space, where they manifest in conflict zones. In the Nigerian case, the conflict zones roughly correspond to the six geopolitical zones, as I discussed earlier in this chapter. An analysis of the regional networks allowed me to compare developments across the conflict zones. Combining country- and region-level networks was an expedient and simple way to describe developments in social *and* geographic space.

Combining the analysis of vertices in social space with geographic space remains a methodological challenge. The solutions proposed so far in the SNA literature require advanced SNA models, e.g., for multi-level networks (e.g., Chong et al. 2017; Emch et al. 2012). To my knowledge, most SNA of armed conflict focus exclusively on social space (e.g., Gade et al. 2019a; König et al. 2017). Another alternative considered for this study was the geographic rooting of the vertices in the visualization, but since armed groups cluster in geographic space, the geographic rooting makes the networks hard to interpret rather than adding new insights (cf. Figure A.4 in the appendix).

I visualized the networks as sociograms, which is the most common visualization form of networks representing vertices as points and edges as lines (Hennig et al. 2012, p. 151). In the visualizations, I included the non-state armed groups and civilians as vertices which are connected through an edge if they jointly

participated in at least one violent event in the given year. The government is only included indirectly through the vertex size: the larger the vertex, the more fatalities resulted from the interaction of this actor and the government. I chose this indirect representation of the government due to readability concerns. As the government has been interacting with more than 100 armed groups and civilians for some years, patterns in the network would have become difficult to identify.

Network visualization offers the possibility of specifying a number of parameters to depict relevant information, e.g., by manipulating the color and size of the vertices and edges. I used the vertex and edge parameters to convey information about the actor types and the level of fatalities they are involved in, among other things. For ease of reading, I explain at the beginning of the quantitative analysis in chapter 6.1 which vertex and edge parameters represent which information. A central network-level parameter is the layout, that is, the position of the vertices in a two- or three-dimensional space. The layout can be used to convey information either on substance, e.g., on the geographic location of a vertex or its hierarchical position in a tree-shape network, or on the structural distance in the data (Hennig et al. 2012, pp. 153, 165). For the latter, layout algorithms are used.

I chose the Davidson-Harel layout algorithm to represent structural distance in the regional and country-level networks. The Davidson-Harel algorithm is a so-called force-directed algorithm. The underlying notion of force-directed algorithms is that vertices repel each other while edges act as springs, pulling vertices closer. The algorithms seek to reach an equilibrium balancing the opposed forces. This means that densely connected vertices are positioned closely to each other (Shizuka 2019). Since no single best force-directed algorithm exists, I compared the most established ones based on their visual performance: Fruchterman-Reingold, Kamada & Kawai, and Davidson-Harel (ibid.). Davidson-Harel clearly produced the best result with regard to interpretability and aesthetics. This is in line with the developers' claim that the algorithm performs best on undirected networks with a relatively low number of vertices and edges (Davidson and Harel 1996).[19] In contrast, the more popular Fruchterman-Reingold and Kamada & Kawai algorithms placed the vertices too close to each other, making the interpretation difficult (Shizuka 2019). I have included examples of visualizations with the different layout algorithms and the geographically rooted vertices in the appendix A.3.

In addition to the visualization, I used several descriptive measures to gather insights on the distribution of government fighting efforts, the development of informal group conflict, and the reaction of formal armed groups. I introduce simpler measures like the number of edges and vertices and the degree of certain actor types together with the visualization parameters in the quantitative analysis chapter. Here, I focus only on the one technically more complex issue: identifying network clusters. Note that many of the commonly used

[19] The Davidson-Harel algorithm uses a procedure called simulated annealing, which means that the solution space of the objective function to be optimized varies over time, allowing for sub-optimal solutions in order to avoid local optima, which are unsatisfactory at the global level (Davidson and Harel 1996).

network descriptives, such as centrality, brokerage, and transitivity, have been developed for networks with positive edges and cannot directly be applied to conflict networks. Conflict networks are sparse and have conceptually negative edges: the relationships between the actors constitute a conflict. This is different from most network analyses that deal with positive edges like information diffusion through followers on social media (e.g., Larson et al. 2019) or shared former membership in armed organizations (Themnér and Karlén 2020). I return to this issue in the conclusion when discussing the viability of SNA in conflict studies.

The identification of network clusters is used to measure fragmentation by approximating the number of active conflicts based on the topology of the country-level network. The approximation of conflicts through clustering is based on the idea that groups in conflict over the same set of resources should be more likely to interact with each other and less with others. This creates network clusters which are usually defined as groups of densely connected vertices with sparse connections to other parts (e.g., Emmons et al. 2016; Lancichinetti and Fortunato 2009). The edges spanning several clusters are particularly interesting since they can indicate spillovers between conflicts. It should be kept in mind, however, that community detection — the technical term for cluster identification — is an unsupervised approach based on mathematical optimization. As with the DBSCAN spatial event clusters, the algorithm has not been trained on ground truth data. The clusters remain an approximation that needs to be interpreted in tandem with the case knowledge.

I identified network clusters by applying the Louvain algorithm by Blondel et al. (2008) to the networks of non-state actors. I excluded the government from the community detection because the government is not part of one specific conflict but is expected to intervene in several, if not most, due to its aspiration for the monopoly on violence. Technically, this means that the government interacts with so many different groups that the community detection algorithms cannot differentiate well between clusters and integrate most vertices in one 'super-cluster.'

There is extensive literature on community detection in networks, and plenty of algorithms are available for this task (Lancichinetti and Fortunato 2009). They can broadly be differentiated into those that partition the network into disjoint communities and those that detect overlapping communities. The partition in disjoint communities means that each vertex is exclusively assigned to one cluster (Vieira et al. 2020, p. 8). I have chosen a partitioning algorithm because I sought to identify separate but interlinked conflicts. Network partition is also the more established approach (ibid.). Then again, partitioning algorithms can be differentiated into divisive, agglomerative, and optimization methods. Agglomerative methods repeatedly merge vertices and communities, divisive methods partition the network through the removal of edges, and optimization methods optimize an objective function (Blondel et al. 2008, p. 1).

I selected the Louvain algorithm by comparing several partitioning algorithms based on their score in Newman's modularity. For the comparison, I selected algorithms that are well-established and diverse in their

method. All algorithms were specified to take the edge weights into account. The results of the comparison can be found in Table A.6 in the appendix. Newman's modularity is an established criterion to assess the ability of algorithms to perform community detection (Vieira et al. 2020). Modularity is "a measure of the proportion of edges that occur within communities, relative to the expected proportion if all edges were placed randomly" (Shizuka 2023).

Specifically, I compared the modularity and number of clusters identified for three different algorithms and three different resolution specifications of the Louvain algorithm. The first algorithm is the divisive algorithm by Newman and Girvan (2004) that removes the edges with the highest edge-betweenness and thereby divides the graph into different components. Second, I selected the Louvain algorithm, which uses a multi-level agglomerative method that first optimizes the modularity of randomly merged vertices and, when the optimum is found, repeats this procedure with the communities from the first phase (Blondel et al. 2008, p. 1). The resolution adjusts the modularity definition in such a way that smaller values create less, and thus larger, communities (Gregorovic and Nepusz 2023). I compared the resolution values 1, 0.5, and 0.3. Third, I used the walktrap algorithm, which mixes random walks with agglomeration (Shizuka 2023). The intuition is that the algorithm based on a random walk is better able to capture the star-like structures common in conflict networks.

I finally selected the Louvain algorithm with the resolution set to 0.3 because it reached the highest modularity across all years. However, the differences between the specifications of the Louvain algorithms and the other algorithms were not very pronounced. The modularity scores and the number of clusters detected were almost the same. The walktrap algorithm tended to detect a slightly higher number of clusters for the more complex networks after 2012 than the other two. Since the modularity score was performing worse, I decided against using the walktrap algorithm. The similarity across algorithms increases my confidence in the robustness of the finding that the network becomes highly fragmented over the course of the observational period.

To conclude, I conducted a descriptive network analysis that combines the visualization and calculation of descriptive measures for the country-level and regional conflict networks. This allows me to carve out the evolution of the conflict network in geographic and social space and to illuminate substantial questions about the behavior of the government and the formal and informal groups. To do so, I built on the conflict event dataset ACLED and developed a novel approach to disaggregate informal groups. I further provided guidance on how the ACLED actor typology can be leveraged to implement the distinction between formal and informal armed groups in quantitative network analysis. The strengths and limitations of my quantitative approach will be elaborated in the discussion chapter 9.1.2. Descriptive quantitative network analysis is valuable for capturing the evolving structural features of the conflict network. Yet, this type of analysis cannot provide insights into the reasons and processes behind the network structure. Therefore, I now turn

to the qualitative component of the research design.

4.3 Qualitative component: data generation, coding, and analysis

The goal of the qualitative component is to trace the processes underlying the evolution of the network in order to present a novel theoretical argument on interdependence in conflict networks. The argument is developed through the integration of deductive and inductive elements in an iterative research process. This section describes how the qualitative data was generated during three months of fieldwork in northern Nigeria, transcribed, and coded with directed content analysis. The coded data, enriched with secondary sources, was used to assess the observable implications of the candidate explanation and seven alternative explanations in a process tracing. As I show in the empirical chapters, the candidate explanation is empirically supported in the Nigerian case and has a larger explanatory power than the alternative explanations (cf. chapter 7 and chapter 8).

A central contribution of the qualitative component is the generation of new primary data on the hard-to-access conflicts in northern Nigeria. Three research assistants and I, supported by three partner organizations, generated most of the data during my three-month stay in Nigeria in 2021. These efforts resulted in 112 interviews with a broad set of participants, ranging from government elites to members of armed groups and affected communities. Thirty-six of the interviews included a graphic elicitation exercise, i.e., the drawing of conflict networks by the participants. Six additional interviews were conducted remotely from Zurich and during a short second stay in Nigeria in 2023, resulting in a final data corpus of 118 interviews.

I decided to generate new primary data through field research because of the lack of suitable secondary data, the limitations of remote data collection, and the added value of context immersion. Field research in conflict zones can entail security risks for the involved researchers and study participants. It is also resource-demanding in terms of money and time. Its necessity and implications should be carefully considered. I provide a reflection on the ethical implications and the impact of my position as a white researcher in the appendix B.4.[20]

In terms of secondary data, a lot of high-quality empirical research on armed conflict in Nigeria exists. Despite this, the case literature mostly focuses on the Boko Haram conflict in the Northeast, the Muslim-Christian violence in the Middle Belt region, or the Niger Delta conflict (e.g., Ebiede 2017a; Higazi 2008; Krause 2018; Mongunu 2017). The farmer-herder conflicts and the recent banditry crisis have received far less attention. In addition, only a few publications investigate the links between these conflicts (e.g., Barnett et al. 2022; Ebiede 2017b; Ebimboere 2020). An alternative to field research could have been remote data

[20]Ethical approval for the field research was obtained from ETH's Ethics Commission (case number EK 2021-N-51).

collection, for example, through newspapers or surveys. Still, this alone is not sufficient for researching the social behavior of vulnerable and hard-to-access populations. Sensitive information is unlikely to be reported in publications or provided in formal interview settings with closed questions (Krause 2021). Surveys are also less suitable for theory-building endeavors with inductive elements that require open questions. Last but not least, immersion in the context fosters innovation in theory-building because it can create a deeper understanding of the environment and raise awareness about causal factors that would have gone unnoticed from afar.

4.3.1 Sampling of interview participants

A critical element in the generation of interview data is sampling study participants. An interview sample should be assessed in terms of composition, response rate, and size (Beitin 2012; Bleich and Pekkanen 2015). For composition, covering all relevant perspectives and the extent of bias are central criteria (Corbetta 2003, p. 267; Beitin 2012). Due to the small sample size, interviews cannot be fully representative of the population (Wood 2006). The sampling needs to be purposive instead of random, prioritizing the informational value of the participants (McIntosh and Morse 2015). For the response rate, it is important to understand whether the decline of interviews might have introduced bias. For size, theoretical and data saturation are the key criteria to judge the sampling quality (Hennink and Kaiser 2022). I first elaborate on my sample composition before returning to the response rate and sample size toward the end of this section.

Purposive sampling is especially important when studying violent conflict to mitigate biases and one-sided narratives. Individuals affected by conflict violence can develop strong beliefs about the out- and in-group — e.g., combining a positive self-image with the devaluation of the other —, which also impacts their information processing (Bar-Tal 2000; Porat et al. 2015). A balanced sample is thus critical in order to cover all relevant perspectives. I followed two strategies to achieve a balanced sample. First, I balanced the observable characteristics of the study participants, i.e., the research site, ethnic identity, religion, and role in the conflict, e.g., whether they are members of an armed group or of an affected community. Second, I diversified my access to the participants and visualized my personal sampling network. It is common practice to access study participants via referrals, i.e., personal recommendations by contacts in the field and other study participants (Woldense 2021; Wood 2006).[21] Yet when most participants are recruited through a few starting contacts, the so-called seeds, this bears the risk of reproducing echo-chambers (Woldense 2021; Khalil 2019, p. 433).

For the balancing across participant characteristics, I distinguish six different groups to capture the role of the interviewees in the conflict. An overview of the number of interviews across the participant groups is

[21] Referrals from one study participant to another are similar to snowball sampling but less systematic. Snowball sampling means that each recruited interviewee is asked to recommend one or two additional interviewees (Goodman 1961). I decided against strict snowballing because I prioritized the balancing across participant groups and research sites.

provided in Table 4.2. Table B.1 in the appendix includes the number of interviews per research site. The participant groups include conflict-affected communities, representatives of interest groups, e.g., ethnoreligious communities, members of non-state armed groups, religious leaders, and state officials, including military officers. I included members of international organizations in the interest group category. In addition, I interviewed a number of domain experts such as researchers and journalists to profit from their analytical perspective and complement the personal experiences of the other interviewees (Corbetta 2003, p. 275). I sampled such a large variety of actors across four different research sites because I aimed for a comprehensive perspective on the conflict network.

		Semi-structured	**Graphic elicitation**	**Total**
Community	Traditional rulers	3	2	5
	Community members	7	5	12
Interest groups	Ethnic/livelihood	7	3	10
	Humanitarian, Development, and Peacebuilding (HDP)	20	6	26
	Religious	2	0	2
NSAG	Bandit	0	0	0
	Vigilante	4	2	6
	Violent extremist	2	0	2
Religious leaders	Christian	2	2	4
	Muslim	5	3	8
State	Local level	1	2	3
	State level	4	2	6
	National level	4	2	6
	Armed Forces	3	0	3
	Foreign diplomat	1	0	1
Expert	Journalist	4	3	7
	Researcher	13	4	17
Total		**82**	**36**	**118**

Note: NSAG = Non-state armed group; ethnic, professional interest groups refers to organizations that lobby for the interests of a specific professional group like farmers or herders. The profession often intersects with a specific ethnic identification, e.g., herders are often equated with Fulani.

Table 4.2: Sampling of participant groups

Achieving a balance was challenging for some groups since the violent conflicts were ongoing at the time of the field research, and my access to remote areas and armed groups was limited for security reasons. My

research assistants and/or I could only interview individuals who were based in urban areas or willing and able to come there. In the case of Maiduguri in the civil war conflict zone, I had to cancel the planned travel, and all interviews were conducted remotely or by my research assistant. While moderate vigilantes are relatively easy to access due to their proliferation and the limited security risk, it was more difficult to access the more militarized and extremist groups. I succeeded in gaining access to three former ISWAP members through the reintegration program Operation Safe Corridor but did not talk to any members of the banditry groups. I compensated for this by interviewing researchers and journalists who have directly engaged with the bandits.

An imbalance has been obtained in terms of gender (21% women), which can be explained by the male-dominated public sphere in northern Nigeria.[22] To underline this point, Nigeria is among the countries with the lowest share of female legislators, having an even smaller share than Iran (as of 2018) (Campbell and Page 2018, p. 119). Among others, Lacher (2020, p. 15) suggests that female researchers would have an advantage because they can access spaces where male researchers are not tolerated. I suspect that this holds for immersive research methods but less for formal, one-time interviews. Noteworthy, recruiting female participants was much easier in Maiduguri. This could be related to the presence of international organizations since my contacts immediately assumed that I would want to talk to individuals identifying as women, too, and provided me with the respective contacts.

In addition to considering the participant groups, I diversified the access to the interviewees to ensure a balanced sample. This meant that I aimed to access the interviewees through a diverse set of seed contacts. I thus recruited them through a mix of referrals and cold e-mails or letters. They are 'cold' in the sense that I did not have any prior connection (Woldense 2021). For the referrals, I relied on my partner organizations at the respective research sites, the networks of my research assistants, other study participants, and professional contacts, which I had established before my departure from Switzerland. For cold e-mails or letters, potential participants were identified as relevant based on my own research. A high number of seed contacts is critical because an individual asked for recommendations for potential participants can inevitably only recommend participants with whom they share some kind of connection. In practice, this often means that these people share political views or other interests (Khalil 2019, p. 433). At the same time, referrals are valuable because they diffuse the trust, which exists between the referee and the referrer, to the researcher, and trust can increase the quality of the generated insights (Stys et al. 2022, p. 246).

To make the use of seed contacts and the structure of the sampling network transparent, I visualized my sampling ego-network (cf. Figure 4.9).[23] The visualization constitutes an innovation of the current practice

[22]Note that the gender identification of the participants has been assumed by my research assistants and me based on the interaction with the study participants.

[23]I used the Fruchterman-Reingold layout algorithm for this visualization.

in qualitative research sampling, building on recent work of Woldense (2021). The innovation allows for a critical assessment of the quality of the sampling process, not least by visualizing patterns that might go unnoticed otherwise. An ego-network is a network that depicts the relationships of one vertex, the "ego," to other vertices, the "alters," but not the relationships of the alters. In the case of the sampling network, I am the vertex at the center of the network (red), whereas the interviewees (light blue) and the middle persons like my research assistants and partner organizations (black) are the alters.

Source: Own figure.

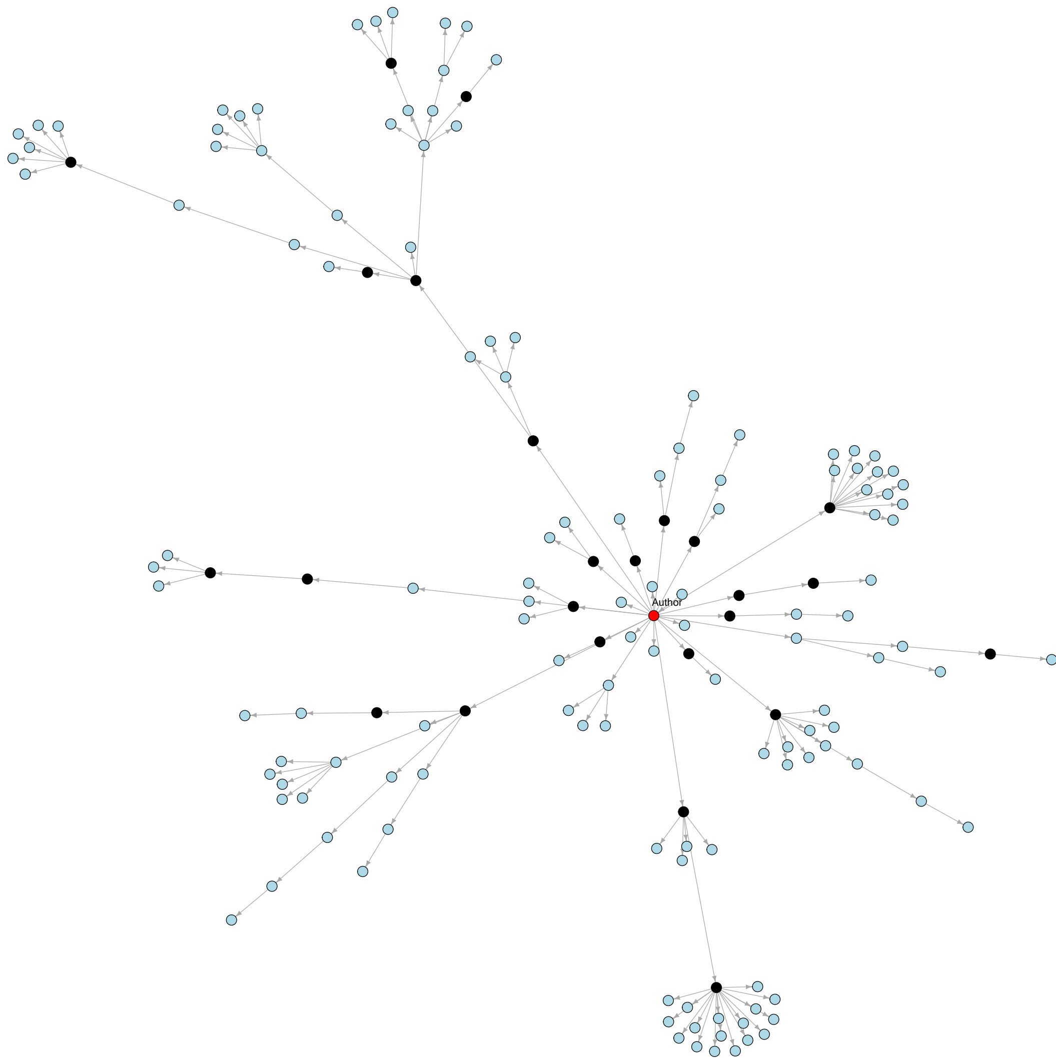


Figure 4.9: Sampling network

The sampling network of this study shows that I had 22 different seed contacts, 18 of which connected me

to additional contacts. A visualization with the location of the interviewees (not shown for data protection reasons) revealed that the access point diversity was high for all research sites except Sokoto. It stands out that five middle persons provided me with access to a large share of the interviewees. Four of these middle persons are my research assistants and partner organizations. Most interviewees who offered to refer me connected me with one more participant in the majority of cases. Still, there were a few interviewees who connected me to five or more study participants or new middle persons who then helped me to meet additional interviewees. Several referrals were made from Abuja to the other research sites and between these research sites. This illustrates the argument that the research sites cannot be seen as separate sub-cases but are part of a larger social network. There were hardly any referrals from the conflict-affected research sites to Abuja. This is because I spent much more time in Abuja and used this time to gain access to potential study participants in the other research sites of interest. Also, many organizations have their headquarters in Abuja and could connect me to their staff in the local offices.

Visualizing the sampling network has two limitations. First, I am agnostic about the relationships between the alters and hence cannot rule out that interviewees who were recruited through different seeds know each other or share personal connections. Second, sampling networks bear the risk of revealing information about the anonymized study participants. In the case of this study, I decided that it is acceptable to include the sampling network here as long as it does not indicate the research site. In cases where publishing the sampling network is deemed too sensitive, I suggest that plotting the network for internal use only can still be a powerful tool to gain new insights into the sampling process. In short, the preceding discussion showed the breadth and diversity of my sampling efforts. In combination with the wide coverage of the participant characteristics and research sites, I am confident that the quality of the sample composition is high.

The response rate — the second criterion to judge the sample quality — was very high. This means that bias is limited due to the systematic rejection of interview requests. Referrals worked particularly well, with hardly anyone declining the interview request. In some cases, participants only agreed after ensuring that neither their personal details nor their organizational affiliation would be revealed. My impression was that representatives of interest groups were especially keen on sharing their perspectives, which is in line with their role. The high response rate fits with the experiences of other researchers doing interviews in Nigeria (e.g., Fubara 2023b). The high response rate can likely be attributed to a mix of Nigerian culture, in which it is appreciated to "discuss political issues candidly and publicly" (Fubara 2023a, p. 20), and my position as a white researcher from a foreign institution. As expected, the participant group with the lowest response rate was the Nigerian military. For example, one member of the armed forces declined my request, stating that he would not be able to comment on ongoing operations.

Finally, the sampling size is the third and last criterion to assess the sample quality. I sampled with the goal of theoretical and data saturation. Theoretical saturation is relevant for the inductive element in my

research design and describes a condition in which additional interviews do not add new concepts or other theoretical insights with regard to the research question. Data saturation describes a condition when either the collected data does not provide additional evidence but begins to repeat itself (Hennink and Kaiser 2022, p. 2), or when at least two pieces of evidence support key implications of the theoretical argument (Fischer 2021, p. 139).

Saturation was challenging to achieve and judge in the case of this study because of the diversity of the study participants and the temporarily concentrated data generation. The main public narratives about the conflicts emerged quickly across locations, e.g., the alleged Fulanization of the country, but additional interviews provided nuance due to the variety of perspectives. Since I was confined to three months for my main data generation, I could not analyze the data at the same time as I was doing the interviews. Accordingly, the theoretical saturation was difficult for me to judge during the sampling. To address this challenge, I conducted a large number of interviews with a diligently composed sample, conducted three additional interviews during a second stay in Nigeria in 2023 to address gaps in data saturation, and complemented the primary data with secondary sources.

4.3.2 Semi-structured interviews, graphic elicitation, and other sources

I used semi-structured interviews and the graphic elicitation of networks as data generation methods[24] and completed the data with other sources such as case research, newspaper articles, and observations. I understand interviews as a guided "conversation [with systematically selected participants] that is explicitly requested by the interviewer" and has a "cognitive objective" (Corbetta 2003, p. 265). Through the interview conversation, the interviewer seeks to gain information about facts and about the interviewee's subjective perception of these facts. Crucially, the obtained data emerges from the interaction between the interviewer and interviewee and is shaped by how the interviewee perceives the interviewer and the context in which the interview takes place, among other things (Njeri 2021). This applies even more to the network drawings because they are based on a participatory approach, and the final drawings are co-constructed by the interviewee and the interviewer. The resulting data is hence context-dependent (Birkett et al. 2021, p. 115). I thus use the term data generation instead of data collection: the latter conveys the notion that data pre-exists and can be collected by the interviewer without interference, while interview data is actually co-constructed by the researcher and study participant (Roulston 2014).

I used semi-structured interviews, which are predetermined in content but not in the form (Corbetta 2003). This means that more or less the same questions are posed to the same type of participant, but their order can vary, and secondary questions (e.g., probing, interpreting, specifying) can be added as required. I

[24]When I refer to interviews/interviewees in a generic manner, this includes both methods.

adjusted the standard questions according to the research site and the participant groups. On some occasions, I used insights from previous interviews to triangulate information received previously (Bryman and Bel 2004). Questions are usually open-ended and aim for an in-depth answer. The interviews ranged from 30 minutes to a maximum of two hours. All but eleven interviews were recorded with the participant's consent; otherwise, notes were taken. All interviewees were informed that their personal information would be anonymized and gave their formal consent with their signature.[25]

I began most interviews with questions on the background of the interviewee. The interviewee's background is relevant for interpreting the generated data. In most cases, the interviewees were asked to share something about themselves. The idea behind this open question was to understand better how the interviewees identify and perceive their position in the conflict — without priming or pressuring them to share something personal. Similarly, the interviewees were asked which languages they speak instead of which ethnic group they identify with (if any). Such an indirect question not only avoided a very politicized and potentially priming question but also provided additional information on the background of the participants, like their family background, mobility within the country, or level of formal education. The third introductory question asked to (almost) all participants was whether they have been interviewed before in order to anticipate whether this could impact the generated data.[26]

The questionnaires for the semi-structured interviews and the graphic elicitation built on the conceptual framework and the deductive elements of the theoretical argument. Since the research design has an inductive element, I also included broad questions on the conflict dynamics. The graphic elicitation exercise was particularly suitable for generating inductive insights because it aimed to elicit a holistic perspective on the conflict network without probing for specific dyadic relationships or events. For example, the interviewees were completely free to decide who and which types of actors they included in the conflict network. Example interview guides for both methods are provided in the appendix B.2.

During the graphic elicitation, participants were guided through a three-step procedure to draw the conflict network. The graphic elicitation method followed the Net-map Toolbox developed by Schiffer (2007). The Net-map Toolbox was contrived in the development cooperation context to understand the influence network in a community before or during a project's implementation. I adapted this toolbox to understand who is influential in the conflict network from the perspective of the study participant(s). Depending on preferences and abilities, the study participants, the research assistant, or I were doing the writing and drawing. Figure 4.10 shows one example of a network from Kaduna. The verbal exchange between the

[25] In two cases, the consent was obtained verbally and recorded because the interviews were conducted remotely, and there was no possibility of receiving the consent in written form. For the other remote interviews, the participants sent me a digital copy of the signed consent sheet.

[26] For the interviews used in the directed content analysis, 23 individuals had prior interview experience, 17 did not, and for 14, my research assistants or I did not document this information.

interviewer and the interviewee during the graphic elicitation was recorded or noted and analyzed in the same way as the semi-structured interviews without graphic elicitation. In addition, I used insights from the network drawings as evidence in the empirical analysis.

Source: Interview 195, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

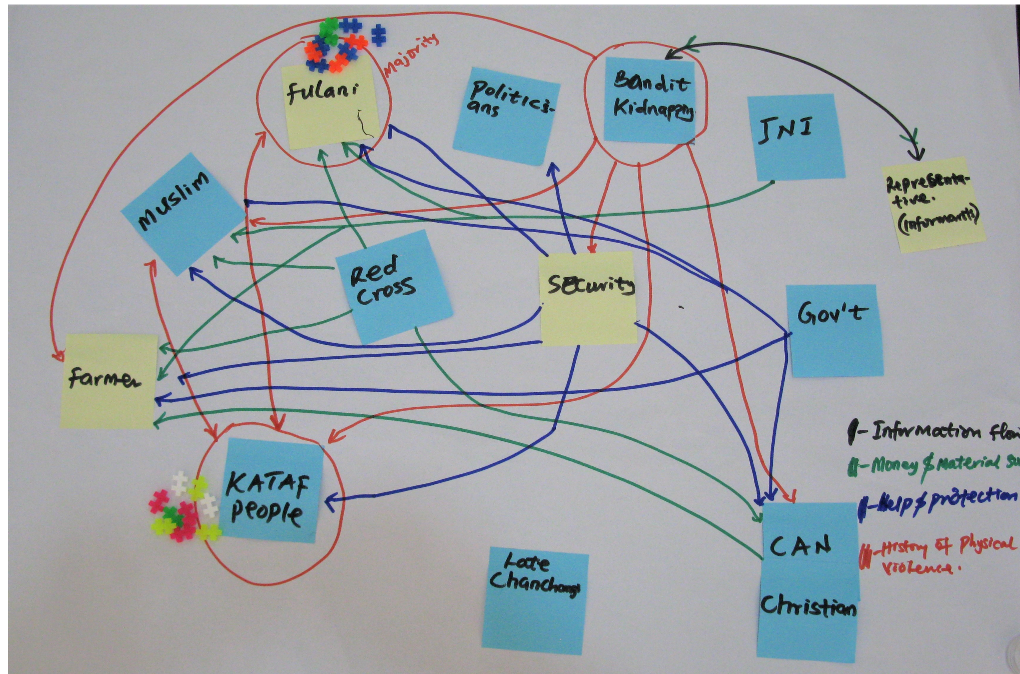


Figure 4.10: Network drawing example

The graphic elicitation proceeded in three steps. First, the participants were asked who was involved in the ‘crisis.’[27] Participants were not primed on the type of actor involved. Accordingly, participants included individuals, social and ethnic groups, organizations, and institutions. I decided not to predetermine the type of actor because I deemed it interesting information which actor types the participants would choose when they think about the conflict. All participants mixed individual and collective actors, although the latter were the clear majority. The actor names were written down on post-its and distributed on a large paper sheet, again in no predetermined order.

In the second step, the respondents were asked about four types of relationships that connect the actors to each other. The relationships of interest included money and information flows, the provision of protection, and the use of physical violence. Different colors were used to indicate the type of relationship. During the second step, participants could still add additional actors if necessary. The three non-violent relationships (money, protection, information) were supposed to operationalize the support relationship introduced in my theoretical framework. Asking for concrete behavior (here, information sharing) instead of an abstract

[27]I decided on the term crisis instead of conflict because this seemed to be the term most commonly used to refer to the conflict violence in northern Nigeria.

concept like support has been recommended because of the varying significance of abstract concepts for individuals (Marin and Wellman 2014; Marsden 2014).

In the last step, respondents had the opportunity to weigh the network actors according to their influence on the level of violence. The participants received a pile of small, colored plastic items (pieces of a 3D puzzle). The instruction was that the more items they assign to an actor, the more influence that actor was supposed to have. The participants received no further guidance on how to divide the items between the actors. While some participants divided large chunks of items between a few actors, others carefully counted the number of items and distributed them between all actors.

Notably, the participants varied widely in how much they talked and explained during the graphic elicitation. In some cases, the interviewees began telling a story inspired by an actor or relationship they were noting down without continuing the drawing exercise. Whenever possible I waited for the participants to finish this digression and then politely prompted them to continue with the network. If the participants did not further comment on the drawing themselves, I asked follow-up questions on actors or relationships that seemed particularly significant to me. Although this selective questioning might introduce bias, I decided against a more systematic questioning about actors and relationships. Graphic elicitation can be very time-consuming and tiring for the participants, and I did not want to wear out their commitment and motivation (Marin and Wellman 2014).

The interviews mostly took place at the Centre for Peace Studies in Sokoto, the Arewa House (a research institution) in Kaduna, the public areas of the hotels, coffee places, or at the place where the interviewee was based (e.g., their office, an IDP camp, a church). Twenty-one interviews were conducted remotely via Zoom or the phone.[28] In nine instances (across semi-structured interviews and graphic elicitation), several interviewees were interviewed together. However, these group interviews rarely developed into a FGD in which the interviewees refer to, affirm and/or contradict each other but were mostly sequential, bilateral interviews. I report them as one interview, however, since the presence of the other interviewees and overhearing the preceding interview potentially influenced the responses. Seven participants were interviewed twice because they seemed very knowledgeable, the first interview had to be interrupted, or because they had two distinct roles in the conflict that I decided to discuss in separate interviews.

The interviews were led by me or by the research assistants, depending on the research site and the language. While Nigeria is highly diverse with hundreds of spoken languages, most people speak English and/or Hausa in the Northwest and English, Hausa, and/or Kanuri in the Northeast. The command of English correlates strongly with the level of formal education, as English was the language of instruction in public schools until the end of 2022 ("Nigeria junior schools" 2022). All my research assistants spoke at

[28] I conducted two remote interviews from Switzerland before my stay, 18 during my stay in Nigeria, and one after my stay in Nigeria.

least English and Hausa. In the Northeast, the research assistant conducted some interviews in Kanuri. One interview had to be terminated because the participant did not have sufficient language overlap with my research assistant.

In Kaduna, I conducted most interviews myself but was always accompanied by my research assistant, Shedrach Bulus Nghozei. When the interview was in Hausa, he took the lead and conducted the interview in my presence, translating it afterward. After my departure, he conducted a few interviews without me being present. In Abuja, I led the vast majority of interviews, in a few cases accompanied by Shedrach Bulus Nghozei. As in Kaduna, he took the lead for the interviews in Hausa, which were conducted at an IDP camp. In Sokoto, Dr. Murtala Rufa'i accompanied me in most interviews, or translated from Hausa to English during the interviews. In Maiduguri, Hauwa Abubakar Abdullahi had to conduct all interviews on her own as I was not physically present. I prepared a detailed questionnaire with a catalog of follow-up questions and trained her in the methodology via video calls to compensate for my absence.

My research assistants and/or I noted down meta-data for each interview, including the behavior and demeanor of the interviewees, the atmosphere, interruptions or interventions by people not part of the interview, and details about the interview location. Meta-data matters for interpreting the spoken words of the interviewee and for assessing how “conditions in the present shape what people are willing to say about violence in the past“ (Fujii 2010, p. 231). Not least, meta-data can help assess the trustworthiness of certain statements. In addition, it contributes to understanding the positionality of the interviewer (Hellmüller 2014, p. 88).

I complemented the interview data with case literature, newspaper articles, informal background conversations, and observations. In addition to the Swiss library network, I collected case literature from four libraries in Nigeria (two in Abuja, one in Kaduna, and one in Sokoto) and the SOAS library in London. The collection process included sifting through potentially relevant material, scanning it, and populating my reference software with the sources. Newspaper articles were gathered from online news outlets. Here, I predominantly relied on the Nigerian news outlet HumAngle due to their high-quality background analysis of the Nigerian conflicts.[29]

Background conversations and observations contributed to this study by deepening my understanding of the context and assessing the trustworthiness of information generated during the interviews.[30] I documented my personal experiences and observations on a day-to-day basis in my field journal, even though I did not immerse myself deeply into the context (partly because of methodological choice, partly because of the tense

[29]HumAngle was founded in March 2020 and describes itself as “a niche media platform committed to insightful and objective coverage of Africa's conflict, humanitarian, and development issues. [...] Our primary duty is to investigate, analyse, and report conflict issues in a sensitive, in-depth, and human-centred manner. We paint accurate pictures of crises and how they affect different communities and demographics” (*About Us* 2024).

[30]I spent five days in Lagos at the end of my stay. While I did not conduct interviews there, the stay was still critical for deepening my understanding of the Nigerian context.

security situation). This approach has been labeled "accidental" or "limited and uneven" ethnography (Fujii 2015; Krause 2021). The accidental ethnography mostly related to my everyday life during my stay in Nigeria, e.g., conversations with taxi drivers, buying groceries at the market, visiting religious or historical sights, and meetings with Nigerian friends and professional contacts. In the case of Maiduguri, I asked my research assistant to take photos and videos on her way to work and the interview locations since I was not able to travel there myself. The background conversations included informal meetings with experts and employees of international organizations and exchanges with my research assistants. Since no explicit consent was given, I do not use the information from these conversations as evidence in the case study.

These conversations and observations were essential for me to grasp the geographic, economic, and societal remoteness of Maiduguri and Sokoto, as well as the sharp cultural differences between the north and south of the country. Through my interactions in Abuja and Lagos, I developed an idea of the lifestyle and wealth of the Nigerian upper class, whose lived reality seemed vastly different from the majority of the population. Against this background, it was noteworthy how the fear of conflict violence, crime, and kidnappings pervades the everyday life of individuals across socioeconomic strata, creating mistrust and stress. That said, the individual economic situation had huge implications for the practical and psychological strategies available to navigate insecurity.

4.3.3 Coding qualitative data with directed content analysis

The data from the interviews and secondary sources was essential for theory-building and -refinement. To be able to employ the data for theory development and as evidence for the observable implications, I needed to create a cleaned, integrated, structured data corpus. To this end, I transcribed the recorded interviews — for some interviews with the support of my research assistants — cleaned the notes, loaded the secondary sources into the coding software, and coded the data using directed content analysis. Codes represent categories of theoretical concepts and connect text segments with these categories (Kelle and Seidel 1995; Morse 2012).

Directed content analysis is a specific type of qualitative data analysis. The goal of qualitative data analysis is to use codes for identifying regularities in unstructured text and translating those into theoretical insights (Kelle 1995). Directed content analysis was chosen for the qualitative data analysis because it fits well with the overall goal of theory development and refinement. The coding categories are derived deductively but can be refined during the coding process inductively (Hsieh and Shannon 2005, p. 1282; Schreier 2012, p. 85). Based on this revised coding scheme, a novel theoretical argument integrating deductive and inductive insights was developed and tested against alternative explanations. I conducted a computer-assisted qualitative data analysis, using the software NVivo.

The directed content analysis was conducted in three overlapping phases: the preparation of the data

corpus, the development of the deductive coding scheme, and the application and inductive refinement of the coding scheme. The first phase, the preparation of the data corpus, began with transcription and, if necessary, translation of the audio-recorded interviews (including both the semi-structured interviews and the graphic elicitation) and the cleaning of the notes from the interviews without recording. All translations and some of the transcriptions were done by two of the three research assistants. To ensure the accuracy and quality of the transcripts of the research assistants, I listened to the original recording and made any necessary corrections. For the translations, I requested the respective other research assistant to check at least a few minutes of the translation to ensure that they were of sufficient quality. The remaining transcriptions were done by myself, partly using the automated transcription software Trint. While the availability of automated transcripts increased speed, quality was limited, and transcription remained a major effort.

My research assistants and me transcribed on a word-by-word basis including pauses, fillers, word cut-offs, and laughter but without intonation (McIntosh and Morse 2015; Roulston 2014). I used the comment function of the transcription software, however, to note when I found an audio segment remarkable for some reason, e.g., if a participant was very emotional or sounded sarcastic. For some interviews, the audio quality was limited due to background noise. When a word or phrase could not be clearly understood, this was indicated in the transcripts. If possible, the best guess for the missing word(s) was added and marked as uncertain (cf. Hirzel 2018). When I had reached a point of data saturation at a later point in the analysis, I stopped transcribing the whole interview and summarized parts that seemed less relevant (Bryman and Bel 2004).

The raw texts needed to be divided into the text segments to be coded (Fischer 2021, p. 134). I chose the context of meaning as the criterion to divide between text segments. This means that the segment should be understandable in itself and convey one main point. Most coded text segments consist of a few sentences and never less than one sentence, allowing me to reach a high level of nuance (Saldaña 2009, p. 19). Another possibility is dividing text segments based on a few words or one sentence. For consistent and reliable results, it is critical to stick to the same criterion throughout the QDA. I decided to segment the raw text in parallel with applying the coding scheme. That means I read through the text, identified one context of meaning, and assigned it to one or more codes.

After the preparatory tasks were completed, the second phase required the development of the deductive coding scheme, i.e., of a set of codes with one or two levels of child codes. I used three types of codes, referring to (1) theoretical categories, at this stage of the process, developed deductively based on prior knowledge and logic (Schreier 2012, p. 85); (2) actors and research sites, e.g., Boko Haram or the Northwest; and (3) meta observations, that is, observations on the research process like my positionality or on the validity of the evidence. For each theoretical code, I documented the definition and exclusion criteria (McIntosh and Morse 2015). Importantly, I also included theoretical codes that relate to the alternative explanations to make sure that these can be systematically assessed (Roulston 2014).

The theory-related codes follow a hierarchical logic and are different from theoretical concepts with attributes. To exemplify, a concept is specified by the attributes that need to be given. In the case of armed conflict, these attributes are the involvement of armed groups, competition over resources, use of violence, etc. For hierarchical codes, however, the parent code is a concept, and the child codes are specifications of the parent (Richards and Richards 1995, p. 82). For example, the parent code is armed conflict, and the child codes are instigation of conflict, links between conflicts, and intensity change in conflict, among others. The key challenge was to specify codes that provide sufficient nuance but are distinct and parsimonious enough to facilitate the analysis (ibid., pp. 87–89).

The third phase was the application and refinement of the coding scheme. Concretely, the deductive coding scheme was applied to a subset of the interviews, revised, and then applied to the remaining interviews (Hirzel 2018). The final coding scheme and the number of text segments per code can be found in the appendix B.3.1. I selected ten interviews for the first round of application and then applied the revised coding scheme to another 35 interviews.[31] In total, I analyzed 37% of the interviews (45 interviews). The appendix provides additional information on how the coded interviews are distributed across participant groups and research sites (cf. Table B.1 and Table B.2).

The selection of the interviews sought to optimize the informative value of the interviews and their relevance for the research questions while maintaining a balanced composition of the interview sample (Schreier 2012, p. 81). I had gauged the informative value of interviews during the data generation process by classifying them as high, medium, or low priority immediately after completion. While this risks introducing bias, some form of prioritization was unavoidable. As Schreier (ibid., pp. 81–82) points out, selecting material from a corpus too large to analyze is an "inevitable" part of most content analysis processes. To mitigate bias, I classified interviews as high priority if the participants' statements contradicted my theoretical expectations at the time. Low-priority interviews, in contrast, were those in which participants seemed to merely repeat public narratives, e.g., when they were interest group representatives or when the interviews were focusing on aspects that were explicitly beyond the scope of the study, like urban rioting. In addition, I still included a few low-priority interviews in the analysis.

After applying the coding scheme to the first ten interviews, the coding scheme was revised by using the residual categories, maintaining analytical memos, and assessing the balance across child codes, i.e., how many text segments were assigned to each code. Revision meant that codes and child codes were added, deleted, or merged (Schreier 2014). The key goal of the revision stage is to ensure the codes' validity, i.e., the code and the assigned text segments capture what they ought to conceptually (Schreier 2012, p. 175). By extension, the revision of the coding scheme informs and refines the theoretical arguments by providing

[31] I selected ten interviews as this corresponds roughly to 10% of the raw data corpus (Hirzel 2018, p. 24), and because it allowed for sufficient variation across participant groups and research sites.

nuance to concepts or by extending the argument to capture new aspects. It also helps to identify salient alternative explanations.

All theory codes of the first deductively derived coding scheme included a residual category to capture text segments that speak to the parent concept but are, at that stage, not captured by the child codes. If the necessity of a new child code seemed clear, I added it already during this first round of coding (Schreier 2014, p. 5; Hsieh and Shannon 2005, p. 1282). I documented thoughts and observations in so-called analytical memos throughout the coding to be able to refer back to these when deciding on the revisions of the scheme (cf. Saldaña 2009, p. 40). For example, I documented first ideas about which codes would best capture the segments in the residual category, recurring problems with codes that were too similar to each other, and justifications for adopting new codes or adapting existing ones. I also maintained memos to document specific coding decisions and theoretical ideas emerging during the coding process (cf. also Kelle 1995).

With regard to the balance across codes, child codes with a very high number of text segments might indicate that the code is too generic and lacks nuance. In particular, a high number of residuals indicates that the child codes do not seem to capture major points (Schreier 2014, p. 9). Codes with a very low number, in turn, might be too specific or unable to capture what they are intended to. Yet, imbalance across codes is not necessarily a problem of the coding scheme but also informative in itself, as it points to variation in salience of the issues (Schreier 2012, p. 188). I carefully judged in each case how to interpret and deal with an identified imbalance. For the residual codes, I sought to create a new child code or split an existing child code when the text segments were relatively homogeneous and speaking to the same issue. If the text segments seemed very heterogeneous and I could not identify a pattern, I retained the residual category.

I re-applied the revised coding scheme to the interviews I had already coded as well as to the additional 35 interviews and some secondary sources (Hirzel 2018, p. 24). Such re-coding has the positive side-effect of assessing the reliability of the coding over time (Schreier 2012, p. 167). If the re-coding reveals that several coding decisions cannot be comprehended or would be taken differently post hoc, this points to fundamental problems with the code, e.g., that the definition is unclear. Since a few issues with the coding scheme came up during the second round of coding, I continued revising it until the coding process seemed saturated. Saturation is the main guiding principle when considering whether the directed content analysis is complete. Accordingly, there is no fixed percentage of the material that needs to be analyzed (Schreier 2012, p. 91; Hennink and Kaiser 2022). Saturation means that the evidence from additional interviews does not add new insights and/or that unambiguous evidence from at least two sources in favor of, or against, an observable implication is present (Fischer 2021, p. 139; Bryman and Bel 2004). I considered saturation with respect to both the candidate and alternative explanations.

4.3.4 Process tracing of the candidate and alternative explanations

The final step of the qualitative analysis was a process-tracing analysis. This analysis aimed to demonstrate that evidence in the Nigerian case supports the candidate explanation and that it has more explanatory power than seven alternative explanations. The candidate explanation is the explanation that I have developed through deductive and inductive reasoning during the directed content analysis. Process tracing "refers to the examination of intermediate steps in a process to make inferences about hypotheses on how that process took place and whether and how it generated the outcome of interest" (Bennett and Checkel 2015b, p. 6). It is the appropriate method for this study because the argument outlines multiple interacting processes set in motion by the outbreak of the civil war (cf. Figure 3.1 in the theory chapter). Since the evidence to demonstrate this claim has been used to develop the argument, it is critical to jointly assess the rival explanations.

The joint assessment of the candidate and alternative explanations is widely acknowledged as the central mechanism through which inference about the validity of claims based on within-case evidence can be made (e.g., Beach 2017; Bennett and Checkel 2015b; George and Bennett 2005; Wolff 2021). Theory-guided inquiry and ruling out alternative explanations are the two main safeguards against a narrative representation of the case or a "'just so' story" (Schimmelfennig 2015). I therefore followed Bennett and Checkel (2015b, p. 23) in their advice to "cast the net widely" for alternative explanations and introduced seven alternative explanations in the theory chapter 3.3. Revisit Figure 3.7 for an overview of how the alternative explanations relate to the different elements of the candidate explanation.

How much one learns from a piece of evidence about the rival explanations depends on the logical relationship between the explanations (Zaks 2017). For example, if explanations are mutually exclusive, evidence in favor of one explanation lowers our confidence in the other. Yet, mutually exclusive explanations are rare in the social sciences (ibid.). Instead, two explanations could operate at the same time or complement each other. In these cases, the relative explanatory power of the respective explanations is relevant. The rival explanations considered in this study are not mutually exclusive. For example, the disruption of everyday life might contribute to a low level of conflict, but this does not rule out that the alignment of some communities with the civil war parties — one of the alternative explanations — also played a role. For that reason, I follow the advice of Zaks (ibid.) to assess all explanations and their empirical relevance separately.

The empirical assessment of rival explanations requires the specification of the observable implications of the candidate and alternative explanations (Schimmelfennig 2015). The processes outlined by these explanations are not directly observable. Therefore, it is critical to derive observable implications of how the processes manifest themselves in empirical reality (Wolff 2021, p. 545). The observable implications are the link between the theoretically proposed sequential steps of the processes and the empirical evidence for a specific case (ibid., p. 546). I used the theoretical and actor-related codes from the directed content analysis

(and combinations thereof) to map the evidence on the observable implications. I aimed to provide several pieces of evidence per observable implication and to consider the credibility of the sources, especially if there were contradictions between them.

An overview of the observable implications of the candidate and alternative explanations are provided in Table 4.3 and Table 4.4, respectively. For ease of reading, I introduce and justify the observable implications at the beginning of each section in the empirical chapters and do not go into detail here. The column at the very right of the respective table indicates the data sources I used to assess the observable implications. The main data sources are the interviews, qualitative secondary sources including newspaper articles, and ACLED. I also specify three other quantitative data sources used to assess the resource allocation of the government and two of the alternative explanations.

The observable implications for the candidate explanation commence with evaluating whether the necessary conditions are given. The remaining observable implications for the candidate explanation are structured along the key steps of the theorized processes. I begin with the resource allocation of the government. While the outbreak of the civil war is the starting point of the theoretical argument, it will be established by the case background and the quantitative SNA and is taken as given in the qualitative analysis. I then continue by tracing the impact of the civil war within and outside the civil war conflict zone. The analysis of the candidate explanation concludes with evaluating the evidence for the two feedback effects across conflicts: the resource pressure on the government and the expansion of the formal armed groups beyond the civil war conflict zone.

The observable implications of the seven alternative explanations are divided into the three theoretical categories introduced in the theory chapter: structural drivers, agent-based explanations, and external influences on the conflict network. Regarding structural drivers, I suggested that the escalation of informal group conflicts could be related to subnational variation in state capacity and lootable resource deposits. Regarding agent-based explanations, I proposed that the resource allocation of the government could be driven by ethnic favoritism instead of threat perception. Moreover, a potential assimilation between the informal and formal armed groups could be related to non-relational diffusion rather than direct cooperation. Finally, the limited severity of conflicts between informal groups in the civil war conflict zone could be related to an alignment of these conflicts with the civil war cleavage. Regarding the explanations emphasizing external influences on the conflict network, I argued that external support and transnational weapon proliferation might have driven the escalation of informal group conflicts in Nigeria. Before I present the empirical analysis of the network structure and, subsequently, of the observable implications, the next chapter introduces the Nigerian conflicts and the formal and informal armed groups involved.

N°		Observable implications	Data sources
		Necessary conditions	
1.1	Resource competition	Rival communities are present within and outside the civil war conflict zone.	[1], [2]
1.2	Resource competition	Competition over resources results in disputes and/or violent conflicts within and outside the civil war conflict zone.	[1], [2]
1.3	Regulation	State and traditional conflict management institutions are unavailable, ineffective in resolving disputes, or unable to enforce their decisions within and outside the civil war conflict zone.	[1], [2]
		Process: Resource allocation according to threat	
2.1	Resource allocation	The government allocates a major part of its coercive resources to the civil war and maintains this allocation even after the severity of conflicts between informal groups increases.	[1], [2], [4]
2.2	Resource allocation	The government withdraws coercive resources from non-civil war areas before re-allocating them to the civil war.	[1], [2]
2.3	Threat perception	The allocation of coercive resources changes in response to shifts in the threat perceived by the government.	[1], [2]
		Process: Low severity and fragmentation within the civil war conflict zone	
3.1	Regulation	After one or more civil war parties gain control over territory, they protect communities under their control against attacks by armed groups and/or opportunistic violence.	[1], [2]
3.2	Regulation	After one or more civil war parties gain control over territory, they establish institutions or practices to adjudicate disputes between individuals and communities.	[1], [2]
3.3	Disruption	Communities are displaced and lose most of their property after the civil war breaks out.	[1], [2]
3.4	Disruption	Communities cannot pursue their livelihood activities after the civil war breaks out.	[1], [2]
		Process: High severity and fragmentation outside the civil war conflict zone	
4.1	Regulation	The security agencies of the state do not stop nor prosecute violence by informal groups after receiving intelligence about their activities.	[1], [2]

4.2	Regulation	The security agencies of the state have less manpower and less and worse equipment than the informal armed groups.	[1], [2]
4.3	Regulation	After the security agencies repeatedly do not intervene, informal groups expand their illicit activities and/or use violent means to assert their position in disputes.	[1], [2]
4.4	Regulation	After informal groups mobilize and/or use violence, they justify it with the perceived need for self-help and lack of alternatives.	[1], [2]
		Process: Feedback effects across conflicts	
5.1	Resource allocation	After the conflicts between informal groups escalate, the government intervenes but with strategies that require limited coercive resources.	[1], [2]
5.2	Resource allocation	After the government intervenes in the informal group conflicts, the formal group(s) in the civil war increase their attacks and make territorial gains.	[1], [2]
5.3	Regulation	One or more formal armed groups clash with informal groups outside the civil war conflict zone after the informal group conflicts escalate.	[1], [2], [3]
5.4	Cooperation	One or more formal armed groups offer training, weapons, and/or operational support to the informal groups outside the civil war conflict zone after they come under pressure in the civil war conflict zone.	[1], [2]
5.5	Cooperation	The informal groups adopt modes of attack and a target choice similar to the formal group(s) after they receive training and weapons from them.	[1], [2], [3]

Note: [1] = interviews, [2] = qualitative secondary sources, [3] = ACLED, [4] = *WhoWasInCommand* (2023)

Table 4.3: Overview of the observable implications of the candidate explanation

N°		**Observable implications**	**Data sources**
		Alternative explanation: Structural	
A1.1	State capacity	Conflicts between informal groups escalate in areas where the state had a low state capacity before the civil war onset.	[4]
A1.2	Lootable resources	Conflicts between informal groups only escalate and fragment in areas with lootable high-value resources.	[1], [2]
A1.3	Lootable resources	Violence between informal groups increases after the price of lootable resources increases.	[1], [2], [3], [5]
		Alternative explanation: Agent-based	
A2.1	Ethnic favoritism	The allocation of coercive resources changes after the ethnic composition of the federal government changes.	[1], [2]
A2.2	Non-relational diffusion	The informal groups adopt modes of attack and a target choice similar to the formal armed group(s) but not their goals and ideological beliefs.	[1], [2]
A2.3	Non-relational diffusion	The informal groups only adopt those modes of attack and target choice from the formal armed groups that do not require advanced military technology.	[1], [2]
A2.4	Alignment	Members from communities with preexisting conflicts join the opposite sides of the civil war cleavage after the civil war breaks out.	[1], [2]
A2.5	Alignment	The seasonal patterns of the civil war violence correspond to the seasonal patterns of violence in livelihood conflicts.	[3]

Alternative explanation: External			
A3.1	External support	Conflicts between informal groups escalate and fragment after at least some of the groups receive financial and/or material support from abroad.	[1], [2]
A3.2	Weapon proliferation	Conflicts between informal groups escalate and fragment after informal groups begin to source the majority of weapons abroad.	[1], [2]
A3.3	Weapon proliferation	Violence between informal groups increases after violence in the weapon-source country decreases.	[3]

Note: [1] = interviews, [2] = qualitative secondary sources, [3] = ACLED, [4] = Lee and Zhang (2017), [5] = *Commodity Price Data* (2024)

Table 4.4: Overview of the observable implications of the alternative explanations

Chapter 5

Formal and informal armed groups in the Nigerian conflicts

This study focuses on armed conflicts in Nigeria between 2000 and 2021, that is, since the transition to civil rule in 1999. The first years of the observational period, between 2000 and 2008, were relatively calm. Sporadic armed conflicts existed, but their intensity and geographic spread were limited. This changed with the outbreak of the Boko Haram conflict in 2009. The Boko Haram conflict quickly escalated to the level of civil war and resulted in more than 40,000 deaths and two million IDPs until the end of the observational period (Campbell 2021; *Nigeria* 2023a). Simultaneously, armed violence increased in all other regions with hundreds of armed groups operating in the country as of 2021. This chapter offers a comprehensive perspective on the background of these conflicts and the involved armed groups. It provides the backdrop for the quantitative analysis at the country level and the qualitative analysis focusing on Nigeria's Northeast and Northwest.

The chapter has three functions. First, it introduces the macro-historical context, emphasizing the legacies of the precolonial polities and colonial rule for today's conflicts. Second, it provides background information on the respective conflicts, including their origin and main conflict issues, to facilitate the subsequent analysis of the case. Third, the chapter demonstrates the applicability of the distinction between formal and informal armed groups and its added value for analyzing the conflicts in the Nigerian case. One of this study's key contributions is developing a parsimonious classification of the wide variety of non-state armed groups. To fulfill these functions, I build on evidence from the more than 110 interviews conducted for this study, the academic case literature, think tank reports, and newspaper articles. The primary sources are critical for illuminating the inner workings of newly emerged groups like the bandits and the Eastern Security Network (ESN) active in the Biafra conflict.

An overview of the classification of the most relevant Nigerian armed groups as formal and informal can

be found in Table 5.1. I suggest distinguishing non-state armed groups as formal and informal based on their structure, identity, and membership (cf. theory chapter 3.1.2). Formal armed groups have stable and depersonalized structures, explicitly identify as an *armed* organization, and have a non-permeable boundary between the military and civilian realm. These attributes are connected by the logic of family resemblance, which means that an armed group is considered formal if it meets at least two of the three criteria. The table indicates how I classified the groups regarding each of the three attributes. The last column indicates which of the Nigerian conflicts the group is involved in. I further use this distinction to differentiate conflicts between formal groups and the government and conflicts between informal groups based on the classification of the majority of actors in these conflicts. Recall that I understand civil wars as a special case of conflicts between the government and formal armed groups with high-intensity violence and formal political power as the conflict issue.

Group	**Type**	**Struct**	**Self-id**	**Non-perm**	**Conflict(s) involved**
Boko Haram	formal	✔	✔	✔	Boko Haram civil war
CJTF	formal	✔	✔	✖	Boko Haram civil war
Cult groups	formal	✔	✔	✖	Cult violence, Niger Delta
IPOB	formal	✔	✔	(✔)	Biafra
MEND	formal	✖	✔	✔	Niger Delta
Vigilante Group of Nigeria (VGN)	formal	✔	✔	✖	Banditry, ethnoreligious, farmer-herder
Bandits	informal	✖	✖	✔	Banditry, farmer-herder
Community-level vigilantes / militias	informal	✖	✖	✖	Banditry, Boko Haram civil war, ethnoreligious, farmer-herder
Yan Sakai	informal	(✔)	✖	✖	Banditry, farmer-herder

Note: Struct = structure, Self-id = self-identification as an armed group, Non-perm = non-permeability of boundaries

Table 5.1: Classification of the most relevant non-state armed groups in Nigeria

The remainder of this chapter is structured as follows. I first elaborate on the macro-historical context and then turn to the conflicts between the government and formal armed groups. Here, I proceed chronologically and introduce the Niger Delta conflict, the Boko Haram civil war, and the re-emerged Biafra conflict in sequence. The final section of the chapter presents the conflicts between informal groups, specifically ethnoreligious and livelihood conflicts, as well as electoral violence. Since the actors involved in these conflicts overlap, the chapter concludes by classifying the informal groups together in one subsection. Note that the chapter follows the case literature in introducing these conflicts separately. It is the distinct contribution of

this study to analyze the interdependence between these conflicts in the subsequent chapters.

5.1 The macro-historical context

The state of Nigeria in its current form is a colonial “amalgamation” (e.g., Fagbule and Fawehinmi 2021), as it had not existed in this unified form before the colonization by the United Kingdom. After gaining independence in 1960, Nigeria was under military rule until 1999, with two short periods of civilian government. Since 1999, Nigeria has been a federal democratic state with a presidential system. The impact of the pre-colonial political entities, colonialism, and military rule can be seen until today, among other things, in the salience of ethnic identities, in the weak legitimacy of the Nigerian state, and in its powerful elites, which divide most of the state revenues among themselves — an attitude called the “national cake mentality” (Ejiogu 2011, p. 3; Campbell and Page 2018; Akinyemi 2021, p. 25).

In the centuries before colonization, present-day Nigeria was divided into several kingdoms, each dominated by a different ethnic group. In the north, Hausa kings ruled over a number of smaller kingdoms before the jihad of the Fulani Muslim scholar Usman Dan Fodio (1803–1806) led to a unification of the kingdoms under the umbrella of the Sokoto caliphate (Fagbule and Fawehinmi 2021). The caliphate spanned almost the whole north, reaching from present-day Ghana in the west to today’s Adamawa state in the east (Abba et al. 2017). The jihad contributed to the merger of Hausa and Fulani, which are since then often considered one ethnic group. In the Northeast, the Sokoto caliphate bordered the Islamic Kanem-Borno empire, an ancient multi-ethnic state in the Lake Chad region comprising parts of today’s Nigeria, Chad, and Niger (Alkali 2013).

In the south, the kingdoms of Oyo and Benin covered large parts of Nigeria’s Southwest and Southsouth. In the Southeast, political authority was decentralized across families and villages, which coordinated and resolved conflicts through councils at the village level (Siollun 2021, p. 38). Historians argue that the southern states were more participatory in their organizational principles, with an impact on civic behavior until today (Siollun 2021; Ejiogu 2011). The slave trade further amplified the differences between the northern and southern kingdoms because it led to the spread of Christianity in the South while the Sokoto caliphate and Kanem-Borno empire continued to follow Islam (Anugwom 2019, p. 44).[1]

After the British snapped up the territory of modern Nigeria during the Berlin Conference in the 1880s, they intensified this north-south division further by creating two independent entities in the Nigerian protectorate with distinct governments and administrative systems. It was only in 1914 that Frederick Lugard unified the two protectorates, allegedly calling it Nigeria following the idea and wish of his wife (Siollun 2021; Anugwom

[1] It is estimated that approximately three million people were abducted and sold outside the country during the slave trade (Anugwom 2019, p. 44).

2019). During their reign, the British followed the principle of indirect rule, which meant that existing governance structures were co-opted and integrated. One consequence of indirect rule was the empowerment of traditional rulers and Islamic institutions who thereby gained authority over minority groups, which had resisted them before.[2]

The pre-colonial polities and the north-south division continue shaping Nigerian politics. The pre-colonial polities and settlement areas of the main ethnic groups correspond roughly to the six geopolitical zones in which the Nigerian state is informally divided, as I elaborated in the research design chapter 4.1.3 (see also Figure 4.4 for a map of the geopolitical zones). The division between the Muslim north and the Christian south is equally relevant today. The area where north and south are adjacent is called the Middle Belt and is known for its mixed population of Muslim Hausa-Fulani and Christian ethnic-minority groups (Guttschuss 2013, p. 24). The Middle Belt covers large parts of the Northcentral and the southern areas of the Northeast.

The colonial period ended with the independence of Nigeria in 1960. The first decade after independence was coined by the conflict over the secession of Igbo-dominated Biafra in the Southeast, culminating in the Biafra civil war (1967–1970) (Ejiogu 2011). The war ended through a military victory of the Nigerian government and constituted the starting point for several decades of military rule, albeit interrupted through short interludes of civil rule during the second and third republic, enduring four and one year(s), respectively (Angerbrandt 2018, p. 148; Campbell and Page 2018). Only in 1999, after the sudden death of ruler General Sani Abacha, the military elites adopted a new constitution — without popular ratification — initiating a civil power-sharing regime, which endures until the day of writing (Campbell and Page 2018, p. 87; Ihonvbere 2000).

The constitution from 1999 has established a presidential system of government in a federal state with three tiers of government (*Constitution of Nigeria* 1999). Nigerian presidents are powerful as they have access to oil revenues, are the commander-in-chief of the armed forces, and appoint the Inspector General of the Police (Angerbrandt 2018, p. 149; Campbell and Page 2018). Importantly, the security apparatus is centralized at the national level, and neither states nor local governments have their own police forces (Campbell and Page 2018). In line with the federal principles of the state, 24% of state revenues are to be distributed equally between the states and 20% between the LGAs. Importantly, the share of the LGAs is first transferred to the states that should then forward the money to the local entities. In practice, however, local governments do not always receive the share that they are entitled to (ibid., p. 88). The traditional rulers who had lost many of their competencies during military rule became almost powerless (Blench et al. 2006).

The three outlined periods and forms of rule — pre-colonial kingdoms, colonial indirect rule, and military

[2]Interview 172, ethnic/livelihood interest group, August 2021, interviewed by Shedrach B. Nghozei and the author.

rule — continue to impact the events unfolding after democratization in 1999, the period of interest to this study. I will focus on two main mechanisms: weak state legitimacy and salient ethnic identities. First, the Nigerian state suffers from low legitimacy among the elites and the citizens more generally. The root of this lack of legitimacy lies in the fact that the state was imposed on the pre-existing political entities without consent — an "arbitrary and flawed state-building exercise" (Ejiogu 2011, p. 4). As Ekeh (1975) diagnosed, this led to the emergence of two publics: the civil public created during colonial rule and the primordial public preceding colonialism.[3] According to Ekeh (ibid.), it was legitimate and expected to use the civil public to extract resources from the state and redistribute it among one's ethnic in-group, i.e., in the traditional public. As Akinyemi (2021, p. 26) emphasizes, the practice of redistribution between the two publics is not so much an abuse of the former colonial institutions but their logical extension to the post-colonial period. The Nigerian elites basically use the post-colonial institutions as they had been intended by the British: to extract and re-invest for one's own gain (ibid., p. 26).

While the colonial origin and the practice of corruption substantially reduce state legitimacy, it is weakened further by the lack of inclusion of the broader public in political processes (ibid.). This is likely a continuing impact of the military rule and palpable, not least in the imposition of the 1999 constitution (Ihonvbere 2000). Politics are often the result of elite bargains and, as a result, political parties are weak. They have no stark programmatic differences, and politicians switch party affiliation frequently to gain political positions (Angerbrandt 2018).

The second mechanism is the salience of ethnic identities. The colonial amalgamation of separate polities with historical ethnic rivalries and the British indirect rule coined contemporary ethnic identities. This can be seen in the importance of ethnic affiliations in politics and the ethnic connotation of the recent armed conflicts (Angerbrandt 2011, p. 20). In the same way, the Nigerian elites should not be perceived as a unified actor but rather as several competing elite networks that exert some degree of control over each other (Campbell and Page 2018, p. 90). The political and economic competition between ethnic groups is informally regulated through the so-called zoning. Zoning has been an elite bargain during the transition to a civil regime and entails that public positions are divided among the five geopolitical zones. Zoning also includes the informal arrangement that the presidency should rotate between the north and the south (Angerbrandt 2018, p. 152).

Some of the recent armed conflicts have been explicitly framed in ethnic terms, but ethnicity also plays a role in cases where the ethnic dimension is less obvious. Examples of ethnically-framed conflicts are the Niger Delta conflict and the recent re-emergence of the Biafra conflict. Less clear is the ethnic dimension of the banditry crisis in the Northwest, which seems foremost related to organized crime and, to a lesser

[3] Similarly, Smith (2007) argues in his seminal book "A Culture of Corruption" that there are two "idioms of accountability" prevailing in Nigeria: one rooted in democracy and bureaucracy between government and citizens and one between patron and client (p. 171).

extent, tensions between farmer and herder communities.[4] Yet, since the majority of bandits have a Fulani background, banditry has also been interpreted as an attempt of the Fulani to grab the land of other ethnic groups, a conspiracy theory labeled the Fulanization of the country (*Stopping Farmer-Herder Violence* 2018, p. 4; Ukandu and Chiaghanam 2019). While the Fulanization narrative is highly questionable and potentially conflict-inciting, its popularity has to be seen against the historical background of the Fulani jihad and rule in the 19th century, which created long-term resentment among the Hausa (Higazi 2016, p. 370; Boye 2021, p. 207). The Boko Haram conflict is commonly not considered an ethnic conflict but rather discussed through the lens of transnational violent extremism. Nevertheless, the group's elites are usually Kanuri, and the conflict can be seen as an attempt to resurrect the Kanuri-led Karnem Borno empire (Mongunu and Umara 2021, p. 83). Another interpretation sees the Boko Haram conflict in historical continuity with the jihad of the Fulani Usman Dan Fodio.[5]

To sum up, Nigeria's history of colonial amalgamation and military rule continues to impact the armed conflicts after the transition to civil rule via weak state legitimacy and the salience of ethnic identities. I now turn to the development of the mentioned conflicts, beginning with those dominated by formal armed groups. I describe the conflicts separately from each other and provide evidence for classifying the groups as formal and informal. The question of whether and how they influence each other is investigated in the subsequent empirical chapters.

5.2 Conflicts between the government and formal armed groups

The government has been challenged by several formal armed groups in three main conflicts since 1999: the Niger Delta conflict, the Boko Haram insurgency, and, most recently, the resurrection of the Biafra conflict. These conflicts vary a lot with regard to the goals of the groups and the level of violence. It is common to all these conflicts, however, that they originated in grievances over poor governance and perceived marginalization. I discuss the conflicts in the chronological order of their (re)emergence, first introducing the conflict issues and basic facts and then classifying the respective groups.

5.2.1 The Niger Delta conflict: fighting for their share

Over the course of the last twenty years, dozens of armed groups operated in the Niger Delta, oscillating between formal and informal groups pursuing political and/or criminal goals (Asuni 2009, p. 3). The Niger Delta conflict began with non-violent protests against the environmental consequences of oil extraction in the

[4]"Bandits" is a politically charged term and not meant as a valid scientific concept here. I use it in the Nigerian context because this is the most common term to refer to the militias operating in the Northwest.

[5]Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author.

1990s before militant groups formed to advance their demands with violent means (Ebimboere 2020; Hanson 2007). The communities in the areas of extraction were dissatisfied because they suffered from the negative environmental consequences of the extraction while not being sufficiently compensated by revenue-sharing (Taft and Haken 2015, p. 9). Movement for the Emancipation of the Niger Delta (MEND) was formed in early 2006 in response to the arrest of one of the key figures of the Niger Delta movement, integrating several smaller groups (Hanson 2007; Nwajiaku-Dahou 2012). To advance their claims, the group used strategies like attacks on oil installations and kidnapped foreign workers (Taft and Haken 2015, p. 14).

The government at first did not try to accommodate the groups' demands but responded violently after the attacks on the oil infrastructure began. The kinetic response included the deployment of a joint task force to the region and the prosecution of the groups' leaders (*Curbing Violence* 2015).[6] When this approach yielded little success, the government introduced an amnesty and Disarmament, Demobilization, and Reintegration (DDR) program to end the conflict in 2009. While the program was successful in reducing the violence, armed groups continued to operate, not least because the drivers of the conflict remained unaddressed (Ebiede 2017a; *Curbing Violence* 2015; Nwajiaku-Dahou 2012).

Notwithstanding its political and grievance-driven roots, the Niger Delta conflict is closely linked to organized crime, in particular, to oil theft involving militants and state officials alike (Reno 2009, p. 6; Jesperson 2017, p. 8; Nwajiaku-Dahou 2012). Many of the involved armed groups are furthermore interwoven with cults and confraternities like Deebam and the Greenlanders (Hazen and Horner 2007, p. 78; *NDPFV* 2023).[7] These groups are urban crime gangs, which emerged at several Nigerian universities in the south, firstly as non-violent confraternities, and are involved in drug and human trafficking as well as electoral violence (Fubara 2023b; Oyibo 2020). Their violence predominantly targets civilians and other cult groups, and they rarely turn against the state.

With regard to the formal/informal distinction, MEND is a formal armed group because it demonstrates two attributes of formality: self-identification as an armed group and low permeability. MEND, however, falls on the border between the binary categories of formality. First, the group explicitly identifies as an armed organization by using the name MEND when claiming responsibility for attacks and has a logo and slogan which at least some fighters display during their operations (Oriola 2016, p. 83). Indeed, one motivation behind the formation of MEND was to aggregate the various militant activities under one label (ibid., p. 93). Second, the members of MEND live separately from their communities of origin in camps (Oriola 2016; Asuni 2009, p. 3). While MEND maintains close support relationships with the communities, secondary sources draw a clear distinction between militants and communities (e.g., Asuni 2009; Oriola 2016). Similarly, an ICRC report explicitly differentiates MEND from other community-embedded armed groups (Terry and

[6] Interview 243, researcher, Abuja, November 2023, interviewed by the author.
[7] Interview 715, researcher, Enugu (remote), January 2024, interviewed by the author.

McQuinn 2018, p. 46).

The group structure is very fluid, however, and there is no clear division of roles, which means that MEND does not display this attribute of formality. Owing to its emergence as an umbrella organization, MEND brings together various militant organizations that enter into shifting alliances, partly just for one operation (Hanson 2007; Asuni 2009, p. 19). There is no "coherent hierarchy" nor one single leader (Oriola 2016, pp. 92–93). The nature of leadership in MEND is difficult to assess as most group leaders are unknown, which seems to be a strategic choice of the group after previous leaders have been killed by the Nigerian military (Hanson 2007). Most likely, leadership is shared among the heads of several subgroups who coordinate and share intelligence (Oriola 2016, p. 95).

I furthermore consider the cult groups to be formal groups due to their strong group identity and organizational structure. There are supposedly hundreds of relatively small cult groups, ranging from around 50 to a few hundred members (Hazen and Horner 2007, p. 82). They usually identify themselves with names and logos, e.g., Vikings, Icelanders, or Black Axe (Oyibo 2020; Walubengo 2022). The groups are described as organized violence specialists (Fubara 2023b) with a central leadership (Hazen and Horner 2007, p. 117). Oyibo (2020) proposes that the groups have a "chain of command similar to militia groups," although the author does not expand on what this means exactly. They have a hierarchy of senior and junior members who are organized based on their location as well as into campus and street wings (Albin-Lackey 2008; Edeh 2018). By contrast, the groups are permeable as the members are neither permanently mobilized nor isolated physically. The youths remain in their everyday environment, e.g., the university campus, and join these groups for income and protection against other cult groups. At the same time, joining the group is relatively formalized through an oath and rituals, which can be brutal and include sexual violence (Edeh 2018). Overall, the classification of the cult groups remains somewhat ambivalent, also because these groups are secretive and share little information on their inner workings (ibid.).

5.2.2 The Boko Haram civil war: the rise of violent extremism

I conceptualize the conflict between the government and JAS, ISWAP, and Ansaru, collectively referred to as Boko Haram, as a civil war because it meets the criteria of being a high-intensity conflict between the government and formal armed group(s) over formal political power (cf. theory chapter 3). The Boko Haram conflict is a high-intensity conflict because it has exceeded the established threshold of 1,000 battle-related deaths (Gleditsch et al. 2002). The Boko Haram factions qualify as formal groups, as I elaborate at the end of this section, and strive for the establishment of an independent Islamic state, following their interpretation of Sharia law.[8]

[8] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

Boko Haram has its origin in a non-violent religious community founded by Mohammed Yusuf in 1995 in Maiduguri, Borno state in northeastern Nigeria (Ebimboere 2020, p. 135). Yusuf strongly criticized the political elites for their corrupt behavior and advocated for a strict interpretation of Islam to create an "Islamic utopia" (Jesperson 2017, p. 8; Ojo 2020, p. 87). While the official name of the group is JAS, the group received its moniker Boko Haram — roughly translated to 'Western education is sinful' — because Yusuf preached against the formal, post-colonial education system provided by the government (Ojo 2020, p. 87).[9] The group turned violent in 2009 due to a fallout with their former political patrons and launched a series of attacks on government buildings and police stations in Maiduguri (Ebimboere 2020, p. 139).[10] The government responded with a heavy-handed crackdown, which led to the arrest and death of hundreds of Boko Haram members, including the arrest and ultimately extrajudicial killing of Yusuf (ibid., p. 144).

The extrajudicial killing of Yusuf is used to explain the radicalization of the group under the leadership of his successor Abubakar Shekau (Margin and de Montclos 2018). The group became extremely violent, not only against government targets but also against civilians, including Christians and Muslims alike. Shekau is often portrayed as a megalomaniac obsessed with power. Allegedly, he justified the large-scale violence against Muslim civilians by declaring them unbelievers because they did not follow his own teachings. Any person with a national ID card was considered an unbeliever because they owned "government property."[11] If his fighters were worried about the day of judgment, "they should say that he [Shekau] was the one who told them to do so."[12] At the peak of its territorial control, JAS controlled large parts of Borno state and had a considerable presence in neighboring Yobe and Adamawa states.[13] The group also began to operate transnationally by retreating to Cameroon, Chad, and Niger (Idler and Tkacova 2023).

The extreme violence against Muslim civilians led to tensions within JAS, triggering the break-away of two factions, i.e., Ansaru and ISWAP.[14] Ansaru broke away from JAS in 2012 and was recognized by Al-Qaeda in the Islamic Maghreb but became inactive shortly after (Zenn 2020b, p. 1255).[15] However, from 2019 on, renewed activities of Ansaru were reported in Nigeria's Northwest (Zenn 2020a). ISWAP emerged in two steps. First, Shekau pledged allegiance to the so-called IS and the resulting ISWAP replaced JAS (Warner et al. 2022, p. 147; Zenn 2020b, p. 1251). However, some of ISWAP's high-ranking members and the leadership of the so-called IS grew increasingly dissatisfied with Shekau due to its extreme violence against civilians. As a result, the so-called IS appointed Abu Musab al-Barnawi, Yusuf's son and close advisor

[9] Interview 357, researcher, Abuja, September 2021, interviewed by the author.

[10] Six years earlier, in 2003, a splinter group of Yusuf's followers called Al Sunna Wal Jamma launched violent attacks against the government in Yobe. After a violent government response, the followers returned to Maiduguri and were reintegrated into Yusuf's group (Afoaku 2017, p. 33).

[11] Interview 443 (FGD), violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[12] ibid.

[13] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

[14] A few years later, a faction under the leadership of Bakura broke away from ISWAP. In 2019, this faction, or at least some of its members, pledged allegiance to JAS (Zenn 2020b, p. 1278).

[15] Interview 239, journalist, Abuja, November 2023, interviewed by the author.

to Shekau, as the new leader of ISWAP. Shekau left ISWAP and 're-activated' JAS (Warner et al. 2022, pp. 154–155). In line with IS' ideology, ISWAP under al-Barnawi restrained its violence against civilians, the use of children for suicide bombing, and adopted a more governance-oriented approach (Ojo 2020, p. 88).[16] After years of infighting, JAS' leader Shekau was defeated by ISWAP in 2021 (Anyadike 2021b; Salkida 2021).[17]

Boko Haram was opposed by the security agencies of the Nigerian state, by the MJTF — a coalition by Niger, Chad, Cameroon, and Nigeria founded in 2015 — and a pro-government militia called CJTF. The CJTF emerged in response to a double victimization of the communities by Boko Haram and the state and sought to credibly signal their rejection of Boko Haram to the government (Agbiboa 2020, p. 362).[18] The CJTF is credited with dislodging JAS from Maiduguri in 2013, pushing them to rural areas (ibid., p. 369). They use their local knowledge of the terrain and the communities to support the government (Harlander et al. 2019). As one interviewed CJTF member put it: "We and the army are almost the same body [...] We work hand in hand."[19] The cooperation between the CJTF and the government became institutionalized, with a small fraction of CJTF members receiving weapons and training from the government (Felbab-Brown 2018, p. 12). Despite being praised for their contribution to fighting Boko Haram, the CJTF have also been criticized for engaging in crime and atrocities against Boko Haram suspects (Harlander et al. 2019).[20]

I now turn to the classification of the non-state armed groups involved in the Boko Haram conflict. I classify the Boko Haram factions and the CJTF as formal armed groups. The Boko Haram factions have similar structures due to their common organizational root. The founder Yusuf created a hierarchical organization with himself functioning as the commander-in-chief and a Shura council consisting of the most important commanders. The commander-in-chief can only act in agreement with the Shura council (Abdulazeez Malefakis 2022, p. 67). I focus on JAS and ISWAP in the following because less is known about Ansaru due to its long inactivity. At least, it is clear that Ansaru identifies as an armed organization. In addition, after the splinter from JAS, the group moved to Nigeria's Northwest which means that the fighters are not embedded in their communities of origin (Zenn 2020a). I further assume that the organizational structure is similar to the other two factions even though Ansaru is structured in urban cells and not as a military organization engaged in rural insurgency (Barnett et al. 2022, p. 61). In short, I assume that Ansaru is a formal group.

With regard to JAS and ISWAP, both have a sophisticated structure building on Yusuf's organizational design. Accordingly, the groups have a clear depersonalized hierarchy and command and control over the

[16] Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[17] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[18] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.
[19] Interview 479, vigilantes, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[20] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

lower ranks.[21] Both groups maintained the Shura council even though Shekau sought to enforce its will against the council.[22] The leadership is followed by several levels of mid-level commanders.[23] At the same time, the mid-level commanders of both factions seem to have some autonomy in tactical decisions (Abdulazeez Malefakis 2022, p. 70). In the case of ISWAP, the former members of ISWAP interviewed for this study emphasized they could mobilize combatants to go for a battle without requiring authorization.[24]

In line with the second criterion, JAS and ISWAP clearly identify themselves as armed groups by name and adopt the symbolic language of the so-called IS. This can be seen, for example, in ISWAP's sophisticated media appearances. This said, fighters can hide their identity for tactical reasons, e.g., when they approach checkpoints in civil appearance to then launch an attack.[25] Third and last, the groups strictly separate civilian and military life. Since 2013, when JAS had been expelled from Maiduguri, the groups lived in isolation from civilian life in remote camps.[26] This seems to concern the fighters as well as their immediate family (their wives and children) as the wife of a former ISWAP fighter described: "He [the interviewee's husband] doesn't go to Maiduguri or anywhere, he is always in the woods with other members."[27] Similarly, she was not allowed to visit her family or other towns during the two years she stayed with the group.[28] She further asserted that the isolated life is a central reason why the conflicts should end: "We are not animals, we are humans, so we can't be living in the woods in isolation."[29] It seems plausible that the isolation of the fighters from their families of origin was also a way to socialize them into the armed group and the extreme ideology. Under Shekau, the fighters were not allowed to speak to their families because they are "non-believers" and "if you are caught talking to people of Nigeria you will be prosecuted."[30] If the groups seized a village, the fighters expelled or killed the residents and settled there alone.[31]

The classification of the CJTF is more ambivalent. The group was informal at the beginning, colloquially called the 'youth with sticks,' and then formalized in the subsequent years (Agbiboa 2020, p. 362). I consider the CJTF after 2013 to be a formal group because it developed a stable, depersonalized structure. The command of the CJTF is centralized in Maiduguri and from there the group is organized in "military-style" sectors, preceded by the respective commanders (Felbab-Brown 2018, p. 12; Agbiboa 2020, p. 365; Haruna

[21] Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[22] Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 261, researcher, Abuja, September 2021, interviewed by the author.
[23] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[24] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[25] Interview 479, vigilantes, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[26] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[27] Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[28] ibid.
[29] ibid.
[30] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[31] ibid.

2023).[32] The sectors correspond to the sectors used by the Nigerian military, and each comprises several communities with their respective leaders.[33] The military and CJTF commanders of each sector liaise with each other.[34] The group further identifies as an armed organization by name, using a logo and uniforms. The uniforms were very similar to those of the Nigerian army but use a different color scheme.[35]

In contrast, the boundaries of the organization are permeable, which means that the groups meet two of the three formality criteria. The mobilization patterns are similar to vigilante groups in Nigeria. The members are not mobilized permanently but in reaction to incidents or upon request by the security agencies. Anyone can become a member. While new members should be approved by the community elders, anyone seems to be accepted in practice (Felbab-Brown 2018, p. 12). This also means that they continue living in their community of origin.[36] A member of CJTF also describes how his occupation as a CJTF member and a welder co-exist: he works as a welder from the morning until 4 pm and then takes on his CJTF shift until midnight.[37] The mobilization in case of an emergency can take place via their normal mobile phones (while some members have radio messengers), ringing a bell in the community, or by being directly approached by other community members.[38]

In parallel, more informal vigilantes and hunters exist in the Northeast that are not integrated into the CJTF structures. I classify them as separate informal groups.[39] As in other parts of the country, these vigilantes have existed for decades to deal with crime in their community. In contrast to the CJTF, they do not have a distinct name for their group and do not wear uniforms. Underlining the permeability of the vigilantes, an IDP from Gowza reported that community members could just decide that they are vigilantes and defend their communities without registering anywhere.[40] It was only in response to Boko Haram that the CJTF was founded as a distinct organization and formalized.[41] Vigilantes and hunters have cooperated with the CJTF since late 2014 and now train alongside them (Agbiboa 2020, p. 362).[42]

[32] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.
[33] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[34] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.
[35] Visible for example in Abubakar (2021) and Zagazola [@ZagazOlaMakama] (2022).
[36] Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[37] Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullah.
[38] Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[39] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.
[40] Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[41] Interview 357, researcher, Abuja, September 2021, interviewed by the author.
[42] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.

5.2.3 The Biafra conflict: the re-emergence of a separatist movement

The third and most recent conflict involving a formal armed group and the government has its roots in the Biafra Civil War (1967–1970). IPOB was formed as an organization in 2012 as a successor to the historic Biafran separatist movement and a breakaway from the non-violent Movement for the Actualization of the Sovereign State of Biafra (MASSOB) (Campbell and Quinn 2021), maintaining the self-conception as a non-violent group for many years.[43] IPOB advocates for the secession of the Igbo people and the southeastern region from the Nigerian state (Adangor 2018, p. 145).

IPOB claimed that the repression of the group by the government has led to its radicalization (*Country policy* 2022). Leader Nnamdi Kanu began to publicly endorse violent means as early as 2015, and the organization formed armed wings, first the Biafra Security Services and later, in December 2020, the ESN (Mbachu and Anyadike 2021; Adangor 2018, p. 146). The ESN is estimated to have between 5,000 and 10,000 members.[44] Indeed, the response of the Nigerian government has been described as "heavy-handed" and "draconian" (Mbachu and Anyadike 2021; Onu et al. 2022, p. 142). This concerns the arrest of Kanu, the proscription of IPOB as a terrorist organization as well as the kinetic response including airstrikes (Adangor 2018).[45] The official reason behind the formation of the ESN, however, is to defend the Igbo farmer communities against alleged attacks by Fulani herdsmen.[46]

Violence increased after the arrest of IPOB leader Kanu upon his return to Nigeria from exile in 2021 (Campbell and Quinn 2021). Most notably, IPOB began to violently enforce a weekly sit-at-home order to pressure the release of Kanu (Kabir 2022b). Other violent events, including attacks on prisons, police stations, and government offices, cannot be directly attributed to IPOB (Mbachu and Anyadike 2021). The 'unknown gunmen,' how they are labeled in the media, rather seem to be *former* members of IPOB that operate independently from the group and are not formally organized.[47] In addition, a number of smaller pro-Igbo groups operate in the region, of which at least the Biafra Zionist Federation is also using violent means (Onu et al. 2022; *Country policy* 2022, p. 19).

With regard to the group type, I classify IPOB and its armed wing ESN as a formal organization. Note that the following description of the group is based on an interview with an expert on the Biafra conflict because I could not identify any published work on the inner workings of the ESN due to the recent foundation of the group.[48] IPOB and the ESN are considered one group as the ESN is clearly integrated into the structures of IPOB and not an autonomous organization. The ESN displays depersonalized, stable structures:

[43] Interview 715, researcher, Enugu (remote), January 2024, interviewed by the author.
[44] ibid.
[45] Interview 243, researcher, Abuja, November 2023, interviewed by the author.
[46] Interview 715, researcher, Enugu (remote), January 2024, interviewed by the author.
[47] ibid.
[48] Interview 715, researcher, Enugu (remote), January 2024, interviewed by the author.

its units are led by commanders who deserted from the Nigerian army and who are under the command of the Directorate of State, the leadership body of IPOB. The interviewed expert emphasized the strong command and control of the group as the commanders only operate after authorization by IPOB's leadership. The ESN further explicitly identifies as an armed group, displaying a logo with a fire-spitting dragon and wearing uniforms, that is, a red cap, black shirts, and blue trousers. The logo is a reference to the Biafra Dragon Squad that confronted the military in 2016 and was able to withstand it for several hours.

The permeability of the group's boundary is more ambivalent. While the ESN uses camps to train new members and manufacture weapons, neither the camps nor the fighters are mobilized permanently. The fighters are "everyday Nigerians" who mix with their communities and are mobilized on demand. Interestingly, IPOB itself emphasizes the informality of its armed wing. It would not be a "standing army" but merely a vigilante group to protect the Igbos against Fulani herders (Mbachu and Anyadike 2021; Adangor 2018, p. 146). Yet, this framing as a non-confrontational vigilante group could also be a political strategy in light of the repression of the state that might not accurately describe the nature of the organization.

To conclude, the three conflicts discussed can be clearly analytically separated because of the different goals, ideologies, and constituencies of the armed groups. The core areas of operations of the groups are distinct, albeit there is some geographic overlap between the Niger Delta groups and IPOB. However, the groups "stay mostly away from each other."[49] This is different for the conflicts involving predominantly informal groups, which are much more closely intertwined.

5.3 Conflicts between informal armed groups

Conflicts between informal groups evolve along four main cleavages: ethnicity, religion, livelihood, and competition in the illicit economy. The case literature and quantitative datasets describe the involved groups as vigilantes, ethnic or livelihood militias, and bandits (e.g., Higazi 2008; Krause 2018; Ngom 2023; Raleigh et al. 2010). Within my conceptual framework, these groups can be summarized under the notion of informal armed groups. While state security agencies can also participate in these conflicts, they usually take on a more restricted role than in conflicts with formal armed groups and intervene to curb violence between these groups rather than defeat them. An exception is the more crime-oriented banditry.

I analytically separate ethnoreligious conflicts between sedentary communities from farmer-herder conflicts and banditry as well as electoral violence because the conflict issues and some of the involved actors differ. However, the conflict issues, the involved groups, and the geographic areas of operation overlap, not least because the ethnoreligious cleavages can be aligned with the livelihood cleavage (i.e., some farmers are

[49] ibid.

Christians and some herders are Muslims), leading to spillovers between these conflicts. Consequently, I first introduce the conflicts separately and then jointly discuss the classification of all groups at the end of the section.

5.3.1 Ethnoreligious conflicts between sedentary communities

Ethnoreligious conflicts between informal groups typically occur between Christian ethnic-minority groups and the Muslim Hausa-Fulani. They are driven by questions of cultural domination, access to political positions and markets, and land ownership (Harnischfeger 2004).[50] One particular source of contention is that the Christian ethnic-minority groups are in some cases recognized as indigenous and, therefore, enjoy special rights. Public positions, however, are often held by the Muslim Hausa-Fulani, who are considered settlers (Guttschuss 2013; Higazi 2016; Krause 2018).[51] The political domination of the Hausa-Fulani is attributed to their political power at the national level as well as to colonial indirect rule, which favored the Hausa-Fulani elites (Angerbrandt 2011).

The intersection of religious and ethnic cleavages facilitates the spread of these conflicts. Violent tensions over the political domination of the Hausa-Fulani have been an issue since independence, but only since the 1970s have religious identities increasingly been used for mobilization (Vinson 2020). While conflicts might start between specific communities, they tend to spread to a regional level because of the social identity of the involved groups.[52] In line with the settlement patterns of the ethnic-minority and religious groups, these conflicts are common in the Middle Belt and, thus, the Northcentral geopolitical zone.

The ethnoreligious violence takes the form of urban riots and clashes between the militias of rural communities, respectively.[53] The urban riots usually emerge in response to some kind of trigger event, for example, over the introduction of Sharia law for criminal matters in Kaduna (Angerbrandt 2011). They can also be related to elections or the appointment of traditional rulers (Angerbrandt 2018).[54] In rural areas, the violence takes a more organized form, with armed groups attacking each other (Krause 2018). In some instances, these rural clashes can be considered spillovers from the urban riots (ibid.). During recent years, at least the urban ethnoreligious violence reduced, which was attributed to the success of inter-religious dialogue formats and the realization of the citizens of the high costs of violence (ibid.).[55]

While ethno*religious* conflicts are often associated with the Middle Belt, conflicts between sedentary

[50] Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[51] See, Interview 172, ethnic/livelihood interest group, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author, for the narrative that Fulani want to deprive farmer of their land and political power.

[52] Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author.

[53] Riots are beyond the scope of the theoretical framework presented in this thesis because the actors do not meet the definition of an armed group, see chapter 3.1. I discuss riots here because they are part of the context in which the dynamics of interest to this thesis play out.

[54] Interview 172, ethnic/livelihood interest group, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[55] Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

communities with different ethnic identities also occur in other areas of the country. For example, Ebiede (2017a) and Nwajiaku-Dahou (2012) show how conflicts between different ethnic communities are also prevalent in the Niger Delta, even though often overlooked due to the conflict involving the formal armed group MEND. Similarly, Taft and Haken (2015, pp. 109, 113) report isolated instances of inter-communal violence for the Southwest.

5.3.2 Farmer-herder conflicts and banditry

Farmer-herder conflicts can be considered livelihood conflicts over access to resources like land and water, while banditry is more akin to organized crime and connected to an illicit economy of kidnapping and cattle rustling. Farmer-herder conflicts and banditry are distinct conflicts considering their origin and violent dynamics.[56] Despite this, the two phenomena are intertwined and often conflated in public discourse because the ethnic identity of the actors overlaps.[57] Farmer-herder conflicts occur throughout the north but in particular in the Northwest and Northcentral (Higazi 2016). Banditry began in Zamfara and Katsina state in the Northwest but has spread to other states in the Northwest and the Northcentral.

Before introducing the conflicts in detail, it is necessary to clarify the difference between sedentary and transhumant pastoralist communities in Nigeria because the difference in lifestyle shapes the behavior of the groups and the spread of conflict. Transhumant pastoralists are communities with a nomadic lifestyle that migrate with their livestock in response to the seasons and, in the case of Nigeria, predominantly identify as Fulani (Higazi and Yousuf 2017, p. 3). Pastoralists can be further differentiated into those covering large distances across the Sahel often crossing several national borders, and locally rooted communities alternating between grazing grounds in relative proximity. While farmers are always sedentary, herders can be both transhumant and sedentary. I follow the terminology of the academic and practice literature in talking about farmer-herder conflicts but technically, these are often farmer-pastoralist conflicts. Sedentary herders can be Fulani but are not necessarily so. Then again, many Fulani follow a sedentary lifestyle, do not own cattle, and are well integrated into society and politics, as visible in the Fulani identity of former president Buhari. They are also blending in with Hausa communities and Higazi and Yousuf (ibid., p. 7) call them the "urbanised 'Hausa-Fulani'."[58]

Farmer-herder conflicts commonly arise because cattle encroaches on farmland and destroys part of the

[56] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[57] Interview 261, researcher, Abuja, September 2021, interviewed by the author.

[58] While Hausa-Fulani are often referred to as one group because they assimilated and got closely intertwined during the Sokoto caliphate, some nomadic Fulani remained relatively separate and continue to speak Fula/ Fulfulde rather than Hausa (Ejiogu 2011, p. 83). Not least, the very tensions between farmers and herders contributed to the recent tendency to perceive Hausa and Fulani again as separate groups (Cline 2021, p. 2).

harvest or arable land or drinks water saved for irrigation (*Stopping Farmer-Herder Violence* 2018, p. 4).[59] These conflicts are not a new phenomenon and are often regulated non-violently.[60] They turn violent, however, when the non-violent conflict management fails, and one of the sides uses violence, triggering retaliation.[61] One frequently mentioned example is that the farmer, whose crops were destroyed, kills or seizes cows in return or even attacks the herder directly, thereby triggering a violent reaction by the herders.[62]

As for ethnoreligious conflicts, disputes between specific farmers and herders turn into community-level conflicts due to the salience of ethnic identities. The pastoralists identify commonly as Fulani, while the sedentary farmer communities are either Hausa (in the North) or from ethnic-minority groups (in the Middle Belt).[63] The involved communities tend to retaliate against the social group instead of specific individuals. One interviewee suggested: "When a herder destroys crops, it is not looked at like a herder who has done it, it immediately looked at: It's a Fulani [..., so] people now come out to kill any Fulani person they meet [...] even if he doesn't have cattle."[64] Religious identities also play a role in areas where the Fulani identify as Muslim and the ethnic-minority groups as Christians or traditionalists.

The rise in farmer-herder conflicts in recent years is attributed to the scarcity of grazing opportunities due to climate change,[65] urban development and expansion of farmland blocking grazing routes (Eke 2020, p. 748; Boye 2021, p. 206),[66] the breakdown of an agricultural symbiosis of farmers and herders due to increased farming productivity and more resilient cattle (Boye 2021, p. 206),[67] the deterioration of traditional governance structures,[68] and the failure of the judiciary to arbiter effectively between the parties (Rufa'i 2021, p. 12).

Turning to banditry, these conflicts began as an intra-Fulani phenomenon, with Fulani bandits rustling the cattle of Fulani pastoralists (ibid.).[69] The loss of their cattle left the affected Fulani highly vulnerable since

[59]E.g., Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[60]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author. The conflict management of farmer-herder conflicts will be discussed in more detail in the qualitative analysis chapter 7.1.2.

[61]Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[62]E.g., Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[63]An estimated 90% of pastoralists in Nigeria are Fulani (*Stopping Farmer-Herder Violence* 2018, p. 4).

[64]Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; similarly: Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[65]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[66]Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[67]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[68]Interview 357, researcher, Abuja, September 2021, interviewed by the author.

[69]E.g., Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

their social and economic status is closely linked to the cattle owned (Guttschuss 2013, p. 27).[70] Impoverished and not able to adjust to a sedentary lifestyle, some of the herders joined the bandits, setting in motion a vicious cycle of increased cattle rustling and recruitment of impoverished herders into the armed group (Higazi 2016, p. 375). The bandits then expanded their business and began to also generate an income by armed robbery along highways, looting of villages, and kidnapping for ransom. The extent of this phenomenon can hardly be overstated. In 2022, Hassan and Barnett (2022, p. 17) estimated that there were around 100 different bandit groups with more than 30,000 members operating in the Northcentral and Northwest.

Due to the comparatively large revenue banditry creates, the bandits are often depicted as criminals driven by material gain. The bandits themselves, however, claim to be motivated by grievances over the Fulani's marginalization and revenge of the atrocities committed against the Fulani community (Barnett 2022, p. 7).[71] Due to their pastoralist lifestyle, the communities are marginalized in the distribution of public goods, including security (Barnett et al. 2022, p. 46; Ojo 2020, p. 94).[72] They are furthermore exposed to discrimination related to prejudices about the Fulani as being uncivilized and hot-tempered (Eke 2020). The marginalization of the Fulani can be traced back to the fall of the Sokoto caliphate and the subsequent colonization (Boye 2021, p. 205). Against the background, banditry is then "the only way they can take what belongs to them."[73] In either way, the kidnapping and cattle rustling have to be seen in the context of wide-spread poverty in northern Nigeria, where opportunities for legal employment and economic upward mobility are rare.[74]

While separate in their origin, banditry and farmer-herder conflicts became intertwined via two mechanisms. On the one hand, sedentary communities often retaliated against any Fulani herder when they had become a victim of a banditry attack, feeding into the tensions between farmers and herders (Hassan and Barnett 2022, p. 5; *Herders against farmers* 2017).[75] On the other hand, Fulani, who became impoverished due to farmer-herder conflicts, became a source of recruitment for the bandits. I elaborate on these mechanisms in more detail in the qualitative analysis in chapter 7 as they are directly linked to the absence of the state.

5.3.3 Electoral violence

Nigeria is commonly cited as an example for countries with high levels of electoral violence (e.g., Birch et al. 2020; Fjelde and Höglund 2022). Indeed, violence in the context of national and state-level elections is a

[70] Interview 252, livelihood interest group, Abuja, September 2021, interviewed by the author.
[71] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.
[72] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.
[73] Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author.
[74] Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 288, HDP interest group, Abuja, August 2021, interviewed by the author; Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[75] Interview 252, livelihood interest group, Abuja, September 2021, interviewed by the author; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

common phenomenon throughout Nigeria, with hundreds of casualties for each national election (Angerbrandt 2018, p. 144), albeit apparently in the decline in the last years. The violence is initiated by political elites who want to secure their electoral victory either by intimidating voters before the election, disrupting the election process, e.g., by snatching ballot boxes or by intimidating political opponents.[76] To this end, the political elites mobilize many of the informal groups introduced above, supporters of parties and unions as well as groups involved in cult violence, introduced in the Niger Delta section (Fubara 2023b). At least one group of interviewees from Sokoto further reported that the relationship also goes the other way, i.e., that groups mobilized for elections turn into permanent informal groups.[77]

In the south, a lot of the electoral violence is perpetrated by cult groups and other urban crime groups like the Lagos-based National Union of Road Transportation Workers. In the Middle Belt and north, electoral violence is closely intertwined with ethnoreligious conflicts, especially if the party or candidate affiliations intersect with, and hence reinforce, preexisting ethnoreligious cleavages (Angerbrandt 2018, p. 160; Fjelde and Höglund 2022, p. 2; Krause 2020). In these cases, vigilante groups and/or more loosely defined thugs can be hired to intimidate voters or start riots. As one interviewee put it: "If there's no election, we can sit (unclear) together with them [the political thugs] without any problem but when election comes [...] they will start carrying weapons to protect their [...] political godfathers."[78] When the party supporters or thugs are only mobilized for a specific event and merely execute what their sponsor wants, they are not captured by my concept of armed groups as the concept requires that the group seeks to advance group-related objectives in a continuing way. Thugs are more similar to rioters who act spontaneously and often without direct order is blurred (e.g., Guttschuss 2013).

5.3.4 Classification of the involved armed groups

Conflicts between informal groups involve various vigilante groups, partially called communal militias, and bandits. I first discuss the group types of the various vigilantes, putting emphasis on the VGN, Yan Sakai, and those vigilantes deeply entrenched in specific communities. Vigilantes vary strongly with regard to their formality (Ogbozor 2016, p. 2), yet high permeability with their communities of origin is common to all of them. I also discuss formal vigilante groups like the VGN in this section because they are part of conflicts otherwise dominated by informal groups. I then turn to the bandits.

Vigilantes are a Nigeria-wide and centuries old phenomenon. Historically, they emerged for policing purposes in community contexts where the state was not providing this function. Their orientation was hence inward, i.e., to attend to community-internal matters and maintain order (Pratten 2008b). These vigilantes

[76] Interview 357, researcher, Abuja, September 2021, interviewed by the author.
[77] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; see also Rufa'i (2021).
[78] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

were more similar to the common international understanding of the term 'vigilantes' today (e.g., Bateson 2021). When violent conflict spread in Nigeria, however, many of these groups turned into self-defense groups, focusing less on internal affairs and prioritizing the conflicts with other communities (Higazi 2016; Krause 2018). Sometimes the defensive vigilantes are differentiated from more offensive operating communal militias, but this distinction is blurred as some of the vigilantes also operate quite mobile and offensive (Higazi 2008, p. 128; Krause 2018, p. 187). I therefore refer to any of these groups as vigilantes in the following. Note that these groups might simply be labeled communal groups in some work.

To start with the classification of the vigilantes, the VGN qualifies as a formal group. The VGN is an umbrella organization for vigilante groups in Nigeria and has been registered with the government as a NGO since 1999 (Rufa'i 2018b, p. 67; Higazi 2016, p. 376). Being a registered organization, the group presents itself to the outside with uniforms and a logo. The group has sophisticated administrative structures at the national, regional, state, and local levels, including executive councils, chairmen, and secretaries at the respective levels (Rufa'i 2018b, p. 70; Ogbozor 2016, p. 4). However, Ogbozor (2016, p. 8) also points out that the structure and sophistication of the VGN varies within the organization depending on the state or LGA. Similarly, Felbab-Brown (2021) diagnoses that the state and local branches of VGN are not always well coordinated. The aforementioned author, nonetheless, clearly distinguishes the VGN from more informal vigilantes. In contrast to other formal groups, the members of the VGN remain embedded in their communities and are mobilized on demand. It has hence permeable boundaries.

The second group of interest is Yan Sakai. Yan Sakai vigilantes operate in the Northwest and emerged in response to banditry. The sources are contradicting with regard to the origin and formality of the group. While some argue that they are a breakaway of the VGN by members who favored a more violent approach (Rufa'i 2018b, p. 70), others say it emerged bottom-up from several farming communities (*Herders against farmers* 2017). At least, there seems to be some overlap between VGN and Yan Sakai, as many Yan Sakai members are also members of the VGN.[79]

Depending on their perceived closeness to the VGN, the formality of Yan Sakai is also gauged differently. While Rufa'i (2018b, p. 70) states the group would have maintained similar structures to the VGN as its breakaway faction, some of my interviewees have emphasized Yan Sakai's informality as it would not be an organization — in explicit contrast to the VGN.[80] In that sense, Yan Sakai is rather a type of local vigilante than a specific group. As one interviewee put it: "Yan Sakai is somebody you can just feel like."[81] There seems to be an agreement, at least, that Yan Sakai does not identify to the outside as an armed group as they do not wear uniforms, and the meaning of Yan Sakai is simply the Hausa term for 'volunteer' and not a

[79] ibid.
[80] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[81] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

proper name (ibid., p. 70). In combination with the permeability of the group, I therefore classify them as informal.

Finally, there are some community-level vigilantes and so-called hunters, which are clearly informal (e.g., Felbab-Brown 2021). They do not self-identify as an armed group to the outside, neither by names nor symbols, and the community and the vigilantes are perceived as one and the same. For example, a traditional ruler interviewed for this study noted that his community does not have vigilante members because everyone is mobilized to defend themselves and their property.[82] The perception of the community and the vigilantes as one also speaks to the permeability of these groups: the members usually pursue a civil profession and fulfill their vigilante function in the evenings or free days. Krause (2018, p. 206) describes for similar groups in Jos, Northcentral Nigeria, how mobilization is done ad hoc and literally in passing: someone comes through the community shouting "it has started." This way of mobilization also fits the lack of centralized command of these groups (ibid., p. 191).

Turning from the vigilantes to the banditry groups, there are many similarities between the two, but the latter are less embedded in their communities of origin. I classify bandits as informal nonetheless due to their shifting, highly personalized structure and lack of self-identification as an armed group. Bandits are organized in small groups of 25 to 300 fighters, which cooperate in loose groupings for operations that require more manpower.[83] In that, they are functioning akin to mercenaries with cells being hired for operations on demand.[84] There is no central or coordinating figure superseding these small groups.[85] While the groups as such are small, the overall number of bandits reaches the tens of thousand (Hassan and Barnett 2022).[86]

The bandit groups are led by one person, who is followed by "his boys," and they tend to splinter when members of the group gauge that they are strong enough to operate independently.[87] They are thus similar to a franchise system in which the main bandit leaders allow and tolerate if some of their followers start to operate independently as long as they remain open for cooperation.[88] However, the splintering can also lead to infighting.[89] The high-level member of the armed forces interviewed for this study explicitly contrasted the structure of the bandits from Boko Haram as a formal armed group: "You have so many groups, loosely controlled by individuals [...] So you see yourself talking to so many people. Boko Haram, if you are talking to a particular person you are talking to almost all the structure, one person can tell everybody: stop! But

[82] Interview 506, traditional ruler, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.
[83] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author, claims that they have between 50 and 3,000 members but this estimation is rather an outlier.
[84] Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[85] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.
[86] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[87] Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.
[88] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[89] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

the bandits — no way, it is not possible."[90] In addition to their informal structure, the bandit groups do not have an explicit identity as an armed organization. The various groups do not have proper names but are identified via the names of their leaders. They do not seem to have any symbolic language or uniform to communicate their identity to the outside.

The boundaries of the bandit groups seem to be less permeable than for other informal groups because the members live in camps in the forest areas outside the communities.[91] The isolation of the bandits from the communities is visible in the fact that they are dependent on informants from within the communities.[92] Similar to Boko Haram, however, their immediate family and some supporters live with them.[93] The non-permeability of banditry groups in contrast to vigilantes can be explained by their very different relationships with the communities. While the vigilantes understand themselves as defending the community from the inside, bandits sustain themselves by violently extracting resources from the communities, be it through kidnapping or looting.

This chapter illuminated the variety of armed groups operating in Nigeria. It showed the complexity of the manifold conflicts in which these groups are involved and alluded to their interlinkages. Despite being a strong simplification, the binary distinction between formal and informal groups proved to be a useful analytical tool to reduce the complexity while still capturing key differences between the groups. The family resemblance criterion, i.e., that only two of three attributes need to be met, was suitable to accommodate the gray zone cases in an efficient manner. The discussion of the informal groups furthermore showed that sticking to established theoretical perspectives — distinguishing vigilantes, criminal gangs, militias, etc. — would have meant looking at the groups in isolation, for example, by only focusing on electoral violence or ethnoreligious militias. By contrast, my classification provided a unified perspective to capture the involvement of these groups across the different conflicts.

Acknowledging this overlap in actors and the similarity of their organizational structure is essential for the analysis in the subsequent empirical chapters that trace the interdependence between conflicts. Specifically, the next two chapters shift the focus from the organizational features of these groups and their goals to their violent and cooperative relationships within and across conflicts. The quantitative analysis describes and visualizes how these relationships developed over time and created the structural environment in which the groups operate. The qualitative analysis then illuminates how this structural environment was co-constituted by the strategic considerations and the behavior of the government and the formal and informal armed groups.

[90] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[91] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[92] E.g., Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[93] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

Chapter 6

The evolution of the Nigerian conflict network over time

The research question of this study is how civil wars and conflicts between informal armed groups influence each other. A central assumption is that these conflicts are interlinked in one overarching network. The goal of this chapter is to describe how the Nigerian network evolved over time, making use of descriptive network measures and network visualizations. The quantitative network analysis focuses on violent relationships as documented by ACLED. In line with my conceptual framework, I classified the non-state armed groups as formal and informal. In addition, I disaggregated social identity groups that ACLED includes as one actor at the country level, e.g., "Fulani (Nigeria)" or "Christians (Nigeria)." This is a crucial refinement in contrast to previous uses of SNA in conflict studies. Due to data limitations, cooperative relations are not captured quantitatively but will be discussed in the process tracing in the next chapter.

The evolution of the network structure constitutes the outcome, which the next chapter seeks to explain by analyzing the underlying processes with qualitative data. This mixed-methods approach mirrors the idea that structure and agency co-constitute each other: the network structure constrains and enables the armed groups, but their behavior changes the evolving structure. In line with this procedure, the quantitative analysis is descriptive and exploratory in nature and is *not* testing specific hypotheses. Notwithstanding, the analysis relies on the concepts introduced in the theory chapter 3 as an analytical lens to identify and describe relevant features of the network.

The conceptual framework emphasizes three aspects of the network structure that are relevant to answering the research question. First, the question is how the government allocated its resources in the network — when the civil war broke out and when the network structure changed in the aftermath of the civil war onset. The resource allocation is not directly observable in the quantitative network analysis focusing on the

violent relationships between armed groups. Therefore, I approximate the resource allocation through the distribution of the government fighting effort across non-state armed groups. Second, the question arises as to how the conflicts between the informal groups developed after the civil war onset and whether this development is spatially contingent. The latter is relevant because I conceptualized conflicts as manifesting in social and geographic space. Third and last, the conceptual framework raises the question of how the evolving network structure impacts the behavior of the formal armed groups opposing the government in the civil war.

The analysis focuses on the developments in Nigeria after 2009 when the high-intensity Boko Haram conflict broke out. Indeed, the quantitative analysis shows dramatic changes in the network after the emergence of the violent extremist groups. While the government concentrated its fighting efforts on Boko Haram, conflicts between informal groups escalated and fragmented in almost all other regions except the Northeast, where the civil war was ongoing. This process accelerated with the proliferation of banditry and vigilante groups in the Northwest. Simultaneous to this escalation, the violent extremist groups expanded their violent activities to the affected areas in the Northwest and Northcentral, even though only to a limited degree.

The remainder of this chapter demonstrates how I arrived at these findings. The first section takes a meta-perspective by explaining how I implemented the theoretical concepts in the network analysis and how the network visualizations have to be interpreted. The second section discusses the distribution of the government fighting effort, first, when the civil war broke out and, second, in reaction to the growing conflicts between informal groups. The third section describes the development of informal group conflicts, outlining their increasing severity and then their fragmentation. The chapter concludes by analyzing the reaction of the violent extremist groups to the structural changes in the conflict environment.

6.1 The Nigerian conflicts through a network lens

Three theoretical aspects guide the quantitative network analysis: the government fighting effort, the conflicts between informal groups, and the reaction of the violent extremist groups. Before I turn to the analysis of the three specific aspects in detail, I elaborate on their operationalization in the quantitative network analysis and how the network visualizations have to be interpreted. An overview of the operationalization is provided in Table 6.1.

Theoretical concepts		Network implementation	
		Descriptive measures	*Visualization*
Armed groups & attacked civilians		n/a	Vertices
Violent conflict		n/a	Edges
Government		n/a	n/a
Formal groups		n/a	Vertex shape: Triangles
Informal groups		n/a	Vertex shape: Squares
Civilians		n/a	Vertex shape: Circles
Distribution of government fighting effort	(a)	Share of edges with government involvement	Vertex size: edge weight with government
	(b)	Relative share of edge weight per group type	
Exacerbation of conflict	(a)	Network size: absolute number of vertices and edges	
	(b)	Edge weight	Edge width
Fragmentation	(a)	Number of clusters	Vertex color per cluster and red edge color for cross-cluster edges [1]
	(b)	Domination: degree standard deviation and maximum	
Expansion of violent extremists		Number of edges to civilians and informal groups outside Northeast	Blue edges to civilians and green edges to informal groups [2]

Note: [1] = country-level networks only, [2] = region-level networks only

Table 6.1: Operationalizing the theoretical concepts in the network analysis

Conceptually, the network consists of the conflict parties that are connected through violent relationships. In the quantitative analysis, armed groups and affected civilians are the network vertices that are connected through edges representing the joint involvement in at least one violent event.[1] The violent relationships are weighted by the number of fatalities that resulted from the interaction of the two actors in a given year. In the visualizations, the edge weight is represented through the thickness of the edges. The vertices are differentiated based on their type into government, formal armed groups, informal armed groups, and civilians. The shape of the vertex corresponds to the group type: triangles to formal groups, squares to informal groups, and circles to civilians. Note that the government is not included as a vertex in the visualization of the networks but only represented indirectly through the vertex size to improve the readability.

The networks are analyzed at the country and regional levels. The region-level networks are facets of the country-level networks based on Nigeria's geopolitical zones, which roughly correspond to the conflict zones of the respective conflicts. The Boko Haram conflict concentrates in the Northeast, the farmer-herder

[1]For a justification of why civilians are included in the quantitative analysis, see research design chapter 4.2.1.

conflicts and banditry in the Northwest and Northcentral, the Niger Delta conflict in the Southsouth, and the Biafra self-determination conflict in the Southeast. If actors are active across several regions, they will appear in each regional network. A complete collection of all networks across the observational period can be found in the appendix A.5 for country-level networks and in the appendix A.6 for region-level networks.

Turning to the implementation of the three theoretical aspects of interest, I start with the distribution of the fighting effort of the government. The fighting effort is an approximation of the resource allocation. A key assumption of my theoretical framework is that the government has finite coercive resources and that the resulting limitation in resources shapes the government's ability to react to non-state armed groups challenging its monopoly on violence. Thus, the question is how the government distributes its resources between formal and informal groups, and across regions. I define the distribution of the fighting effort as the actions devoted to engaging in combat.

Fighting effort and resource allocation are not identical, as the latter could have a deterrence effect that decreases fighting. Moreover, the fighting effort is jointly produced through interaction with other actors and, hence, potentially the result of attacks against the government rather than the government's strategic choice. Still, I consider the fighting effort informative because it indicates which actors the government uses its coercive resources against. In addition, the fighting effort must be related to the coercive resources to some degree, as the government can only be attacked where it is present. In the case of Nigeria, I can provide qualitative evidence that the resource allocation indeed correlated with the fighting effort spent (cf. qualitative analysis chapter 7.2).

In the network analysis, I operationalize the distribution of fighting effort via two descriptive measures. First, I assess whether the government concentrates the fighting effort on just a few actors or divides it more broadly by calculating the relative government degree. The relative government degree is the number of edges with government involvement divided by the absolute number of active non-state armed groups in the network. Second, I consider how much of the government's fighting effort is spent on formal groups and how much is spent on informal groups. To do so, I compare the relative share of fatalities — technically speaking, the edge weight — resulting from government interactions with formal armed groups to those with informal armed groups. In the network visualizations, the fighting effort is represented through the vertex size of non-state actors and civilians. The larger the vertex, the more fatalities resulted from interactions between the respective actor and the government. If a vertex is an isolate, i.e., it has no connections to other vertices, this means that the group exclusively interacted with the government.

The second aspect of interest is the development of conflicts between informal groups after the civil war outbreak. Here, I focus on the severity and fragmentation of these conflicts. I defined conflict severity as the network size and the level of violence. In the network analysis, I operationalize this through the number of

vertices and edges as well as through the edge weight, that is, the number of fatalities. The fragmentation of the network is measured by identifying the number of clusters in the network and by assessing the ability of some informal groups to dominate the fighting.

Measuring fragmentation through network clusters is based on the idea that clusters are an approximation of distinct conflicts that can be interlinked with other conflicts. The conflict network is thus more fragmented the more clusters it includes. In the visualization of the country-level networks, the vertex colors indicate the clusters, i.e., vertices that are connected to each other and have the same color belong to the same cluster.[2] If two actors fight each other across clusters, these cross-cluster edges are indicated in red. Moreover, I use the degree standard deviation and maximum to measure the ability of some informal groups to dominate the fighting. The standard deviation of the degree captures whether informal groups have a similar number of edges. If the standard deviation is higher, this means their violent behavior is more heterogeneous, and some informal groups are more active than others. I interpret this as a sign of some actors dominating the fighting. The maximum degree indicates the highest number of edges an informal group has. I propose that a maximum that is much higher than the average indicates that at least one informal group is dominating the fighting.

I acknowledge that relying on violent behavior to measure domination cannot account for powerful actors who have a deterrence effect and are involved in less violence. In the Nigerian case, the violence-based measurement approach seems plausible because the attacks of informal groups on civilians allow them to accumulate resources and hence capabilities. Therefore, highly violent actors should be more capable and, by extension, more dominant. A second limitation of the domination measures based on degree is that they might not adequately capture a multipolar structure with several dominant groups. Hence, it is crucial that these measures are combined with cluster identification to measure fragmentation. More generally, it is critical that this quantitative analysis is embedded in a mixed-methods design that allows me to contextualize the quantitative findings with qualitative data.

Last but not least, the quantitative analysis seeks to describe how the behavior of the formal groups involved in the civil war changed in response to the evolving conflict network. Here, I am focusing on the question of whether and to what degree these groups can leverage emerging conflicts as a window of opportunity to confront informal armed groups and civilians outside the civil war conflict zone, thereby enlarging their area of influence. I operationalize this idea by assessing the number of edges that the formal groups opposing the government have with informal groups and civilians per region. Correspondingly, the regional network visualizations indicate the violent relationships of these groups with informal groups in green and with civilians in blue. After having clarified the implementation of the conceptual framework in

[2]The clusters are not indicated in the regional networks because they have been calculated at the country level and do not apply to the regional networks.

the quantitative analysis, the three subsequent sections present the results for each of the three aspects of interest.

6.2 The uneven distribution of government fighting effort

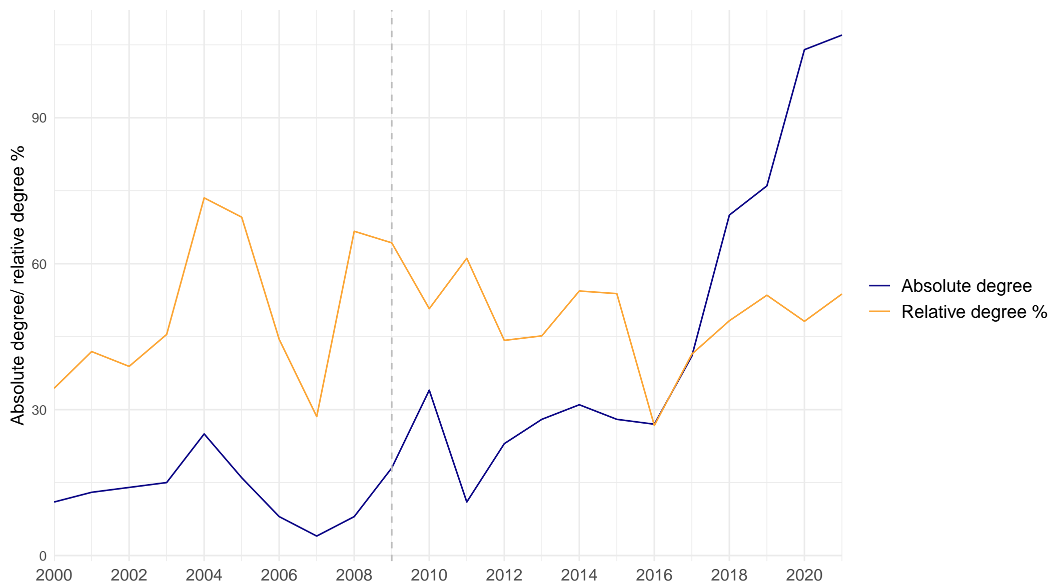
The analysis of the government fighting effort reveals that the government concentrated on the violent extremist groups in the Northeast until approximately 2017 and then shifted its attention increasingly towards informal armed groups. Figure 6.1 shows the government fighting effort across the observational period. The upper panel (a) indicates the development of the absolute government degree in blue and the degree relative to the number of non-state armed groups active in a given year in orange. The increase in the absolute degree demonstrates that the government distributed its fighting efforts across more and more actors from 2017 onward. This increase corresponds to the increase in network size as the relative government degree remains stable at around 50–60% until the end of the observational period.[3]

To interpret, a relative government degree of 50% means that the government was involved with 50% of the active non-state armed groups. This also has the implication that around 50% of these groups never violently interact with the government. Based on the quantitative data, it cannot be known whether this is due to the government's limited capacity, the collaboration with or at least toleration of these groups, or government interventions with non-violent means. The qualitative analysis in the next chapter will provide evidence that this lack of engagement was related to the limited capacity of the government and to collaboration with non-state armed groups fighting against Boko Haram or the bandits.

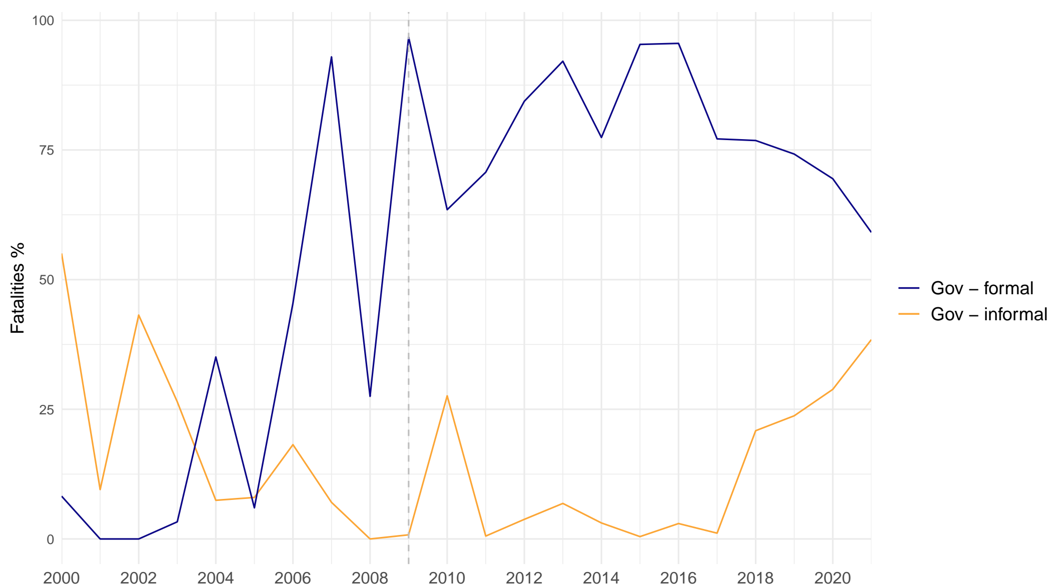
Considering the distribution of fighting effort in terms of fatalities across group types provides additional nuance. The lower panel (b) in the aforementioned figure indicates the share of fatalities that involved the government and formal groups in blue and the government and informal groups in orange, respectively. The relative share of fatalities involving the government and civilians is not shown, which explains that the relative shares do not always add up to 100%. Between 2006 and 2017, the government engaged much more violently with formal armed groups than with informal groups, first with the Niger Delta groups and then with the violent extremists. This cannot be explained by the absence of informal groups. For example, in 2016, the government-related fatalities amounted to 95.6% from interactions with formal armed groups, even though 96 informal groups were active in the country. However, after 2017, there was a major change in government behavior. As a result, the fighting effort was no longer exclusively focused on formal armed groups. Within five years, the government's relative fighting effort dedicated to informal groups changed from 1.1% in 2017 to 23% in 2019 and 38% in 2021.

[3]There is one outlier in 2016 where the relative degree drops to around 30%. One possible explanation for this outlier is the sudden emergence of many new groups in the Southsouth. It could be that the government was taken by surprise and needed some time to address these groups.

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) Government degree



(b) Fatalities with government involvement per group type

Figure 6.1: The fighting effort of the government over time

The network visualizations allow me to unpack these descriptive measures by showing through the vertex size which groups and regions the government was specifically involved with. I analyze the network graphs, first describing the government's reaction to the onset of the Boko Haram conflict and then turning to the shift in government behavior after 2017 that I identified above.

6.2.1 The government's reaction to the outbreak of the Boko Haram conflict

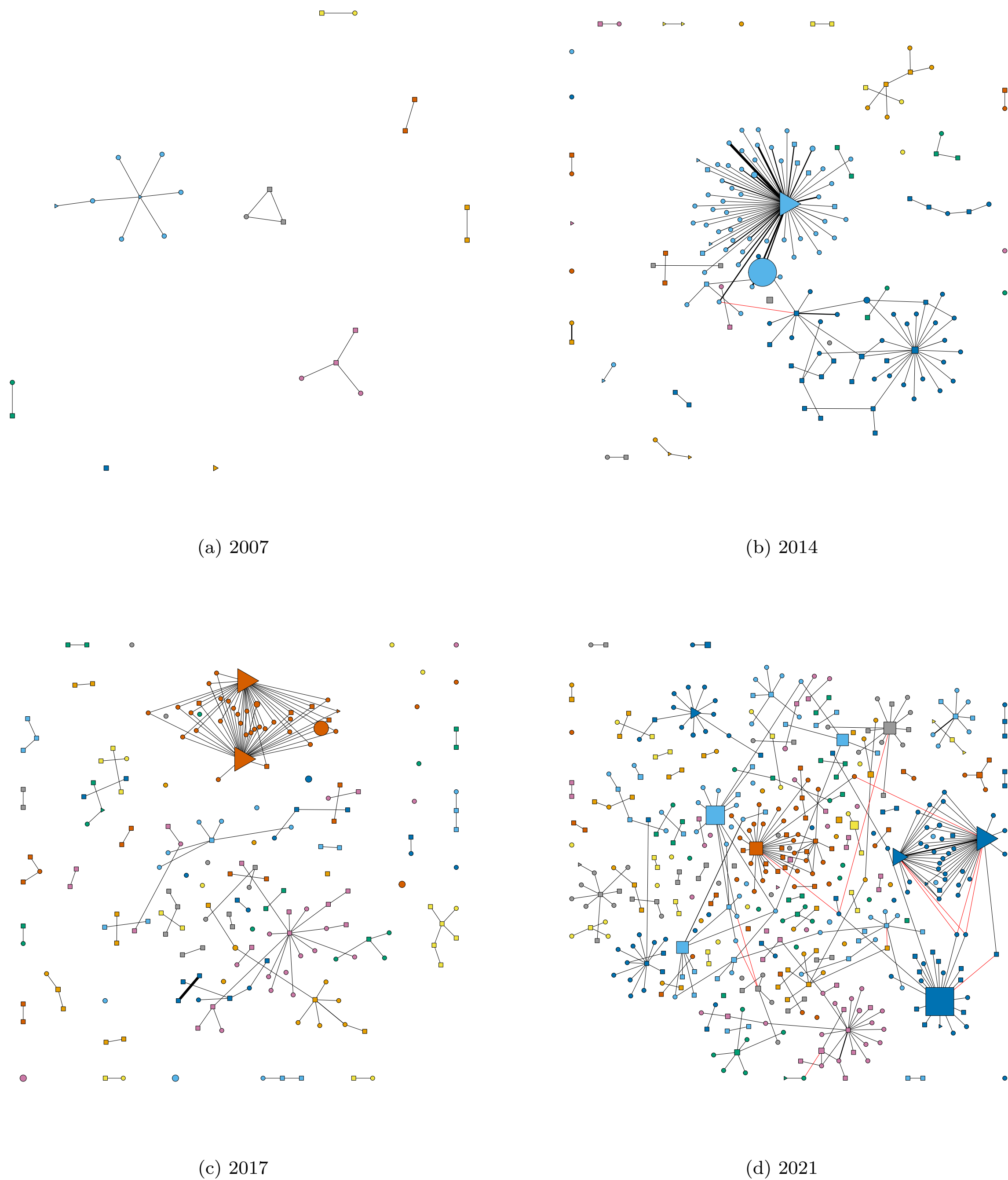
This section considers the government's behavior before the civil war, i.e., before 2009, and a few years after to outline its reaction to the onset of the Boko Haram conflict. There is a clear difference between the two periods. In the years before the emergence of Boko Haram, the small vertex sizes highlight that the government interactions with non-state armed groups and civilians were not very violent in this period. Remarkably, this also applies to the Niger Delta group MEND (cf. Figure 6.2 (a)).[4] This changed in 2009 when JAS began to challenge the government.

Once Boko Haram had launched its violent struggle, the government focused almost exclusively on the Boko Haram conflict until and including 2017. This is visible in the country-level networks, in which the triangles representing JAS and, later on, ISWAP stand out clearly from the rest of the vertices throughout the years (cf. Figure 6.2, panel (b) and (c)). The period was also marked by high levels of violence against civilians by the government and the violent extremists alike. In case of the government, this is visible in the large light blue vertex in circle shape in the 2014 network (cf. Figure 6.2, panel (b)). Similarly, the same network shows the manifold edges that JAS has with civilian vertices.

The visualization of the regional networks reveals that the prioritization of the Boko Haram conflict implied that the government fighting effort almost completely focused on the Northeast, the area where Boko Haram was active. The network visualizations clearly show that this regional focus on the Northeast meant that the numerous conflicts in the Northcentral and Southsouth were left unattended or that the government at least did not intervene militarily (see for example, the regional networks in 2016, Figure A.50 in the appendix).

[4] MEND is the hub of the light blue star structure of the 2007 network.

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) 2007

(b) 2014

(c) 2017

(d) 2021

Figure 6.2: Evolution of the country-level network

6.2.2 The redistribution of the fighting effort after 2017

In the shadow of the high-intensity conflict between Boko Haram and the government, conflicts between informal groups began to grow and fragment as the next section describes in detail. However, the government only shifted its attention to these emerging conflicts between informal groups, and especially to the bandits,

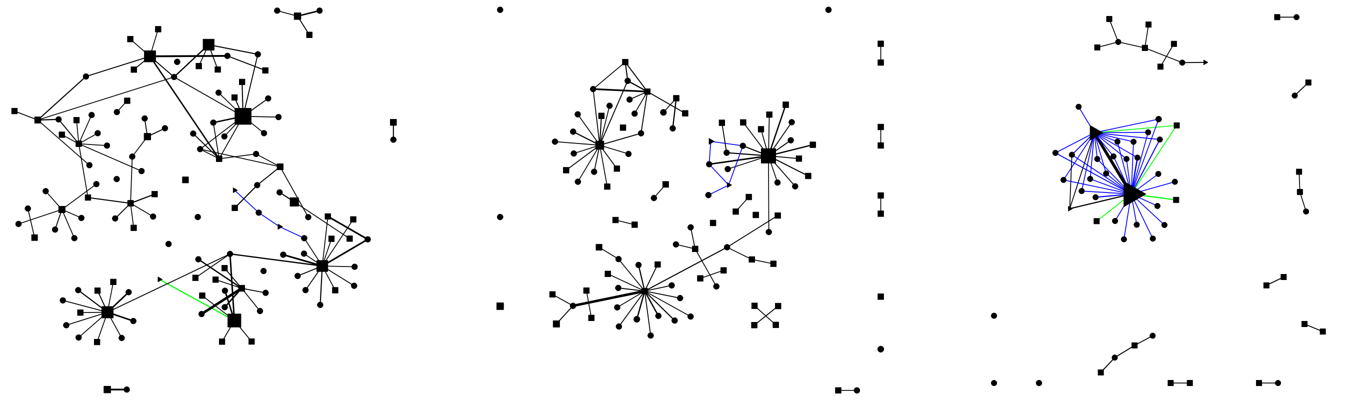
from 2018 onward. In the visualization of the country-level networks, this is clearly visible in the 2021 network (cf. Figure 6.2 (d)). The large square vertices indicate that many of the fatalities that resulted from events involving the government can now be attributed to interactions with informal groups.

Looking at the regional networks for 2021 shows that this change in government behavior also implied a geographic shift in the distribution of the fighting effort away from the Northeast (cf. Figure 6.3). The vertex sizes in the Northcentral and the Northwest indicate that the government became much more active in these regions. It is also indicative that the regional networks show a number of isolated vertices. These are bandit groups that clashed with the government but no other armed group. They also did not attack civilians.

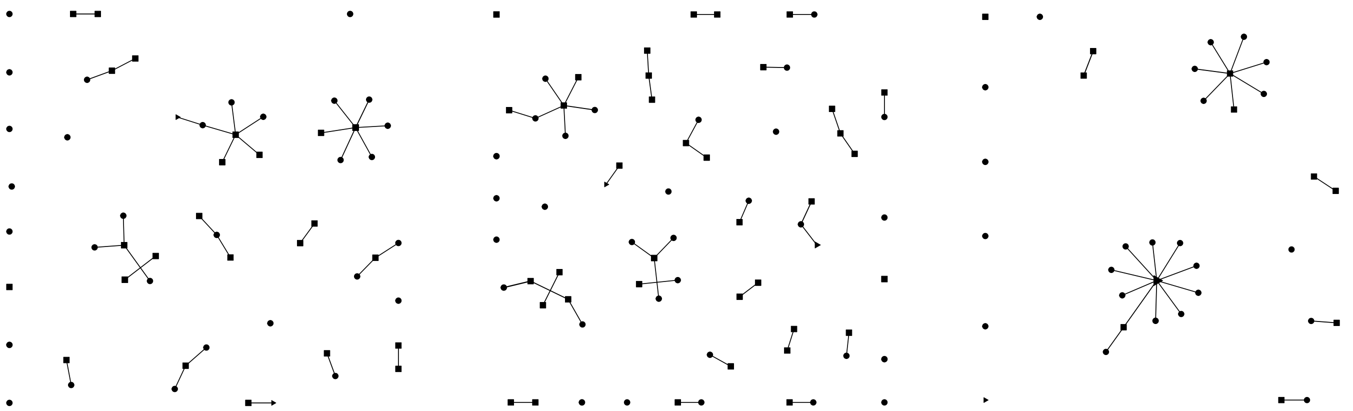
These observations notwithstanding, the government continued concentrating a lot of the fighting effort on the violent extremist groups in the Northeast after 2018. Accordingly, the regional networks in 2021 reveal that the government was still not engaged in many of the informal group conflicts, particularly in the Southsouth where several Fulani groups operated. The continued focus on the Northeast was possible because the government predominantly relied on airstrikes outside the Northeast, avoiding the stationing of ground troops (Hassan and Barnett 2022). It is only in 2021 that more fatalities resulted from government interactions with a bandit group than with one of the Boko Haram factions (cf. vertex sizes in Figure 6.2 (d)). In addition, the Biafra conflict reemerged during these years, and in 2021, the government interaction with IPOB increased in the Southeast, as did IPOB's violence against civilians.

In sum, the government prioritized the civil war for several years, even when conflicts between informal groups increased. When the government shifted its fighting efforts to these conflicts away from the Northeast, the situation still aggravated further. As the qualitative analysis in the next chapter shows, the aggravation of the situation was also a result of the increased government intervention with air strikes. The bandits retaliated against rural communities after attacks by the government and evaded the air bombardments by moving into new territories.

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) Northwest (b) Northcentral (c) Northeast



(d) Southwest (e) Southsouth (f) Southeast

Figure 6.3: Regional networks in 2021

6.3 The escalation and fragmentation of conflicts between informal armed groups

Conflicts between informal groups escalated and fragmented continuously after 2009 — the year the Boko Haram conflict turned violent — with an acceleration of this process after 2017. This development stands in contrast to the stability of the pre-civil war period. During that period (2000–2009), conflicts between informal groups took place in isolation from each other and the majority involved two to three actors only. They occurred in all six regions, in particular in the Northwest and Southsouth. I now outline the developments after 2009, starting with the severity of the conflicts and then turning to their fragmentation.

6.3.1 Increasingly severe conflicts between informal armed groups

The escalation of the conflicts between 2009 and 2021 can hardly be overstated. The increase in the number of non-state armed groups (vertices) and their violent relationships (edges) is visualized in Figure 6.4. Between 2009 and 2021, the number of non-state armed groups increased from 28 to 199. Similarly, the number of edges increased from 38 to 460. The figure shows that the growth in the number of non-state actors is driven by informal groups and civilian targets, whereas the number of formal groups is comparatively low and stable.[5] The edge width in the network visualizations shows that the vast majority of violent relationships between informal groups resulted in few fatalities. Across years, only a small number of mostly Fulani and bandit groups have wider edges and hence more lethal relationships. However, since the overall number of edges increased so dramatically, the development still entailed a substantial increase in the overall level of violence.

Regarding the geographic distribution of informal group conflicts, the regional networks between 2010 and 2017 show that conflicts between informal groups began to grow in the Northcentral and Southsouth and, to a lesser degree, in the Northwest. The majority of these conflicts involved Fulani, ethnic-minority groups, and party supporters. After 2018, conflicts between informal groups spread geographically: On the one hand, the Fulani groups became more active throughout the South, including the Southeast and Southwest. On the other hand, the bandits appeared as actors for the first time and likely ignited violence in the Northwest. The growth in the size and complexity of the conflict networks in the Northwest in the subsequent years is glaring. Figure 6.5 presents the regional network of the Northwest between 2018 and 2021 as an example. Banditry then spilled over from the Northwest to the Northcentral in 2020 and 2021.

At the same time, banditry and other conflicts between informal groups did not seem to emerge or spill

[5] Since the civilians are classified based on the LGA where they have been attacked, an increase in civilian targets always also indicates a geographic spread of the conflict.

over into the Northeast. For instance, this can be seen in the Northeast network for 2021 included in the previous section (cf. Figure 6.3 (c)). There has been a limited increase in the activity of informal armed groups, but it is not comparable to the other regions. Instead, the Boko Haram conflict clearly continued to dominate the situation. Those informal groups active in the Northeast were concentrated in the Middle Belt, which runs through the southern parts of the Northeast and directly connected these conflicts to the dynamics in the Northcentral.

Source: Own figure based on ACLED by Raleigh et al. (2010).

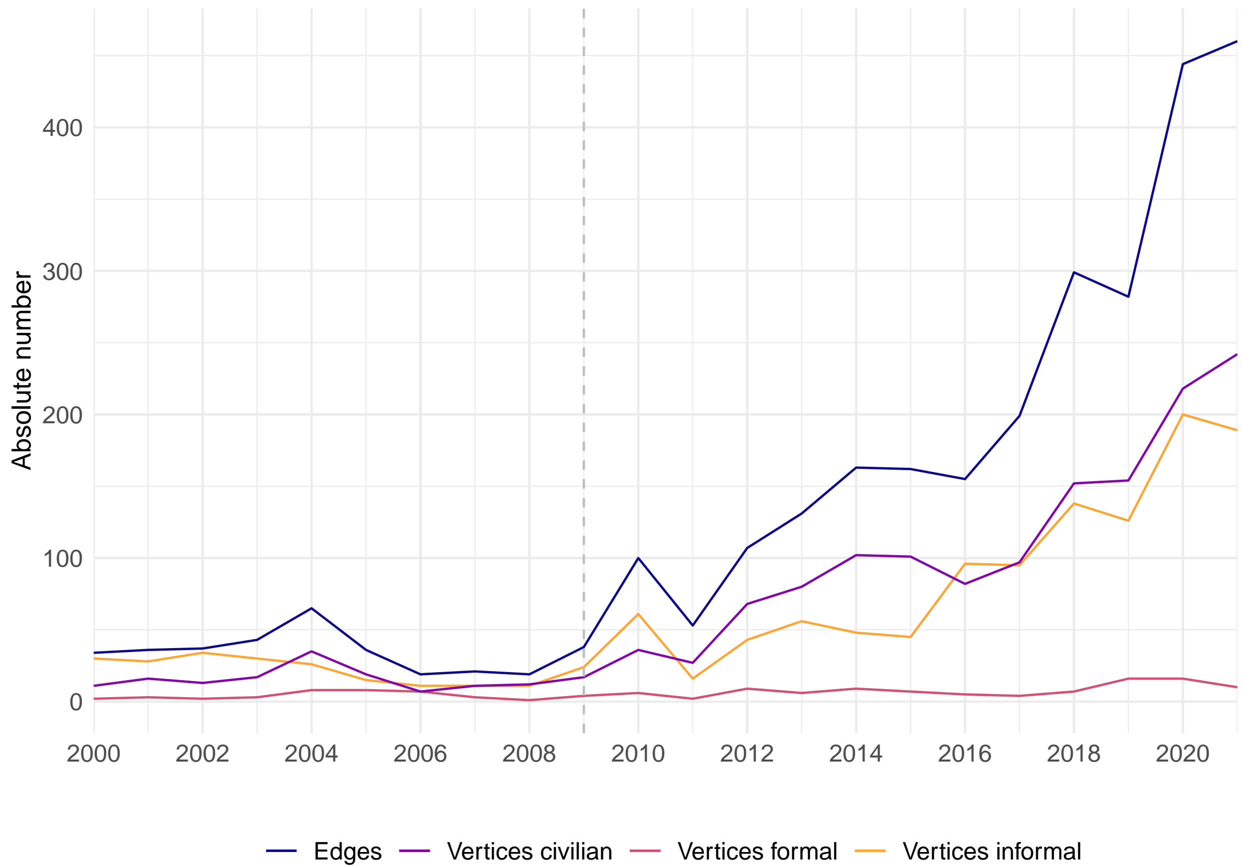


Figure 6.4: Network size over time

Source: Own figure based on ACLED by Raleigh et al. (2010).

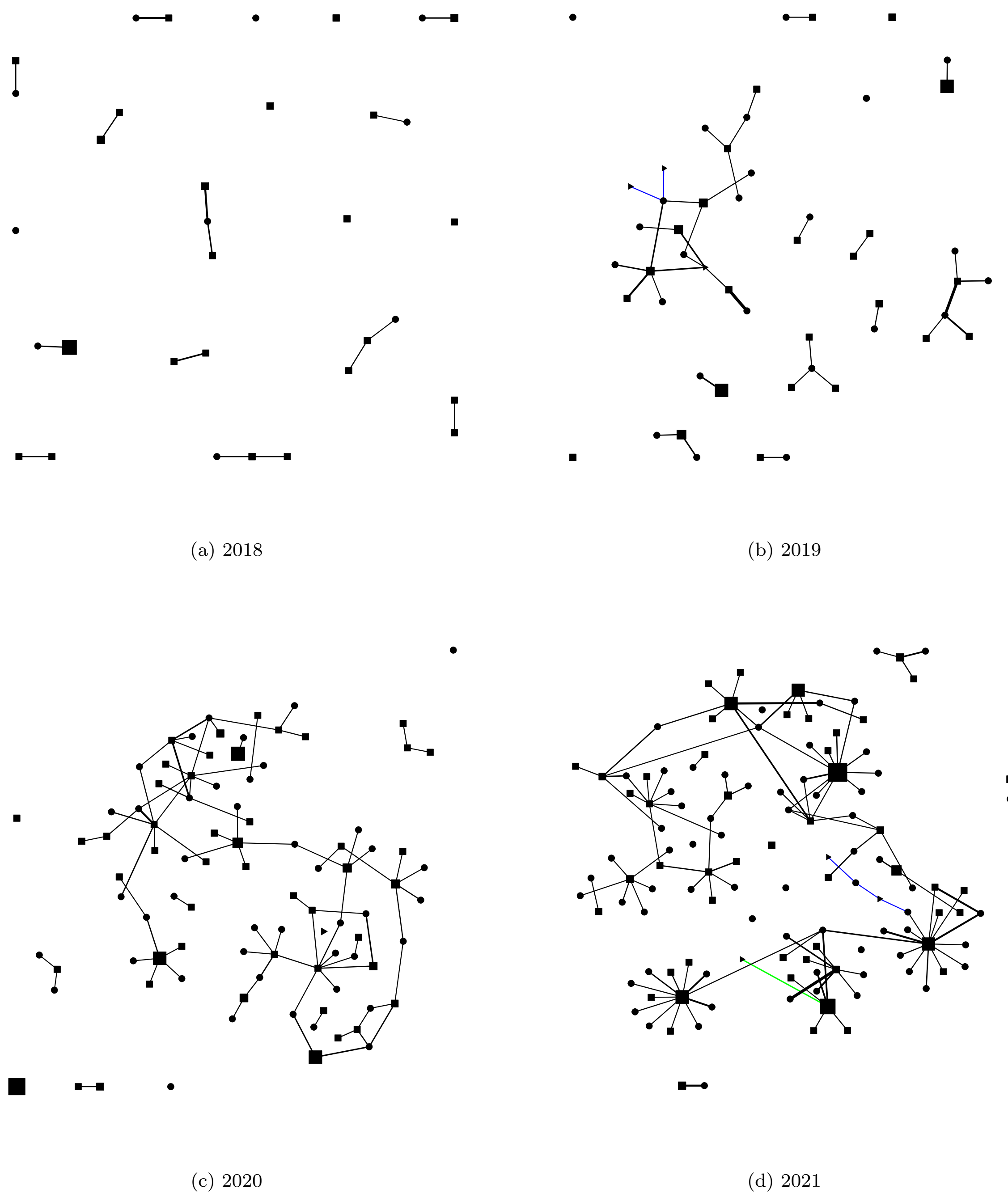


Figure 6.5: The Northwest network 2018–2021

6.3.2 Fragmenting conflicts between informal armed groups

The network analysis further uncovers the strong fragmentation of the conflict network over the course of the observational period. I assess the fragmentation through the prevalence of network clusters — an approximation of conflicts — and the ability of a few informal groups to dominate the violence. With

regard to the cluster measure, Figure 6.6 shows the total number of network clusters over time in purple. The number of clusters increased from below 20 before the outbreak of the Boko Haram conflict to 131 in 2021. In combination with a small average cluster size of between two and seven actors, this points to a pronounced fragmentation of the conflict network.[6] The orange line in Figure 6.6 indicates clusters that only include informal groups (and the targeted civilians). These clusters make up the vast majority of the clusters, demonstrating that the fragmentation of the conflict network is driven by informal armed groups.

With the number of network clusters increasing, the conflicts also became more interlinked. Instead of separate dyads like in the pre-civil war period, several informal groups are now connected within and across clusters. This could point to spillover effects between the conflicts. In 2010, for example, violence escalated between the Berom and Fulani (cluster in pink), and this conflict is directly linked to an inter-religious conflict between Muslims and Christians (cluster in orange) (cf. country network for 2010 in the appendix, Figure A.22). The network analysis thus proves expedient in capturing the interwovenness of ethnoreligious conflicts.

With regard to domination, the notion of conflict fragmentation is also corroborated. I propose that fragmentation is higher if no armed group is able to dominate the conflict violence. I assess domination through the degree distribution among informal groups. Figure 6.7 indicates (1) the average number of violent relationships for the informal groups (the average degree) in blue, (2) the standard deviation in the number of relationships in orange, and (3) the maximum degree, i.e., the maximum number of violent relationships an informal group has in a given year, in purple. The average degree is low and steadily fluctuates between one and two. This underlines how sparse the conflict network is.

The standard deviation and maximum degree increase clearly between 2009 and 2021, even though with fluctuation. The standard deviation is almost zero before the onset of the Boko Haram conflict and reaches 3.3 in 2021. The maximum degree steeply rises after 2013 and then varies between 13 and 23 until 2020. In 2021, the maximum degree of informal groups makes a major jump and reaches 29. The visualization of the country network in 2021 shows that the maximum degree of 29 can be attributed to a banditry group that attacked primarily civilians and informal groups associated with ethnic-minority groups (cf. Figure 6.2 (d)). The increase in these measures of domination could point to a consolidation of the network rather than its fragmentation. However, the numbers need to be seen in relation to the 300 to 450 edges in the conflict network after 2017. From this perspective, a degree standard deviation of 3.3 is still very low. Similarly, an armed group with almost 30 violent relationships is still not able to dominate the fighting.

[6] The average size of the clusters remains relatively stable and rather reduces across the observational period. This is unlikely an artifact of the community detection algorithm as this growth trend in the number of clusters has been picked up by all tested algorithms (cf. Table A.6).

Source: Own figure based on ACLED by Raleigh et al. (2010).

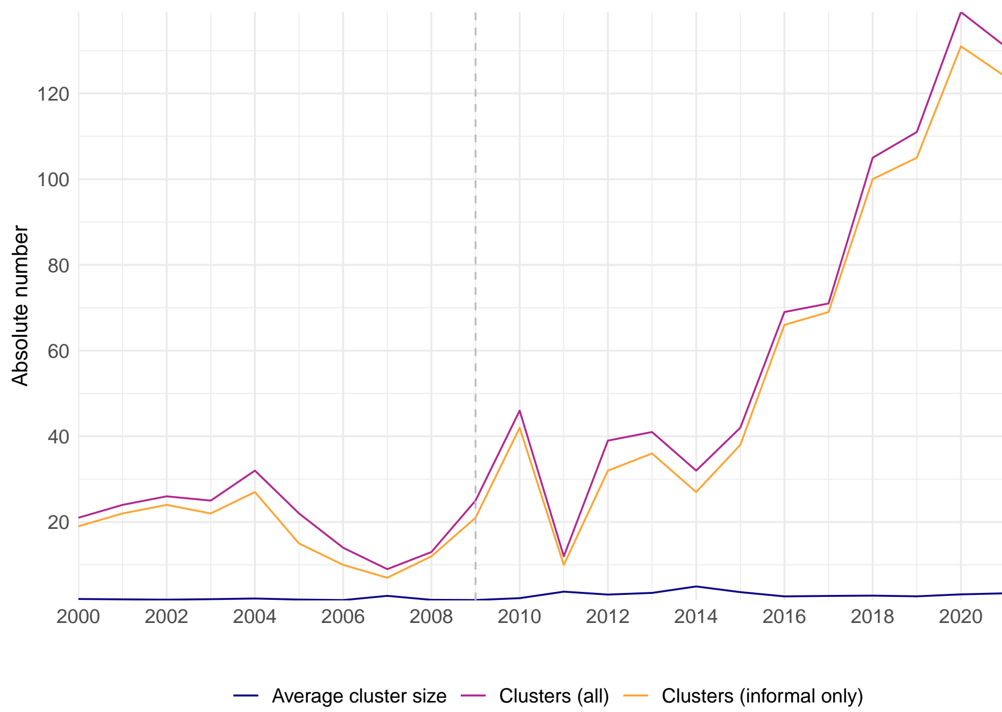


Figure 6.6: Cluster development over time

Source: Own figure based on ACLED by Raleigh et al. (2010).

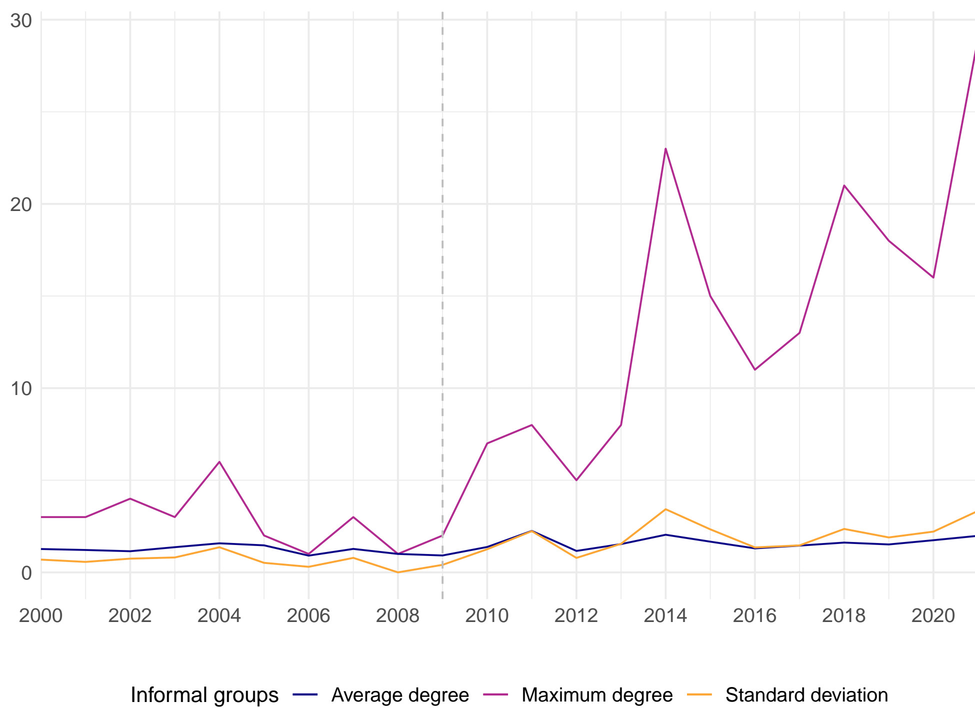


Figure 6.7: Degree measures for informal groups over time

To conclude, new conflicts between informal groups arose after the beginning of the civil war, first emerging in the Northcentral and Southsouth, then followed by most other regions except the Northeast, where the civil war was taking place. The new conflicts between informal groups were highly fragmented, and while some groups became more active over time, there was no group that seemed to be able to dominate the situation. These processes accelerated after 2018 when bandits entered into the network in the Northwest and subsequently spread to the Northcentral. That said, the banditry-related violence is probably underestimated in the quantitative network analysis considering that qualitative sources date the escalation of banditry conflicts to 2012/2013. I return to this point in the discussion chapter 9.1.1 when reflecting on the validity of the evidence.

I propose that the structural changes described in the network after the civil war onset speak to the notion of a power vacuum and resulting security dilemma. The increase in the number of groups, combined with the high number of clusters, points to the decentralized mobilization of new groups in an increasingly threatening environment. At the same time, no informal group seemed to be able to fill this vacuum and dominate the situation, even though the last year of the observational period might point to the beginning consolidation of the conflicts.

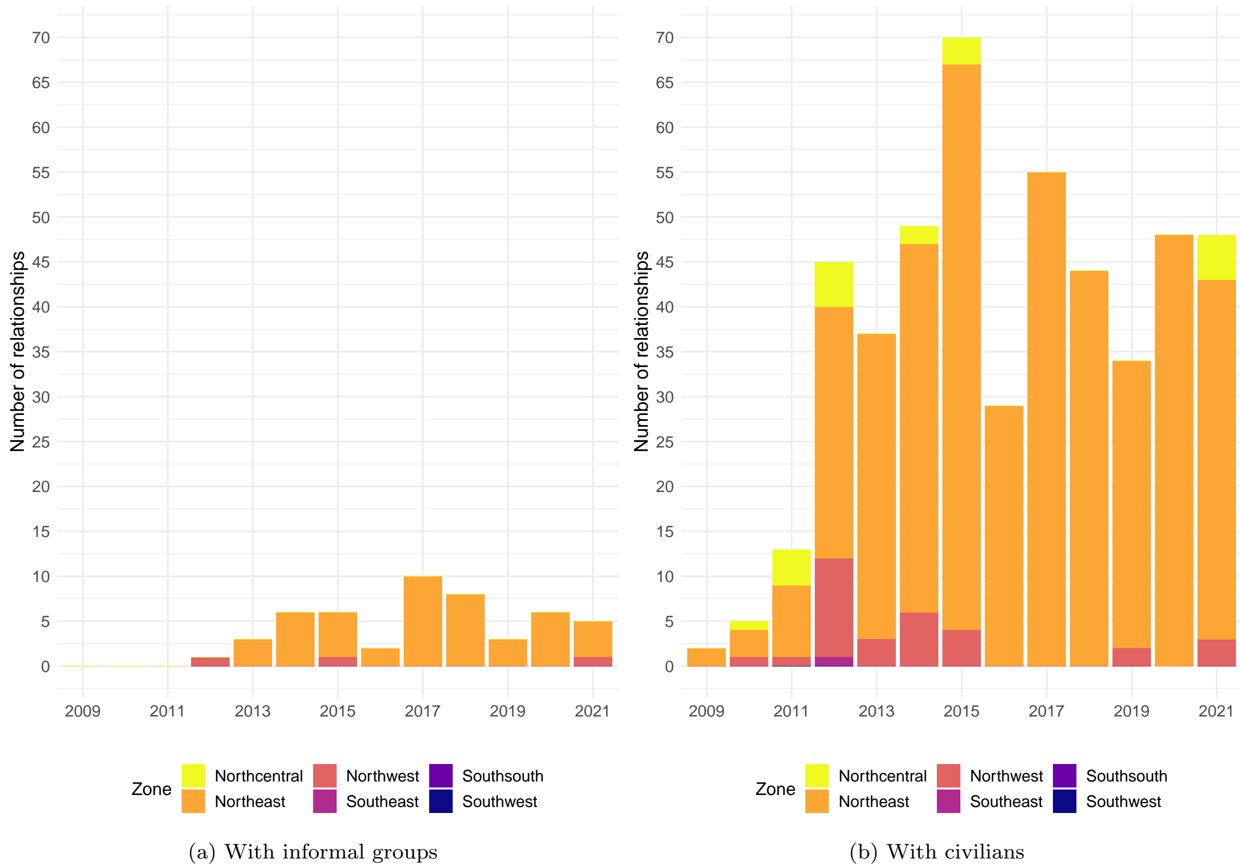
6.4 Boko Haram's renewed expansion to the Northwest

The last question of interest to the quantitative analysis is how formal armed groups involved in the civil war — in the Nigerian case, the Boko Haram factions — reacted to the changing conflict landscape. Specifically, I am interested in whether these formal groups leverage the escalating conflicts between informal armed groups to expand their influence. In the quantitative analysis, I only look at this question from the perspective of confrontation, i.e., whether the Boko Haram factions use violent means against informal groups or civilians in an attempt to establish their presence in those regions. The regional network visualizations indicate the violent relationships of Boko Haram groups with civilians in blue and the relationships with informal groups in green (cf. appendix A.6). The qualitative part will shed light on the cooperative relationships between Boko Haram and informal groups.

Figure 6.8 shows the number of relationships (edges) Boko Haram has with informal groups and civilians per region. The comparison of the regions underlines that the Northeast is Boko Haram's core area of activity. Even within its core territory, Boko Haram mostly attacked civilians and hardly clashed with informal groups. This is in line with the observation that only very few informal groups mobilized in the Northeast. Outside of the Northeast, Boko Haram also attacked civilians, but to a much lesser extent. There were only three years in which Boko Haram factions interacted violently with one informal group each, and these interactions all took place in the Northwest. It is noteworthy that Boko Haram neither clashed with informal groups nor

attacked civilians in the South, besides one exception in 2012.

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) With informal groups

(b) With civilians

Figure 6.8: Boko Haram's relationships to informal groups and civilians per geopolitical zone

Zooming in on the Northwest and Northcentral, two periods can be distinguished. Before 2016, JAS had established urban cells outside the Northeast that conducted terrorist attacks in urban areas. Accordingly, there are a number of violent relationships between civilians and JAS outside the Northeast during this period. In two years, their presence in these areas led to clashes with informal groups, such as a Christian militia in Kano and a pro-government militia in Zamfara. After the major government offensive in 2014 and 2015 against JAS in the Northeast and financial policies intended to curb terrorist activities, JAS was not able to maintain its operations outside the Northeast.[7] Accordingly, there were no violent relationships outside the Northeast for a few years.

Against this background, it is remarkable that the violent extremists were again able to operate in the Northwest and Northcentral from 2019 onward. Concretely, JAS attacked communities in Zamfara and Niger states, as well as the Kaduna-Abuja train. As I will elaborate in the next chapter, the attacks in Niger state were related to a JAS cell that established a presence in Shiroro, Niger state, in agreement with

[7]Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

one of the bandit leaders. Similarly, the Kaduna-Abuja train attack was likely conducted together with bandits. In addition to these attacks against civilians by JAS, Ansaru clashed with a bandit group in 2021 (cf. Figure 6.5 (d)). Foreshadowing the qualitative analysis, this finding fits Ansaru's goal to govern and win over communities in the Northwest, not least by protecting them against bandit attacks.[8] In contrast, ISWAP's involvement in the Northwest is less clear as I will discuss in the next chapter.

In sum, the strategy of the Boko Haram factions was very different during the second expansion attempt. The groups did not maintain urban cells to launch terrorist attacks in these urban centers but conducted military attacks in rural areas. The temporal correlation between the escalation of informal group conflicts and Boko Haram's expansion to the Northwest shortly after corroborates the idea that the two developments are related to each other. The qualitative analysis will scrutinize this observation by analyzing Boko Haram's behavior in depth.

Overall, the quantitative network analysis showed the evolution of the network from occasional, limited, and rather distinct conflicts before the civil war onset to a much larger, fragmented, and interlinked network 12 years later. After JAS entered the network as a very aggressive actor in 2009, the government's fighting effort was concentrated on this group albeit the conflict network began to grow and fragment in most regions beyond the Northeast. In addition, the Biafra conflict reemerged, and IPOB entered the network in 2016, becoming increasingly active in the subsequent years. Only after 2017 did the government begin to redistribute its fighting effort across more groups and regions. The temporality of these developments — the outbreak of the civil war, the time-lagged escalation and fragmentation of the network, and the behavioral shifts by the government and the violent extremists — speaks to the idea of interdependence. Nevertheless, the descriptive quantitative analysis does not allow to draw such conclusions based on mere correlation. Therefore, I now turn to the qualitative evidence to illuminate the processes driving this development. To this end, I zoom in on the developments in Nigeria's Northwest and Northeast.

[8] Interview 239, journalist, Abuja, November 2023, interviewed by the author.

Chapter 7

Conflict interdependence in northern Nigeria

The previous chapter employed quantitative SNA to establish the fundamental changes in the Nigerian conflict network after the civil war with Boko Haram broke out. While the government's fighting effort was concentrated on the violent extremist groups in the Northeast of the country, the number of armed groups grew from around a dozen to more than two hundred in other parts of the country. The majority of these groups are connected in small conflict clusters, creating a fragmented network structure. These findings raise a number of questions, including: What explains the uneven distribution of the government's fighting effort? How is the government's behavior linked to the escalation and fragmentation of informal group conflicts? Why is there no similar development within the civil war conflict zone?

To answer these questions, I generated and systematically coded a qualitative data corpus including novel primary data from more than 110 interviews, newspaper articles, and secondary sources from several Nigerian libraries. The qualitative analysis focuses on four different research sites in northern Nigeria: Maiduguri in the civil war conflict zone in Nigeria's Northeast, the towns of Kaduna and Sokoto — both affected by informal group conflicts — in Nigeria's Northwest, and the capital Abuja. Leveraging the qualitative data in an iterative procedure, I developed a novel theoretical argument to explain the structural changes in the conflict network with the behavioral incentives of the government and non-state armed groups. This approach is based on the assumption of the co-constitution of structure and agency in conflict networks.

The empirical analysis in this chapter traces the processes outlined in the theoretical argument. To do so, I invoke evidence for and against the observable implications to demonstrate the validity of the argument in the Nigerian case. When referring to an interview as part of the evidence, I only cite a random identifier

together with limited contextual information to ensure the anonymity of the study participants.[1] An overview of the observable implications was provided in Table 4.3 in the research design chapter. A short summary of the argument and a justification of the observable implications are provided at the beginning of each section. To avoid confirmation bias, I assess alternative explanations in an equally systematic manner in the subsequent chapter.

The chapter begins by demonstrating that the necessary conditions of my argument are given throughout northern Nigeria, i.e., within and outside the civil war conflict zone. It then starts the process tracing by outlining the resource allocation of the government and approximating the motivation behind it. The impact of the uneven resource allocation is traced for Nigeria's Northeast — the main theater of the Boko Haram civil war — and Nigeria's Northwest — the region most affected by informal group conflicts, including banditry. Finally, two feedback effects of these developments are described.

7.1 Establishing the necessary conditions for northern Nigeria

I identified resource competition and the limited access to conflict management mechanisms as necessary but not sufficient conditions for my theoretical argument. Only when the two conditions are met and groups have the motivation to use violence, can one expect violent conflicts between informal groups to emerge. Yet, whether violence is indeed used depends also on the potential costs of doing so. It is thus only in combination with the lack of third-party intervention that violence escalates. Without resource competition and lacking conflict management, the limited informal group conflicts in the civil war conflict zone would not be puzzling. If the groups had no reason to use violence, the absence of violence does not call for further explanation. I therefore aim to show empirically that the potential for conflict was given throughout northern Nigeria and that the spatiotemporal variation in its escalation and fragmentation thus solicits an explanation. I begin by discussing the salience of resource competition and then turn to the conflict management mechanisms.

7.1.1 Resource competition between livelihood and ethnoreligious communities

Competition over resources in northern Nigeria evolves between livelihood and ethnoreligious communities and concerns access to land, markets, fishery grounds, or government funds, among others. For the necessary condition to be met, the competing communities need to be present in the Northeast *and* Northwest (Observable Implication 1.1) and the competition over resources must result in disputes and/or conflicts (Observable Implication 1.2). The manifestation of violent conflict between these communities in the Northwest is widely acknowledged, has been established in the previous chapter, and will also be discussed in length

[1] A list with all interviews used in the analysis is provided in Table B.6 in the appendix.

when I describe the dynamics in this area in section 7.4 of this chapter. Therefore, the empirical analysis in this section focuses on the Northeast, i.e., the civil war conflict zone, to show that the Northeast also had a high potential for violent conflicts between informal groups due to the prevalence of rival communities and resource-related disputes.

Source: Higazi and Yousuf (2017, p. 8)

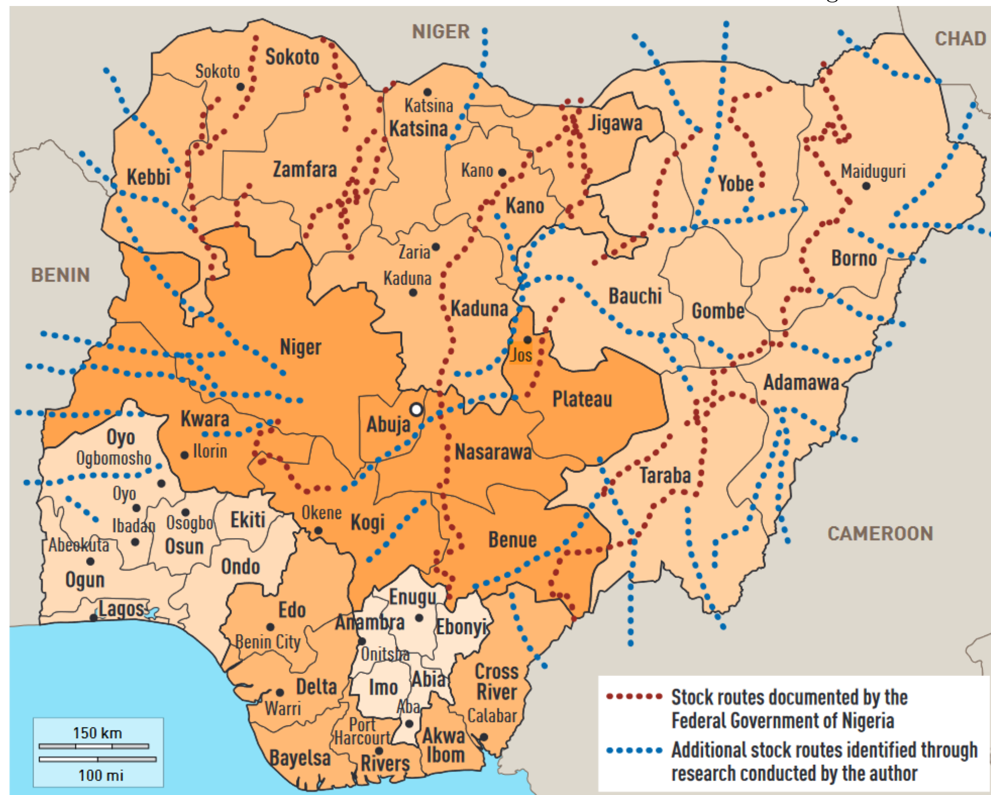


Figure 7.1: Map of cattle routes in Nigeria

I focus on potential livelihood and ethnoreligious conflicts since these are the most salient cleavages in Nigeria. Farmer and pastoralist communities both live in the Northeast of the country. Borno, the state most heavily affected by Boko Haram in the Northeast, has been described as a "highly-productive area for pastoralism" (Higazi and Yousuf 2017) and as having the highest livestock population in Nigeria (*Strategic conflict assessment* 2013, p. 156). According to the Food and Agriculture Organization of the UN, 17% of Borno's land mass is used for livestock pasture and 22% for crops. The migration routes of the pastoralists pass through the whole north, that is the Northwest, Northcentral, and Northeast, sometimes crossing international borders (cf. Figure 7.1).[2]

Relationships between farmers and herders are not necessarily tense but can be symbiotic.[3] The farmers leave the residues of their harvest on their land as fodder for the livestock of the pastoralists. The resulting

[2]Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author.

[3]Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

manure of the livestock serves as fertilizer for the next farming season (*Herders against farmers* 2017, p. 1).[4] Often, the same pastoralists stayed with the same farming communities during their annual migration, creating amicable relationships.[5] By contrast, the once symbiotic relationship unraveled in the last decades for a number of reasons, giving rise to disputes. The reasons were reviewed in the case background chapter 5.3. They include the use of chemical fertilizers (Boye 2021, p. 206); the encroachment of farmland and urban development into the migratory routes of the pastoralists (Eke 2020, p. 748; Boye 2021, p. 206); and the reduction of fertile land and pasture due to changing weather conditions, likely induced by anthropogenic climate change (Harnischfeger 2004, p. 441).[6]

The resulting tensions created a heightened risk for farmer-herder conflicts in the Northeast. For example, a conflict analysis by the Institute for Peace and Conflict Resolution, a think tank of the Nigerian government, explicitly lists farmer-herder conflicts as one source of economic conflict in Adamawa, Northeast Nigeria (*Strategic conflict assessment* 2013, p. 122). The report claims that conflicts arise because the herders do not understand the route and reserve system as they are often non-Nigerians (ibid., p. 124). This is in line with the complaints by interviewees from Adamawa that Fulani forced their cattle into their farms "eat[ing] up everything you planted and there is nothing you can do."[7] A previous version of the report from 2008 assesses the risk for farmer-herder conflict in Borno as "moderate to high" due to the distrust between the ethnic communities (*Strategic conflict assessment* 2008, p. 109). A study participant of Higazi and Yousuf (2017, p. 18) asserted that reduced access to water and grazing areas has been a longstanding problem for the pastoralists in the Northeast. Mongunu (2021, p. 52) suggests that the increasing desertification "make[s] Borno [the epicenter of the Boko Haram conflict] prone to farmer-pastoralist conflict." According to a survey conducted by the aforementioned author, farmer-herder conflicts in Borno had been on the rise before the Boko Haram conflict (ibid., p. 53). This impression was corroborated by a representative of herder communities based in Maiduguri, the capital of Borno state. The increase in farmland had heightened farmer-herder conflicts, meaning "that there was violence just before the [Boko Haram] war."[8]

Another potential source of tensions in the North is the competition between sedentary ethnoreligious groups, mostly Muslim Hausa-Fulani and Christian ethnic-minority groups. These conflicts are prevalent in the Middle Belt, which spans the Northwest, Northcentral, and Northeast geopolitical zones. These conflicts often intersect with, and thereby reinforce, tensions between farmers and herders. This has been reported from Adamawa and Taraba, northeastern states that are part of the Middle Belt.[9] One example is Mambilla

[4]Interview 232, ethnic/livelihood interest group, Abuja, August 2021, interviewed by the author.
[5]Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[6]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[7]Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; similarly, for the Lake Chad region: Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[8]Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[9]Interview 357, researcher, Abuja, September 2021, interviewed by the author.

in Taraba state, where a conflict between farmers and sedentary herders broke out over a land dispute: allegedly, the farmers had sold their land to the herders but later demanded it back based on their indigeneity to the area.[10]

Yet, ethnoreligious violence also occurred in the Northeast beyond the Middle Belt. The Lake Chad region — nowadays under the control of ISWAP — has been affected by tensions between Buduma communities on the one side and Hausa and Kanuri communities on the other side. The communities compete over the access to lucrative fishery grounds.[11] The Buduma consider themselves indigenous to the area, while Kanuri and Hausa migrated there to participate in the fishery business. The shrinking of Lake Chad during the last decades has further incited this competition (ibid.). In addition, religious clashes between Muslim and Christian communities have been reported for Maiduguri, Borno state, for example after the publication of the Danish Mohamed caricatures in 2005 (Tattersall and Cutler 2010). Yet, evidence also suggests that inter-religious relationships might have been comparatively peaceful in the Northeast before the Boko Haram conflict. Several interviewees reported about inter-religious marriages and the celebration of festivities together.[12]

In sum, the evidence supports the idea that the potential for livelihood conflicts, and to a lesser extent ethnoreligious conflicts, was high in the civil war conflict zone — even though these conflicts rarely escalated violently. In the next section, I demonstrate that the low conflict severity cannot be explained by efficient and effective conflict management specific to this region.

7.1.2 Limited conflict management by state and traditional institutions

Resource competition does not lead to violent conflict if institutions are available to resolve the resulting disputes. Thus, the question is whether the presence of these institutions in the Northeast can explain the low conflict severity in this area. If the necessary condition for my argument is met and access to conflict management mechanisms is limited, one should see that state and traditional conflict management institutions are either unavailable, ineffective in resolving disputes, or unable to enforce their decisions (Observable Implication 1.3). Again, this should be the case in the Northwest and the Northeast of the country alike. Indeed, the subsequent analysis will show that, at least to some degree, conflict management is dysfunctional throughout northern Nigeria and can hence not account for the observed spatial variation in violence.

Traditional, religious, and state institutions for conflict management co-exist in northern Nigeria. The current traditional institutions are rooted in the pre-colonial polities amalgamated into the modern Nigerian

[10] Interview 261, researcher, Abuja, September 2021, interviewed by the author.

[11] Fish from Lake Chad is not primarily caught for direct consumption but is sold as a delicacy throughout Nigeria and accordingly generates high profits, cf. Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 357, researcher, Abuja, September 2021, interviewed by the author.

[12] E.g., Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 319, researcher, Maiduguri (remote), September 2021, interviewed by the author.

state and are accordingly organized around ethnic identities. For example, the Kanuri in Northeast Nigeria follow the Shehu of Borno, while Fulani and Muslims in the Northwest follow the Sultan of Sokoto. With the creation of the Nigerian state through colonial rule, state institutions following the British example were established, including a civil and penal code and courts to dispense justice in line with these laws. After independence, several states in the north, including Zamfara in the Northwest and Borno in the Northeast, introduced variations of Sharia law as an alternative regulatory mechanism. This means citizens can choose whether they want to take up a case in a secular court or Sharia court, for example.[13] During the period of interest to this study, 2000–2021, traditional institutions held hardly any formal power. The federal, state, and local-level units were ruled by elected state officials. Only the district and village heads under the local-level government were appointed and can be considered part of the traditional institutions.[14] Despite their limited formal power, traditional institutions continued to wield informal power because of their legitimacy among the population and their ability to mobilize voters for the political elites (Ebiede 2017b, p. 1200).[15]

Ideally, the state, traditional, and religious institutions work together in managing tensions between and within communities. A Fulani traditional ruler from Kaduna, for example, described how the "kings" of the different ethnic communities and the district head came together in a committee at least once a month to discuss "progress or problem."[16] For minor disputes, traditional rulers and community elders of the respective communities were the first addressee.[17] They come together and try to negotiate an agreement, e.g., by suggesting a compensation of the farmer for the crop destroyed by the livestock of the herders.[18] A traditional ruler from Sokoto emphasized how these agreements are different from a court ruling because they are based on mutual understanding and amicability.[19] According to an employee of an international organization, this traditional way of conflict resolution was active relationship-building because the herders compensated the farmers by working with them in the fields, thereby sharing time and food.[20] If the traditional institutions were not able to solve the issue, the case was transferred to the state institutions, i.e., the police, the civil defense, and/or the court. The severity of the conflict and damage caused determines which institution is approached.[21] The collaboration between traditional and state institutions was reported by interviewees in the Northeast and Northwest alike.[22]

[13] Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author.

[14] The local governments have the authority to regulate traditional institutions, which means that their power varies across the 774 LGAs (Ebiede 2017b, p. 1200).

[15] Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[16] Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[17] E.g., Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[18] Interview 597, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; Interview 558, vigilante, Sokoto, October 2021, interviewed by the author.

[19] Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author; see also, Interview 319, researcher, Maiduguri (remote), September 2021, interviewed by the author.

[20] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.

[21] Interview 597, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author.

[22] E.g., Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author; Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 597, local-level

Even though many minor conflicts were effectively managed this way,[23] traditional and state institutions often failed to fulfill their functions in managing disputes. For the traditional institutions, this failure was attributed to their deprivation of formal powers since independence. Traditional rulers had been comparatively powerful under British indirect rule but lost power under the military regime and were downgraded from administrators to advisers. This also meant that the traditional rulers had to give up their courts and integrate their police forces into the national police. With the transition to a civil regime in 1999, they lost almost all their remaining competencies (Blench et al. 2006). The weakening of traditional institutions is problematic for farmer-herder conflicts, for example, because traditional institutions administered existing resource-sharing agreements between the sedentary and pastoralist communities. Among other things, these agreements regulated during which periods the pastoralists could use land for grazing and which water points needed to be always accessible for them.[24]

In the case of farmer-herder conflicts, the Fulani pastoralist traditional institutions suffered from a tension between lineage-based institutions and the idea of territoriality, which is at the core of state institutions rooted in colonialism. This tension led to a lack of accountability among the pastoralists. Traditionally, a lower-level Fulani ruler, the Ardo, was at the head of certain families and migrated together with them.[25] In case of conflict with sedentary communities, the Ardo could hence be called in to negotiate with the sedentary traditional rulers. Yet, due to the incentives of the Nigerian political system, the Fulani traditional rulers became sedentary to be eligible for political offices. This had the consequence that they were unavailable if conflicts occurred somewhere along the migratory routes.[26] This structural problem was exacerbated by the "balkanization" of Fulani communities along political boundaries, in contrast to the cohesive social order that existed before.[27] Their official representation, the Myetti Allah Cattle Breeders Association, was also highly fragmented (Boye 2021, p. 216).

In addition, Fulani communities increasingly settled in permanent or semi-permanent settlements with the consequence that individuals, often young and male, were sent for herding alone. This reduced social cohesion among the Fulani and the social control during the herding.[28] Weakened cohesion among the Fulani implied that Fulani living in one area could not contribute to the management of conflicts between sedentary communities and other Fulani coming in during transhumance. This was a problem because this ability

government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

[23]Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 319, researcher, Maiduguri (remote), September 2021, interviewed by the author.

[24]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[25]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author.

[26]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[27]ibid.

[28]ibid.

was expected of them as there was a narrative that Fulani herders are closely connected to each other and can hence be held accountable as a group.[29] Indeed, many non-pastoralists invoked this narrative in my interviews. For example, a traditional ruler claimed that the Fulani "have unity, if you touch one Fulani today, [...] they mobilize more."[30] Due to this narrative, some Fulani's lack of cooperation in resolving contentious issues was interpreted as unwillingness rather than inability.

Beyond the Fulani, the larger societal change was held responsible for the weakening of the traditional and religious institutions and of social control more generally. Wide-spread access to the internet and urbanization contributed to the deterioration of traditional values and the rise of material wealth as a central goal.[31] A local government official in Kaduna cited Evan, a gang leader in Kaduna state in the late 2000s, as an example. Evan amassed substantial wealth through illicit business. The spread of his "success" story via the media created a hype around the illicit economy as an attractive business opportunity.[32] In case of the religious institutions, a religious leader from Kaduna criticized that these institutions were captured by politics, creating an ambivalence of igniting and solving conflicts at the same time: "They are part of the people that put on the fire and they are also part of people who try to resolve."[33] This strongly limited their effectiveness. Overall, these developments lowered the legitimacy and resources of traditional institutions necessary for effective conflict management, and there is no reason to assume that they were different for the Northwest and the Northeast.

State institutions were unable to fill the void of effective conflict management either due to the "failure of the criminal justice system" (Hassan and Barnett 2022). According to a survey by the UN Development Programme (UNDP) and Small Arms Survey (SAS), 47% of the respondents in the Northeast and 43% in the Northwest, respectively, indicated to have no or almost no access to "justice/ resolution of disputes" by the government (Forquin et al. 2022, p. 69). The failure can be attributed to widespread corruption and partiality (Mongunu 2021). Some interviewees even reported outright extortion by state officials, in particular by the police. For example, a Fulani traditional ruler explained that members of his community were arrested by the police based on false grounds and only be released against a high bail.[34]

Corruption impacted conflict management on a case-by-case basis as well as structurally because the local-level governments did not receive the share of financial resources they were entitled to from the federal government. This is because the allocated money was not directly sent to the LGAs but administered by the state governments, which often withheld large parts of it (Margin and de Montclos 2018, p. 88).[35] This

[29]ibid.
[30]Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[31]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[32]Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[33]Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author.
[34]Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[35]Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

limited the local governments' capacity to provide public services, including effective conflict management. At the case level, corruption by state officials took various forms, including the acceptance of payment for a favorable court decision or police report or the withholding of a share of the compensation to be paid by the conflict parties.[36] For example, one IDP from the Northeast reported how, before the Boko Haram conflict, they did not dare to file a complaint against someone because if that person was "influential" the police would not take any action and the accused person might well turn against you.[37]

Interviewees across ethnic and/or religious groups furthermore reported that the state institutions were biased in favor of other groups. However, there seems to be a particular anti-Fulani sentiment, not least exploiting their lack of formal education (Rufa'i 2021, p. 12).[38] Hausa civil society activists in Sokoto admitted that "the Hausa people ... had the court, the policemen are Hausa, all those institutions are headed by the Hausa and unfortunately the Hausa ... only see Fulani people as ... second class citizens," leading to an "open injustice" against the Fulani.[39] This said, even state officials with good intentions failed to resolve conflicts as they were not familiar with the local relationships and practices or because their authority was not accepted by the communities.[40]

The evidence shows that the lack of non-violent conflict mechanisms was a problem throughout the north and hence cannot explain the strong spatial variation in violence. Dissatisfaction with the functioning of conflict management has been expressed for the Northwest and the Northeast alike, and the reasons for ineffective conflict management applied to northern Nigeria in general. For traditional institutions, the lack of recognition in the constitution and the deterioration of traditional values were not specific to certain states or regions. For the state institutions, the problem of corruption affected the dispense of justice throughout the country (Smith 2007, p. 174).[41] This also manifested itself in a negative, geographically constant perception of the police (ibid., p. 172).

A potential exception to this broader trend was the northeastern state of Yobe, which is part of the civil war conflict zone. According to Boye (2021), the government invested successfully in the management of conflicts between pastoralists and sedentary farmers through the demarcation of routes, among other things. According to the author, this creates a "unique situation" in Yobe with a much lower level of violence between farmers and herders than in other states. Similarly, a national-level government official argued there was a correlation between stronger traditional institutions and less violent conflict within some areas of the

[36]E.g., Interview 597, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[37]Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[38]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[39]Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[40]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author.

[41]Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

Northeast.[42] A researcher specializing in the conflicts in the Northeast pointed out that the local police were effective in containing farmer-herder conflicts in Adamawa state too, even though to a lesser extent.[43]

This evidence appears to challenge my theoretical argument because it suggests that the variation in the severity of informal group conflict is related to variation in conflict management institutions rather than conflict interdependence. However, this evidence is not sufficient to explain the stark variation in violence between the Northeast and the Northwest. First, Boye (2021) points out that the government initiatives in Yobe were not able to prevent the occurrence of farmer-herder violence completely.[44] Second, these policies only concerned the state of Yobe and therefore cannot account for the limited conflicts in other states in the Northeast, like Borno or Adamawa. In the same way, the aforementioned conflict researcher confirmed the variation in conflict management within the Northeast.[45] After providing evidence on the necessary conditions, I now turn to the main theoretical argument and the government's prioritization of the Boko Haram conflict.

7.2 The allocation of resources according to the threat

According to my argument, the Nigerian government faces a resource allocation problem when confronted with several armed groups that are active across its territory. I expect that the state prioritizes the civil war by allocating a major part of its coercive resources to the civil war conflict zone. The allocation decision should be driven by the perceived threat the civil war poses to the government rather than by ethnic favoritism (see chapter 8.1.2, for the assessment of this alternative explanation). The evidence on the government's decision-making and behavior used in this section strongly builds on three insider interviews with a government official at the defense ministry, a current high-ranking member of the armed forces, and a retired commander of the armed forces.

The resource allocation in the Nigerian case needs to be seen in the context of the centralization of the security agencies at the federal level and the relatively limited coercive resources at the disposal of the federal government. The security agencies of the state, including the armed forces and the police, are under the command of the federal government and it is hence the federal government that can decide over their deployment across the national territory. This implies that the state governments were constrained in their ability to respond to violent crises independently from the federal government. There are two main reasons why the coercive resources available for allocation by the Nigerian government were relatively limited. First, while the defense ministry has received the highest annual budget for years, the invested money did not

[42] ibid.

[43] Interview 357, researcher, Abuja, September 2021, interviewed by the author.

[44] See also, Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[45] Interview 357, researcher, Abuja, September 2021, interviewed by the author.

always arrive where it should due to embezzlement (*Nigeria* 2024).[46] Second, the police forces have been purposefully weakened under military rule before 1999 and have not recovered from this deprivation since (Hazen and Horner 2007, p. 72). This means that the military had to take over a lot of domestic functions that are handled by the police in other contexts (Mbachu and Anyadike 2021).[47]

7.2.1 The prioritization of the Boko Haram conflict

The quantitative analysis showed how the fighting effort of the government was concentrated on the Boko Haram conflict. Here, I aim to show that this uneven distribution of the fighting effort correlated with the allocation of coercive resources. I should find evidence for two observable implications if the government prioritized the Boko Haram conflict in its allocation of limited resources. First, the prioritization of the Boko Haram conflict in the Northeast should be visible across time, i.e., when the civil war broke out but also after conflicts between informal groups increased elsewhere (Observable Implication 2.1). Second, the prioritization of the Boko Haram conflict should be preceded by the withdrawal of coercive resources from other areas (Observable Implication 2.2.).

The government responded to the outbreak of the Boko Haram insurgency in the Northeast with a three-fold approach: deploying military operations, establishing (multinational) joint task forces, and initiating socio-economic development programs. Since the military operations were multi-agency endeavors, not only the armed forces including the air force, army, and navy were deployed to the region, but also the police, customs officers, intelligence officers, and humanitarian agencies.[48] Despite this, the military did the "heavy lifting."[49] After the Boko Haram conflict escalated violently in 2009, then-president Umaru Musa Yar'Adua ordered that "security be beefed up in all neighboring states and security personnel placed on full alert" (quoted from Onuoha 2010, p. 59). The former military commander I interviewed emphasized how this prioritization of the Northeast not only concerned the mere number of personnel deployed but also the high quality of their equipment and training.[50] In the Northwest, in turn, the prioritization of the Northeast had the consequence that the military commanders and soldiers deployed were not well-trained, not familiar with the area, and did not even receive a proper briefing.[51]

The allocation of resources to the Northeast implied resources from other areas had to be relocated.[52] For

[46] Interview 357, researcher, Abuja, September 2021, interviewed by the author; Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

[47] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.

[48] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; Interview 243, researcher, Abuja, November 2023, interviewed by the author.

[49] Interview 243, researcher, Abuja, November 2023, interviewed by the author.

[50] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

[51] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[52] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

example, Comolli (2017, p. 127) and Krause (2018, p. 177) report that security agencies were withdrawn from Sokoto state and Plateau state, respectively, to be deployed to the Northeast after the Boko Haram conflict broke out. Importantly, Krause (ibid., p. 177) argues that, before the redeployment, the military forces had been quite effective in containing communal violence in Plateau state. In addition, the government under President Goodluck Jonathan withdrew forces from the peacekeeping missions in Mali and Darfur to use them in the fight against Boko Haram (McGregor 2013). As a result, the Northeast disposed over far more coercive resources than any other region. According to *WhoWasInCommand* (2023), security agencies (i.e., military and police) were stationed in five and four locations in the northwestern states of Sokoto and Zamfara respectively, while the northeastern state Borno alone had 75 locations in 2021. This skewed distribution has been confirmed by a high-ranking member of the Nigerian military who estimated that less than 5% of all Nigerian troops were located in the Northwest, while around 30% were in the Northeast.[53]

The interviewee from the defense ministry confirmed that the limited resources were a challenge for the government. Suitability and *availability* were the key criteria to decide whether an operation received equipment and/or reinforcement.[54] In line with this claim, the senior member of the armed forces vividly described how the field commanders in the Northwest requested equipment and additional personnel from the federal government but did not receive everything they asked for because "there [were] so many crises everywhere" and "a lot of manpower" was stationed in the Northeast. As a result, the government started redeploying troops from the South to the Northwest.[55] He further pointed out that it posed "a big problem" to the government that there is such a high demand for the additional deployment of security agencies among the population, which cannot be catered for.[56]

Importantly, this skewed distribution has been maintained even after violence between informal groups increased rapidly in the Northwest. The severe need for coercive resources in the Northwest was explicitly expressed by various state officials and representatives from the Northwest, who actively called for security reinforcement but did not receive any (e.g., Akhaine and Alabi 2022; Dahiru 2021).[57] Yet, the continuing prioritization of the civil war had the consequence that, in the Northwest, the security agencies were outnumbered and outgunned by the informal groups, in particular the bandits. This was reported for various northwestern states, in interviews across participant groups and secondary sources, and concerned the military and police alike (Barnett et al. 2022, p. 50). According to several interviewees, less than ten police personnel were in charge of some LGAs, in some cases even without weapons out of fear that these could be raided by the armed groups.[58]

[53] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author: in absolute numbers, 30,000 troops were stationed in the Northeast.

[54] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.

[55] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[56] ibid.

[57] Interview 528, local-level government official, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[58] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 528, local-level

In addition, the military was hardly present in the remote rural areas as the few troops available retreated to the safer urban areas and even explicitly rejected to intervene — as I will discuss in more detail in section 7.4.1 below.[59] Interviewees further complained that the scarce personnel is disproportionally allocated to protect the political elites.[60] The frustration of one of the interviewees became palpable when he cried out how the police accompanied the children of the political elites to school, carrying their schoolbags.[61] In short, the evidence clearly shows that the resource allocation in the north was skewed in favor of the civil war conflict zone. According to my argument, the skewed distribution was driven by the threat perception of the government.

7.2.2 Shifts in the threat perception of the Nigerian federal government

I argue that governments prioritize civil wars due to the perceived threat they pose to the survival of the government, whereas the threat includes the potential impact and the probability of the impact materializing. If this is correct, one should observe that the government's response shifts corresponding to the perceived threat (Observable Implication 2.3). To assess this observable implication, I trace the reaction of the government to armed conflicts active in the observational period, in particular the Boko Haram insurgency, the re-emergence of the Biafra secessionists, and the violence by the informal groups in the Northwest.

Interviewees from academia and the Nigerian government explained that, during the last two decades, governments reacted slowly and only once a conflict became a serious crisis and thus a threat to the government.[62] Once triggered, the response was repressive and violent rather than accommodating.[63] If several crises made a selective response necessary, the "urgency and need,"[64] or the "magnitude of the threat"[65] respectively, were used as criteria. According to the official at the defense ministry, the threat was assessed based on the intensity and regularity of attacks against the police and military.[66] The latter is critical as it suggests that civilian killings were perceived as less threatening and thus less relevant. This was also made explicit by the retired army commander: "killing here, killing there, we don't [...] take it from the start."[67] A researcher specializing in the government's response to contentious politics pointed to prestige

government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[59] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

[60] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[61] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[62] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author; Interview 243, researcher, Abuja, November 2023, interviewed by the author.

[63] Interview 243, researcher, Abuja, November 2023, interviewed by the author.

[64] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[65] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.

[66] ibid.

[67] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

and availability of funding as additional criteria that shaped the strategy of the government, specifically in the context of the global war on terror after 9/11.[68]

The pattern of a delayed and brutal government reaction is visible in the case of the Boko Haram conflict. The government tolerated the activities of the religious sect around Mohammed Yusuf for more than a decade, even though the domestic intelligence service Department of State Services (DSS) and the government of the US warned the Nigerian government about the dangerous beliefs of the group (Ebimboere 2020, p. 135).[69] According to the former army commander, the government underestimated the threat the group posed at that point: "We all took it for granted [...] we thought [...] we're so loving each other, we didn't like to die, we love our life so much, we like enjoyment [...] we love money so we will not like to pick up arms and kill ourselves."[70]

However, as soon as Yusuf started to threaten the government seriously, it switched to a repressive mode, culminating in the extra-judicial killing of Yusuf.[71] The group became threatening because Yusuf started to criticize the political elites publicly, endangering their electoral success due to Yusuf's legitimacy and large entourage, and because the group members increasingly clashed with the police (ibid., p. 135).[72] This threat to the electoral survival of the political elites was combined with a considerable threat to the integrity of the Nigerian state due to the maximalist goals of the group, aiming at the establishment of an independent Islamic state (Mongunu and Umara 2021). After the professionalization of the group into an insurgent organization backed by a transnational violent Islamist network (Weeraratne 2017), which demonstrated its ability to control substantial parts of the territory (Anders 2020) and conduct terrorist attacks throughout the country (Onuoha 2014), the realization of the goals became an actual possibility. The strong kinetic response by the government was outlined above. This pattern is similar to the Niger Delta. The government ignored the groups as long as they acted as a non-violent social movement but reacted harshly when they started to destroy pipelines and kidnap oil workers, thereby threatening the income of the state.[73]

The importance of the threat perception is underlined by comparing the reaction to the Boko Haram conflict with the government intervention in the Biafra conflict. The government reacted much more quickly and firmly to the activities of IPOB in the Southeast, a group lobbying for the independence of Biafra, than to Boko Haram before 2009. The secession of Biafra would not only have a tremendous economic impact due to the location of the oil reserves in the region — the main income of the Nigerian mono-economy — but also seemed a realistic scenario, considering the history of the secessionist civil war in the 1970s. The official at the defense ministry made this link explicit: "any agitation [in the Southeast] is suspected to be about

[68] Interview 243, researcher, Abuja, November 2023, interviewed by the author.
[69] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.
[70] ibid.
[71] Interview 243, researcher, Abuja, November 2023, interviewed by the author.
[72] ibid.
[73] ibid.

breaking up the country, this is why there is a swift response to any threat."[74] The threat perception among the government might be particularly high due to the overlap of the current government elites and military officers who fought in the Biafra civil war, including the former president Buhari.[75]

In contrast, the government's response to the increasing violence by informal groups in the Northwest was delayed and irresolute for many years and only changed to a more decisive, still comparatively low-scale intervention in 2017. This change in strategy corresponded to the increasingly aggressive behavior of the bandit groups who began to target government forces and critical infrastructure, that is, the Abuja-Kaduna train, which is often used by government officials (Dahiru 2022). As a military officer previously stationed in the Northwest put it: "The Northwest hasn't (...) gotten that much surge in troops deployment, we are just beginning to build up because every day we open a new front, a new place opens and we have to confront it."[76] Before that, however, the activities of the informal armed groups did not seem to pose a serious threat to the federal government, not least because the groups did not explicitly challenge the government's authority and refrained from attacking the urban centers. Interestingly, non-state actors anticipated that the state would operate based on the threat perception. When a bandit leader claimed that he was now affiliated with the so-called IS, civil society actors who wanted to de-escalate the crisis were appalled because they feared a crack-down by the federal government in response.[77]

The violence in the Northwest was perceived as a phenomenon in the rural periphery, mostly affecting the Fulani and other rural communities that had little influence on the elite-dominated politics (Campbell and Page 2018). In particular, when cattle rustling and banditry were still an intra-Fulani phenomenon, "the entire society [...] looked the other way, [...] 'it's pastoral children stealing a pastoral cow, so it's their own affair."[78] The official at the defense ministry highlighted how this perception was also visible in the name of one of the earlier military operations in the Northwest in 2016. The operation was called 'Dark Clouds over the Bush'[79] and, for the interviewee, this name showed how the federal government thought about these conflicts as something mysterious, almost eerie, happening in the far distance while "it is sunny where you are."[80] It also speaks to the idea that the government underestimated the significance of the violence in the Northwest and that the federal government expected the state governments to take care of it because "they thought it was all communal things."[81] In short, the government was "in denial of the scale of the conflict"

[74] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; see also, Interview 243, researcher, Abuja, November 2023, interviewed by the author.

[75] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.

[76] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[77] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

[78] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; see also, Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author.

[79] Original name in Hausa: Hadrin Daji; Hadrin are dark clouds that are about to rain; translation by the interviewee.

[80] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.

[81] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; see also, Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

and slow and reactive in its response (Kura 2021, p. 284).

Critically, the slow response was also a result of the Boko Haram conflict. The government was so distracted by the conflict in the Northeast taking "the limelight" that it allowed the crisis in the Northwest to develop unchecked.[82] I have also described above how the military on the ground in the Northwest requested additional troops and equipment but did not receive them because of the Boko Haram conflict.

To conclude, the evidence clearly shows that the allocation of coercive resources in Nigeria was skewed in favor of the civil war conflict zone. This means that resources were withdrawn and thus unavailable in other areas. I provide strong evidence that the government underestimated the potential impact of the violence in the Northwest at the beginning and hence discounted it in its resource allocation. I now show how the resource allocation in favor of the civil war had converse effects in the Northeast and the Northwest of the country.

7.3 Nigeria's Northeast: the regulation and disruption of everyday life

The quantitative analysis of the conflict network in chapter 6 showed that only a few conflicts between informal groups occurred in the Northeast before and after the outbreak of the Boko Haram conflict. This is the case, although the two necessary conditions — resource competition and limited access to conflict management mechanisms — were given. Primary and secondary sources propose that this is because the Boko Haram conflict has "overshadowed" any other conflict in the civil war conflict zone (*Strategic conflict assessment* 2013, p. 118).[83] The purpose of this section is to empirically unpack this notion of overshadowed conflicts in the Nigerian case. Theoretically, I argue that conflict between informal groups in the civil war conflict zone is limited when the civil war parties regulate community life in an attempt to create order or if displacement or dispossession — in the sense of almost complete property loss — disrupt community life. In addition, community life can be disrupted for communities in areas with segmented territorial control as they need to adjust their behavior to navigate this situation of insecurity.

In the Nigerian case, the impact of the civil war on the communities strongly varied, not least due to differences in the strategies of the civil war parties as well as variation in their territorial control. The government's counterinsurgency strategy was highly violent, displacing and dispossessing many communities in contested areas. However, in areas under stable government control, the communities were relatively well protected, and community life was under the regulation of the government and the allied CJTF. Territorial

[82] Interview 243, researcher, Abuja, November 2023, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[83] E.g., Interview 357, researcher, Abuja, September 2021, interviewed by the author.

control in these areas could be integrated or segmented, and in the case of the latter restricted to cities or garrison towns (Abdullahi 2021a). Among the Boko Haram factions, ISWAP was governance-oriented and penetrated the everyday life of the communities under its control. The group controlled substantial parts of Nigeria's Northeast, in particular around Lake Chad. In contrast, JAS under the leadership of Shekau was renowned for its brutality and raiding of the rural communities.[84]

In the following, I provide detailed evidence of how the resulting variation in the regulation and disruption of community life contributed to an overall limited level of conflict between informal groups in the Northeast. The two interviews with three former members of ISWAP and the interviews with IDPs from different areas in the Northeast conducted in Abuja and Maiduguri were critical to tracing the processes within the civil war conflict zone.

7.3.1 Civil war parties as regulators: Boko Haram, the CJTF, and the state

When civil war parties want to create order to strengthen their territorial control, they regulate the behavior of the communities within their territory and fend off external intruders. Regulation entails the enforcement of rules and the prosecution of their violation as well as the adjudication of disputes over rule violations between their subjects. Empirically, I expect that the ruling party protects individuals under its rule against attacks by adversarial armed groups and/or opportunistic violence (Observable Implication 3.1). Considering the internal and external dimensions of creating order, this should equally apply to violence by outsiders and insiders. Furthermore, the ruling actor should establish institutions or practices to manage conflict between individuals and communities (Observable Implication 3.2). I assess the two observable implications for the respective civil war parties, i.e., Boko Haram (JAS/ ISWAP), the Nigerian state, and the CJTF.

The regulation by the violent extremist groups applies to the stronghold areas of ISWAP around Lake Chad in Yobe state and communities under JAS) rule at the border to Cameroon in Borno state (Samuel 2020a).[85]. As expected, ISWAP provided the communities under its rule with a much more sophisticated form of order than JAS, but even the latter established some governance including the prosecution of crime (Abdulazeez Malefakis 2022, p. 72). The former member of the armed forces, who had fought in the Northeast, reported that it was part of JAS' strategy to provide security for communities under their control — and that it was highly effective: "There was no crime, no theft, there were no robbery, there were no attacks, they were secured."[86]

Due to its state-building goals and the connection to the so-called IS which spurred interest by academics

[84]Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[85]Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.
[86]ibid.

and journalists, more source material is available on the governance by ISWAP than on JAS. We hence know that ISWAP had a sophisticated institutional governance system rooted in their Islamist ideology.[87] Externally, ISWAP's aspiration to establish a monopoly on violence entailed that it did not tolerate other armed groups like JAS and the bandits operating in its territory. In this vein, a representative of the pastoralist communities argued that banditry did not spread to Borno in the Northeast because ISWAP "cannot allow them" to operate or find a base.[88] When pastoralists entered territory under the control of ISWAP, they paid taxes in exchange for safe passage through the territory. A former ISWAP member described this as follows: "We assure them security together with their animals, and they will pay taxes for a period of time [...] They agreed to our terms and pay their taxes as agreed, and we also offered maximum security and protection."[89] In contrast, JAS rustled the cattle of the herders which meant that some herders redirected their routes to stay and/or pass through the areas under ISWAP control.[90]

Internally, ISWAP let community life proceed in the sense that farming and fishing were allowed, for example, as long as the communities paid their taxes and did not collaborate with the government. This is consistent with the observation that ISWAP was generating income from taxing trade and hence had an incentive not to disrupt it too much (Margin and de Montclos 2018). The prohibition to collaborate with the government was strictly enforced, and anyone suspected of sharing information was killed (Pieri and Zenn 2018, p. 659).[91] ISWAP's governance system included an Islamic Hisbah police and a court system. Criminal offenses were prosecuted with physical and capital punishments. The prosecuted crimes included theft, murder, adultery and homosexuality.[92] The Hisbah also intervened in disputes between individuals, for example "between husband and wife."[93]

Their institutions also resolved disputes between individuals and communities, for example about land and resources, through an approach called Sulh. Sulh is a mediation style rooted in Islamic law and translates into "amicable settlement" (Othman 2007). ISWAP practiced Sulh in particular in communities in the border areas of Nigeria and Niger and Chad respectively, where land conflicts were particularly common.[94] I also heard reports that ISWAP delineated land plots within the communities in the Lake Chad area. While it remains unclear why exactly they were doing this, perhaps to implement their tax system, it seems plausible that such an intervention by a powerful third party can prevent and/or reduce land conflict.

The state and the pro-government CJTF also increased the provision of security and the prosecution

[87] Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author; Interview 261, researcher, Abuja, September 2021, interviewed by the author.

[88] Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author.

[89] Interview 443, violent extremist (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[90] Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author; Interview 443, violent extremist (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[91] Interview 261, researcher, Abuja, September 2021, interviewed by the author.

[92] Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[93] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[94] Interview 239, journalist, Abuja, November 2023, interviewed by the author.

of crime in at least some of the civil war areas. The state nominally should provide security to its citizens anywhere in its territory, but state capacity has historically been low throughout the north (Lee and Zhang 2017), and state institutions for conflict management were ineffective.[95] After the civil war broke out, large parts of the territory were lost to Boko Haram, but in the remaining parts — mostly Borno state's capital, Maiduguri and its surroundings, as well as the garrison towns — the state stepped up its presence. This was a result of the resource allocation discussed above. The increased presence of the security agencies was intended to defend the territory against Boko Haram but had the side effect of increasing the protection of the communities against opportunistic violence by any other actor. It was striking how my contacts during the field stay referred to Maiduguri as one of the safest places in Nigeria in terms of criminal offenses because there was military everywhere.

Yet, the communities were also scrutinized and harassed as part of the counterinsurgency efforts of the state.[96] This had a deterrence effect on violence as people wanted to avoid any contact with the state. An interviewed vigilante described how crime in their community went down because of the harsh prosecution of any suspect through the security agencies. When called in to prosecute a crime, the security agencies started scrutinizing the whole community and arresting members for their alleged collaboration with Boko Haram. This brutal prosecution had the side effect that criminal offenses were deterred: "Everybody is scared to engage himself in any form of violence to avoid getting arrested, so [...] you can even leave your properties in an open space, and nobody will dare touch it talk less of stealing it."[97]

The CJTF was founded to fight against Boko Haram and signal allegiance to the government but extended its duties to the prosecution of crime and the resolution of disputes within and between communities.[98] Their activities ranged from settling family matters, resolving land disputes, and prosecuting petty crime to passing their own bills and holding extra-legal trials (Felbab-Brown 2018, p. 12).[99] As one IDP from Gowza described: "They [the vigilantes] fight Boko Haram and then deal with any other crime at their communities, they also solve disputes between members of the community and between families. [...] Be it within their community or with other communities, they intervene."[100] During a focus group discussion, a vigilante described in detail how the CJTF resolved disputes between their and another community by liaising with the CJTF unit of the other community and the respective community leader and establishing the facts on both sides before taking

[95] I will return to the issue of pre-civil war state capacity in the alternative explanations chapter 3.3.

[96] Interview 478, IDP Northeast (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[97] Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[98] CJTF was not the only group that tried to resist Boko Haram but many other community-level initiatives were not successful, e.g., the Kesh-Kesh militia of the Shuwa Arabs (Interview 357, researcher, Abuja, September 2021, interviewed by the author; Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi).

[99] Interview 357, researcher, Abuja, September 2021, interviewed by the author; Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[100] Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; see also, Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

any further action.[101] Interestingly, a group of IDPs reported that the CJTF even extended its geographic reach beyond their communities of origin because "they were given the right to go to any community to fight against violence."[102]

In addition, the CJTF enabled the state to expand its reach to areas where it was absent and to penetrate the communities more deeply.[103] A key function of the CJTF was to provide the security agencies of the state with intelligence. As one vigilante claimed: "We are their eyes."[104] Typically, the CJTF used its embeddedness into the communities to identify and apprehend criminal suspects and hand them over to the police or to alert the security agencies to intervene when an incident occured.[105] Here, it is critical to understand the proportions of the CJTF: the group is estimated to have more than 10,000 members across LGAs all over Borno. Using the words of one interviewee: "Due to the fact that the vigilantes were everywhere across every community, that act of violence was also minimized."[106] Indeed, it seems that the CJTF was quite effective in reducing the influence of Boko Haram in the communities and deterring crime including sexual violence: "The armed robbers and the Boko Haram are scared of them [...] on gender-based violence like rape, it used to happen at the community level, but now honestly the rate of crime is minimized."[107]

In sum, I find ample support for the notion that the civil war parties, pro-government and adversarial groups alike, regulated the behavior of communities under their rule. It seems plausible that the prosecution of opportunistic violence by high-capability groups changed the cost-benefit calculations for communities to mobilize and use violence against each other. Indeed, the direct negative impact of violence by informal groups has been made explicit in several cases. In addition, the low severity of conflicts in the Northeast has been shown at the macro level in the quantitative analysis. The comparison of the Northeast to the Northwest further increases my confidence in my argument. As I will show in the subsequent section, the lack of prosecution of opportunistic violence created a vicious cycle in which criminal groups could expand their activities, reinvest their growing income into endowments, including weapons, and thereby grow stronger. Before I turn to the Northwest, I now discuss evidence of the disruption of community life in the Northeast.

7.3.2 The disruption of everyday life in contested and segmented territories

I argue that the limited violence in the Northeast was not only related to the attempts of the civil war parties to establish order but also resulted from the disruption of everyday life. Community life is disrupted after the outbreak of the civil war when communities in contested areas are displaced or lose most of their property

[101] Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[102] Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[103] Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[104] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.
[105] E.g., Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[106] Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[107] ibid.

(Observable Implication 3.3). In addition, many communities in areas with segmented control are no longer able to pursue their livelihood activities (Observable Implication 3.4). I first discuss the extent and impact of displacement and dispossession before I turn to the disruption of livelihood activities. I also provide evidence of how disruption is linked to low conflict severity.

For disruption due to displacement and dispossession, it is critical to grasp the magnitude of the Boko Haram conflict and its consequences. At the end of the observational period of this study, 2021, the highly violent phase of the conflict endured more than ten years and affected the lives of millions of people, causing over 40,000 fatalities and a major humanitarian crisis (Campbell 2021). According to the International Organization for Migration (IOM), around 2 million people have been internally displaced in the Northeast (*Nigeria* 2023a) while some hundred thousand more have fled to the neighboring countries (Abdulazeez Malefakis 2022). The displacement was so extensive that a government report already concluded in 2013 that Borno has been "significantly depopulated" since the outbreak of the Boko Haram conflict (*Strategic conflict assessment* 2013, p. 118). Similarly, one of the interviewed former ISWAP members described: "You would not find anybody, [...] all the way to the North [in Borno], there is nobody."[108] Even after the government managed to push back Boko Haram, many communities refused to return to their villages out of fear, implying that the "population density in the area is still low."[109] To my knowledge, there is no systematic data on how many people lost all their property, but many interviewees described how their houses were destroyed, including by air bombardment by the government, and how their belongings were raided by the conflict parties (Higazi and Yousuf 2017).[110]

Displacement and dispossession affected the sedentary communities and the pastoralists alike, yet the pastoralists often do not appear in humanitarian statistics because they rarely lived in IDP camps due to their nomadic lifestyle.[111] This said, Higazi and Yousuf (ibid., p. 18) report that herders live in the IDP camps in the Northeast too. Even when the exact number of conflict-affected herders is difficult to determine, sources agree that they have been heavily impacted as I will describe in detail below. Most likely, the impact of the conflict on the pastoralists is underestimated due to their under-representation in public awareness.[112]

Communities in the civil war conflict zone were displaced by both the government and Boko Haram.[113] With regard to the government, civilians fled from rural areas to avoid the government's highly violent counterinsurgency strategies including air bombardment, arbitrary arrests, and other human rights violations

[108] See also, Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[109] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[110] E.g., Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[111] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[112] Interview 261, researcher, Abuja, September 2021, interviewed by the author.

[113] Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

(Abdulazeez Malefakis 2022, pp. 85–87).[114] In some instances, the government intentionally displaced communities to summon them in garrison towns (Abdullahi 2021a; Wolf 2020).[115] The military also 'evacuated' several islands of Lake Chad as part of their counterinsurgency strategy (Margin and de Montclos 2018).

Officially, the proactive displacement was a measure to increase the protection of the civilian population whose security could not be guaranteed when scattered throughout the countryside. De facto, this meant that communities were forced to leave their communities of origin, as staying back was interpreted as an endorsement of Boko Haram (Abdulazeez Malefakis 2022, p. 85). This logic is visible in the government label 'Boko Haram associate,' which was used for individuals who lived or have lived under Boko Haram rule — regardless of whether they had a choice. In 2019, the government formalized this approach by launching the so-called super camp strategy (de Simone and Iocchi 2022; Wolf 2020). The strategy implied that the Nigerian forces were gathered in the mentioned garrison towns, dismantling the Forward Operating Bases (Abdullahi 2021a).

With regard to Boko Haram, JAS, and to a lesser extent also ISWAP, raided and/or seized villages. Many inhabitants were either forced to flee or were abducted, especially young women and children (*My heart is in pain* 2020, p. 6).[116] Several interviewees reported how Boko Haram entered their village and began shooting randomly at individuals, forcing the people to hide in the forests or caves in proximity to their village.[117] For example, a group of IDPs from the Lake Chad region described how their community trekked several days under horrific conditions towards the next urban center to flee from Boko Haram, with children and elderly dying along the way.[118]

JAS furthermore attacked herders and rustled their cattle to finance its activities (*Herders against farmers* 2017, p. 5).[119] Many herders were killed or deeply impoverished by losing their main, and often only, asset — their livestock.[120] According to an estimation of the cattle breeder association MACBAN in 2017, more than 1 million cattle had been rustled by Boko Haram (ibid., p. 6). The rustling also affected the livestock of the sedentary communities.[121] Those herders, who could, fled from the areas where JAS was operating, either to other parts of Nigeria or to the neighboring countries with a large pastoralist community, i.e., Chad and Niger.[122] The movement of herders out of the civil war conflict zone was so massive that their numbers in

[114]Interview 478, IDP Northeast (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[115]Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[116]Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[117]Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[118]Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[119]Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.
[120]Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 319, researcher, Maiduguri (remote), September 2021, interviewed by the author.
[121]Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[122]Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author; see also, Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

these areas were significantly reduced.[123] This concerned the Fulani as well as other pastoralist groups like the Shuwa Arabs (Higazi and Yousuf 2017, p. 17).[124]

The civil war also disrupted the lives of those who stayed back in their communities of origin when they found themselves in areas where territorial control was segmented. The most common strategy described to navigate the patchwork of control was the adjustment of mobility patterns by farmers, fishers, traders, and pastoralists alike to avoid contact with the armed groups. De facto, the communities could not pursue their livelihood activities any longer because they could not access their farms, fishing grounds, markets, or grazing areas.[125] Moreover, many pastoralists changed their transhumance routes to avoid the conflict-affected areas.[126] As a state-level government official summarized for Borno state: "No grazing, no fishing, no farming, except outside very close to Maiduguri."[127]

In the Nigerian case, the adjustment of mobility patterns was most relevant for communities who lived in government-protected, often urban areas and who would need to enter ISWAP- and/or JAS-controlled territory to pursue their livelihood activities. Entering this territory constituted a high-security risk as ISWAP and JAS systematically checked and robbed travelers along the roads and killed individuals they suspected of collaborating with the government (Samuel 2020a). This implies that the communities could not easily engage in trade with other communities or access markets.[128] Noteworthy, even the interviewed repentant ISWAP member who now wanted to earn a living by trading fishery products explained that he could not engage in his business because the roads through the ISWAP-controlled areas were too insecure: "I also don't want to follow that road myself because I know our people, the way we treat people those days along that road was very bad."[129] In addition, Boko Haram intentionally attacked markets and commercial areas, making trade difficult (*Strategic conflict assessment* 2013, p. 119). This stands in contrast to areas under the full control of ISWAP, where the communities were explicitly allowed to continue pursuing their "businesses and market reasons" as long as they did not collaborate with the government.[130]

Segmented control heavily affected farming because farmers could not attend their fields in areas without government protection.[131] One interviewee reported how several members of their community were killed when they left their village for the field or to fetch firewood.[132] As a result of displacement and reduced

[123] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[124] Interview 405, ethnic/livelihood interest group, Maiduguri (remote), October 2021, interviewed by the author.
[125] Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[126] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[127] Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[128] Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[129] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[130] Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi; see also previous section.
[131] Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 319, researcher, Maiduguri (remote), September 2021, interviewed by the author.
[132] Interview 478, IDP Northeast (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

mobility, crop production in the Northeast has been heavily curbed, putting millions of people at risk of food insecurity (Higazi and Yousuf 2017, p. 18; *North Eastern Nigeria emergency* 2021). Similarly, agricultural activities, including fishing, completely stopped in the Lake Chad region.[133] Beyond the adjustment of mobility patterns, livelihood activities were affected by government policies and the reduced demand for goods due to the large-scale displacement.[134] Disrupting government policies include curfews and the closure of the Maiduguri cattle market, previously the largest in the country (*Strategic conflict assessment* 2013, p. 119).[135]

The disruption of farming and herding in the Northeast has been clearly linked to the absence of conflicts between the farmers and herders. For example, Mongunu (2021, p. 52) finds that the "stifled crop production" due to the Boko Haram conflict meant that "farmer-pastoralist conflicts were [...] virtually non-existent in the northern and central parts of [Borno]." Similarly, a representative of the pastoralists argued that there was less farmer-herder violence because "there are some places where the farmers cannot even farm and the herders can also not go."[136] An interviewed expert on pastoralism similarly eluded to the fact that farmer-herder conflicts in Yobe stopped after the outbreak of the insurgency due to the massive cattle rustling of Boko Haram.[137] The link between disruption and the absence of armed conflict also became clear in the reaction of interviewees and middle persons when I explained my interest in farmer-herder conflicts in the Northeast. I perceived the reactions as surprised or even impatient and curt: If there were no farms, how could there be farmer-herder conflicts? Similarly, when I asked a group of IDPs from the Northeast about tensions between farmers and herders, one of them replied: "The Fulani that had the cattle — Boko Haram has rustled them, no single one is remaining."[138]

I found no evidence explicitly linking disruption to the absence of other types of conflicts between informal groups, such as competition over political posts or market access. However, it is reasonable to assume that these questions lost salience in light of the massive disruption outlined above. More generally, an interviewed IDP pointed to the disruptive impact of the civil war on the motivation and opportunity for conflict between informal groups: "Everyone was affected, and everyone was a victim [of Boko Haram] one way or the other, directly or indirectly so there was no time for disputes."[139]

My findings are noteworthy because they stand in contrast to the observation of other scholars that conflicts between communities increase in civil war contexts because of the collapse of conflict management mechanisms and exacerbated resource competition (van Baalen 2024, p. 2). I demonstrated at the beginning

[133] Interview 357, researcher, Abuja, September 2021, interviewed by the author.
[134] Interview 421, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[135] Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author.
[136] Interview 414, ethnic/livelihood interest group, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.
[137] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[138] Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[139] Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

of this chapter that the conflict management mechanisms were dysfunctional even before the outbreak of the Boko Haram conflict. I further showed that conflict management in some areas rather *improved* due to the intervention by the civil war parties. Exacerbated resource competition was irrelevant in the civil war conflict zone because of the massive scale of disruption. If entire areas are depopulated, competition over land should reduce rather than increase. Similarly, access and control over markets become irrelevant if communities cannot travel to them in the first place.

Last but not least, the extreme violence of Boko Haram seemed to have a uniting rather than dividing effect, at least in some communities. Interviewed IDPs reported how the Boko Haram conflict first created mistrust and skepticism between Muslims and Christians — potentially increasing the risk for conflict — but that they then had to realize that any religious community was victimized by the group.[140] In sum, the evidence clearly shows that the civil war heavily disrupted the life of the communities, be it through displacement, the loss of property, or having to navigate segmented territorial control. The disruption is clearly linked to the absence of farmer-herder conflict and likely also to other types of conflicts betweeen informal armed groups.

7.4 Nigeria's Northwest: the expansion of bandits and vigilantes in a power vacuum

The Northwest experienced a remarkable increase in the severity and fragmentation of informal group conflicts after the Boko Haram conflict broke out. The quantitative analysis visualized the rapid emergence of these conflicts. It is one of the key questions of this study how the temporal co-variation in the escalation of the civil war and the conflicts between informal groups can be explained. Theoretically, I argue that the government's prioritization of the civil war creates a power vacuum outside the civil war conflict zone. In this vacuum, violence by a few actors can set in motion a security dilemma that leads to the decentralized and spontaneous mobilization of a large number of informal armed groups.

In the case of Nigeria, the government allocated a large share of its coercive resources to the Northeast where Boko Haram was based. This impeded the government's ability to curb banditry, vigilante violence, and farmer-herder conflicts in the Northwest when they were just emerging. As a result, organized crime and violent conflicts between communities spread, triggering a vicious cycle of violence and retaliation. The escalation and fragmentation of conflicts in the Northwest can thus be explained by a combination of local conflict drivers and civil war externalities.

[140]Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 479, vigilantes (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

7.4.1 The lack of government intervention due to resource shortage

I have demonstrated empirically that it was a political decision at the federal level to prioritize the Boko Haram conflict over the conflicts between informal groups in the Northwest. In this section, I trace the implications of this decision for the military reality on the ground. I argue that the shortage of coercive resources prevented the state security agencies from intervening in violence by informal groups, that is, from enforcing rules by stopping the violence and from prosecuting rule transgressions. If this argument is correct, I should see that the security agencies do neither stop nor prosecute violence by informal groups, although they would have sufficient intelligence (Observable Implication 4.1). Furthermore, I should find evidence that the security agencies have less manpower as well as less and worse equipment than the informal armed groups (Observable Implication 4.2). The observable implications are critical to differentiate non-intervention due to the challenging operating environment from non-intervention for capacity reasons. The difficult terrain in the Northwest, with vast undeveloped forest areas, could have been a challenge for any well-equipped and well-trained army. However, if sufficient intelligence was given and the lack of equipment was evident, this would raise confidence in my argument.

Note that the non-intervention of the government and the emergence of strong informal groups are mutually reinforcing processes. When the government is not intervening, this allows informal groups to operate and increase their capacity. This, in turn, lowers the possibility of the government to intervene. In this section, I focus on the non-intervention of the government and take the presence of strong informal groups — in particular the bandits — as given. The next section illuminates the other side of this process, i.e., how the groups could become so strong.

To start, the lack of government intervention becomes visible by comparing the network drawings between the Northeast and Northwest. In the Northeast, where the civil war was fought, security agencies are included in all network drawings, and in all but one, they are indicated to provide protection to the civilian population. In contrast, security agencies do not play a prominent role in the network drawings in the Northwest. In some of the networks, they are not even included as an actor. A vigilante drew protective relationships from his group to various communities but not a single protective relationship as coming from the security agencies.[141] A journalist included a dashed protection line between the communities and the police, explaining that the police should protect the communities but often fail to do so.[142]

Regarding the lack of enforcement, I repeatedly encountered complaints that the security agencies remained inactive even after explicitly being called for help before an expected attack.(e.g., Abubakar 2022b; Adebajo 2021b).[143] Some of the bandits seemed to intentionally expose themselves before the attacks by sending

[141] Interview 558, vigilante, October 2021, interviewed by the author, Sokoto.
[142] Interview 527, journalist, October 2021, interviewed by the author, Sokoto.
[143] E.g., Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 527,

letters to or calling the communities they planned to raid. In some cases, these letters were attempts of extortion but sometimes they did not even include a demand (Adebajo 2021b).[144] One government official in Kaduna interpreted these announcement letters as a demonstration of power: bandits sent the letters because they knew that they would not be stopped.[145] This underlines how widespread and persistent the lack of enforcement was.

Similarly, the security agencies did not intervene in ongoing attacks, although they would have had the time and opportunity to do so. The long duration of rule violations was visible in both farmer-herder and banditry-related violence. Violent clashes between farmers and herders were usually not a one-time event but began with a violent action by one side, which was then retaliated after days and sometimes even weeks. Bandits have been reported to loot villages and rob travelers on highways for hours in broad daylight without government security agencies intervening (Abubakar 2022a; Adebajo 2021b). Village raids by informal groups could take several days, but the security agencies did not appear at all or only hours after the attacking group had left (Samuel 2020b).[146] One interviewee in Sokoto reported that bandits attacked a village and, without any sign of hurry, requested the villagers to prepare food for them and 'provide' them with women to be sexually abused over the course of the evening.[147] Vigilantes, in particular Yan Sakai, on the other hand publicly executed herders for their alleged participation in banditry in orchestrated campaigns over the course of weeks without being stopped (*Herders against farmers* 2017, p. 5; Rufa'i 2018b, p. 72).[148]

The network drawing by the traditional ruler in Sokoto, whom I called Ishiyaku in the introduction, illustrates this point.[149] When he did not draw a relationship of protection between the security agencies and his community or any other actor, I probed whether this was on purpose. He looked at me slightly surprised and confirmed that the security agencies did not do anything for them. His community had informed local officials about a suspected attack by the bandits, but the security agencies did not prevent it. Later, when asked to weigh the influence of the actors included in the network drawing, Ishiyaku said about the security agencies: "Yes, they are important if they are available. If they are available, they can protect." This highlights that the unavailability of security agencies was a major issue.

Regarding the lack of prosecution, the evidence suggests that the government repeatedly failed to hold violent non-state actors accountable. Hassan and Barnett (2022) and the International Crisis Group report *Herders against farmers* (2017) identify the failure of the criminal justice system as one factor driving the

journalist, Sokoto, October 2021, interviewed by the author.

[144]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 172, ethnic/livelihood interest group, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[145]Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author.

[146]Interview 528, local-level government official, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[147]ibid. This anecdote is in line with Cohen (2016) who argues that gang rape is potentially risky for armed groups because it requires time and hence makes them vulnerable.

[148]Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

[149]Interview 506, traditional ruler, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

violence in the Northwest. In several cases, suspects were neither arrested nor put on trial, or they were arrested but freed shortly after (*Herders against farmers* 2017, p. 11).[150] Using the words of one interviewee: "Nobody will be arrested as if these guys [the bandits] were spirits."[151] Again, the lack of prosecution does not seem to be a problem of intelligence. The locations of the bandit camps seemed to be widely known. For instance, government officials from the respective areas offered the security agencies to lead them there (Babangida 2021).[152] A local government member in Sokoto reported that he had given detailed maps with information on the camps to the security agencies.[153] Similarly, community members informed the security agents about the movement of the bandits without any action taken (Kura 2021).[154] In line with the claims by the interviewees in the Northwest, the interlocutor from the defense ministry affirmed that the government had high-quality intelligence about the bandits due to its double agents.[155]

With sufficient intelligence being available, the question arises as to why the security agencies did not intervene. I propose that this was due to the lack of manpower and equipment. In line with this argument, it was mentioned in several interviews in Kaduna and Sokoto that the bandits had more men and better weaponry than the security agencies of the state.[156] This needs to be seen in the context of the "military-grade" weapon arsenal of the bandits (Hassan and Barnett 2022, p. 1). Besides stacks of machine guns, the bandits disposed over Rocket Propelled Grenades, rocket launchers, and anti-aircraft guns.[157] Their weapons were also newer and in better condition than those of the military (Obi and Iwuoha 2023, p. 13).[158] In addition, the bandits had better knowledge of the terrain, which enabled them to operate at night more easily than the military and to lay ambushes in strategic locations.[159]

It speaks to the asymmetry between the bandits and the security forces that many soldiers have been killed by bandits in the Northwest (Hassan and Barnett 2022, p. 24). As an interviewed journalist put it: soldiers were "killed like flies" in the Northwest because "they are not provided with enough equipment."[160] Furthermore, the asymmetry manifests itself in the payment of ransom by the government to the bandits.[161] The aforementioned journalist gave room to his frustration and remarked sarcastically: "Like in Sokoto, I

[150] Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author.
[151] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[152] Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[153] Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.
[154] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[155] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; see also Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[156] Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[157] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[158] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[159] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.
[160] Interview 527, journalist, October 2021, interviewed by the author, Sokoto.
[161] Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

know that our security commissioner is more of a negotiator than a commissioner."[162] According to an article in the Wall Street Journal, the Nigerian military made a protection payment to the bandits to guarantee the security of the Nigerian president when he came to visit the Northwest (Parkinson and Hinshaw 2021).

Primary and secondary sources link the lack of intervention by security agencies to their military inferiority and the resulting lack of motivation, not least because the interventions would have endangered their lives (e.g., Kura 2021; Obi and Iwuoha 2023, p. 13). According to several interviewees including the state-level government official, the security agencies made this explicit. When asked to intervene in banditry attacks, members of the military replied that they had far fewer weapons than the bandits and hence did not confront them or that they were afraid to intervene because the herders would be armed, respectively.[163] Similarly, a community reported to the security agencies that they received an extortion letter but the military rejected to do anything because the bandits had "higher firepower."[164] Interviewees across participant groups furthermore claimed that the situation led to a tacit collaboration between the security agencies and the bandits. The members of the security agencies shared information with the bandits and were not attacked in return.[165]

The asymmetry between the soldiers and the bandits led to a security gap between rural and urban areas where the security agencies were mostly stationed. While some soldiers refused to leave the safer urban areas at night, others rejected to go to "the bush" at all and just stayed on the main roads.[166] It is in line with these claims that respondents from the urban outskirts reported that their security situation was relatively good.[167] Similarly, I experienced the stark difference in security between rural and urban areas during the fieldwork. In terms of the security of the research assistants and me, it seemed an acceptable risk to stay in the urban areas of Sokoto and Kaduna towns. Yet, anywhere beyond the urban core areas was considered much more insecure by my contacts. The pertinence of their assessment manifested itself in attacks against the Nigerian Defence Academy and the airport on the outskirts of Kaduna during and a few months after my stay in Nigeria ("Gunmen kill one" 2022; "Key facts about NDA" 2021).

To conclude, I provided evidence from a wide array of sources to depict how the government's decision to prioritize the Boko Haram conflict manifested itself on the ground in the Northwest. The evidence clearly shows that the lack of government intervention was not driven by intelligence problems but by a stark asymmetry between the security agencies and the bandits. The security agents, therefore, sought to minimize

[162]Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[163]Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[164]Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[165]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[166]Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[167]Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

the risks for their own lives by avoiding being overpowered by the bandits. To be clear, this is not to say that the government never intervened in the violence in the Northwest. The quantitative analysis indicated a shift in the government's fighting effort towards this region after 2017. Nevertheless, the interventions were limited or used indiscriminate, often remote violence, which aggravated the situation further. I return to this point when I discuss the feedback effects on the conflict network at the end of this chapter. Now, I outline the dramatic consequences of the lack of government intervention for the communities and informal armed groups in the Northwest.

7.4.2 The escalation and fragmentation of conflicts between farmers, herders, bandits, and vigilantes

The lack of intervention by the state leads to the emergence of severe and fragmented conflicts when some informal groups use this opportunity to use violence to solve conflicts or to enrich themselves. I hence expect to find evidence that informal groups can expand their illicit economic activities unchecked and/or use violent means to assert their position in a conflict after the state security agencies repeatedly do not intervene (Observable Implication 4.3). This renders violence the central — and often only — means of protection for the communities affected by the violence. If this is correct, informal groups should justify their mobilization and/or use of violence with the need for self-help and the lack of alternatives (Observable Implication 4.4). I evaluate the two observable implications together by tracing the intertwined dynamics of farmer-herder conflicts and banditry.

A simplified version of the process that led to the escalation and fragmentation of farmer-herder conflicts and banditry is depicted in Figure 7.2. Farmer-herder conflicts and banditry had distinct origins at the beginning. Farmer-herder violence took place mostly between Fulani herders and Hausa or ethnic-minority farmers (1). Banditry, in contrast, began as urban crime and intra-Fulani cattle rustling (2). Yet, the conflicts began to mutually reinforce each other when the bandits began to attack farmers (3). The farmer groups retaliated against the Fulani in response because they equated the bandits with any Fulani herder (4). This reinforced the existing tensions between farmers and herders. As I demonstrated in the previous section, the security agencies were unable to contain this vicious cycle. As a religious leader in Kaduna put it: "Things start small, and they metamorphose into different things [...] it started as cattle rustling then, now it has generated into an ethnic war."[168]

[168]Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; see also Interview 172, ethnic/livelihood interest group, August 2021, interviewed by Shedrach B. Nghozei and the author, for a similar use of the notion of the metamorphosis of preexisting conflicts.

Source: Own figure.

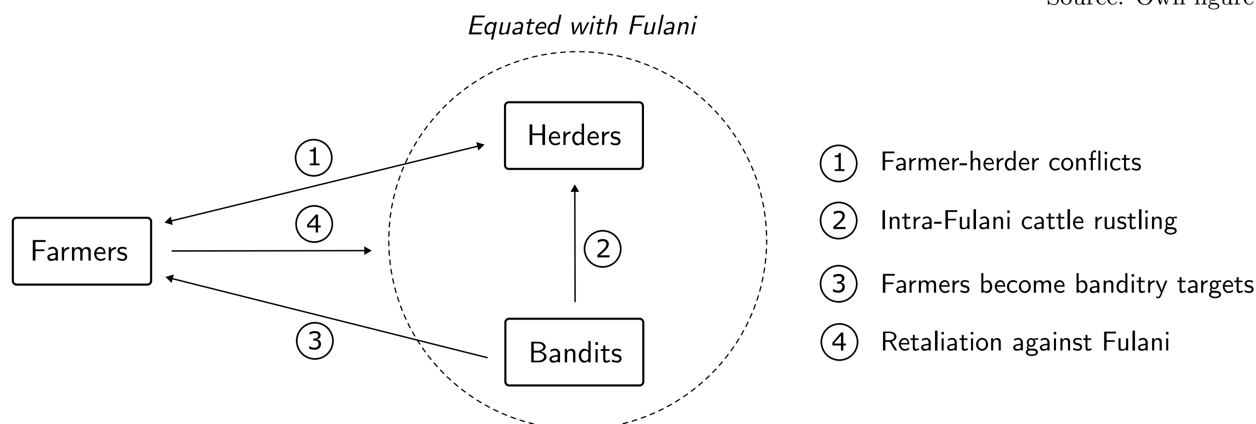


Figure 7.2: The mutual reinforcement of farmer-herder conflicts and banditry

Farmer-herder violence typically arose when the livestock of the herders encroached on farmland and destroyed part of the harvest or drank water intended for irrigation. In the Middle Belt, the disputes could also be charged with religious tensions (Krause 2018, p. 202).[169] In a context where traditional and state mechanisms failed to resolve the resulting disputes — as established by the necessary condition, the groups were left on their own to deal with these issues. In addition, the absence of security agencies entailed that groups did not have to fear prosecution for the use of violence but could also not rely on the state for protection. Interviewees and secondary sources held farmers and herders alike responsible for these conflicts. The herders were accused of carrying modern weapons and being "hot tempered," making it difficult to find an amicable solution or prevent the herders from entering into the farm in the first place.[170] The farmers were accused of demanding exaggerated compensations and/or revenging the destroyed harvest by seizing or killing cattle (Obi and Iwuoha 2023, p. 8).[171] For example, a local government official from Sokoto reported how a farmer community reached an agreement with Fulani herders to allow their cattle to graze on their land but only after the harvest. When the Fulani did not comply with the agreement, the farmers poisoned the plants, and the cattle died.[172]

Even small skirmishes or disputes could escalate due to violent retaliation against any member of the respective ethnic group, irrespective of their actual involvement in the incident. It contributed to the escalation that the retaliatory actions were often disproportionate and could spread at a regional level due to the high salience of ethnic identities (*Herders against farmers* 2017, p. 13).[173] Specifically, anti-Fulani

[169] Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author; Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.
[170] Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[171] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 558, vigilante, October 2021, interviewed by the author, Sokoto.
[172] Interview 597, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; see also: Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[173] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

sentiments have increased in Nigeria during the last years, incited through conspiracy theories that the violence by Fulani herders was a new form of Fulani jihad by which the Fulani sought to grab land and political power (*Herders against farmers* 2017; Ejiofor 2022).[174] It highlighted the absence of the state in the Northwest, which meant that these retaliatory dynamics could play out unstopped, i.e., without violence being prevented and prosecuted.

The willingness of the communities to use violence has to be seen in the context of the high dependency of the livelihood groups on their harvest or livestock to generate income.[175] Herders were vulnerable to forms of retaliation that killed their livestock which was often their only asset and source of income, since they did not have the formal education to join the labor market and pursue alternative means of income. A representative of the herders described the loss of cattle for herders as "going to bed as rich people and waking up as poor people."[176] The impoverished herders then became a recruitment base for the bandits because of the lack of alternatives.[177]

In parallel, banditry could expand unbothered by the government's security agencies. Banditry was a business model, no matter whether the bandits engaged in it for grievance-related or opportunistic reasons.[178] This business could grow unimpeded as the bandits were able to reinvest their revenue from rustling and kidnapping into weaponry, their means of production, which in turn allowed them to expand and professionalize their operations further.[179] Several interviewees, including a member of the armed forces, reported that some bandits had an air delivery system in place where new weapons were brought in via helicopter in exchange for money and/or mining products.[180] Another example of professionalization is that the bandits and the extremist group Ansaru set up a "cell phone booster mast" in their operating area to improve the signal strength (Barnett et al. 2022, p. 62; Abdulaziz 2021). The illicit kidnapping economy grew so large that it fed back into the regular economy, which meant that the banditry activities were tolerated by some of the sedentary communities.[181] The bandits procured food for themselves and the kidnapping victims, logistical services, information, and sex work.[182]

[174]Interview 172, ethnic/livelihood interest group, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[175]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[176]Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author.
[177]Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.
[178]As Ojo (2020, pp. 96–97) clarifies, the cattle rustling by the bandits in Nigeria is an illicit economy and should not be confused with more traditional, small-scale forms of cattle raiding between pastoralist communities as it is observed in East Africa; see also, Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author. The grievances of the bandits related to the marginalization of the Fulani have been discussed in the case chapter 5.
[179]E.g., Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[180]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[181]Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[182]E.g., Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 149, state-level government

The bandits not only expanded their business but also optimized their strategy in response to external shocks and economic opportunities. Banditry began with burglary in urban centers and robbery along highways.[183] Yet, robbery and burglary began to be less lucrative after the digitization of the Nigerian banking system during the mid-2000s. Therefore, the criminal groups turned to cattle rustling.[184] Later, however, cattle rustling became less lucrative due to the policy interventions by the state governments. Since the security agencies of the federal government failed to counter the bandits, state governments tried to lower the incentives for cattle rustling by closing down cattle markets and requiring proof of ownership when selling cattle (Akhaine and Alabi 2022). In combination with the digitization of the banking system, this had the consequence that the involved armed groups ultimately switched to kidnapping and the raiding of villages of sedentary communities.[185] As a national government official put it, the bandits figured out that stealing persons is logistically easier and more lucrative than stealing cattle.[186]

After the switch to kidnapping, the bandits continued optimizing these activities. This concerned the height of the ransom demands, the target choice, and the geographic area of their activities. For example, the state government official from Kaduna claimed that the bandits could "test the waters" and then increased their demands with each abduction.[187] In one case in southern Kaduna, the bandits abducted a family and first demanded 6 million Nigerian Naira (NGN). When the NGN 6 million were to be paid, the bandits abducted the bearer of the money and demanded NGN 20 million.[188] Regarding target choice, the bandits were renowned for targeting any individual independent of their socioeconomic class, creating revenue by the sheer scale of their activities. After 2020, however, the groups began to target school classes and once even kidnapped a military officer.[189] One interviewee interpreted this shift to high-value targets as a response to the impoverishment of the population in the Northwest, which was literally squeezed out by the bandits.[190] Finally, the geographic spread of banditry from Zamfara and Katsina to Kaduna can be seen as the response to the economic opportunity associated with this wealthier state.[191]

official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 164, Christian religious leader, Kaduna, August 2021, interviewed by the author; Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[183] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author.

[184] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[185] E.g., Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[186] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; similarly on the link between rustling and kidnapping: "Why do I need to rustle cattle? What I need to do is to kidnap the owner," Interview 189 official, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author.

[187] Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[188] Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[189] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[190] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[191] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

As a result, banditry, and specifically kidnapping, took on a massive scale. Hassan and Barnett (2022) estimate that around 30,000 bandits are active in Northwest and Northcentral Nigeria. At the same time, the real extent of the kidnappings is difficult to estimate as many cases likely go unreported.[192] ACLED counts 418 kidnapping events in the Northwest and Northcentral in the whole observational period (Raleigh et al. 2010) but the actual case numbers are likely much higher. For example, more than 1,000 people have been abducted in one month alone in 2021, according to the Nigerian Security Tracker maintained by the Council on Foreign Relations (Adebajo 2021a). A survey by UNDP and SAS finds that 42% of the Nigerian respondents gauge that kidnapping "occurred frequently or very frequently" (Forquin et al. 2022, p. 77) and another small survey by the news outlet HumAngle finds that two-thirds of the respondents know someone who was abducted personally (Eboigbe 2021). In the interviews, the scale of kidnapping was reported as even larger. One interviewee declared that 3,000 people had been kidnapped in his LGA in Sokoto alone and a local government official from Kaduna reported that people in his constituency had been abducted two or three times already.[193] In line with these reports, the risk analysis firm Smart Risk Solutions classifies Nigeria as the highest kidnapping risk level, the same as in Afghanistan and Libya (*Kidnap Risk Map 2021* 2022).[194]

These estimations are mirrored in my interviews and informal conversations in Nigeria, where abductions were a common topic of conversation. Some contacts in the field told me about cases of abducted relatives, while others shared they were on a kidnapping target list. One person who was recommended to me as a potential interviewee rejected the interview request because her daughter was currently held captive by the bandits. Someone shared that his friends in the kidnapping-affected areas only sleep in dark clothes to be able to hide in the bush at night should their village be raided.[195] This expression of a pervasive feeling of insecurity resonates with the finding of the UNDP/SAS survey in 2022 that 61% of the respondents in Northwest Nigeria feel insecure or very insecure in their neighborhood — much more than in conflict-affected regions in Sudan (40%), Chad (21%), or Libya (17%) (Forquin et al. 2022, p. 76).

What is remarkable about the activities of the bandits, from the point of view of my argument, is that their expansion was possible without being seriously hampered by the state. Using the words of a member of the local government in Sokoto, the "bandits used to went there anytime they want [...] they enter any village they want" because the security agencies were completely absent.[196] The lack of intervention of the state in the banditry meant that herders and farmers alike were exposed to the violence of the bandits and many sedentary communities thus formed, or reinforced, their own vigilante groups (Hassan and Barnett

[192] Interview 252, ethnic/livelihood interest group, Abuja, September 2021, interviewed by the author.

[193] Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

[194] Since this classification is at the country level, the kidnapping risk related to Boko Haram also contributes to this assessment. Nevertheless, Nigeria is classified at a higher risk level than Niger or Mali, i.e., other countries with jihadist insurgencies.

[195] Similarly, a traditional ruler from Kaduna reported that they cannot sleep at night anymore because of the fear of kidnapping: Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[196] Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

2022, p. 5).

The formation of vigilantes was clearly linked to the need for self-help and lack of alternatives, as shown throughout the interviews and secondary sources (*Herders against farmers* 2017).[197] A representative for sedentary communities in the Middle Belt claimed: "They are very vulnerable. [...] If you are pushed to the wall, sometimes you have no option." Similarly, a Muslim religious leader from Kaduna summarized the intricate situation of the herders: "A herdsman has [...] three options. Either you join the gangs rustling cattle, or you join the gangs protecting cattle, or you get your cattle rustled. So they became two, those stealing cattle and those that are defending cattle. And they all need weapons."[198] A Fulani traditional ruler furthermore pointed to the need for arming due to the stark vulnerability that modern weapons introduce.[199]

Sedentary communities and herders alike justified their violent actions with the failure of the state to "carry out its primary responsibility" to protect them (Rufa'i 2018a, p. 71; *Herders against farmers* 2017, p. 11).[200] According to Rufa'i (2018b, p. 71), a militant wing among the vigilantes emerged because they were dissatisfied with how the state handled the situation. Other interviewees did not mention the state at all, and it is equally noteworthy that the state, be it through security agencies or other institutional channels to secure their rights, seems to be completely absent from their considerations.

Despite this narrative of self-defense and self-help, some of the sedentary community vigilantes, especially Yan Sakai, operated in a very offensive manner, prosecuting any Fulani for their alleged participation in banditry (Higazi 2016, p. 375; Hassan and Barnett 2022, p. 7).[201] Their operations included extra-judicial killings, public mass executions, and proactive attacks on Fulani settlements (Hassan and Barnett 2022, p. 5; *Herders against farmers* 2017; Rufa'i 2018b).[202] The sedentary vigilantes began to take economic advantage of their new power, for example, by taxing a "protection levy" from Fulani communities or by seizing and selling the cattle after their attacks (*Herders against farmers* 2017; Hassan and Barnett 2022, p. 25).[203] This extreme violence by some vigilantes pushed pastoralists to form their own resistance groups, which were later infiltrated by the bandits (Obi and Iwuoha 2023, p. 9).[204] Highlighting this link to the resistance groups, the bandits equally began to justify their activities as self-defense and revenge against the violence by the

[197] E.g., Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 172, ethnic/livelihood interest group, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[198] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

[199] Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[200] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[201] E.g., Interview 149, state-level government official, Kaduna, August 2021, interviewed by the author; Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[202] Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[203] Interview 527, journalist, October 2021, interviewed by the author, Sokoto.

[204] E.g., Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 252, livelihood interest group, Abuja, September 2021, interviewed by the author; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

sedentary vigilantes (e.g., Barnett 2022; Obi and Iwuoha 2023, p. 9).[205] The vicious cycle of arming, attacks, and counter-retaliations was aptly summarized by a civil society activist in Sokoto: "They [Yan Sakai] will carry weapons against those Fulani people that are terrorizing the state, so those [Yan Sakai, ...] also commit atrocities against innocent people which is making some of the innocent Fulani to carry weapons against them."[206]

The dynamics outlined were reinforced by the endorsement and support of the sedentary vigilante groups by state-level and local governments as well as by individual politicians.[207] For example, the governors of Benue and Zamfara explicitly appealed to the citizens to take up arms to defend themselves (Abubakar 2022b).[208] The government support to the vigilantes included vehicles, fuel, small stipends, and weaponry (Rufa'i 2018a).[209] Even after Yan Sakai was officially banned in 2016 in an attempt to negotiate an agreement with the bandits, the group was still tolerated by the local-level governments and the agreement collapsed (Obi and Iwuoha 2023, p. 12).[210] Importantly, the subnational governments explicitly linked their support for the vigilantes to the failure of the federal government to provide the military capacity needed in the Northwest (e.g., Akhaine and Alabi 2022; Dahiru 2021).[211] An employee of an international organization interpreted the behavior of the state governments accordingly: "It [the arming of vigilantes] shows that there's some sort of lack of trust, [...] lack of confidence in the ability of the federal security apparatus to be able to address the security issues."[212]

Two additional channels linked banditry and farmer-herder conflicts. First, the herders avoided the bush because of cattle rustling bandits. This meant, however, that their livestock was more likely to encroach on farmland, creating additional conflicts with farmers.[213] Second, herders and farmers alike used bandits as mercenaries in their conflicts, either to attack community members or to protect themselves.[214] Yet, the collaboration with the bandits could also go out of hand since some of the bandits stayed after their engagement and started engaging in crime in the respective community. [215] The hiring of mercenaries underlines once more the self-help logic under which the communities in the Northwest operated and the impunity of the bandits.

To sum up, there is strong evidence from interviews, network drawings, and newspaper reports that the

[205] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[206] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.
[207] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[208] ibid.
[209] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.
[210] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.
[211] Interview 528, local-level government official, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[212] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.
[213] Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[214] Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.
[215] Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

government failed to enforce rules and prosecute their violation in Northwest Nigeria. The evidence further highlights how offensive groups like the bandits and some of the vigilantes could operate unchecked, leading to the formation and arming of more defensive groups, creating a vicious cycle of violence and retaliation. The salience of ethnic identities led to an intertwinement of banditry and farmer-herder conflicts, reinforcing the escalation further. The self-reinforcing process traced with mostly qualitative evidence in this section fits well with the findings of the quantitative network analysis. The latter showed how a large number of groups mobilized in small clusters within a short period, which speaks to the uncoordinated mobilization process outlined above. The number of fatalities increased sharply and non-linearly, capturing the unhampered expansion of banditry and the retaliation by the vigilantes. Importantly, the initial emergence of the conflicts between informal groups was unrelated to the civil war. Vigilante groups and banditry have existed in Nigeria since precolonial times (Hassan and Barnett 2022, p. 7; Rufa'i 2018b, p. 66).[216] Yet, it was the inaction of the understaffed and under-equipped security agencies hat allowed that the crisis in the Northwest "grew off."[217] Indeed, several sources explicitly linked the violence of the informal groups to the government's failure to intervene. I now broaden the perspective to illustrate the feedback effects of these developments on the wider conflict network.

7.5 Feedback effects: pressure on the government and opportunities for Boko Haram

The theoretical argument outlines two feedback effects of the escalation and fragmentation of informal group conflicts. First, the threats to the government beyond the civil war increase and so does the pressure on the inherently limited resources. This potentially weakens the government's position in the civil war. In the case of Nigeria, the scale of the kidnappings and the targeting of infrastructure by the bandits meant that the government could no longer ignore the escalating crisis in the Northwest. Second, the informal group conflicts provide an expansion opportunity for the formal armed groups involved in the civil war. For Nigeria, two interviewed experts explicitly interpreted the escalating conflicts in the Northwest as a window of opportunity: "If the government leaves a crisis for too long, it is a fertile ground for extremism, taking advantage to move into the region."[218] Similarly, a local government official asserted that Boko Haram expanded to Kaduna because the government's attention was so focused on the Northeast that "here they can do whatever they

[216] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[217] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; see also, Interview 261, researcher, Abuja, September 2021, interviewed by the author: "If you do not deal with it, it spreads, this is where the government is responsible."

[218] Interview 261, researcher, Abuja, September 2021, interviewed by the author; see also: "He [Shekau] realized that in the Northwest, there is absence of coverage by the armed groups" in Interview 239, journalist, Abuja, November 2023, interviewed by the author.

want to do."[219]

7.5.1 "So many crises everywhere"

"So many crises everywhere" — these were the words of the interviewed high-ranking member of the armed forces when explaining the resource shortage of military in the Northwest.[220] After having discounted the relevance of the conflicts in the Northwest for a long time, the extent of the banditry crisis undermined the government's claim to the monopoly on violence and its public support. Also, the targets were no longer only pastoralist but also sedentary communities. I suspect that violence against sedentary communities was of higher relevance to the government due to their electoral importance. At the same time, the civil war with Boko Haram was still ongoing, and the tensions over a potential secession of Biafra in the Southeast heightened. Biafra was of larger significance to the government than the Northwest, as I have shown at the beginning of this chapter. I propose that the government seeks to deal with this intricate situation by intervening in informal group conflicts but with as few resources as possible. As for observable implications, I suggest that the government begins to intervene in the informal group conflicts with 'cheap' measures, that is measures that require limited coercive resources, after the informal group conflicts escalated (Observable Implication 5.1). This intervention should weaken the government's position in the civil war. I expect to observe that the formal groups in the civil war use this moment to increase their attacks and enlarge their territory (Observable Implications 5.2).

I begin with the government intervention in the Northwest. The government launched its first military operation in the Northwest in 2015 (Obi and Iwuoha 2023, p. 13). This operation and the ones to follow in the subsequent years heavily relied on air bombardment, which does not require the permanent stationing of troops (Hassan and Barnett 2022, p. 24). In 2021, the government declared Zamfara state a no-fly zone (Obi and Iwuoha 2023, p. 13), probably to cut the areal weapon supply of the bandits. In some instances, the air strikes killed unarmed civilians, in particular from herder communities ("Bombing of herders" 2023).[221] Military units allegedly also committed atrocities against the herder communities on the ground (Hassan and Barnett 2022, p. 24).[222] The quantitative analysis identified that the start of these interventions apparently preceded the escalation and fragmentation of informal group conflicts. Yet, as I elaborate in the discussion chapter 9.1.1, this is likely due to the fact that the quantitative data underestimates the violence levels in the early years of the conflicts.

These interventions have been criticized for being ineffective and reactionary, not least because they were not complemented with ground troops (Obi and Iwuoha 2023, p. 13; Hassan and Barnett 2022, p. 24). The

[219] Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[220] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[221] Interview 239, journalist, Abuja, November 2023, interviewed by the author.
[222] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

absence of security agencies on the ground meant that the bandits retaliated against communities after they had been targeted by the government. This included attacks on villages and the extortion of communities to pay for the cattle that the bandits lost in an air strike (Hassan and Barnett 2022, p. 24).[223] In addition, the air bombardment pushed the bandits to leave their core territories and expand their areas of operation — which, again, was possible because of the absence of the government.[224]

The federal and state governments furthermore used non-kinetic means that did not require a lot of manpower like suspending the mobile network, restricting the trade of fuel and cattle,[225] development initiatives, negotiations with the bandits, and the introduction of new banknotes to deprive the bandits of their cash deposits (for a review of government strategies, see Wiehler and Malefakis 2024).[226] Yet, the non-kinetic measures primarily impoverished the civilians, for example, by not allowing commercial motorbike riders, making them easy targets for armed group recruitment.[227] The armed groups, in contrast, were able to adapt to these measures more easily. Moreover, the interviewee from the ministry of defense criticized that these non-kinetic initiatives were "piece meal" and thus not effective.[228]

Gauging the impact of these interventions in the Northwest on the civil war in the Northeast is more difficult. Even if not many, the number of troops, including special forces, was increased in the Northwest (Obi and Iwuoha 2023, p. 13), which likely decreased the ability of the government to fight against Boko Haram. An employee of an international organization expressed his concern that the Northwest was now "drawing government attention" and humanitarian support away from the Northeast while the extremist groups were far from defeated.[229] Nevertheless, according to the quantitative analysis, the government's fighting effort in the Northeast remained at similar levels, and I do not find evidence that violent extremist groups made major military advances during that period.

The fact that the reduction of government resources in the Northeast did not have a notable impact until the end of the observational period, could be a result of the heavy infighting between ISWAP and JAS after 2019, culminating in the killing of JAS' leader Shekau in 2021 (Salkida 2021; Zenn 2020a).[230] The infighting likely weakened the groups and limited the extremists' ability to oppose the government. Interestingly, the increased infighting after the shift of government attention to the Northwest fits well with the argument by Pischedda (2018), who proposes that rival non-state groups use moments of government distraction to fight each other. The government distraction constitutes a window of opportunity for the non-state groups to get rid of their rivals. The infighting pattern in Nigeria's Northeast thus supports the idea that the government's

[223]ibid.
[224]Interview 288, HDP interest group, Abuja, August 2021, interviewed by the author.
[225]Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.
[226]Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.
[227]Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[228]Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.
[229]Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.
[230]The infighting is also visible in the country-level network in 2021, Figure A.33 in the appendix.

attention in the Northeast was reduced due to its engagement in the Northwest.

7.5.2 Cooperation between the violent extremists and the bandits

I argue that formal armed groups can leverage the absence of the state outside the civil war conflict zone and the resulting, highly violent conflicts between informal groups to expand their influence. Theoretically, I identified two strategies for how formal groups aim to do this: by controlling territory and filling the power vacuum or by cooperating with the informal groups. Empirically, I expect for the first strategy that the formal groups involved in the civil war clash with informal groups after the conflicts between the latter escalate (Observable Implication 5.3). For the second, cooperation-based strategy, I expect the formal armed groups to offer training, weapons, and operational support to the informal armed groups after the former come under pressure in the civil war conflict zone (Observable Implication 5.4). The cooperation should then lead to an assimilation of the modes of attack and the target choice of the informal groups to the formal armed groups (Observable Implication 5.5). The temporality is important because mere similarity is insufficient to corroborate the idea of diffusion (Bakke 2013). I discuss in chapter 8 how I can differentiate the assimilation due to cooperation from non-relational diffusion.

In the following, I discuss the strategies of all three violent extremist groups — JAS, ISWAP, and Ansaru — in sequence. The analysis reveals not only variation across these groups but also their flexibility in oscillating between the two strategies. Emprirically, the strategies are less distinct than theoretically assumed. JAS and Ansaru both actively tried to win over some bandit groups, but Ansaru combined this with violently challenging those bandits who refused to cooperate and with attempts to govern communities. ISWAP's role is unclear, with some sources reporting their presence in the Northwest while others reject it. If ISWAP engaged in the Northwest, it likely took a more confrontational stance towards the bandits.[231] To make this argument, I build especially on the interviews with former ISWAP members and with two experts, a journalist and a researcher, who have worked on this issue.[232] The comprehensive analyses by Abdulaziz (2021), Barnett et al. (2022), and Samuel (2021) provided critical details.

Sources agree that JAS, under the leadership of Shekau, primarily followed the strategy of cooperating with the bandits. Primary and secondary sources point to a mix of push and pull factors which made Shekau interested in this cooperation and expansion to the Northwest. The main push factor was the military pressure by the government and ISWAP in the Northeast.[233] First of all, JAS had lost most of its territory after the major offensive by the government and the MJTF in 2015 and was confined to Sambisa forest

[231] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[232] Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 261, researcher, Abuja, September 2021, interviewed by the author.

[233] E.g., Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 239, journalist, Abuja, November 2023, interviewed by the author.

(Cannon and Iyekekpolo 2018; *Government - JAS* 2022; Ojo 2020). JAS' already weak position was then aggravated by air bombardments by the government on Sambisa forest and increasing infighting with ISWAP from 2019 onwards (Zenn 2020a).[234] In addition, JAS' Bukara faction operating around Lake Chad was also increasingly under pressure (ibid.). Within the Northeast, the group thus did not have any opportunity to retreat further (Samuel 2021). The former ISWAP member interviewed for this study emphasized how JAS was "discouraged and fearful."[235] In short, "the Northeast [was] becoming too hot for Boko Haram."[236]

Against this background, the informal group conflicts in the Northwest became a "low-risk/high opportunity attraction" (Idler and Tkacova 2023). First, the Northwest offered JAS opportunities to strengthen its capabilities by adding new income sources and possibilities for recruitment. JAS could tap into the kidnapping, mining, and cattle rustling economy in the Northwest and sought to recruit among the bandits (Abdulaziz 2021).[237] Second, proactively escalating the violence in the Northwest offered Shekau the possibility to divert government attention and thereby reduce the pressure on the Sambisa Forest, creating some "breathing space" (Abdulaziz 2021; Samuel 2020a, 2021). This is also the interpretation of my interview partner at the Armed Forces: "we have intelligence that they [...] link-up with the bandits and *try to open a new front* to spread their tentacles."[238] The deliberate creation of a second front is noteworthy as it demonstrates that the formal armed group consciously exploited the resource allocation problem of the government. Finally, Shekau had an ideological motivation to expand JAS' territorial influence westward in order to create an Islamic caliphate that spans the whole of Nigeria's Muslim north (Samuel 2021). This call might have seemed in particular urgent as ISWAP and Ansaru had already been gaining ground in the Northwest, putting Shekau at the risk of being side-lined (Zenn 2020a).

Shekau's choice to cooperate with the bandits instead of seeking territorial control is likely related to JAS' weak position, his lack of interest in building relationships with rural communities, and his failed attempt to establish a permanent presence in the Northwest during the early years of the conflict. JAS had tried to establish its presence in the Northwest between 2011 and 2014 and, when successful at the beginning, leveraged this presence to plan and implement suicide attacks in major Nigerian cities, as I have also shown in the quantitative analysis (Mantzikos 2014; Zenn 2012). Interestingly, a local government official from Kaduna claimed that the presence of JAS in the Northwest in the early 2010s created a pool of informants and logistics providers who could later be used by the bandits for their activities.[239] Ultimately, however, JAS could not maintain that presence because of the lack of civilian support, difficulties in integrating with

[234] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.
[235] Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[236] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; a similar statement was made in Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.
[237] Interview 261, researcher, Abuja, September 2021, interviewed by the author.
[238] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author. Emphasis added by the author.
[239] Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

the Hausa communities as a Kanuri-dominated group, and prosecution by security agencies (Zenn 2020a).[240] Due to JAS' focus on urban areas, it was relatively easy for the security agencies to dismantle the group.[241]

Potentially as a lesson learned, Shekau focused on the rural areas and leveraged the newly-emerged informal groups in the area during his renewed expansion to the Northwest in 2020/2021 (Samuel 2020b).[242] Shekau reached out to a number of groups via emissaries and middle persons like Adam Bitri, Sadiku, and Kali Noa (Barnett et al. 2022, p. 53).[243] Samuel (2021) reports that Adam Bitri, a friend of Yusuf and Shekau, was critical in connecting JAS and bandits in Kaduna. He was waiting to be enrolled in a de-radicalization program but then fled to Kaduna and established the link between the bandits in Kaduna and Sokoto. Bitri was killed, however, and Shekau therefore relied on Sadiku, a Fulani JAS commander shuttling between the Northwest and Northeast since 2019, to ensure that the link continued (Barnett et al. 2022, p. 59).[244]

The outreach resulted in three different types of links, although their actual extent is difficult to judge due to contradicting or imprecise sources — not least because Shekau had an interest in overselling JAS' engagement in the Northwest (ibid., p. 58), in line with his plan to divert government attention away from the Northeast. The first type of link was a loose franchise model, in which bandit groups claimed to operate as part of the violent extremist groups but did not change their behavior in any way (ibid., p. 58). On some occasions, they cooperated with JAS for specific operations (ibid., p. 57). This allowed Shekau to appear present in the Northwest without costs. An example in this regard is the abduction of more than 300 schoolboys in Kankara, Katsina state, in December 2020. Shekau claimed responsibility and shared a proof-of-life video of the children. Yet, the involved bandit leader, Auwalun Daudawa, later rejected this claim and suggested that he had planned and implemented the abduction (Anka 2022). Apparently, Daudawa had shared the video of the boys with Shekau hoping to improve his position in the negotiations with the government (Barnett et al. 2022, p. 58). This is against the background of the abduction of the Chibok girls by Shekau in 2014, which allowed Shekau to extort a high ransom and free imprisoned group members.[245] Yet, this time, "he [Shekau] wasn't taken seriously — not even by the government" (Samuel 2021).

Second, several sources point to cooperation between JAS and the bandits in the form of training. JAS supposedly shared its expertise on raids, mass abductions, the use of weaponry like anti-aircraft guns and Improvised Explosive Devices (IEDs) and even trained some of the bandits in the Northeast (Barnett et al. 2022, pp. 47, 52).[246] The former ISWAP members claimed that the bandits and "the people of Shekau"

[240] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.
[241] Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[242] Interview 167, traditional ruler, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[243] Interview 239, journalist, Abuja, November 2023, interviewed by the author.
[244] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[245] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.
[246] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author.

worked together and "give each other advice."[247] A journalist, who I consider knowledgeable and trustworthy on this issue, rejected these claims, however. While there was an exchange of intelligence, there would be no tangible evidence for training or weapon supply between the groups.[248] Similarly, a state official in Kaduna argued that Boko Haram would "inspire" the bandits, which I interpret as a less extensive relationship than providing training or the exchange of tangible goods.[249]

Third, bandits allowed JAS to set up a base in Shiroro in Niger state in 2021, from where they conducted attacks against communities which seemed to have been at least coordinated with the bandits (ibid., pp. 56–58). This Shiroro cell was led by Sadiku, Shekau's middle person for reaching out to the bandits (ibid., p. 59). The Shiroro cell reached a treaty between "groups loyal to Shekau and those not" that established the co-existence of these groups as they committed to refrain from attacking each other (Samuel 2021). The existence of this cell was corroborated by the public exchange of videos between Shekau and the fighters in Niger state (ibid.). In their video response, the fighters in Niger state also referred to their brothers in Zamfara, but to my knowledge, it is not clear whether and where exactly another JAS cell operated in Zamfara (Zenn 2020a). According to an insider source cited by Barnett et al. (2022, p. 57), JAS furthermore had loyalists in southern Kaduna and Plateau state.

In addition, there was a transactional element to the relationship between JAS and the bandits which points to the economic interests that JAS was pursuing in the Northwest. This included the smuggling of weapons and motorcycles (ibid., p. 57).[250] Another example was the sale of protection charms to the bandits by Boko Haram members as reported by a local government official from Kaduna.[251]

I now turn to the analysis of ISWAP and Ansaru, which were much more governance-oriented and accordingly also chose a different strategy towards the bandits. However, the role of ISWAP in the Northwest is difficult to ascertain empirically. Speculations range from their complete absence over limited outreach to the bandits to military operations against the government but without cooperation with the bandits. This picture is further blurred because some sources talk about an overlap of Ansaru and ISWAP in the region (Zenn 2020a). In either way, the involvement of ISWAP seems to be much more limited than in comparison to JAS and Ansaru. This seems plausible considering that ISWAP had weaker push and pull factors that would motivate the group to expand to the Northwest.[252] On the one hand, ISWAP was much more successful and stronger in the Northeast than JAS. Hence, it had fewer incentives to divert government attention, for example. On the other hand, the group had stable financial income through taxation in the Lake Chad area

[247] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[248] Interview 239, journalist, Abuja, November 2023, interviewed by the author.
[249] Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[250] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.
[251] Interview 188, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.
[252] Interview 261, researcher, Abuja, September 2021, interviewed by the author.

and their transnational connections to the so-called IS (Warner et al. 2022, p. 152).[253] Accordingly, the group had less incentives to turn to the Northwest for economic reasons.

The ideological differences to the bandits also lowered ISWAP's incentive to cooperate with them. ISWAP's governance orientation and reliance on civilian support stood in direct contradiction to the violent behavior of the bandits (Hassan and Barnett 2022, p. 21).[254] The former members of ISWAP explicitly rejected mass kidnappings of Muslims as an acceptable tactic — a tactic the bandits frequently engaged in.[255] Cooperation would hence only have been possible if bandits changed their modes of attack or ISWAP compromised on its principles by allowing the bandits to continue kidnapping and killing civilians (Barnett et al. 2022, p. 60). Some sources point to the former because ISWAP allegedly reached out to bandit leaders to convince them of their ideology and to train them in their governance approach (Zenn 2020a; Barnett et al. 2022, p. 53). In contrast, two sources claim that ISWAP directly attacked the bandits to protect the communities against them.[256] Another source, however, rejected that claim.[257] Also, the quantitative analysis did not capture any clashes between ISWAP and the bandits (see network visualizations in the appendix A.6).

There are also some indications that ISWAP tried to establish its presence in the Northwest independently from the other armed groups. For example, villagers from Niger state have reported ISWAP's presence since 2019 without ISWAP publicizing its activities in that area (Zenn 2020a). According to Abdulaziz (2021), ISWAP developed cells in much of northern Nigeria and was "building capacity of several smaller radical groups." This is consistent with the claim of the interviewed former ISWAP fighters that the group had a presence almost throughout all of Nigeria, including Nasarawa, Niger, Katsina, the capital Abuja, and some states of the South.[258] I was not able to verify this claim, however.

Considering that ISWAP was renowned for its focus on government rather than civilian targets, it seems plausible that ISWAP wanted to use its presence to target the government directly. As early as October 2019, the group claimed responsibility for an attack on government troops in Sokoto (ibid.). Similarly, the government claimed that ISWAP had attacked a military outpost in Sokoto in September 2021 ("DHQ admits ISWAP attack" 2021). However, government and civil society interviewees rejected this presentation of the incident and maintained that the latter attack was launched by bandits.[259] The government potentially misrepresented the attack to downplay the strength of the bandits and secure additional funds for the fight against international terrorists rather than local criminals.[260]

[253] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[254] Interview 261, researcher, Abuja, September 2021, interviewed by the author.
[255] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[256] Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[257] Interview 239, journalist, Abuja, November 2023, interviewed by the author.
[258] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[259] E.g., Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i; Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.
[260] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 295, Armed Forces,

Ansaru is the last formal armed group to be discussed. Ansaru's case is different from JAS and ISWAP because the group was exclusively active in the Northwest (cf. case chapter 5.2.2). After many years of inactivity, the destabilized situation in the Northwest offered the group the possibility to re-emerge, rather than to to expand its influence geographically. Ansaru was primarily present in Birnin Gwari, connecting Kaduna, Niger, and Zamfara states.[261] In addition, some activities of Ansaru and Al-Qaeda in the Islamic Maghreb (AQIM) fighters were reported from northern Sokoto, at the border to Niger (Barnett et al. 2022, p. 63).

Like ISWAP, Ansaru is a governance-oriented group. Therefore, it tried to recruit among the bandits and to indoctrinate them with their ideology (Anka 2022; Zenn 2020a). Ansaru issued a public statement in Fulfulde in 2019, in which it urged the bandits to join (Barnett et al. 2022, p. 62). To build a good rapport with the bandits, they sold them weapons at low market prices (Forquin et al. 2022, p. 39) and provided them with access to weapons from Niger (Abdulaziz 2021). If the bandits rejected to join — which seemed to be mostly the case — Ansaru either co-existed with them or confronted them violently (ibid.). The former was the case with the bandit leader Dogo Gide, who did not want to join the extremists but was open for an alliance and therefore allowed the group to operate in his area (Barnett et al. 2022, pp. 54, 62).[262] Apparently, Dogo Gide liked to present himself as a well-connected transnational violent extremist but was "not convincing" because he lacked basic knowledge about them (ibid., p. 55).[263]

At the same time, Ansaru apparently tried to temper the brutal behavior of the bandits, for example by declaring a "ceasefire on abductions" (Sadiq 2021). When the bandits did not comply with this or other rules declared by Ansaru, Ansaru attacked them (Sadiq 2021; Barnett et al. 2022, p. 63).[264] This adversarial relationship has been identified in the quantitative analysis too. As a result, Ansaru was increasingly linked to the Hausa sedentary communities rather than the bandits or Fulani (Barnett et al. 2022, p. 63). The confrontation of the bandits is in line with Ansaru's goal of governing the communities in the Northwest and protecting them against attacks from the outside. Their governance system was relatively sophisticated and included the provision of public goods and services, charity, and entertainment (Abdulaziz 2021).[265] According to the journalist interviewed, Ansaru realized that grievances over poor governance were more effective in mobilizing communities for their cause than religious messages.[266] This said, Ansaru was a small group and only governed a few communities.[267] The group was not able to counter the bandits over a sustained period or at a larger scale (Barnett et al. 2022).

Abuja, October 2021, interviewed by the author.

[261] Interview 239, journalist, Abuja, November 2023, interviewed by the author.

[262] ibid.

[263] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

[264] See also, Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.

[265] Interview 239, journalist, Abuja, November 2023, interviewed by the author.

[266] ibid.

[267] ibid.

All in all, the link between the bandits and the violent extremist groups was limited: be it for cooperation or violent confrontation. The evidence suggests that cooperation was rare due to the rejection of the extremist groups by the bandits. JAS and Ansaru actively tried to recruit and/or enter into alliances with the bandits, but only very few bandits showed interest in these overtures. On the contrary, bandits even killed some of the members of the violent extremists that reached out to them.[268] The evidence suggests that differences in ideology became the biggest obstacle for more extensive cooperation because the bandits were not receptive to the extremists' indoctrination attempts (Anka 2022; Barnett 2021).[269] This is interesting because theories of diffusion suggest that shared religion fosters relationship building (Horowitz 2010, p. 43; Bandiera and Rasul 2006). However, bandits and Boko Haram followed different schools within Islam.[270]

Other reasons for the limited cooperation between bandits and violent extremists included differences in goals, the historical rivalry between Fulani and Kanuri, and the organizational characteristics of the bandits. The violent extremists had maximalist goals and strived for political power and the establishment of their own state. The bandits, in turn, had more limited goals focused on economic gains and the marginalization of the Fulani (Barnett et al. 2022, p. 46).[271] The Fulani, which made up a substantial part of the bandits, were attributed to a strong sense of cultural independence.[272] In combination with the historic rivalry between the Fulani-led Sokoto caliphate and the Kanuri-led Borno Karnem empire (Fagbule and Fawehinmi 2021), I assume that the Fulani bandits were reluctant to adopt the beliefs and practices of Kanuri violent extremists. Furthermore, the organizational structure of the bandits as a loose network of small gangs likely prevented the establishment of more comprehensive relationships (Abdulaziz 2021; Barnett et al. 2022). Finally, Barnett et al. (2022, p. 47) point out that the bandits were so strong that they did not need the support of the extremists and had simply no incentive to cooperate.

Nevertheless, a few bandits were still interested in cooperation. First, the link to the violent extremist groups was a way for the bandits to increase their capabilities relative to the government and to rival groups, in particular at a time when the government began to exert more military pressure on these groups.(ibid., p. 55).[273] More specifically, bandit leader Dogo Gide hoped that his link to Ansaru would improve his position in negotiations with the government and similar considerations have been reported for the bandit leader Turji (ibid., p. 55).[274] Noteworthy, Gide claimed that he allowed Ansaru to operate in his area so

[268]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[269]Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[270]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[271]Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author; Interview 239, journalist, Abuja, November 2023, interviewed by the author.
[272]Interview 288, HDP interest group, Abuja, August 2021, interviewed by the author.
[273]Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author; Interview 239, journalist, Abuja, November 2023, interviewed by the author.
[274]Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

the government would go after them rather than his gang (ibid., p. 55). This highlights the relevance of the government resource allocation at the local level. Second, cooperation might have been a strategy of the bandits to improve their position relative to their rivals. Bandit leader Alhaji Shingi, for example, pointed out that if he did not cooperate with JAS, his rivals might do so (ibid., p. 53). Third, the ideology of the extremist groups provided the bandits with "prestige and legitimacy," turning them from "thieves of the forest" into religious fighters (Abdulaziz 2021; Barnett et al. 2022, p. 55).[275]

The last observable implication evaluates whether the cooperation between the formal and informal groups — even if it was limited — had an impact on the behavior of the informal groups. For the observable implication to be supported, the informal groups should assimilate to the formal groups starting in 2020 when the cooperation began.[276] In sum, the evidence is mixed. Qualitative sources see significant similarities between the formal and informal groups, but the quantitative data is less clear. A limitation of the quantitative data is that the bandits can only be approximated as distinct actors after 2018 which precludes an analysis of their behavior in the years before.

The qualitative sources identify the mass abductions of students, sexual violence,[277] cattle rustling,[278] and the raiding of villages, sometimes occupying the location in the aftermath, as similarities between the bandits and Boko Haram.[279] As one interviewee put it: "We find it very difficult to differentiate between the bandits and the Boko Haram. In the sense that both militias are armed, they attack and kill, they kidnap for ransom. So their mode of operation is almost the same."[280] However, two state-government officials interviewed in Kaduna cautioned against reading too much into these similarities. The kidnappings by the bandits by far exceeded the activities of Boko Haram, for example.[281]

For the assessment of this observable implication with quantitative data, Figure 7.3 and Figure 7.4 show the target choice and the modes of attack of the bandits and JAS in comparison.[282] The figures are only based on events for which the respective group is coded as the attacker to capture their choice when they are proactive. To capture shifts in the bandits' and JAS' tactical choices rather than their level of activity, the figures show the relative share of targets and event types instead of absolute numbers. I focus on JAS because ISWAP likely did not cooperate with the bandits, and Ansaru hardly engaged in violence during the observational period (or at least their violence is not captured by the quantitative data).

[275] ibid.

[276] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[277] Interview 507, HDP interest group, Sokoto, October 2021, interviewed by the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i

[278] Interview 261, researcher, Abuja, September 2021, interviewed by the author.

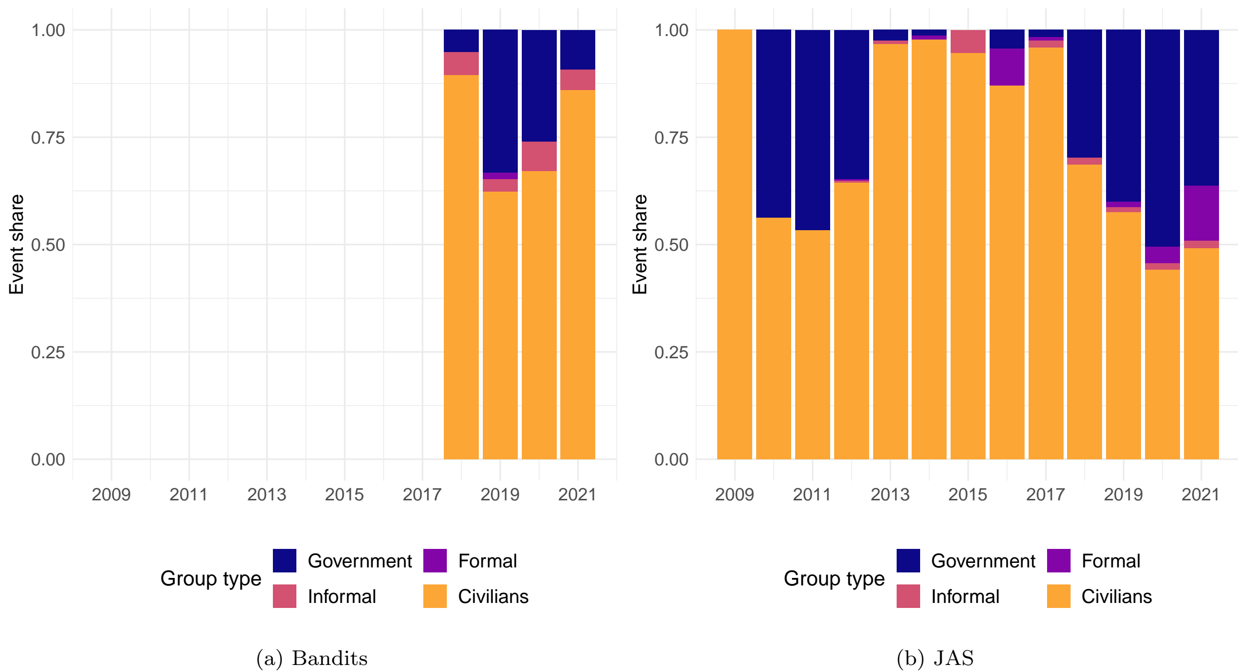
[279] Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 506, traditional ruler, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

[280] Interview 319, researcher, Maiduguri (remote), September 2021, interviewed by the author.

[281] Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[282] Note that I included both, events that have been attributed to JAS and those that have been attributed to JAS or ISWAP. The results of the quantitative comparison should hence be interpreted with care. For example, JAS' engagement with the government is likely overestimated. See research design chapter 4.2.2 for a discussion of the attribution problem.

Source: Own figure based on ACLED by Raleigh et al. (2010).

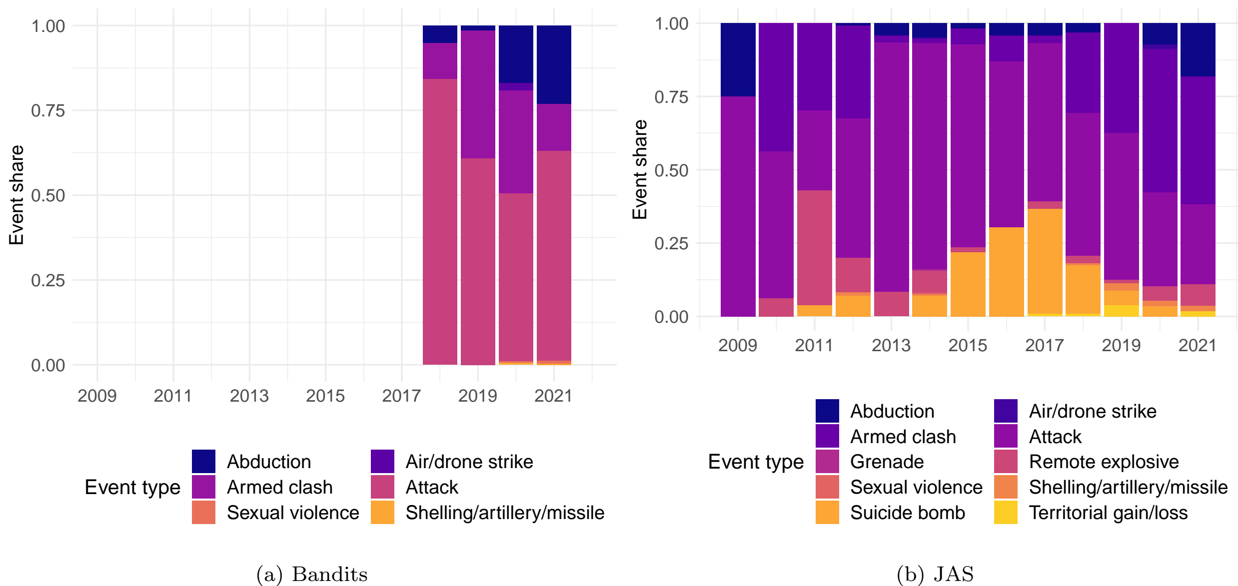


(a) Bandits

(b) JAS

Figure 7.3: Comparing the target choice of bandits and JAS

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) Bandits

(b) JAS

Figure 7.4: Comparing the modes of attack of bandits and JAS

Figure 7.3 (b) indicates that there is substantial variation in Boko Haram's target choice. More than 40% of their attacks target the government before 2013 and after 2017, but in the period in between, civilians are the main target by far. I conjecture that JAS influenced the bandits in 2020 and 2021, i.e., at a time when the government was an important target for the group. If the bandits assimilated to Boko Haram,

I would hence expect them also to target the government directly. Indeed, Figure 7.3 (a) shows that the bandits attacked, in relative terms, more government targets in 2019 and 2020 than in the first documented year, 2018. Yet, the relative increase in government targets reduced again in 2021. The temporal pattern contradicts my expectations because the increase and peak in government targeting preceded the cooperation with JAS in 2020/2021.

Similarly, comparing event types of the bandits and JAS in Figure 7.4 shows major differences between the groups. The bandits had far less variety in their mode of attack. For example, they did not use any suicide bombing or remote explosives like IEDs. There was a notable increase in abductions by the bandits, which some of the interviewees had seen as the influence of JAS. ACLED, however, shows that abductions made up only a small share of the violent activities of JAS. In 2019, for example, JAS was not involved in a single abduction. This raises the question of whether the influence between the groups went in the other direction and JAS assimilated to the bandits. This has been suggested by Barnett et al. (2022) who speak of a “banditization of jihad.” I return to the issue of assimilation when I discuss the possibility of non-relational learning between the groups as an alternative explanation.

In sum, tracing the cooperation between the violent extremists and the bandits as well as the consequences for their behavior requires future research as the evidence is inconclusive. Ideally, such research will include interviews with members of the armed groups. Critically, Shekau died in May 2021, and the analysis had to focus on the short period from 2020, when the cooperation began, to his death. Shekau likely committed suicide during a battle with ISWAP (“Abubakar Shekau” 2021). After his death, JAS disintegrated with thousands of fighters surrendering to the government, some switching sides to ISWAP, and only a minority continued to operate as JAS (Barnett et al. 2022, p. 59). It can only be speculated how the relationship between JAS and the bandits could have deepened otherwise and how this would have influenced the groups’ behaviors. Shekau’s death during infighting with ISWAP, which potentially escalated because the government was distracted by the crisis in the Northwest, underlines the close intertwinement of the processes in the conflict network and the importance of feedback effects across conflicts.

In conclusion, the process tracing of the Nigerian case uncovered the consequences of the Boko Haram conflict and of the resource allocation of the government for the conflict network. Concretely, I found strong evidence for the influence of the civil war parties on community life and, by extension, on community-level conflicts and crime within the civil war conflict zone. ISWAP and the CJTF established institutions and practices to resolve disputes and prosecute crime, partly in a draconian manner. The activities of JAS and the government displaced millions of people, disrupting community life fundamentally. Outside the civil war conflict zone, I have provided compelling evidence that the government’s security agencies’ lack of manpower and equipment made them almost passive observers of the escalating banditry crisis and farmer-herder conflicts. This led to the decentralized and widespread mobilization of vigilantes and banditry groups.

I further offered a detailed assessment of how these countervailing developments in the Northeast and Northwest weakened the government while opening up new opportunities to ISWAP, JAS, and Ansaru. I showed that the government became increasingly thin-spread across the various crises and relied on air strikes in the Northwest to compensate for its weak presence on the ground. This, however, aggravated the situation in that region further. Likely, JAS and Ansaru seized this opportunity and sought to find arrangements with the bandits to increase their operations in the Northwest. However, the evidence is less clear on this issue, not least due to the secretive nature of these organizations (Prieto Curiel et al. 2020).

In this chapter, I demonstrated through the systematic assessment of observable implications that the theoretical argument is supported by evidence from a variety of sources, including original interview data and participatory network drawings. The goal of this chapter was to show that the argument developed in an iterative process is deeply grounded in evidence, not to test a deductively derived argument. It is in the subsequent chapter 3.3 on alternative explanations where I evaluate the explanatory power of my argument in comparison to seven alternative explanations.

Chapter 8

Assessing alternative explanations and external validity

This chapter evaluates alternative explanations for the patterns of violence observed in the Nigerian case and discusses the external validity of the theoretical argument. This is critical to avoid two pitfalls of single-case studies developed in an iterative process: confirmation bias and idiosyncrasy, i.e., tailoring the explanation to the Nigerian case at the expense of relevance for the population of cases. Systematically collecting and analyzing evidence on a wide set of alternative explanations can prevent confirmation bias. Assessing the transferability of the theoretical argument to other cases within and beyond the scope conditions allows me to probe the external validity of my argument. Transferability focuses on the applicability of a theory to other cases and contexts instead of the generalization to the whole population of cases (Maxwell and Chmiel 2014). I first assess the alternative explanations and then turn to the external validity.

8.1 Alternative explanations

The previous chapter showed that the candidate explanation is empirically supported. Yet, it is only together with the *lack* of support for viable alternative explanations that one gains confidence in the explanatory power of the candidate explanation. This is because the relationship between the candidate explanation and the alternative explanations is not mutually exclusive (cf. Zaks 2017). I distinguish the seven alternative explanations according to their focus on structure, agency, or external influence. The observable implications have been specified in Table 4.4 in the research design chapter. They will be outlined at the beginning of each of the subsequent sections. I assess the observable implications with a mix of ACLED data on the violence patterns, quantitative data on structural measures like state capacity, and qualitative evidence. Table 8.1

provides an overview of the results.

Alternative explanation	Supported
State capacity	✖
Lootable resources	O
Ethnic favoritism	✖
Non-relational diffusion	✖
Alignment	✖
External sponsors	✖
Weapon proliferation	O

Note: ✔= supported; O= inconclusive; ✖= not supported

Table 8.1: Overview of the results for the alternative explanations

8.1.1 Structural explanations for the subnational variation in violence in Nigeria

My theoretical argument seeks to explain a puzzling spatial variation: conflicts between informal groups escalate and fragment outside the civil war conflict zone but not within. I have argued that this is a downstream effect of the resource allocation in response to the civil war. One alternative explanation is that the variation in violence caused by informal groups is driven by ex-ante variation in structural conflict drivers rather than interdependence between the conflicts. I consider two different conflict drivers: state capacity and lootable resources. I identify one observable implication for the relevance of state capacity and two for lootable resources. If state capacity drives spatial variation, we should witness conflicts between informal groups escalate in areas with low state capacity *before* the civil war (Observable Implication A1.1). The temporality of the observable implication also addresses the concern that the weak state presence in the Northwest is not related to the resource allocation problem but a result of — and hence endogenous to — strong informal groups. For lootable resources, I expect conflicts between informal groups to escalate and fragment where lootable high-value resources are located (Observable Implication A1.2). The prevalence of lootable resources should thus explain the spatial variation in violence. Fluctuations in resource prices — in the Nigerian case, the price of gold — should furthermore co-vary with the fighting, thereby explaining the temporal variation in violence. Precisely, we would expect fighting to increase after the price of the resource increases (Observable Implication A1.3).

I begin by discussing the relevance of pre-conflict state capacity. One way state capacity can be observed is through legibility, i.e., "the breadth and depth of the state's knowledge about its citizens and their activities" (Lee and Zhang 2017, p. 118). The data by Lee and Zhang (ibid.) shows that state capacity most likely

cannot explain the spatial variation in violence. Lee and Zhang (ibid.) measure state capacity based on legibility using the Myers index, ranging from 0 to 90, where higher values indicate *lower* state capacity. The Myers index captures the accuracy of the age documentation in national censuses, and the authors propose that lower accuracy can be interpreted as lower state capacity. In the Nigerian case, the data by Lee and Zhang (ibid.) is available for the 2006 census and thus captures state capacity before the onset of the civil war and the large-scale conflicts between informal groups (cf. network visualizations for 2006 in the appendix, Figure A.18 and A.40).

Source: Own figure based on data by Lee and Zhang (2017) and Ordu (2023).

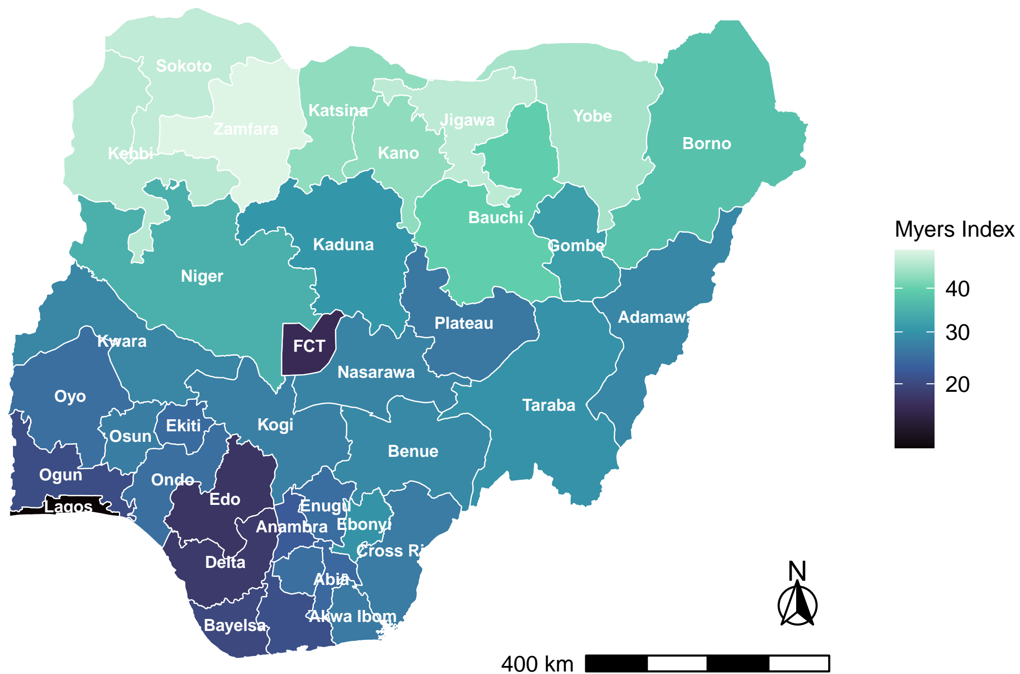


Figure 8.1: Map of Nigeria indicating the Myers Index (2006)

The Myers index shows the stark difference in state capacity between the north and south of the country but far less variation across the north. Figure 8.1 indicates the Myers index per state. Brighter colors correspond to lower state capacity. The northern states have an average Myers index of 35.34 (49.78 maximum), and the southern states have an average of 22.83 (maximum 30.06). Within the north, low state capacity does not seem to correlate with the occurrence of conflicts between informal groups. The latter are spatially concentrated in the Northwest and Northcentral and limited in the Northeast. According to the Myers index, however, the state has a higher capacity in the Northcentral than in the Northwest and Northeast.

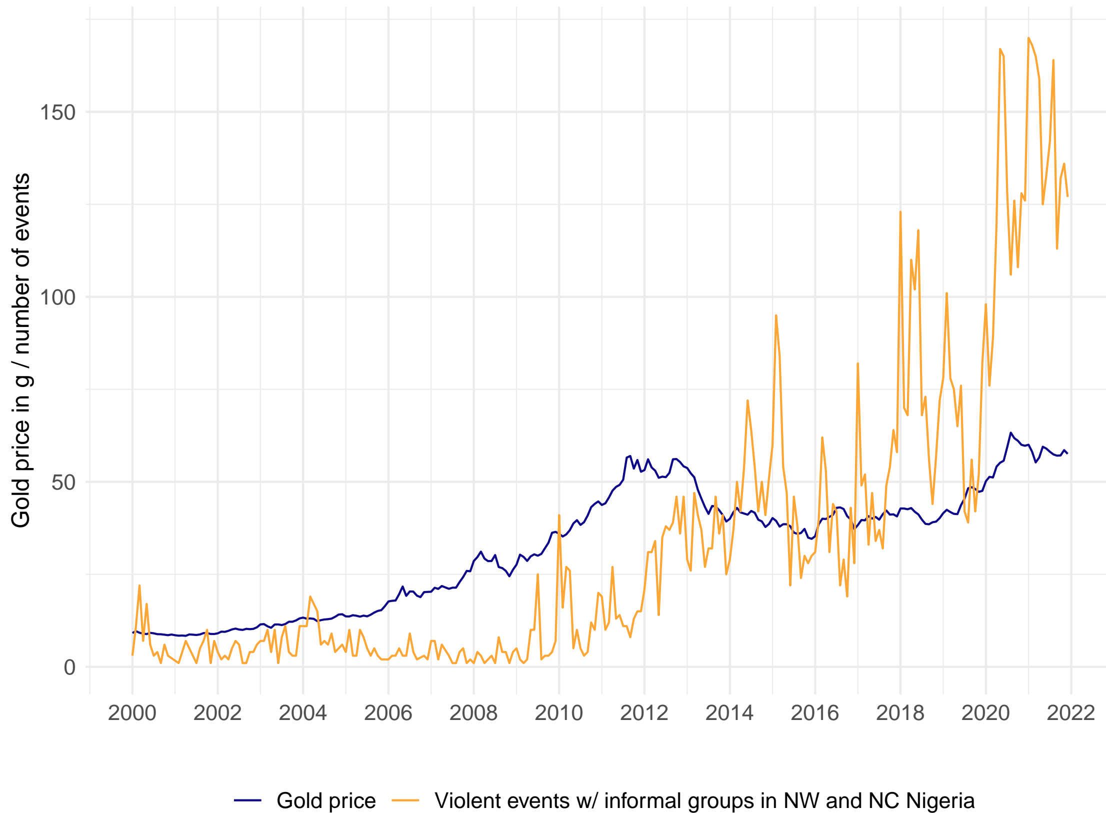
The high variance in the Myers Index across states within the same geopolitical zone, which does not

seem to correlate with the level of conflict in these states, also puts in question the relationship between state capacity and conflicts between informal groups. For example, Kaduna state in the Northwest is one of the most affected states by banditry but has a higher state capacity than Borno in the Northeast, where conflicts between informal groups are almost absent (Myers index of 30 in comparison to 37). Similarly, Katsina — located in the Northwest and heavily affected by banditry — and Yobe — located in the Northeast and mostly spared by informal group conflicts — share a very low level of state capacity (Myers index of 43 and 45). In short, there is no clear pattern that state capacity correlates with the location of conflict between informal groups. In addition, the quantitative component of this study described a rapid process of conflict escalation and fragmentation, which structural measures can not account for, at least on their own.

I now turn to the second structural alternative explanation that examines the role of lootable resources in explaining the spatial and temporal variation in violence. Gold is the most important high-value resource in northern Nigeria. The locations of natural gold deposits and banditry violence seem to coincide, supporting the alternative explanation. Yet, the evidence on the temporal co-variation of resource prices and violence, as well as the evidence from qualitative sources, is mixed. The mineral resource map by the Nigerian Geological Survey Agency shows that gold is concentrated in the Northwest and Northcentral, in particular in Zamfara, Niger, and Kaduna (*Mineral Resources* 2023). By contrast, gold hardly occurs in the Northeast, where instead clay and diatomite are the most common resources — both of which hold comparatively low value. It is thus notable that the location of the gold deposits in Nigeria is congruent with the geopolitical zones most heavily affected by banditry, one form of conflict between informal groups. A link to farmer-herder conflict is less apparent. This is plausible, considering that farmer-herder conflicts are livelihood conflicts while banditry is more akin to organized crime and thus more likely to be linked to illicit mining.

To assess whether lootable resources are able to explain the temporal variation in violence, I compare the development of the global gold price (US Dollars (USD) per gram) and of the number of violent events involving informal groups in the Northwest and Northcentral, i.e., the geopolitical zones with the gold deposits. Figure 8.2 shows that the gold price quadrupled between 2004 and 2013. However, violence by informal groups only increased after 2009, i.e., with a time lag of five years. Also, the violent events continued to increase after the gold prices decreased between 2013 and 2016 and stagnated thereafter. The only period that speaks in favor of the link between resource prices and violence between informal groups is the increase in both late 2019 and early 2020, respectively. In short, based on this preliminary analysis, lootable resources do not seem to be able to explain the temporal variation in violence.

Source: Own figure based on *Commodity Price Data* (2024) and Raleigh et al. (2010).



Note: NW = Northwest, NC = Northcentral

Figure 8.2: Comparing the gold price and the number of violent events (2000–2021)

The analysis of qualitative primary and secondary data on the link between illicit mining and banditry is equally inconclusive. On the one hand, mining was seen as the main income source allowing the bandits to expand their capabilities through new weaponry and recruiting.[1] Several interviewees vividly described how helicopters came in from abroad, picked up minerals, and left weapons in return (Rufa'i 2021, p. 13).[2] The involvement of foreign helicopters was also confirmed by the interviewed army officer: "The helicopters are not ours."[3] Other sources link the banditry crisis to a competition between miners who hired bandits to protect their areas and fight against others (ibid., p. 13).[4] The bandits' involvement in mining furthermore protected them against prosecution because state-level officials also participated in the illicit mining business and therefore had an interest in keeping the federal government out (ibid., p. 13).[5] This has to be seen

[1] Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 193, local-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

[2] Interview 288, HDP interest group, Abuja, August 2021, interviewed by the author; Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author.

[3] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[4] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[5] Interview 243, researcher, Abuja, November 2023, interviewed by the author; Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.

against the background that natural resources in Nigeria belong to the federal government and that the federal government banned mining in 2020.[6] As an employee of an international NGO laconically remarked: "There has been a ban on mining now, but I do not understand the system as the [state] governor has one mine in his hometown."[7]

On the other hand, the illicit mining explanation for banditry was dismissed as overstated, in particular by study participants who had a closer relationship to Fulani pastoralists and emphasized the political nature of the conflict. A government official and expert in pastoralism claimed: "All these theories I have heard them... [...] But I really can't see the direct link between banditry and mining. [...] I've never gotten a single evidence or sign of any direct link between the two."[8] Accordingly, a more fine-grained perspective on the spatial correlation between banditry and mining would contradict the conjecture of a close link as "the areas where banditry is entrenched is far away from the mining sites."[9] Instead, the interviewees emphasized the origin of the conflicts in the tensions between farmers and herders and intra-Fulani cattle raiding.[10]

Other sources acknowledged that mining plays a role in banditry but considered it less relevant. The miners, for example, did not actively incite violence but had to pay a protection fee to the bandits (Rufa'i 2021, p. 15). This would also explain why mining sites were mostly spared from banditry attacks.[11] In addition, the enforcement of the mining prohibition was relatively efficient, at least preventing illicit mining at a large scale.[12] The ban rather had the indirect effect that youth became unemployed and more easily recruited into banditry (Obi and Iwuoha 2023, pp. 11–12).

To conclude, it cannot be ruled out that lootable resources contributed to the high severity of conflicts between informal groups in northern Nigeria — but it is equally not clear that it had a major impact. More research is needed to elucidate this link. As one interviewee pointed out, mining and conflict seem somewhat related in Nigeria, but there is little systematic research on this topic.[13] I argued that this alternative explanation is not mutually exclusive with the candidate explanation, i.e., the relevance of mining does not necessarily rule out that my theoretical argument is at play. Indeed, the two explanations can potentially complement each other: that informal groups could engage in illicit mining is another consequence of the power vacuum due to the prioritization of the civil war. My argument might thus account for the temporal variation in violence.

[6] Interview 243, researcher, Abuja, November 2023, interviewed by the author.
[7] Interview 288, HDP interest group, Abuja, August 2021, interviewed by the author.
[8] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[9] ibid.
[10] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.
[11] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[12] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.
[13] Interview 288, HDP interest group, Abuja, August 2021, interviewed by the author.

8.1.2 Agent-based explanations for government and armed group behavior in Nigeria

Agent-based explanations emphasize the behavior of armed and non-armed actors to explain the conflict dynamics. I focus on three arguments that can offer alternative explanations for different parts of the theoretical mechanism. First, the prioritization of the civil war and the lack of intervention in the conflicts between informal groups might be the result of ethnic favoritism rather than the government's threat perception. Following Franck and Rainer (2012), I expect that the allocation of coercive resources should be sensitive to the changes in the ethnic composition of the federal government if this explanation is correct (Observable Implication A2.1).

Second, the escalation of conflicts between informal groups could be related to non-relational diffusion rather than direct cooperation between the formal and informal armed groups. To differentiate between relational and non-relational diffusion, I unpack the notion of assimilated behavior. For either type of diffusion, I expect assimilation of the receiver — in the case of this study, the informal armed groups — in terms of tactics employed, i.e., in the modes of attack and target choice (Horowitz 2010, p. 38). Yet, it is only for relational diffusion that I expect the groups also to adopt the goals and ideological beliefs. Adopting the goals and beliefs of another actor requires deep learning (Simmons et al. 2006, p. 795), and I conjecture that deep learning is unlikely without direct contact. Similarly, the diffusion of complex and skill-demanding military technologies is unlikely feasible based on mere observation (Gilli and Gilli 2019). If I see that informal groups adopt such technologies, this would speak against the relevance of non-relational diffusion. In short, if non-relational diffusion is the dominant channel of diffusion, I should observe that informal groups assimilate in modes of attack and target choice to the formal group(s) but do not adopt their goals and ideological beliefs (Observable Implication A2.2) and only those tactics that do not require advanced military technology (Observable Implication A2.3).

Third, the absence of conflicts in the civil war conflict zone might be due to the alignment of conflicts between informal groups with the civil war master cleavage. The civil war becomes a substitute for these conflicts, and the two are indistinguishable. As for observable implications, I expect that members from communities with preexisting conflicts are likely to join the opposite sides in the civil war cleavage (Observable Implication A2.4). Furthermore, if preexisting livelihood conflicts are absorbed by the civil war, the seasonality of fighting typical for livelihood conflicts involving pastoralists should manifest itself in the temporal patterns of the civil war violence (Observable Implication A2.5). This observable implication rests on the idea that the conflict issues between informal groups manifest themselves in the behavior of the civil war parties with which these groups are now aligned.

To start, I address the agent-based alternative explanation that ethnic favoritism drives the resource

allocation of the government. It is important to test this alternative explanation in the Nigerian case, since ethnic bias within the government is a popular narrative in Nigeria. In particular, representatives of (Christian) ethnic-minority groups, heavily victimized by the informal armed groups, claimed that President Buhari did not intervene to stop the violence because of his Fulani identity.[14] This narrative was connected to a conspiracy theory according to which the Fulani, and by extension President Buhari, aimed for the 'Fulanization' of the country, seeking to take over the land belonging to the sedentary farmers (Ejiofor 2022; Ukandu and Chiaghanam 2019). The popularity of this narrative has to be seen in the light of the jihad of Usman Dan Fodio in the early 19th century, during which many of the Hausa and ethnic-minority communities mobilized to resist the Fulani conquers (Fagbule and Fawehinmi 2021).

During the observation period (2000–2021), there were three government changes, one of them after the civil war onset in 2015. The change in ethnic composition, however, was not very pronounced in either of the government changes. Since the transition to a civil regime in 1999, successive Nigerian governments have shared power between the major ethnic groups and geopolitical zones. Therefore, the Hausa-Fulani, the Yoruba, and Igbo alternated between junior or senior partner roles in the federal government throughout the observational period (*Nigeria* 2021a). It is also common practice that the president picks a vice president from another ethnic group. This is critical as vice presidents were required to step in the past. For example, the Ijaw vice president Goodluck Jonathan became acting president after the death of Fulani President Yar'Adua and was elected president during the subsequent elections. Similarly, the Yoruba vice president Yemi Osinbajo carried on the presidential duties when President Buhari was on leave for medical treatment (ibid.).

This power-sharing practice and hence continuity in the inclusion of ethnic groups in government might explain why there were no pronounced shifts in resource allocation after the presidency changed from a Christian Ijaw (Goodluck Jonathan) to a Kanuri-Fulani Muslim (Muhammadu Buhari) in 2015.[15] With regard to coercive resources, Jonathan and Buhari were both repressive towards the Boko Haram conflict and relatively hands-off towards the informal groups in the Northwest. Arguably, the conflicts between informal groups had not yet escalated so dramatically when Johnathan was in power. The central question is then why Buhari's reaction to the informal group violence in the Northwest and Northcentral was so delayed. As I outlined above, some people interpreted this delay as an indication of Buhari's pro-Fulani bias. It is unclear, however, why a pro-Fulani bias would necessarily entail that the government is *not* intervening. The absence of security agencies in the Northwest seemed to affect Fulani and non-Fulani alike.[16] Indeed,

[14] E.g., Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 172, ethnic/livelihood interest group, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 232, ethnic/livelihood interest group, Abuja, August 2021, interviewed by the author.

[15] While Buhari is publicly portrayed as a Fulani, he has a Kanuri mother (Interview 232, ethnic/livelihood interest group, Abuja, August 2021, interviewed by the author). From the perspective of ethnic favoritism, he should be lenient towards both, the Fulani groups and the Kanuri-dominated Boko Haram.

[16] Interview 103, Muslim religious leader, Kaduna, interviewed by the author, August 2021; Interview 167, traditional ruler,

banditry supposedly started with intra-Fulani violence which left many of the pastoralist Fulani communities impoverished. Also, Fulani were heavily victimized by the vigilante groups. If the government was biased towards the Fulani, one could equally argue that the government should have intervened to protect the Fulani civilians.

Ultimately, it is difficult to separate the allocation based on threat perception from one based on ethnic favoritism since this question requires understanding the intention of the government, which is difficult to observe directly. As one interviewee pointed out: "One could say it [the non-response to Fulani-related violence] is about ethnic affiliation; but at the same time, the government was simply really busy with Boko Haram."[17] I have provided strong evidence in the analysis of the candidate explanation that the weak intervention in the conflicts in the Northwest was at least partially related to the demanding response in the Boko Haram conflict. In combination with a continuation of resource allocation across government cabinets, I conclude that there is no convincing evidence that the government's resource allocation was predominately based on ethnic affiliations.

I now turn to non-relational diffusion, the second agent-based alternative explanation. The combination of the evidence for the candidate explanation and for the alternative explanation rejects the idea that non-relational diffusion played an important role in the Nigerian case. The analysis of the candidate explanation has already shown in chapter 7.5.2 that JAS was in direct contact with some bandit leaders — pointing to the relevance of relational rather than non-relational diffusion. Since the bandits were mostly not receptive to JAS' overtures, it is not surprising that ACLED does not indicate a systematic assimilation of the bandits' behavior to JAS. Without the assimilation of behavior, the question of the mechanism of diffusion (relational or non-relational) becomes irrelevant. Nevertheless, there are a few individual instances in which analysts have pointed to the potential assimilation of bandits to violent extremists. These instances neither support the idea of non-relational diffusion.

First, the instances refer to the practices of the bandits in which they seemed to adopt the ideological beliefs of JAS. For example, bandit leader Dogo Gide released a video saying he would report to Al-Baghdadi in Iraq from now on, but later quickly retreated from this claim.[18] Dogo Gide furthermore claimed that he established a Quranic school and trained the abducted boys to become fighters while marrying off the girls (Abdulaziz 2021). This practice is usually associated with Boko Haram. Similarly, Turji began to enforce prayer times in the areas under his control and to prohibit the selling of drugs (ibid.). In addition, some bandits started using the particular visual language of Boko Haram in their public videos and wearing clothes similar to ISWAP (Zenn 2020a).[19] However, according to the Zenn (ibid.), it is difficult to distinguish

Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[17]Interview 243, researcher, Abuja, November 2023, interviewed by the author.

[18]Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

[19]Interview 527, journalist, Sokoto, October 2021, interviewed by the author; Interview 239, journalist, Abuja, November

whether this visual assimilation is due to direct influence by ISWAP or rather a sign of the professionalization of the bandits. Overall, these observations point to relational diffusion. Corroborating this assumption, Dogo Gide is one of the bandit leaders who had direct contact with JAS.

Second, the bandits conducted a few sophisticated attacks, for which analysts suspected an influence of Boko Haram. The sophistication of the attacks, however, precisely contradicts the idea of non-relational diffusion. One of these attacks was the assault on the Kaduna-Abuja train, an instance of direct cooperation between the bandits and JAS (cf. qualitative analysis chapter 7.5.2). According to a journalist who worked extensively on the link between Boko Haram and the bandits, the groups cooperated precisely because the bandits felt the operation was too sophisticated for them alone.[20] Another example of a sophisticated attack is the downing of a military chopper (Ewokor 2021).[21] The downing of the military chopper might have been a chance hit according to the aforementioned journalist: the chopper was overloaded, flying deep and unstable. This allowed the bandits to down it, just using machine guns.[22] A chance hit, however, does equally not support the alternative explanation of non-relational diffusion but rather puts diffusion as such in question.

If anything, it speaks to the alternative explanation that the bandits did not adopt technically sophisticated means like remote explosives, which JAS used frequently. However, the bandits had little incentive to adopt this technology since using remote explosives would not align with their tactic of using violence for resource extraction. Overall, the evidence points to limited diffusion between the civil war and the conflicts between informal groups. The diffusion that took place is likely related to direct contact between the groups.

The last agent-based alternative explanation to be assessed is the alignment of the informal group conflicts with the civil war cleavage. I find limited evidence that this dynamic is sufficient to explain the systematic absence of conflicts between informal groups in the Northeast. Applying the first observable implication to the Nigerian case, I would expect communities with a preexisting conflict to join either one of the Boko Haram factions or the pro-government CJTF. Since livelihood conflicts are the most common in the Northeast (cf. qualitative analysis chapter 7.1), I focus on the behavior of the pastoralists, fishers, and farmers from various ethnic backgrounds in the following.

At an aggregated level, the ethnic recruitment patterns do not support the alignment explanation. Most members of Boko Haram identified as Kanuri, dominating the group in terms of the number and leadership positions occupied.[23] While the CJTF was more diverse, many of the members were Kanuri too. Most pastoralists joined neither of the two sides and rather avoided the conflict-affected areas. Shuwa Arab pastoralists formed their own vigilante group called Kesh-Kesh to protect their cattle.[24] Hence, there is

2023, interviewed by the author.

[20]Interview 239, journalist, Abuja, November 2023, interviewed by the author.

[21]Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.

[22]ibid.

[23]Interview 239, journalist, Abuja, November 2023, interviewed by the author.

[24]Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 357, researcher, Abuja,

no clear ethnic division between CJTF and Boko Haram that would correspond to preexisting livelihood conflicts.[25]

Nevertheless, I encountered evidence for two types of communities whose behavior was in line with the alternative explanation. One is the community of Gowza in Southeast Borno, and the other are Buduma fishing communities at Lake Chad (Mongunu 2021, pp. 59–60).[26] The communities felt marginalized by other ethnic groups settling in their area and supposedly taking away economic opportunities from them. When the Boko Haram conflict erupted, these groups could have seen this as an opportunity to "flush out all the other ethnic groups so that they can gain control of their original space."[27] Similarly, the interviewed journalist described the strategy of ethnic groups in Gowza as follows: "Some join Boko Haram, some CJTF, they use that to inflict pain on each other."[28] Yet, it is difficult to determine the motivations of these communities as other reasons for joining Boko Haram could be their marginalization in politics and civil service and the economic opportunities associated with Boko Haram membership.[29] In the case of Gowza specifically, indoctrination might also have played a role. Gowza was the retreat for the early followers of Yusuf, which meant that they lived and preached there for years.[30]

Furthermore, if the communities join the opposite sides of the civil war cleavage to advance their position in conflicts predating the Boko Haram conflict, I should find evidence that they pick their targets based on preexisting disputes. The interviews with the former ISWAP members support this idea. For example, one of them complained about the CJTF: "Even the many people the CJTF arrested, most of them were not true Boko Haram, most of the people they arrested were people they once had disputes with, it was just another chance to get rid of the Muslim[s]."[31] A former high-ranking member of the CJTF rejected this idea. However, the interviewee might have had an interest in preserving the good reputation of the CJTF.[32] It increases my confidence in the validity of this claim that the study participant criticized the CJTF openly in other parts of the interview.

Similarly, ISWAP's target selection could be influenced by former conflicts. When asked about their target selection, the former ISWAP member replied: "When they find out a certain community is dominated by Christians they at times attack such community, or a certain community who once had a dispute with them even if it was with a single member."[33] A similar idea was reiterated by another ISWAP interviewee

September 2021, interviewed by the author.

[25]Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.

[26]Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[27]Interview 357, researcher, Abuja, September 2021, interviewed by the author.

[28]Interview 239, journalist, Abuja, November 2023, interviewed by the author.

[29]Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[30]Interview 357, researcher, Abuja, September 2021, interviewed by the author.

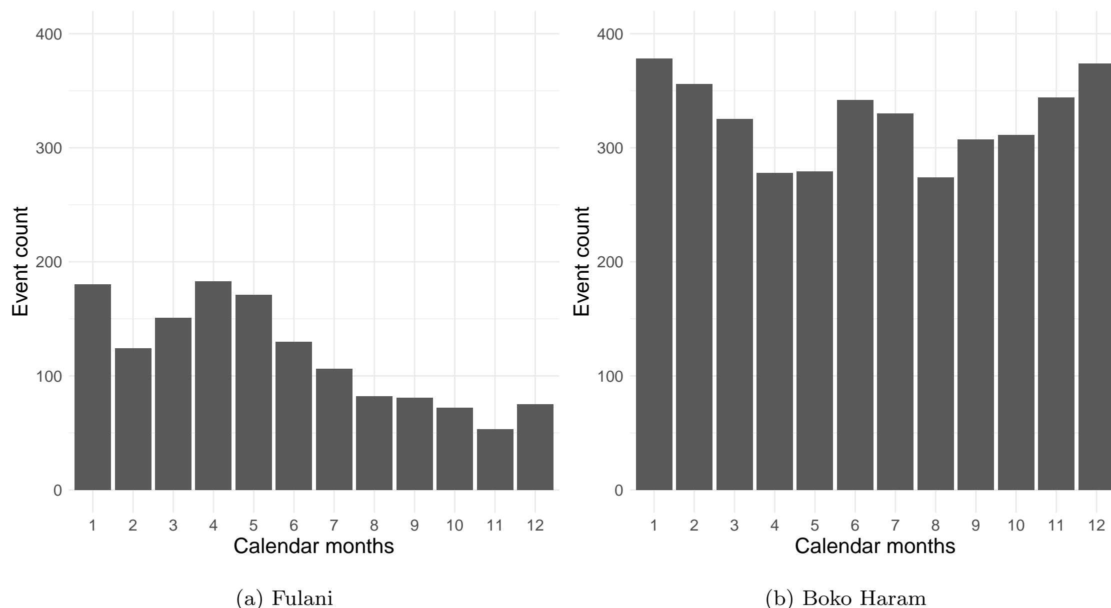
[31]Interview 443, former ISWAP member, Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi. Emphasis added by the author.

[32]Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author.

[33]Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

who claimed that his group would normally not attack civilians, "unless for example if I see a village I do not like I can decide to send people to set the village on fire."[34] However, the interview remained unclear about what "I do not like" means here, as this is not necessarily related to former feuds. Similarly, the reference to disputes "with a single member" could point to interpersonal rather than group conflicts.[35]

Source: Own figure based on ACLED by Raleigh et al. (2010).



(a) Fulani

(b) Boko Haram

Figure 8.3: Comparing the seasonality of events attributed to Fulani militias and Boko Haram (2000–2021)

Last but not least, there is no evidence that livelihood conflicts between farmers and pastoralists drive the seasonal patterns of the Boko Haram conflict. Figure 8.3 compares the number of violent events associated with the Fulani militias and Boko Haram, respectively, per calendar month for the whole observational period. Violence involving Fulani militias peaks towards the end of the dry season between February and May and declines with the rainy season between June and September (*Nigeria* 2021b).[36] For Boko Haram, however, no clear seasonality pattern is apparent. All in all, I find mixed evidence for the argument that conflicts between informal groups were absorbed by the civil war cleavage. The reported cases rather seemed to be exceptions and were not visible in the recruitment and seasonality patterns. More research is needed to better understand the motivation of the non-Kanuri communities joining Boko Haram. It seems unlikely that the alignment explanation is sufficient to explain the absence of conflicts between informal groups in the Northeast at large.

[34]Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[35]Interview 440, violent extremist, Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.
[36]The peak of events in January constitutes an outlier, which appears like a coding artifact, e.g., because events with unclear dates could be attributed to January 1st. However, ACLED only includes events for which at least the month can be determined, and I have no explanation for the outlier at this point (*ACLED Codebook* 2019).

8.1.3 External sponsors and weapon proliferation from Libya

I focus on two alternative explanations emphasizing influences external to the conflict network in explaining the escalation and fragmentation of the informal group conflicts. First, external sponsors of non-state armed groups can lead to splintering and infighting. If the explanation applies, we should observe that conflicts between the informal groups increase and fragment after at least some of the groups receive financial and/or material support from abroad (Observable Implication A3.1). Second, the proliferation of small arms and light weapons from abroad could drive the escalation of conflicts between informal groups. If this is correct, I should see that the conflicts escalated after informal groups began to source the majority of their weapons abroad (Observable Implication A3.2). Furthermore, I should observe a co-variation in the level of violence in the source country and the receiving country because the demand for weapons in the source country shapes the supply on the international market. Specifically, decreased fighting in the source country should lower the demand for weapons, which then become available internationally. In short, conflicts between informal groups should escalate after violence in the weapon-source country decreases (Observable Implication A3.3).

With regard to the first alternative explanation, I do not find support for the impact of external sponsors on the conflicts between informal groups in the Nigerian case. Specifically, I did not encounter any evidence that actors from abroad would have sponsored the bandits, vigilantes, or herders with material and/or financial resources. Some sources argued that the bandits were connected transnationally by trading resources from illicit mining against weapons (Hassan and Barnett 2022, p. 21), but trading is different from the external sponsor mechanism because it should not trigger violent competition between the sponsored groups.[37] In addition, a common narrative stated that the armed Fulani herders in Nigeria received support from Fulani in neighboring countries. Support, however, refers here to recruitment and ad-hoc cooperation with transhumanist pastoralists crossing through Nigeria rather than external sponsors (Rufa'i 2018b).[38] An interviewed expert on pastoralism contested this narrative by arguing that pastoralists would be far less mobile than depicted in this narrative.[39]

In contrast, the evidence for the impact of transnational weapon proliferation — the second alternative explanation regarding external influences — is more ambivalent. Interview partners and secondary sources often refered to porous borders and weapon proliferation after the ousting of Qaddafi in Libya in 2011 as a main driver of conflict in Nigeria (Ebiede 2017a, p. 33; Ojo 2020).[40] According to one interviewee, a bandit claimed: "It is easier to buy a gun than bread in the forest."[41] By contrast, an analysis of issue-specific

[37] Interview 503, HDP interest group (FGD), Sokoto, October 2021, interviewed by the author.
[38] Interview 592, religious leader, Sokoto, October 2021, interviewed by Dr. Murtala Rufa'i and the author.
[39] Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.
[40] E.g., Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author; Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.
[41] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

secondary sources and co-variation of violence in Libya and Nigeria results in a more nuanced picture.

First, domestic and external weapon sources were both relevant. The bandits bought at least some of their weapons abroad (Hassan and Barnett 2022, p. 21; Rufa'i 2021, p. 21).[42] Libya, however, did not seem to be so important after all, and other source countries include Iraq, Ivory Coast, and Niger (Forquin et al. 2022; *Nigeria's Herder-Farmer Conflict* 2020). Informal groups with less financial resources relied mostly on domestic weapons. According to a survey in Northwest Nigeria by Forquin et al. (2022, p. 88), respondents more frequently indicated that weapons come from domestic sources (60% of respondents) than from any other country including Libya (44% of respondents). Domestically sourced weapons are either raided from stacks of the Nigerian government, in particular by Boko Haram, who then sells these weapons to other armed groups (Berman 2022; Jesperson 2017),[43] or they are manufactured illegally in Nigeria. The domestic illegal fabricates range from Dane guns to more sophisticated AK47 replicas (Nowak and Gsell 2018; Forquin et al. 2022, p. 39).[44] Some vigilantes use machetes and cutlasses, which can be legally purchased in the market.[45] Interestingly, IPOB's armed wing, the ESN, claimed they were self-sufficient in weapon supply by raiding and manufacturing.[46] This highlights the importance of domestic weapons beyond the informal groups.

Second, weapons were more expensive and less readily available than one would expect based on the narrative that Nigeria had been flooded by Libyan weapons. Two interviewees estimated independently from each other that an AK47 costs between NGN 500,000–800,000 (approximately USD 1,100–1,700), which is a considerable amount in rural areas in northern Nigeria (Rufa'i 2021, p. 33) — the Nigerian minimum wage is NGN 30,000 per month and most likely far less in said areas.[47] An AK-49 was even more expensive.[48] The high prices also explain why the vigilantes often had very simple, self-made weapons with which they tried to counter the bandits' superior capacity. If weapons were easily available and cheap, the vigilantes would be much better equipped. Third, the weapon proliferation argument cannot explain the spatial variation in violence by informal armed groups. Porous borders and the Libyan weapon influx should affect the whole northern region.[49] The argument alone is at least insufficient to explain the spatial patterns of violence.

[42] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.

[43] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[44] Interview 232, ethnic/livelihood interest group, Abuja, August 2021, interviewed by the author; Interview 287, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author; Interview 527, journalist, Sokoto, October 2021, interviewed by the author.

[45] Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[46] Interview 715, researcher, Enugu (remote), January 2024, interviewed by the author.

[47] Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 232, ethnic/livelihood interest group, Abuja, August 2021, interviewed by the author.

[48] Interview 527, journalist, Sokoto, October 2021, interviewed by the author.

[49] E.g., Interview 295, Armed Forces, Abuja, October 2021, interviewed by the author; Interview 528, local-level government official, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa'i.

Source: Own figure based on ACLED data by Raleigh et al. (2010).

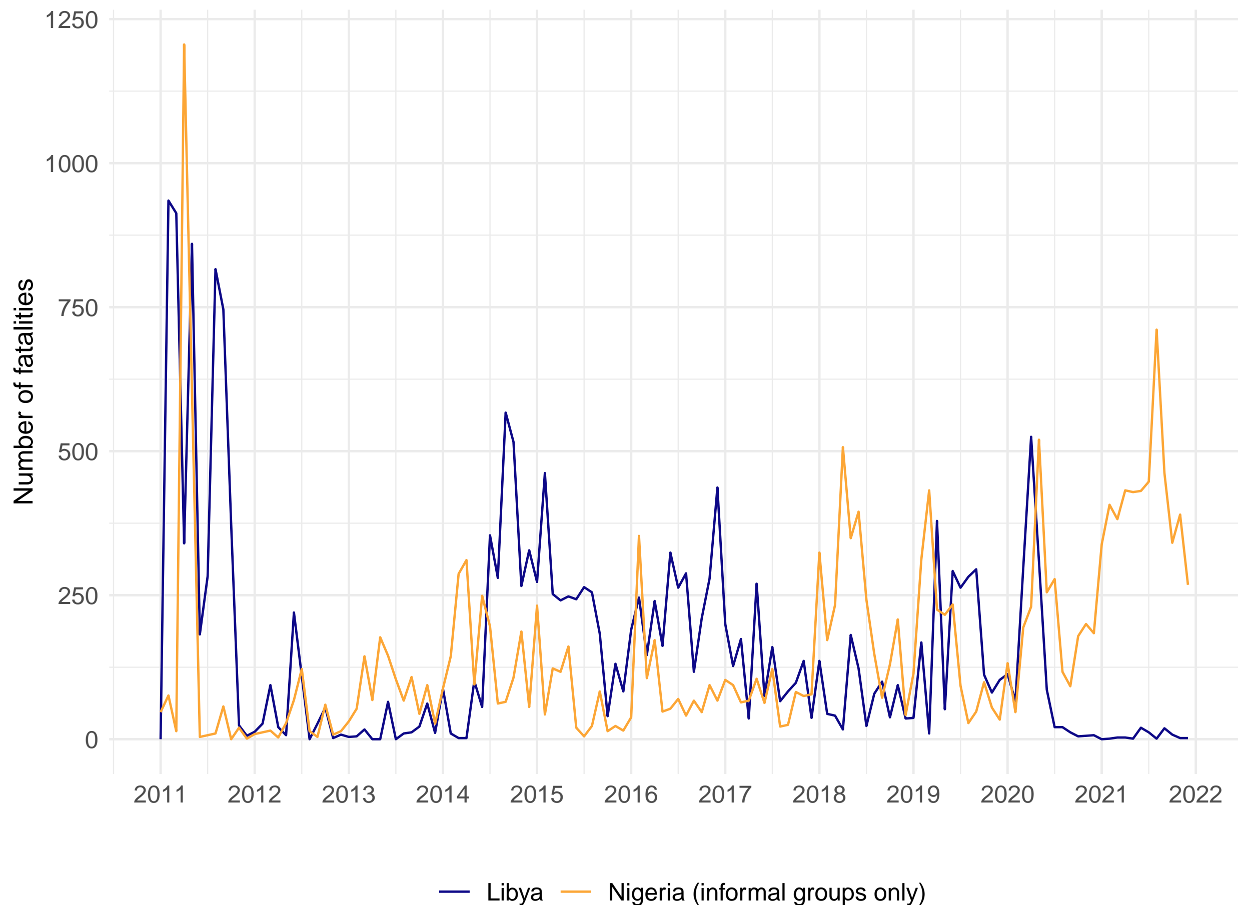


Figure 8.4: Fatalities in Nigeria and Libya (2011–2021)

Finally, the temporal patterns of violence in Libya as the source country and Nigeria as the receiving country do also not fit well with the alternative explanation. Figure 8.4 shows the number of fatalities in Libya and Nigeria after the collapse of the Qaddafi regime in 2011. For Nigeria, only fatalities related to events involving informal groups are included. The figure displays a four-year time lag between the ousting of Qaddafi and the increase of violence in Nigeria.[50] Violence between informal groups in Nigeria only increased after 2014. Yet, according to Forquin et al. (2022, p. 90), the outflow of weapons from Libya decreased precisely after 2014, when fighting in Libya re-emerged and the Libyan demand for weapons increased. Between 2014 and 2020, no pattern points to a relationship of fighting in the two countries. Only the developments in 2021 could speak in favor of the alternative explanation. After the ceasefire in Libya in October 2020, fatalities dropped drastically, which I interpret as a drop in demand for weapons. A few months later, in Nigeria, violence involving informal groups escalated. Even if this is correct, it could only

[50]The outlier in Nigerian fatalities in 2011 is related to Muslim-Christian urban riots in which buildings were systematically burned down (see event descriptions in the ACELD data: Raleigh et al. 2010). It does not seem plausible that this incidence, characterized by arson and urban rioting, is related to Libyan military weapons.

explain the increase in violence in the last year of the observational period.

In sum, it seems very unlikely that external sponsoring can explain the high severity and fragmentation of conflict in Nigeria. The evidence for the impact of transnational weapon proliferation is mixed. The origin of weapons varies, and the narrative of Nigeria being flooded with Libyan weapons is not supported. Weapon proliferation could have played a role so far that it allowed the financially strong bandits to increase their weapon arsenal. As a result, the availability of expensive weapons on the black market reinforced the asymmetry between the informal groups.

Overall, this section showed that a wide range of alternative explanations cannot explain the patterns of violence in the Nigerian case as well as the theoretical argument presented in this study (cf. overview in Table 8.1 at the beginning of this section). The two explanations on lootable resources and weapon proliferation stand out because the evidence was inconclusive and future research is needed to illuminate their importance in the Nigerian case. Interestingly, the two explanations point in a similar direction because they can potentially explain why the bandits became so much stronger than the other informal armed groups: they could use the income from illicit mining to buy weapons on the black market, which were too expensive for the other groups. The resulting asymmetry between the groups might then have reinforced the security dilemma. Theoretically, this raises questions about the importance of the capacity of and power balance between the informal groups. Incorporating this element would extend my theory but not contradict it: that the bandits could expand their capacity undisturbed and that this set in motion a security dilemma can be explained well by my theoretical argument.

8.2 Beyond Nigeria: probing the external validity

Having shown the explanatory power of my theoretical argument in comparison to seven alternative explanations, the question of the external validity of the theoretical argument still looms large: How much do we learn about other cases from this study? The goal of this section is to give a first indication of the transferability of the theoretical argument to other cases within the population, that is, to other cases where civil wars and conflicts between informal armed groups can potentially influence each other. Transferability in this context means that the theory can be meaningfully applied to other cases and contexts. It can be understood as a context- and time-bound generalization (Kelle 2015, p. 600). Transferability is different from generalizability, which requires that the argument generalizes to the population of cases (Maxwell and Chmiel 2014).[51] I do not assess generalizability here because, on the one hand, this requires assuming that Nigeria is representative of a homogeneous conflict population — which seems unrealistic considering the idiosyncrasies of armed conflicts (cf. Toshkov 2016, p. 304; Pepinsky 2019, p. 193); on the other hand, it is beyond the

[51] This type of generalization is also called statistical generalizability (Maxwell and Chmiel 2014).

scope of this study to assess how the argument applies to the population of cases as this requires knowledge on the whole population and a large-n test.

I use secondary sources of around a dozen cases to probe whether my theoretical argument can contribute to explaining the conflict dynamics in the respective case. I rely on qualitative evidence, which has the implication that I mostly focus on evidence for the underlying processes rather than the spatial and network structure patterns.[52] For the qualitative evidence on other cases, it should be noted that research on the interdependence of civil wars and conflicts between informal groups is limited and that this lens is accordingly also not widely applied in the case literature. On the contrary, it lies in the nature of the case literature to zoom in on and understand one phenomenon in depth. The analysis here can thus only provide an indication with which cases the theoretical argument can resonate, leaving it to future research to explore these questions in more depth.

The population of cases are countries affected by civil war where the government is a relevant actor. To assess the transferability of the theory, I focus on cases where at least one conflict between informal groups was active. I have described this subset of the population in the research design. Between 1989 and 2022, the vast majority of conflicts between informal groups — 88% according to UCDP — have taken place in Africa and many of the examples provided in this section come from this context (Sundberg et al. 2012).

In the following, I proceed in three steps: I first highlight cases where my theoretical argument, or parts of it, seems to apply and can contribute to understanding these cases better. I then turn to cases that seem to contradict the propositions of my theory and discuss how the theory would need to be adapted to account for these contradictions. This is in line with the claim of Maxwell and Chmiel (2014), that, even if the argument is not transferable, we still learn something about the theory by examining why it is *not* transferable. Finally, I scrutinize the scope conditions of the theoretical argument and discuss how my argument can provide valuable insights beyond civil wars and conflicts between informal armed groups.

8.2.1 The transferability to other cases

To demonstrate the transferability of my argument, I first highlight the case of Burkina Faso due to its striking similarities with the Nigerian case. I then examine a broader variety of cases and elaborate on how they speak to different parts of my argument. The recent conflicts in Burkina Faso show remarkable similarities with Nigeria. A conflict with violent extremists following an Islamist ideology broke out in the north of the West African country as a spillover from Mali (*Alarming escalation* 2018). The Burkinabe government struggled to defeat, or at least contain, the conflict despite sending its troops into the area,

[52] The disaggregation of informal groups included in ACLED, the re-classification of non-state armed groups as formal and informal, and settling on strategies to deal with missing data require manual specification and recoding to apply the method to other cases. A quantitative analysis of other cases was hence not feasible.

including newly recruited and only briefly trained soldiers (de Montclos 2021; Nsaibia 2019). As a result, the conflict spread further, reaching into the northeastern regions of the country (*Insurgencies and Unrest* 2019). One reason for the success of the extremist groups was their ability to recruit Fulani herders who have been prosecuted by vigilante groups (de Montclos 2021).

A report by the International Crisis Group describes the consequences of the absence of the state and the opportunity it creates for the violent extremists: "The absence of any form of regulation across much of the countryside has led to a rise in banditry and land disputes, as well as the emergence of self-defense groups [...]. In this context, Islamist militants have expanded their footprint across rural areas" (*Burkina Faso* 2020). Indeed, banditry increased in the Southwest of the country, and soon rumors about a potential "jihadization" of banditry in that region emerged, pointing to a potential collaboration between the bandits and violent extremists (Nsaibia 2019). In other areas like the northern province of Oudalan, the expansion of the jihadists meant that they began to adjudicate disputes between pastoralists and farmers (Assanvo et al. 2019). Then again, the siege of the jihadists on the provincial capital, Djibo, meant that "herders have no place to graze their flocks because everything is blocked. Farmers also cannot go out to cultivate" ("To end the siege" 2024).

Analyzing this case through the lens of my theoretical argument, it seems plausible that the government had to relocate its coercive resources to the northern part of the country, which created a power vacuum in the Southwest. The bandits, as informal armed groups, could exploit this environment to thrive. The Burkinabe government appeared to be under severe resource constraints, even within the civil war conflict zone in the north, as visible in the arming of vigilantes to fight the violent extremists and statements of the president calling for a "general mobilization, of the sons and daughters of the Nation" ("Anti-terrorist fight" 2019; *Burkina Faso* 2023). It seems hence plausible that the government could not adequately respond to the expanding informal groups in the Southwest. The thriving banditry, in turn, allowed the violent extremists to expand their influence by co-opting and cooperating with bandits (*Burkina Faso* 2020). One difference to the Nigerian case is thus that the Burkinabe jihadists were more successful in co-opting the bandits. The evidence from Burkina Faso further supports the idea that the jihadists sought to regulate community life, including through the adjudication of disputes, in the areas under their control, thereby potentially reducing the prevalence of such conflicts. In contested areas, community life was severely disrupted.

Looking beyond Burkina Faso increases my confidence in the transferability of the argument, as at least parts of it resonate with several other cases, also outside the West African region. Burkina Faso is relatively similar to Nigeria and a likely case for transferability. Both countries are located in West Africa, bordering the Sahel, and have a history of conflicts between farmers and Fulani pastoralists. Outside the Sahel zone, Kenya is an interesting case from the perspective of my theory. The Turkana and Baringo counties in western Kenya have been affected by banditry-related violence, and civil society actors raised complaints about

the weak reaction of the Kenyan police and military — even though the communities would have provided the necessary information on the routes of the cattle rustlers to prosecute them (Cheng 2023; Koech 2023; Wanjala 2023). The lack of security personnel in these counties has been identified as one of the reasons for the government's weak reaction (Koech 2023). In contrast, the Kenyan military has invested tremendous financial resources and manpower into fighting al-Shaabab in the northeast of the country after the Westgate mall attacks in Kenya's capital Nairobi (Cheng 2023; "Kenya's security spending" 2023). My argument offers an explanation for the behavior of the government by highlighting the resource allocation problem and the resulting power vacuum in other parts of the country.

In addition, it was reported in a number of other cases that the civil war parties sought to cooperate with the informal groups engaged in conflict with each other. One case in which this has been widely documented is Mali. The violent extremists provided training and weaponry for informal groups who sought to protect themselves in conflicts with other informal groups (Assanvo et al. 2019; Bøås et al. 2020). The support of the jihadists for some groups then incentivized others to increase their armament too (Assanvo et al. 2019, p. 19). Similar dynamics were reported for Niger and the Central African Republic (Bøås et al. 2020; *Central African Republic* 2018). Cline (2021) describes how some Fulani joined the violent extremists to improve their defensive military capabilities and left the group shortly after. This speaks to my findings in Nigeria that highlight the agency of the informal groups in refusing offers for cooperation.

My argument further proposes that formal armed groups can reduce conflicts between informal groups by regulating community affairs. One important aspect of this mechanism is adjudication in case of inter- or intra-community disputes. Dispute adjudication was reported for other violent extremist groups, who also follow an Islamist ideology, for example the Katiba Macina in Mali and al-Shabaab in Somalia (Assanvo et al. 2019; Duursma and Gamez 2023), but also for non-religious rebel groups. Examples of the latter are the Congolese Liberation Front under the leadership of Jean-Pierre Bemba that facilitated an agreement between the Hema and Lendu in the DRC ("Hema and Lendu sign peace pact" 2001) or the Forces Nouvelles in Ivory Coast that established "law and order institutions," punishing and preventing crime and facilitating negotiated agreements between farmers and herders (van Baalen 2024). The African Peace Processes dataset by Duursma and Gamez (2023) documents such cases of non-state armed group mediation systematically.

Finally, cases like the Central African Republic and Sudan provide first indications for the link between the disruption of everyday life and the vanishing of conflict between informal groups as a result. Cases in point include the reduction of tensions between farmers and herders in the western border region of the Central African Republic after most of the cattle had been stolen or moved towards safer areas in Cameroon (Shepherd and Ankogui-M'Poko 2020, p. 3). Similarly, tensions between Muslims and Christians in Bossangoa, Central African Republic, eased, likely also due to the displacement of almost the entire Muslim population from the town (ibid., p. 5). In Sudan, violence by informal groups has been in decline since the outbreak of

the high-intensity civil war between the Sudanese Armed Forces and the paramilitary Rapid Support Forces (Eltayeb 2024; Raleigh et al. 2010, using the "identity militia" category to identify informal groups). My argument suggests that this decline could be related to the displacement of more than eight million Sudanese, currently the largest displacement crisis in the world (*Weekly Displacement Snapschot* 2024). Future research needs to investigate this link further.

8.2.2 The limits of transferability

This first assessment of the external validity of the theoretical argument proposed in this study seems promising. Still, some cases show very different patterns of violence, which do not seem to be congruent with the argument. I elaborate on two such cases, South Sudan and Indonesia, in the following. A key difference between South Sudan and Nigeria is that the civil war and the conflicts between informal groups in South Sudan are not as distinguishable but rather two manifestations of the same conflict. After South Sudan gained independence in 2011, a civil war broke out between the government led by Salva Kiir, identifying as Dinka, and the SPLM-IO led by former president Riek Machar, identifying as Nuer (*South Sudan: Government* 2023). In concurrence with the civil war, fighting increased between informal Dinka and Nuer groups, including the Nuer White Army, which were co-opted by the national elites into the civil war (Krause 2019; Wild et al. 2018).

The close intertwinement of conflicts between informal Dinka and Nuer groups with "military-scale political violence" has a long history, predating the South Sudan civil war (Wild et al. 2018, p. 3). The argument that conflicts between informal groups increase due to a power vacuum after the outbreak of the civil war is thus not applicable here. Even more so, the conflicts in South Sudan raise questions about the distinction between formal and informal armed groups as these groups are not always separable but meld into each other (Krause 2019, p. 487). As Wild et al. (2018, p. 4) point out, "White Army refers to groups of armed young Eastern Nuer, separate from the formal SPLM-IO ranks, but without whom the SPLM-IO would have limited credible military force." Nonetheless, I am optimistic that the network analytical lens, which includes cooperative relationships between informal and formal armed groups, can capture this ambivalence of separate but closely linked groups. Also, Krause (2019, p. 483) points out that South Sudanese differentiate well between "militarized rebel movements with a national political agenda, and the 'home' community and its militia, which is primarily seen as a defender."

The limited transferability of my theoretical argument to South Sudan offers the possibility to either adapt the theoretical argument or reconsider its scope conditions. My theoretical argument is agnostic about the ethnic distribution between the civil war parties and the informal armed groups. The South Sudan case highlights that the *non*-alignment of ethnic identities in the Nigerian case might have played an important

role for which the theory is not accounting at the moment. As I have pointed out in the case selection, the Boko Haram insurgency originated in urban areas as an Islamist anti-corruption movement and can be considered as almost exogenous to ethnoreligious rural conflicts (cf. research design chapter 4.1.3). In addition, the structure of the Nigerian army might have impeded an alignment of the conflicts along ethnic cleavages as it is not organized in ethnic divisions. Recall also that Nigeria has an ethnic power-sharing regime.

Another insight from the South Sudan case is the importance of temporal sequencing. In Nigeria and Burkina Faso, the civil war erupted or spilled over relatively suddenly and at a time when the conflicts between informal groups were either absent or very limited. In contrast, the ongoing violence between informal groups in South Sudan potentially offered the civil war parties a window of opportunity to instrumentalize these conflicts from the beginning. I had considered temporality mostly from a research design point of view, i.e., as an opportunity to observe the ripple effects of civil war, but this preliminary comparison with the South Sudan case points to its theoretical importance. Both aspects, ethnicity and temporal sequencing, will require further theorizing.

Indonesia is another case where a civil war and conflicts between informal groups were ongoing in temporal proximity but where the theoretical argument of this study does not seem to apply or only in a limited manner. Secondary sources like Krause (2018) and Tajima (2014) point to the regime transition from a military to a civil regime as a reason for the increase in violence between informal groups — rather than interdependence with the secessionist conflicts in Aceh and East Timor. The regime transition weakened the government and thereby limited its ability to intervene in conflicts between informal groups (Tajima 2014). Complementing this narrative, my theoretical argument raises the question of whether the concurrent conflicts in Aceh and East Timor put additional pressure on the Indonesian government in this critical moment and weakened its response to the conflicts between informal groups further. As the UCDP conflict encyclopedia points out, violence escalated simultaneously in 1999 in both secessionist conflicts in Aceh and East Timor as well as between informal Muslim and Christian groups and civilians in various parts of the country (*Indonesia* 2023).

Even if my theory can provide additional nuance on this point, I did not encounter any indication that the groups involved in the civil war in Aceh or East Timor tried to expand their influence to the areas where the informal groups were active. Besides the hampering factor of geography — the conflicts are far away from each other, in some cases on separate islands —, the *secessionist* group had few incentives to expand beyond the specific area they seek to control and where their supporters are based. This is different from the Boko Haram groups in Nigeria, who seek to gain control over the government and want to establish their own state in an area that is less clearly defined geographically. Thereby, the Indonesian case highlights the theoretical importance of the conflict issue. Last but not least, the Indonesian case raises questions

about the importance of peace negotiations and ceasefires in mitigating the resource allocation problem, as this reduces the battlefield activities in the respective conflict and might allow the government to use its resources elsewhere. The Indonesian government negotiated with the Free Aceh Movement in Aceh for years and concluded several ceasefires (*Indonesia* 2023; Åkebo 2016). From this perspective, one reason for the transferability of my argument to neighboring countries in the Sahel could be that negotiations with jihadist insurgents are rare and mostly unsuccessful.

8.2.3 Broadening the scope

The question remains whether the proposed theoretical argument provides insights beyond the link between civil wars and conflicts between informal armed groups. I discuss this question with regard to inter-state conflicts, criminal wars, and state collapse. In principle, I expect that the theoretical argument can be extended to conflicts between informal armed groups in the context of inter-state conflicts. As long as the inter-state conflict is severe enough to threaten the core functions of the state, I expect that the government will prioritize this conflict in its resource allocation, potentially creating a power vacuum between informal groups. One context where this could be applicable is India. In an analysis of the United States Institute for Peace, the authors warn that the China-India border conflict could limit the government's ability to respond to the escalating conflicts between Meitei and Kuki ethnic groups in Manipur, Northeast India (Nepram et al. 2023).

If this is correct, why do we not see conflicts between informal groups in Ukraine, for example, where the military is struggling to fight off the full-scale Russian invasion? My argument proposes that the potential for conflict between informal groups is a necessary condition, i.e., informal group conflicts need to have escalatory potential because there is resource competition and no access to non-violent conflict management. These necessary conditions are likely not met in Ukraine. In addition, inter-state conflict might increase social cohesion through rallying around the flag effects, thereby lowering the probability of internal conflict. For example, Onuch (2022) provides survey evidence that Russia's Ukraine invasion fostered a common civic identity. The cohesion-enhancing effect of inter-state conflict is an interesting difference from intra-state conflicts that could be explored further.

An equivalent to the idea that formal armed groups support informal groups to expand their influence and potentially weaken the government is the external support for non-state armed groups operating in adversarial states in the context of inter-state conflict. Yet, this support is normally extended to formal armed groups fighting against the government rather than informal groups. This could be observed during World War II, for example. British special operation units and Kachin insurgents collaborated in nowadays Myanmar to resist Japanese occupation (Farnan 2019) and British parachutists supported sabotage acts in

Greece under German occupation (Woodhouse 2003).

It seems plausible that destruction and displacement caused by inter-state war can also disrupt conflicts between informal groups. The relationship between inter-state conflict and the regulation of everyday life is less straightforward. One possibility is that territorial control switches between states and that the new ruling government enforces inter-communal order, for example, by subjecting the won territory to military rule. Another possibility is that the originally ruling government seeks to increase its control over the population to mobilize it for war efforts or to suppress dissent, which would weaken the government from the inside. These efforts could, as a side effect, also reduce conflicts between informal groups and opportunistic criminal violence.

Looking beyond informal groups, my argument emphasizes that the distraction of the government by armed conflict offers a window of opportunity for others to either equally attack the government or fight with a third actor. Among others, the relevance of this argument has been shown for the fighting behavior of formal armed groups in civil wars, including for rebel infighting (e.g., Pischedda 2018; Uzonyi and Reeder 2023). The Central African Republic is one example where the Union of Democratic Forces for Unity was able to seize a regional urban center while the government was engaged in fighting with the Popular Army for the Restoration of the Republic and Democracy (Uzonyi and Reeder 2023, p. 17). In the realm of inter-state conflicts, the Nagorno-Karabakh conflict between Turkey-backed Azerbaijan and Russia-backed Armenia is an example. In September 2023, Azerbaijan seized control of the contested Nargorno-Karabakh region, before predominately inhabited by Armenians, likely using Russia's distraction in the Ukraine war as a window of opportunity (Wolff 2023).

Moreover, my argument is a fruitful starting point to unpack the interdependence between civil wars and criminal wars. Lessing et al. (2015) differentiate state-cartel conflicts following a logic of constraint from insurgencies following a logic of conquest. From the point of view of my theoretical framework, most of the involved groups in criminal wars are formal armed groups, which raises the question of how my argument focusing on informal groups can apply here. I assume that the power vacuum idea is relevant as the engagement of the government in a civil war might allow formal groups specialized in crime to thrive — similar to the bandits in the Nigerian case. Surprisingly, the Colombian case supports this idea but turns the constellation on its head: it was the drug war fought by the Colombian and US governments that allowed the FARC to expand its operations in the meantime, not least because the drug war "dismantled the most powerful military opponents of the FARC," thereby creating a power vacuum that the FARC could fill (Peceny and Durnan 2006). This observation highlights that formal armed groups challenging the government are not necessarily perceived as the biggest threat and prioritized by the government.

The Colombian case further points to the relevance of regulation of behavior by civil war parties in

changing the dynamics of criminal wars. Medellín was infamous for its high, drug-gang related homicide rates during the 1990s. Yet, the paramilitary leader Diego Fernando Murillo, known as Don Berna, was able to reduce the high level of violence in the city by establishing himself as a local hegemon and creating order between the gangs, which now had to pay taxes to Don Berna for their activities (*'Don Berna'* 2016; Sandoval 2017). This anecdote broadens the focus of this study on the regulation of everyday life to the regulation of inter-group relationships more generally. In contrast, the mechanism around the disruption of everyday life is unlikely to be relevant for the link between civil wars and criminal wars between formal armed groups. The latter are by definition less embedded in the communities and their motivations and opportunities to use violence should be less affected by the disruption of everyday life.

Finally, I consider to which degree my argument can resonate with cases of complete state absence, i.e., cases in which the government is not a relevant actor. Here, it seems crucial to consider the temporality of state absence: has the state always been very weak, or has the state collapsed more recently? Tajima (2014) points out that conflicts between informal groups arise if the state is not intervening, but communities expect the state to do so. If the state has always been absent, communities develop their own mechanisms to regulate conflicts. Similarly, arrangements in which warlords or local strongmen mediate between a very weak central government and the population can be relatively stable (De Waal 2015; Mukhopadhyay 2014). This is in line with my argument that it is the *sudden* weakening of the state due to the prioritization of the civil war, which creates a power vacuum in which conflicts between informal groups escalate. This means if at all, my argument should apply to cases of more sudden state collapse.

For cases of sudden state collapse, I assume that the parts of my argument on power vacuum and the cooperation between formal and informal groups can apply but that one should not see a comparable spatial variation — since the civil war is not confined to some parts of the country in the case of state collapse. The conflicts in Libya after the ousting of Qaddafi might be indicative of such a development. Fighting broke out between militias in the south of the country, and these groups were co-opted by the formal armed groups fighting over government control in a proxy war (Carboni and Moody 2018; Lacher 2020). Whether and when inter-communal order is created through regulation depends on how quickly one or more formal armed groups are able to gain territorial control and engage in state-building, or at least some limited form of governance. Last but not least, my argument on disruption could equally apply to cases of state collapse, but the extent of disruption depends on the behavior of the formal armed groups if the state is absent.

To conclude, the discussion of secondary cases showed that the theoretical argument is likely transferable to cases that display certain similarities to Nigeria, for example, with regard to a history of livelihood conflicts and the sudden eruption of the civil war. In addition, at least elements of the argument resonate with many cases beyond West Africa. Remarkably, this seems to be the case, although the respective states vary in terms of military capabilities and resources, for example, Burkina Faso and Kenya. Even for cases that contradict

my argument, the theoretical framework can provide important insights by explaining precisely this lack of transferability. The argument provides a fruitful lens for a further investigation of these cases. The exemplary application to South Sudan and Indonesia highlights the importance of the ethnic alignment of the civil war parties with the informal groups and of the conflict issue in the civil war. Finally, the discussion underlines the promise of extending the theoretical argument beyond its original scope of civil war and conflicts with informal groups. In particular, a future application to criminal wars seems worth exploring.

Chapter 9

Discussion

The theoretical argument of this study was developed in an iterative process and combines deductive and inductive elements. Empirically, I visualized and described the evolution of the Nigerian conflict network with quantitative methods and traced the processes that co-constituted the network structure with qualitative and, subsidiarily, quantitative data. Doing so, I evaluated the candidate explanation in comparison to seven alternative explanations. As a next step, I probed the transferability of the argument to other cases in sub-Saharan Africa and beyond. In this chapter, I reflect on the research strategy and the main findings of the empirical analysis. The chapter is divided into two sections. I first discuss the validity of the evidence and outline the strengths and limitations of my research design. I then turn to the main findings of the empirical analysis and discuss their theoretical implications.

9.1 Assessing the research strategy after implementation

The primary aim of the research design was to integrate the macro-level network structure and the micro-level processes empirically and theoretically. As Balcells and Justino (2014, p. 1347) pointed out "linking micro outcomes and macro processes in conflict analysis [...] involves considerable theoretical and methodological challenges." I approached these challenges by employing a mixed-methods SNA. Mixing methods is one of the central assets of this study because it triangulated data sources and methodological perspectives, increasing confidence in the validity and robustness of the empirical results. This section highlights the strengths and innovations of the quantitative and qualitative components of the mixed-methods design, which followed the best practices in the methodological literature. It also outlines the remaining challenges and the mitigation strategies adopted to address them. Before I turn to the quantitative and qualitative components in detail, I discuss the validity of the evidence, an issue that is cross-cutting both components.

9.1.1 Validity of the evidence

This study used a mixed-methods design that combines quantitative and qualitative evidence from original primary data and a variety of secondary sources. A distinct advantage of mixed-methods research is that it allows for the combination of different types of evidence and methodological perspectives that can even out their respective individual weaknesses. This worked well in the case of this study. First, the insights from the quantitative analysis functioned as a corrective to the qualitative analysis and vice versa. Second, each perspective generated insights that could not have been gained with the other perspective in principle. However, armed conflicts are an inherently difficult information environment. A central challenge shared across sources and analytical methods is the insufficient distinction between armed groups.

To start, I elaborate on how the mixed-methods approach enabled me to identify and mitigate limitations in the quantitative and qualitative data through triangulation. This is the corrective function of mixing methods. For the quantitative data, ACLED underestimated the extent of the informal group conflicts in the Northwest by discounting low-level violence, violence without government involvement, and specific types of violence. This is in line with previous research cautioning against an underestimation of communal violence in media-based conflict datasets (Krause 2019, p. 485; Dawkins 2020).[1]

Specifically, the quantitative data underreports the low-intensity beginning of the banditry crisis. Relying on ACLED only, it appears that the banditry crisis escalated from 2018 onward. Yet, qualitative accounts argue that banditry became a significant problem starting in 2013, triggering the creation of Yan Sakai in the same year (Rufa'i 2018b, p. 72; Obi and Iwuoha 2023, p. 8).[2] Yan Sakai, in turn, brutally prosecuted Fulani as alleged bandit suspects. These activities are likely even less visible in the group-level conflict data because the group conducted extra-judicial executions of individuals on markets and checkpoints. Systematic underreporting of the early phase of the conflict in the quantitative data is problematic because it prevents an understanding of the escalation process. Furthermore, I presume that the coverage of the banditry crisis depends on government involvement. The coverage of banditry violence in ACLED most likely improved after the government began to intervene. In this vein, my analysis showed that government involvement reduces the probability of missing actor information (Table A.1 in the appendix). This bias could lead to substantially wrong conclusions, such as overestimating the escalatory impact of the government intervention.

My analysis also points to the underestimation of specific types of violence. The figures on kidnappings reported in the interviews and secondary sources are much higher than the kidnapping events captured in the quantitative data.[3] According to an interviewed journalist, violence in the Northwest was also underreported

[1]See e.g., Chojnacki et al. (2012), Ruggeri et al. (2011), and Weidmann (2016) for a more general discussion of the quality of quantitative conflict data based on media reports.

[2]Interview 172, ethnic/livelihood interest group, August 2021, interviewed by Shedrach B. Nghozei and the author.

[3]See discussion of this issue in the qualitative analysis chapter 7.4.

because the government actively tried to obfuscate its military inferiority in comparison to the bandits.[4] Also, the quantitative data insufficiently covers infighting between bandits groups or between ISWAP and the bandits. I conjecture that this is related to the lack of news coverage of the fighting between armed groups in the rural periphery.

For the qualitative data, these accounts are not immune to inconsistency and biases either. In comparison to the quantitative data, an exclusive reliance on qualitative reports would have underestimated the involvement of the government in the Northwest. The qualitative reports draw a grim picture of extremely passive security agencies. The quantitative data, however, indicates that the government and the bandits were engaging violently, at least after 2017. I interpret this violence as an effort of the government to counter the bandits. I suggest that the non-intervention of the security agencies created grievances that tended to be shared in interviews. The non-intervention of the security agencies is probably considered more worth reporting than when they fulfill their core function.

The qualitative evidence furthermore has the limitation that not all perspectives are equally well captured, despite the efforts invested in the sampling composition. This is primarily the case for state and non-state armed groups. To understand strategic priorities behind the federal government's and armed forces' resource allocation, I rely on three key interlocutors. Similarly, the analysis of ISWAP's strategies strongly builds on two interviews. I compensate for this by complementing these interviews with a wide array of other sources and 'outsider' interviews with experts. For the resource allocation of the government, data by *WhoWasInCommand* (2023) and the quantitative analysis of the government's fighting efforts were critical.

I now turn to the advantage that quantitative and qualitative data complement each other by generating insights that the respective other cannot give in principle. On the one hand, the quantitative SNA can substantiate qualitative accounts of the banditry crisis by quantifying the extent and visualizing the topology of this crisis. In addition, the country-level analysis was critical to ensure the internal generalizability of the findings of the qualitative component. Internal generalizability means "generalizing within the setting, institution, or case studied, to persons, events, times, and settings that were not directly observed" (Maxwell and Chmiel 2014). On the other hand, the qualitative process tracing can provide meaning to the quantitative findings. For example, the quantitative analysis could visualize and quantify the fragmentation of the conflict network, but the qualitative analysis was essential to understand how and why the conflicts were increasingly fragmented. The qualitative analysis could further highlight the importance of actors and relationships not covered by the quantitative analysis, in particular of cooperation between armed groups.

However, quantitative and qualitative data on armed conflict have common limitations that cannot be overcome by combining the two. These fundamental limitations result from the noise inherent to the

[4]Interview 527, journalist, October 2021, interviewed by the author, Sokoto.

battlefield — commonly labeled the “fog of war” after Clausewitz (1918) — and the misrepresentation of private information by the conflict parties (Wiehler 2021, p. 8). This high uncertainty environment is further compounded by the “fictions of war” spreading among the population, manifesting themselves in the “mischaracterisation of the reality, delusion, strategic deception, and rumors” (Bouhlel and Guichaoua 2023, p. 30).

A major challenge for the present study was the distinction between various Nigerian armed groups. I have discussed the problem of missing actor attributions at length for the quantitative data (cf. research design chapter 4.2.2). As the qualitative data generation clarified, however, attributing violence to specific actors is fundamentally challenging and not merely a problem of media-based event datasets like ACLED. Interviewees often generically referred to Boko Haram, the bandits, or the herdsmen without differentiating further. A national government official contended: “One of the major challenges within the Nigerian public discourse is the failure to distinguish between the various forms of conflict that is taking place simultaneously.”[5] Even the affected communities do not always know who attacked them[6] and information transmission across communities can malfunction, for instance, because the government shut down the mobile phone network.[7] It cannot be ruled out that study participants had more detailed information on the armed groups but did not want to share all of their information with me or my research assistants. However, in some cases at least, the study participants appeared genuinely upset about this lack of information themselves.

The lack of information on the identity of armed groups posed a particular challenge for three aspects of the present study: (1) potential informal group conflicts in the Northeast, (2) the cooperation between bandits and Boko Haram, and (3) the distinction between herders and bandits.

With respect to the first point, uncertainty remains about the actual level of violence used by informal groups in the Northeast because all violence was interpreted through a Boko-Haram lens after that conflict first broke out.[8] Criminal groups exploited the presence of Boko Haram to operate in their shadow, for example, to rustle cattle.[9] Indeed, Jesperson (2017, p. 8) claims that criminal groups and vigilantes would sometimes chant Boko Haram phrases while stealing cattle to disguise their activities. The extreme violence of Boko Haram meant that there were hardly any international organizations in the rural areas of the Northeast, removing them as “independent observers” (ibid., p. 7). As a result, the aforementioned author suggests that the Boko Haram violence is overestimated and criminal activities are underestimated.

An underreporting of communal conflicts may also arise because the latter appears to be less relevant

[5]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[6]E.g., Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 506, traditional ruler, Sokoto, October 2021, interviewed by the author and Dr. Murtala Rufa’i.

[7]Interview 583, traditional ruler, Sokoto, October 2021, interviewed by Dr. Murtala Rufa’i and the author.

[8]Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.

[9]Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi; Interview 281, IDP Northeast, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

compared to the extreme violence used by JAS. I noticed that many interviewees described the Northeast as a peaceful place without any tensions, even though the quantitative data and secondary sources indicate several instances of informal group conflict and ethnoreligious riots before the Boko Haram conflict. I therefore suspect that this tendency to discount less lethal violence also applied to the period when the Boko Haram conflict was ongoing. In the worst case, this could mean that the spatiotemporal variation between the Northeast and the Northwest is less pronounced. Yet, here, the added value of a mixed-methods design becomes once more apparent. The evidence from several interviews with community members from different areas in the Northeast describes how conflicts or disputes within and between communities and crime reduced due to the intervention of the civil war parties. This increases my confidence in the relevance of the spatiotemporal variation.

Turning to the second point, I found it challenging to ascertain which Boko Haram faction adopted which expansion strategy towards the Northwest, if at all. The cooperation between the non-state armed groups was difficult to research since that issue impinges on groups' internal strategic decision-making. Boko Haram is secretive and potentially dangerous for researchers (Prieto Curiel et al. 2020; Zenn 2020b). Similarly, bandit leaders are only accessible to researchers at considerable risk to their personal security. I, therefore, mostly relied on interviewees outside to these armed groups and secondary sources. Yet, interviewees often merely referred to Boko Haram without differentiating extremist groups any further. Bouhlel and Guichaoua (2023, p. 65) report the same issue for other countries of the Sahel where large parts of the population do not differentiate between various factions of violent extremists.

The lack of clarity on the involved actors was further compounded because the cooperation between Boko Haram and the bandits became a popular narrative among concerned civil society and government actors in Nigeria. Accordingly, several of the network drawings indicated that Boko Haram and the bandits exchanged money and/or information.[10] Some interviewees even argued that the groups could hardly be differentiated any longer: "There is just but a very thin line dividing who is a bandit, who is a kidnapper, who are herdsmen, and who is a Boko Haram."[11] By triangulating this perception of close cooperation between Boko Haram and the bandits with expert interviews, interviews with repentant ISWAP fighters, and secondary sources, I suspect that the aforementioned connection was overstated. One of the interviewed journalists attributed the overstatement to "armchair journalists [who] did their PhD in the UK and US, speak good English, visualize anything, even if it is not true."[12]

Finally, with regard to the third point, herders and bandits are often equated.[13] This equation was

[10]E.g., Interview 527, journalist, October 2021, interviewed by the author, Sokoto; Interview 193, local-level government official, August 2021, interviewed by the author, Kaduna; Interview 465, IDP Northeast (FGD), Maiduguri, October 2021, interviewed by Hauwa Abubakar Abdullahi.

[11]Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei.

[12]Interview 233, national-level government official, Abuja, September 2021, interviewed by Shedrach B. Nghozei and the author.

[13]Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.

one of the mechanisms contributing to the escalation of informal group conflicts, as vigilantes retaliated against herders for attacks conducted by bandits. The popularity of the anti-Fulani narrative, whereby all herdsmen are bandits, is also reflected in some interviews during which the two types of actors were not differentiated — even though I deem the distinction critical to understanding the escalation process in the Northwest. This lack of differentiation also affected some network drawings in which Fulani herdsmen and bandits were included as one actor. Interestingly, this was not the case in Sokoto. One explanation is that banditry poses a longstanding problem in the border areas to Niger and is hence perceived as a distinct phenomenon (Rufa'i 2021).

9.1.2 Strengths and limitations of the quantitative component

I identify four key strengths of the study's quantitative component. After outlining these strengths, I turn to the remaining limitations and my strategies to address them. First, I introduced an efficient and transferable operationalization of the distinction between formal and informal armed groups. The operationalization can be implemented in ACLED — one of the most frequently used conflict datasets — with minimal manual coding. The approach has been tailored to the Nigerian case but can readily be adapted to other cases based on basic case knowledge.

Second, I proposed a more accurate way of incorporating informal groups into SNA. The disaggregation of groups is critical here because it opens up a novel and more precise perspective on the conflict network. So far, informal groups have mostly been included in SNA at the level of their social identity. As a result, the network structures appear much more cohesive and centralized than they are. The approach introduced in this study improves substantially upon this practice by identifying informal groups based on their area of activity. This is possible because these groups are spatially anchored through their community embeddedness. Furthermore, I developed two strategies depending on the available information. If information on the primary operating base of a group is available, k-means clustering can be used to assign events to the respective base. In the case of this study, this allowed me to assign violent events to bandit groups based on the location of their camps (cf. research design chapter 4.2.3). If such information is unavailable, organically shaped spatial clusters can be identified with the DBSCAN algorithm. I suggest that the disaggregation of informal groups is also valuable for quantitative analysis with non-SNA methods, e.g., that are interested in subnational spillover processes across groups.

Third, I developed a novel way to measure conflict fragmentation, combining the disaggregated informal groups with the network approach. Existing approaches to measuring fragmentation focus on the number of groups and the division of the fighting effort between them (e.g., Bakke et al. 2012; Lacher 2020). Yet, these approaches do not exploit information on the relationships between these groups (for an exception, see

Metternich et al. 2013). The relationship structure is highly relevant to capture how fragmented or cohesive a conflict landscape is. Therefore, I suggest using the number and size of clusters in the conflict network, identified with a community detection algorithm, as an alternative measure of fragmentation. This is also an improvement of the established approach in SNA that assesses the fragmentation of a network based on transitivity, i.e., the number of closed triads. A closed triad is a network structure in which three vertices are connected to each other. Yet, this is not an expedient approach in conflict networks where triadic closure seems theoretically counterintuitive. Two groups with a shared enemy tend to cooperate rather than fight. This makes the triad closure less likely (Walther et al. 2020). Instead, a measure of fragmentation that does not rely on closed triads is required.

Fourth, and finally, I demonstrated how social and geographic space can be captured in a simple manner in a descriptive network analysis by combining country and region-level networks in the visualization. The integration of geographic with social space remains a challenge for SNA even though the interplay is of high theoretical importance as I demonstrated in this study. I return to this issue in the conclusion when discussing avenues for future research.

After having outlined the strengths, I discuss the limitations of the quantitative analysis in the following. The limitations concern data availability, the inevitable uncertainty of cluster identification, and the layout of the network visualizations. With regard to data availability, the quantitative analysis had to focus on the violent relationships of the conflict network and could not analyze the cooperation relationships. Combining cooperation and conflict in the same SNA would open up a new perspective on the structure of the network and provide additional nuance to the measurement of fragmentation. I conjecture that the network accounting for both relationships would be less fragmented as cooperation relationships could span across violence clusters. Moreover, it would be interesting to better understand how the cooperative behavior evolved over time and in interplay with the violent dimension of the conflict network. Against this background, the value of the mixed-methods design becomes evident as cooperation can at least be captured in the qualitative component.

The second limitation concerns the identification of clusters. Recall that I use clustering twice: in a first step to identify informal armed groups based on the geolocation of events and in a second step to identify clusters of armed groups in a conflict network. In both of these steps, results produced by the clustering algorithm reflect a mathematical optimization procedure that is not trained on ground truth data, i.e., on exogenously given, true cluster assignments. Since this ground-truth data is not available, results of the clustering algorithms need to be interpreted with care.

Performing step one, the identification of informal groups, is inherently difficult due to the problem of reliably attributing violent events to specific actors (see the previous discussion on the validity of the

data). I suggest that clustering is still preferable to including the actors at the aggregate level of an entire social identity group, e.g., ethnicity or religion. I included robustness checks to assess the sensitivity of my spatial clustering results to different settings of the underlying optimization procedures (cf. appendix A.4.1). Regarding step two, I similarly compared results from several community detection algorithms to establish robustness. All specifications identified the same trend of an increasingly fragmented network and only varied marginally in the number of identified clusters (cf. appendix A.4.4).

Last but not least, the layout of the network visualization could be optimized to increase the comparability of the networks across time. In this study, the layout is generated independently for each year which means that vertices move in the two-dimensional space across years. This makes it more difficult to track changes in the network structure and in the position of specific groups. One possibility to explore in future work is the visualization of dynamic networks (e.g., Bender-deMoll 2016). Layout algorithms for dynamics networks optimize the same parameters as those for static networks but additionally seek to strike a trade-off between allowing changes in the layout and limiting major shifts in the structure. Another option is to explore the visualization of network states. This approach differentiates between different levels of significance of network changes and aggregates networks for which only minor changes occurred (Murugesan et al. 2020). In the case of this study, the problem of comparability over time was mitigated by the use of regional networks that disaggregated the country-level network into smaller components.

9.1.3 Strengths and limitations of the qualitative component

The main strength of the qualitative component is the creation of an extensive data corpus, including novel primary data on armed conflicts in northern Nigeria. The conflicts in the Northwest have been researched far less than the Boko Haram conflict in the Northeast and the generation of data on these conflicts is especially important. As Balcells and Justino (2014, p. 1345) diagnose, it is a weakness of civil war research that general conclusions are drawn based on a small set of well-researched cases due to feasibility considerations. The remaining limitations of the data generation need to be seen in light of the challenging context in which it was generated, characterized by high-intensity violence, poverty, and poor infrastructure. Operating in such a context required restrictions, in order to adhere to ethical principles of research involving human participants.[14] Despite the challenging context, I was able to conduct 112 interviews and collect secondary sources from four Nigerian libraries within only three months.[15] This resonates with the reflection by Stys et al. (2022, p. 251) on their collection of network data in the DRC: "Considering the sensitivity and value of such information and the precariousness of everyday life [...], it is perhaps most surprising that we managed to collect the data we did."

[14] I describe the ethical considerations in the appendix B.4.1.

[15] 112 interviews were conducted during the main field stay in 2021. In total, I completed 118 interviews.

The strengths of the qualitative data include the sample quality, the combination of different data generation strategies, and the audio recording. To begin with, I invested a lot of effort into balanced sampling, considering not only the participant groups and the research sites but also the diversification of my access points. Not least due to the high response rate, these efforts resulted in a wealth of interview material that captured perspectives from different regions and ranged from national-level elites to affected communities. For the government participants, I managed to interview individuals from the political and military sides as well as from all three administrative levels. The latter was critical due to the federal structure of the Nigerian state.

In addition, I combined two strategies to generate data on the same research question: Semi-structured interviews and graphic elicitation. Combining different data generation methods increases confidence in the validity and reliability of the evidence (Bleich and Pekkanen 2015, p. 92). Graphic elicitation is structured and makes use of visualizations. The technique was ideal for theory development with deductive elements. Graphic elicitation compels study participants to apply a pre-specified conceptual lens while being open about the actors and relationships to be included. It furthermore summarizes the discussion while the interview is ongoing, facilitating the identification of inconsistencies and gaps (Molina et al. 2014). In contrast, the semi-structured interviews allowed for a more narrative approach and spontaneous probing of specific aspects. The questionnaires for both data generation strategies were revised with a Nigerian case expert before my departure to the field and adjusted after my arrival to improve the fit to the Nigerian discourse and language use. Each questionnaire included questions on the background of the study participant. This enabled me to understand the positionality of the study participant in the conflict, and it was critical to contextualize their replies and anticipate bias.

I was able to make audio recordings of almost all interviews. Audio recording ensures the data quality because it allows the reconstruction of the exact wording and intonation and prevents the researcher from unconsciously filtering or changing the obtained information while taking notes (Bryman and Bel 2004; Corbetta 2003). A potential downside of audio recording is that interviewees might feel less comfortable sharing sensitive information. However, I have no indication this caused systematic bias. I emphasized that the interviewees could choose between audio recording and note-taking, and almost all agreed to recording without hesitation. I also assured all interviewees of their full anonymity. I invested major effort to ensure the quality of the transcriptions of the recordings, for example by reviewing and, if necessary, correcting all transcripts completed by my research assistants.

I adhered to the best practices of directed content analysis when systematically analyzing this data corpus. This included the definition of codes with inclusion and exclusion criteria, memo writing to reflect and document coding decisions, a diligent selection of the interviews used for the development of the coding scheme, and the re-coding of the interviews after adjustments in the coding scheme. I included codes for

alternative explanations in order to avoid confirmation bias. The process tracing, which used the resulting structured data corpus as evidence, equally followed the best practices by specifying theory-guided observable implications for the candidate and alternative explanations.

The qualitative component faces three limitations rooted in the restriction to urban centers, differences in the data generation across research sites, and the graphic elicitation technique used. First, the restriction to urban centers limited access to non-state armed groups, particularly bandits, and affected communities. In contrast to other non-state armed groups of interest like the vigilantes and violent extremists, bandits are neither officially represented in the urban areas nor are they part of official reintegration programs, the most established channel through which former violent extremists are recruited for research interviews. To cover the perspectives of the bandits, I therefore relied on research and journalistic secondary sources that have been published while this study was ongoing.[16] For the affected communities, I mitigated the access problem by interviewing IDPs based in the cities and interest group representatives of ethnic and livelihood groups who are familiar with the situation in the rural areas. In contrast, leaving the urban centers in Kaduna, Sokoto, and Borno states would have resulted in undue security risks for the research assistants, the study participants, and me.

Second, differences in the data generation process across research sites resulted from security-related adjustments of the itinerary. Originally, I planned to spend two weeks each in Kaduna, Maiduguri, and Sokoto. The stay in Sokoto had to be postponed and shortened after consultations with Nigerian contacts about the kidnapping risk and an offensive by the Nigerian military in the neighboring state of Zamfara, which made the situation in the region even more volatile. The stay in Maiduguri had to be canceled on short notice after a security incident. After monitoring the security situation in Maiduguri for a few weeks, I decided to conduct interviews remotely and via a research assistant based in Maiduguri. Such adaptations are almost unavoidable for data generation in conflict contexts (Stys et al. 2022, p. 240; Wood 2006, p. 380).

The decision not to travel to Maiduguri personally entailed that, unlike at the other research sites, my research assistant conducted around half of the interviews alone. One potential concern is that theoretical conclusions drawn based on differences between Maiduguri and other research sites are an artifact of differences in the data generation. This issue should be less pronounced for the graphic elicitation exercise, which is very structured. I countered this concern by training the research assistant in Maiduguri online, by providing her with a long catalog of potential follow-up questions, and by doing a number of remote interviews and interviews with IDPs from the Northeast in Abuja.

Third, I encountered a few issues during the drawing exercises, which future iterations of this method could seek to improve. These issues are rooted in the transfer of this exercise from development cooperation

[16] Key sources included “I am a bandit” by Rufa’i (2021), Barnett et al. (2022), and Hassan and Barnett (2022).

practice to the conflict studies domain. One issue was the attrition of the participants' motivation and attention over the course of longer drawing exercises. When participants had included a lot of actors in the network, drawing four different types of relationships meant a lot of repetitive work, the so-called "completion burden" (Birkett et al. 2021, p. 114). Due to attrition, connections drawn toward the end of an interview might be less valid than connections drawn at the beginning. After I became aware of this problem, I tried to address it by alternating the order in which I asked for different types of relationships across interviews.

Another difficulty was that many participants included actors in the networks that were not mutually exclusive or very aggregated. The participants included representatives of professional groups like farmers, ethnic groups like the Kataf, and religious communities like Christians. In practice, however, these identities intersect with each other, i.e., farmers living in a community can be Christians and Kataf. At the same time, not all farmers are Kataf, and not all Kataf are Christians. This made drawing relationships complex and partly confusing. In other instances, collective actors were too aggregated to capture variation in behavior within the group. For example, communities would be attacked by bandits, but some community members would collaborate with them by providing information. In the network drawing, the same community would then have a relationship of violence and information-sharing with the bandits. This issue is mitigated by the explanations of the interviewees, which were recorded and allowed to reconstruct the reasoning of the interviewees. I mostly used the transcriptions of these explanations as evidence rather than systematically comparing the drawings.

In some cases, the participants did not follow my instructions, either because they continued to narrate their story instead of drawing or because they just started drawing something else. Interestingly, the latter was the case with participants with higher formal education. My interpretation is that these interviewees were more confident using pen and paper creatively and applied methodologies they knew from their studies or work. Notwithstanding, even if the participants did not follow my instructions, the drawings proved to be a useful tool to structure the interview and inspire the participants. Overall, most of the participants enjoyed the drawing exercise and were very engaged, which is in line with the observations of other social scientists using graphic elicitation (Molina et al. 2014, p. 316; Copeland and Agosto 2012).

The limitations outlined above are mitigated through the combination of various data sources — including interviews, network drawings, secondary sources from Nigerian libraries, and newspaper articles —, the embeddedness of the qualitative component in a mixed-methods design, and the transparency about the research process. Transparency about the qualitative data generation process is critical because the level of detail and depth of single-case studies makes it difficult to judge data validity for outsiders (Dunning 2015). Also, procedures are less standardized and replicable than in quantitative studies. Ensuring transparency included visualizing the sampling network, a novel approach that I developed to make potential biases in the sample composition visible.

9.2 Revisiting the theoretical framework in light of the mixed-methods evidence

Against the background of the strengths and limitations of the research strategy, I now synthesize the key findings of the study and explore potential avenues for refining the theoretical framework. By critically engaging with the study's findings and assumptions, this section aims to provide a nuanced assessment of the theoretical framework in light of the mixed-methods evidence. To do so, I first examine the empirical evidence supporting the study's central argument in comparison to the results for the alternative explanations and the external validity probe. Then, I identify five possibilities for further developing the theoretical framework.

9.2.1 Key findings across rival explanations, types of evidence, and cases

The argument developed suggests that the civil war outbreak sets in motion non-linear and multi-causal processes, which, in the short-term, strengthen the non-state armed groups and weaken the government — at least under the contextual conditions of the Nigerian case. The threat emanating from the civil war forces the government to act, albeit with adverse consequences for stability in other parts of the country. Formal non-state groups can capitalize on the destabilized situation. This argument, which rests on a network analytical framework, has greater explanatory power than alternative explanations, such as uneven state capacity, ethnic favoritism, or external sponsoring. Similar dynamics can be observed in Burkina Faso and other countries in the Sahel. Kenya might be at the starting point of such a process, considering the conflict between the government and Al-Shabaab in the north and increasing banditry in the west. Below, I revisit the elements of the theoretical argument and the respective empirical evidence in sequence. I conclude by deliberating on the long-term development of the conflict network and evaluating the usefulness of the conceptual framework.

The resource allocation choices made by the government are a critical factor in understanding the ripple effects of the civil war outbreak. The empirical analysis clearly established the prioritization of the civil war and the northeastern region in its resource allocation by citing evidence from insiders in the Armed Forces and federal government, data on troop deployment by *WhoWasInCommand* (2023), and the distribution of fighting effort established in the quantitative SNA. I used the distribution of fighting efforts to approximate the government's allocation of resources based on violent event data, yet due to a potential deterrence effect, the validity of this proxy was unclear. The results show that, at least in the Nigerian case, the fighting effort indeed correlates with resource allocation.

I further argued that the perceived threat to the persistence of the state drives the government's prioritization of the civil war. Delineating a threat-based explanation of resource allocation from one centered

on ethnic favoritism was empirically challenging because it requires tracing the decision-making of the top-level government. Elite interviews with a defense ministry official and a high-ranking army official provided me with strong evidence that the threat and urgency of the crisis were indeed important considerations in resource allocation. I furthermore compared the government response across different violent conflicts to assess my argument. I find that the variation in the government response is consistent with different threat levels. Nonetheless, the analysis raises the question of whether threat perception and ethnic favoritism are really separable theoretically. After all, the quality of the relationship between the government and an ethnic group might shape whether it is perceived as threatening or not (Galano Toro 2024). I will return to the role of ethnicity in the subsequent section on the extension of the argument.

The civil war outbreak and the subsequent uneven allocation of resources have countervailing effects within and outside the civil war conflict zone. Within the central war zone, conflicts between informal groups are limited because community life is regulated — or disrupted — by the civil war parties. To demonstrate the validity of this argument empirically, I established the low conflict severity quantitatively and traced the regulation and disruption mechanisms with qualitative data. The link between the micro-level mechanisms and the macro-level outcome was shown with interview statements that explicitly ascribed the absence of violent community conflict and crime to the behavior of the civil war parties. This also reduces my concerns about a potential underestimation of informal group conflicts in the quantitative analysis.

The relevance of the regulation mechanism was evident across countries. I showed that formal groups in countries as diverse as Mali, Ivory Coast, and the DRC intervened to resolve communal conflicts in territories under their control. The creation of order by non-state armed groups is widely discussed in research on rebel governance, but the specific impact on communal conflicts is often not made explicit (for an exception, see van Baalen 2024). The link between disruption and conflicts between informal groups is less clear beyond Nigeria. I suspect that Nigeria's Northeast might be an extreme case of displacement due to the brutality of JAS under the leadership of Shekau and the forced displacement by the Nigerian government. More than 2 million people have been displaced, leaving whole areas depopulated (*Nigeria* 2023a). In less extreme cases, displacement might increase conflict due to resource scarcity. For example, the displacement of 100,000 in Cameroon's Far North region likely had a conflict-inducing effect (*Curbing Feuds* 2024). Similarly, the displacement in Nigeria's Northwest due to the banditry violence did not appear to abate the conflict escalation.

An alternative explanation for the low conflict severity in the civil war conflict zone is that the communities align with the civil war parties and use the civil war as a channel for their conflict. The evidence in Nigeria does not support this explanation beyond a few communities. This stands in contrast to reports from other countries in the Sahel where violent extremist groups are more closely linked to the communities in the civil war conflict zone (e.g., Assanvo et al. 2019; Nsaibia 2019). A comparison of these cases with Nigeria is an

interesting avenue for future research.

Outside of the civil war conflict zone, my argument predicts high conflict severity and fragmentation because of the sudden power vacuum that emerged through the prioritization of the civil war. The analysis of the Nigerian case showed how a few violent actors are sufficient to rapidly destabilize the situation by setting in motion a security dilemma between the exposed communities. The decentralized mobilization of the groups and the geographic spread of violence were clearly visible in the visualization of the fragmented network structure. Yet, the quantitative conflict data underestimated the extent of the violence in the early phase of the banditry conflict, underlining the added value of the mixed-methods design. In light of these findings, the current situation in Kenya is concerning as the emerging banditry in the country's west might become a larger crisis.

Moreover, the added value of quantitative network analysis in capturing escalatory processes in comparison to simpler measures like the number of fatalities became clear. A common narrative about the Nigerian case is that the Boko Haram conflict peaked in 2014/2015 before JAS was pushed back through a military offensive. Since then, the group has been contained to the Northeast. The Nigerian government actively promoted the image that the security situation normalized during these years (Margin and de Montclos 2018). Against the background of this narrative, it appears that banditry suddenly erupted a few years later after a period of calm. This narrative is mostly based on the number of fatalities, a common measure to approximate conflict intensity (e.g., Gleditsch et al. 2002). Indeed, fatalities at the country level peaked at almost 10,000 per year in 2014 and 2015 and then reduced to around 4,000. They sharply began to rise again in 2020 and 2021, this time driven by informal armed groups (based on ACLED by Raleigh et al. 2010). Network analysis allows me to add nuance to this narrative. Analyzing the network topology reveals how the conflict network continuously grew and fragmented, even during the years before the sharp increase in fatalities in 2020. Relying only on fatalities as a measure of conflict intensity misrepresented the severity and complexity of the situation in Nigeria's Northwest. This finding potentially has important implications for the prediction, and hence prevention, of armed conflict.

The qualitative empirical analysis underlined the massive scale of banditry and the counter-violence by vigilantes like Yan Sakai. The scale also became clear in the network drawings, which produced an unexpected finding. I had intended to use the relationship types 'money flow' and 'providing information' as an operationalization of cooperative links between armed groups. Yet, during the interviews, it became clear that (a) the money relationships mostly covered extortion of communities by the bandits and (b) information relationships covered the collaboration between bandits and informants in the kidnapping business. The qualitative analysis furthermore shed light on another self-reinforcing relationship: the non-intervention of the security agencies allowed the bandits to increase their capacity, and the more their capacity increased, the more passive the security agencies became. Last but not least, the analysis of the alternative explanations

added further critical insights into the rapid escalation of the banditry crisis. Income from lootable resources might have enabled the bandits to procure modern weaponry on the black market and the resulting power imbalance exacerbated the security dilemma, functioning as an accelerator of the theorized process. However, qualitative sources diverged in their assessment of the relevance of illicit mining.

I proposed that these regional processes can create feedback effects across conflicts. The escalation and fragmentation of informal group conflicts increases the resource pressure on the government, which needs to reconsider its resource allocation, potentially weakening its position in the civil war. I showed that the Nigerian government tried to circumvent this problem by mostly conducting air strikes in the Northwest rather than redeploying ground troops. Similarly, the evidence in Burkina Faso showed how the government was overwhelmed by the number of geographically dispersed conflicts and armed groups and has now leveraged the arming of community vigilantes to compensate.

At first glance, the Nigerian government did not seem to be dramatically weakened in the Northeast as it was able to exert substantial pressure on JAS. This seems to contradict my theoretical expectations. However, the empirical analysis showed that infighting between ISWAP and JAS escalated in that period. According to Pischedda (2018), rival insurgent groups use government distraction as windows of opportunity to defeat their rivals. This would imply that the government's distraction by the banditry crisis was palpable on the ground in the Northeast. More research is needed, however, to corroborate the applicability of Pischedda's argument in the Nigerian case.

Last but not least, another feedback effect is that the informal group conflicts offer the formal groups the opportunity to expand their influence, e.g., to enlarge the territory under their control or to increase their capacity through income and recruitment. Theoretically, I distinguished between an expansion through cooperating with the informal groups or by opposing them violently. The qualitative analysis found that at least JAS and Ansaru used the emerging opportunity space in the Northwest. My analysis also made clear, however, that cooperative and coercive elements are often combined so that the contrast between the two strategies should not be overdrawn. Both of the aforementioned groups tended to switch between approaching bandits with the intent of winning their cooperation and more territorial-control oriented strategies such as setting up their own bases and clashing with the bandits if they rejected cooperation offers or did not follow the extremists' rules.

The role of Ansaru furthermore raised theoretical questions because the group is permanently located in the Northwest and follows a subversive rather than open adversarial stance towards the government. The group did not use violence until 2020 and still focuses primarily on establishing pockets of control and governance rather than attacking the state (*Ansaru's comeback* 2022). Therefore, the group does not fit well into my conceptual framework, which focuses on civil wars as high-intensity conflicts in one region on the

one hand and informal group conflicts in another region on the other. Future work needs to examine the conceptual implications of this observation.

It was empirically difficult to establish, whether and with which strategies the violent extremists pushed into the Northwest. This is because the internal decision-making of these groups and their secretive operations in remote areas affected by violence is difficult to observe. In principle, expansion through the violent confrontation of informal groups should be within the scope of the quantitative network analysis. However, the comparison of the quantitative results with qualitative accounts indicated that the quantitative data likely underestimated violence between violent extremists and bandits. The cooperative relationships should be captured in the qualitative accounts but it equally proved difficult to establish these relationships empirically due to contradicting information and insufficient differentiation between the three Boko Haram groups. In contrast, the evidence is clear that most of the bandits rejected the overture of the violent extremists.

The rejection by most bandits is remarkable, not least in comparison to other cases like Mali, the Central African Republic, and Niger, where Fulani herders and other informal groups cooperated with violent extremists. The very limited cooperation across conflicts might have 'helped' the government by forestalling a situation similar to a war on two fronts. According to my empirical analysis, the rejection was due to a mix of lack of incentives for cooperation, religious differences, and historical animosities between Kanuri and Fulani. The fact that the bandits did not need the support of the violent extremist groups again underlines the unusually high capacity of the bandits in comparison to other non-state armed groups and the government. The finding is furthermore in line with the existing research on alliances that highlights that diverging ethnicity and/or ideology make cooperation less likely (Blair et al. 2021; Gade et al. 2019a). However, Blair et al. (2021) furthermore propose that religion should foster cooperation. On this point, the present study underscores that alliance research would benefit from a more nuanced understanding of shared religion because the differing denominations or interpretations of religious texts seemed more relevant than a common allegiance to Islam.

This study concentrated on the immediate ripple effects of the civil war and its two attendant feedback effects on the conflict network. Long-term dynamics were beyond the scope of my investigation. As such, it remains an open question as to how the conflict network will develop after the outlined processes end. While the analyzed period was characterized by rapid changes, the emergence of a new, eventually highly violent equilibrium is possible. I argued that the civil war and the informal group conflicts could merge into one 'super conflict,' which the government could contain in the periphery but would not win militarily.

The developments between the end of the observational period in December 2021 and the completion of the study in the summer of 2024 point in another direction, potentially because Shekau's death in 2021 ended the emerging relationships between bandits and JAS. My impression is that banditry conflicts began

to consolidate, while infighting between ISWAP and JAS continued. As an International Crisis Group report conjectures on the latter: "They may have visited more damage upon each other than the Lake Chad states have inflicted on the jihadists" (*JAS vs. ISWAP* 2024). Accordingly, violence in the civil war conflict zone in the Northeast increased once more in 2023 after a short dip in 2021 and 2022, probably due to the weakening of JAS after the killing of Shekau (cf. Figure 9.1).

I suspect a consolidation of the banditry conflicts due to reports that the bandits became more stationary and began to tax rather than raid communities.[17] Supporting this idea, violence in Northwest, Northcentral, Southwest, and Southeast Nigeria abated in 2023 for the first time in five years (cf. Figure 9.1). Note, however, that President Bola Tinubu was elected in 2023, and more research is required to understand which role his election played in the decreasing violence.

Source: Own figure based on ACLED data by Raleigh et al. (2010).

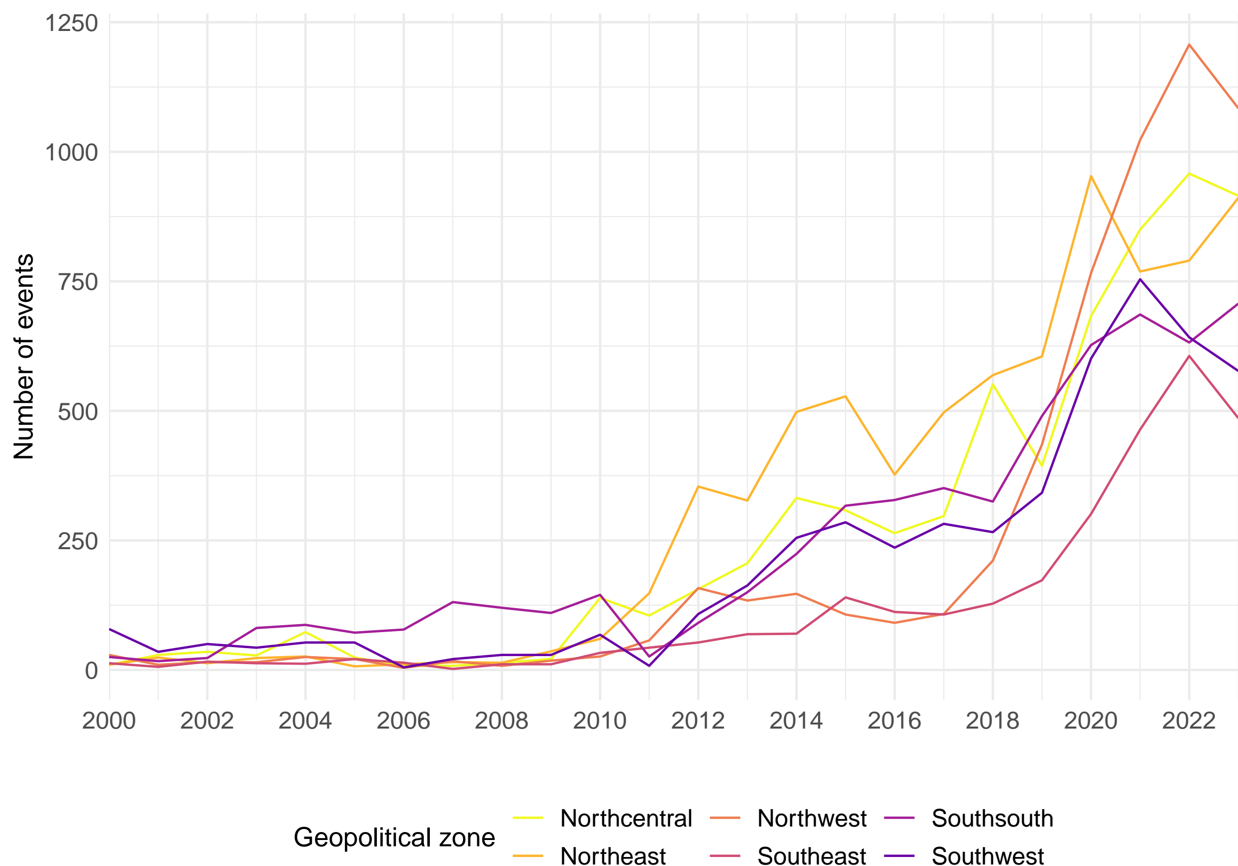


Figure 9.1: Number of violent events per Nigerian geopolitical zone (2000–2023)

At the conceptual level, the network analytical framework and the distinction between formal and informal

[17]The taxation of communities by bandits was already reported in some interviews in 2021, e.g., Interview 189, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author. It also came up in one of the interviews conducted during the second stay in 2023: Interview 212, national-level government official, Abuja, November 2023, interviewed by the author.

groups proved useful in developing a novel argument on the interdependence between civil wars and conflicts between less organized and locally grounded armed groups. This was possible by combining the structural perspective on the network topology with the tracing of armed group behavior in response to the structural constraints and enablers. The group classification allowed me to adopt a comprehensive yet sufficiently simple perspective on the conflict network. Aggregating the existing typologies of militias, vigilantes, and criminal gangs into the category of informal groups was critical for understanding the close intertwinement of farmer-herder conflicts, vigilante violence, and banditry in the Nigerian case. This would not have been possible by looking at them as distinct phenomena.

The empirical analysis further showed that the distinction between formal and informal armed groups is highly relevant to conflict dynamics. This increases my confidence in its theoretical importance and leverage. First, the vicious cycle of violence in the Northwest was made possible by the permeability of informal groups' boundaries. The empirical analysis showed that individuals affected by the violence joined informal groups either for economic reasons or self-defense. This was possible because joining the group did not require prolonged socialization into the group, abandonment of one's community of origin, or withdrawal from civilian life. In contrast, I could not observe a similar practice for Boko Haram in the Northeast. For example, herders who were impoverished by Boko Haram's cattle rustling did not join the group but "became [...] beggars."[18] I argue that this was because Boko Haram has more rigid boundaries and mostly recruits on ethnic grounds. Fulani herders would have needed to credibly adopt an extremist ideology, join the group as an ethnic-minority member, and live in camps of the violent extremists far from civilian life. Second, the formal group type of JAS, which implies the separation of civil and military life, enabled the group to be mobile and expand beyond the Northeast by setting up new bases. Third, the informal organizational structure of the bandits impeded the cooperation between the bandits and the violent extremists because it made it more difficult for the extremists to negotiate with these groups (Barnett et al. 2022). Interestingly, state governors faced the same challenge when trying to negotiate amnesty deals with the bandits (Wiehler and Malefakis 2024).

9.2.2 Adding nuance to the theoretical framework

The theoretical framework of this study rests on a number of assumptions and emphasizes the importance of some factors over others. By contrast, the empirical analysis, especially of the alternative explanations and the external validity of the argument, points to a number of ways in which the argument could be refined and developed in the future. Five issues stand out in this regard: (1) the relevance of non-armed actors, (2) the unitary actor assumption for the government, (3) the conceptualization of formal and informal armed

[18] Interview 357, researcher, Abuja, September 2021, interviewed by the author.

groups as stable and discrete entities, (4) the influence of ethnicity, and (5) the transnational embeddedness of the network.

The first point to be discussed is the relevance of non-armed actors. My conceptualization of the conflict network exclusively concentrates on the military dimension of the conflict and, therefore, only includes armed groups and their violent and cooperative relationships. Empirically, however, these armed groups are embedded within a much larger network of non-armed actors. This became apparent in the network drawings. In the first step of the network drawing exercise, I sought to elicit the actors involved in the conflict, using the prompt “Who is involved in the crisis in....” In all networks, the armed groups only made up a small share of the mentioned actors. Other actors included various ethnic, religious, and livelihood groups, traditional rulers, informants, and NGOs providing humanitarian assistance. Specifically, the network drawings and interviews emphasized the importance of a network of illicit entrepreneurs, which underpinned and integrated the conflicts. This included the trade of weaponry: gunrunners were identified as key individuals that bridge Boko Haram and other armed groups like the bandits. The underlying criminal network has also been described for Mali (Assanvo et al. 2019). This points to the larger question of how the armed conflicts are embedded in and affected by the war economy. Network analysis could be a promising tool to address this long-standing question in an innovative manner.

Another type of non-armed actor repeatedly mentioned by study participants is the political elite. The theoretical framework developed in this study is state-centric and does not theorize the preferences and behavior of the political elites as distinct from the government. I consider the elite part of the government that wants to ensure the survival of the state. In contrast, the interviews and secondary sources revealed that the government and the political elites are not necessarily congruent. Instead, the political elites operate in the background and are organized around intersecting cleavages, whereas the cleavage between the north and south seems particularly significant. The north-south division constituted the ground for an elite bargain concluded before the transition to the civil regime in 1999 (Angerbrandt 2018, p. 152). This elite bargain called “zoning” informally stipulates a rotation of the presidency between the north and south (ibid.). This elite bargain seems to be stable, as recently demonstrated through the transition of power from the northern president Buhari to the southern candidate Bola Tinubu in 2023 (Orjinmo 2023).

The qualitative data paints a negative picture of the political elites as corrupt and inciting conflicts for economic gain.[19] Corruption is described as endemic and pervasive in the Nigerian context (Smith 2007). Bad governance and dissatisfaction over corruption are identified as grievances and motivators in the Nigerian conflict, including the Boko Haram conflict and banditry crisis (Barnett 2022).[20] In addition, political elites

[19]E.g., Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 316, vigilante, Maiduguri (remote), September 2021, interviewed by the author; Interview 478, IDP Northeast (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[20]Interview 239, journalist, Abuja, November 2023, interviewed by the author; Interview 357, researcher, Abuja, September

are accused of mobilizing and arming thugs for election rigging — thugs that turn into armed groups after the elections. This has been argued for informal groups, including the bandits, but also Boko Haram's origin is traced to electoral politics (Ebimboere 2020, pp. 139, 142; Rufa'i 2021).[21] These observations put the relevance of formal state institutions into question and instead point to patronage-centered frameworks like the political marketplace by De Waal (2015). In this framework, the state is hollowed out and becomes a mere theater for the competition between armed groups over elite sponsoring (see also, Carboni and Moody 2018).

In contrast, I propose that the state is not as insignificant as suggested by the political marketplace framework, even though the role of the elites should receive more theoretical attention in the future. At least in the Nigerian case, I consider the notion of the two publics by Ekeh (1975) the more accurate depiction. Here, the central idea is that former colonies like Nigeria are not simply organized into a public and a private sphere but that the public sphere itself needs to be differentiated into a civic and a primordial one, the former having been imposed through colonial institutions. Elites seek to capture positions in the civic public sphere so that they can redistribute captured resources to their primordial public sphere, which is often ethnically connotated. In this vein, Watson (2023, p. 16) suggests that the competition over formal political posts in Nigeria is strong because it is linked to access to resources. This perspective is compatible with my theoretical framework because access to state institutions is highly relevant, and the elites have an incentive to sustain and defend the state. At an aggregate level, this implies that the state fights back when it is attacked by non-state armed groups and seeks to enforce order.

These considerations lead to the second issue that requires further theorizing: the unitary actor assumption. My argument operates theoretically at the group level. I make an argument about the behavior of unitary, collective actors, including the government, and do not theorize diverging preferences within them. The limitations of this assumption became most visible for the government. I assumed that the different levels of government and the military ultimately work together towards the same goal.

Conversely, the study participants had a more nuanced perspective on the government, which also became apparent in their network drawings. Participants differentiated between levels of government, specific positions like the presidency or state security commissions, and various security agencies. Importantly, these different actors were often perceived as pursuing separate aims and potentially acting against each other. For example, some participants claimed that the lower ranks of the security agencies cooperated with bandits on the grounds of their military inferiority or that state governors collided with the bandits in illicit business while the leadership aimed to defeat them.[22] Another example is the position held by the state and local governments

2021, interviewed by the author.

[21]Interview 503, HDP interest group (FGD), Sokoto, October 2023, interviewed by the author.

[22]Interview 212, national-level government official, Abuja, November 2023, interviewed by the author; Interview 121, researcher, Kaduna, August 2021, interviewed by Shedrach B. Nghozei; Interview 527, journalist, Sokoto, October 2021, interviewed by the

towards the bandits. While some followed a No Negotiation policy, others tried to negotiate amnesty deals with them. By not streamlining these initiatives, subnational governments most likely undermined each other (Wiehler and Malefakis 2024). This discussion highlights the strength of the mixed-methods design since a purely quantitative SNA would have missed this tension.

The third theoretical issue is the assumption that non-state armed groups are discrete and stable entities that can be differentiated into two main types: formal and informal. Here, discrete means that one can delineate between an in-group and an out-group, notwithstanding the community-embeddedness of informal groups and the fuzziness of their boundaries. This assumption is a basic requirement of any group-level network analysis that uses groups as nodes. It also underpins my approach, which approximates informal groups through spatial event clusters. This approach presumes that events can be assigned to one distinguishable group. However, future work might take an even more radical stance and reconsider the concept of an armed *group* in and of itself. Vigilantism has been described "as practice rather than an object of analysis with clear-cut conceptual and empirical boundaries" (Pratten 2008a, p. 8). Similarly, banditry has been framed as a mass movement of frustrated youth in northern Nigeria without these youth necessarily being part of a specific group.[23] Here, consulting research on ethnic riots and lynching might be insightful as it theorizes violence as a practice executed by spontaneous collective actors.

I furthermore assumed that the armed groups are stable units that can cooperate and fight each other.[24] However, the qualitative analysis showed that the groups might be much more fluid in that they split and merge frequently. Also, the distinction between close cooperation and merging is not clear-cut theoretically and empirically. For example, the Niger Delta group MEND is an umbrella organization for several smaller groups active in the Southsouth of the country. I decided to follow the secondary literature, as well as the coding in the ACLED data, by treating MEND as one actor in my analysis. However, individual factions within MEND have considerable autonomy, so they could also be conceptualized as a set of armed groups that cooperate with each other. Linking to the former point questioning armed groups as discrete units, Hanson (2007) even argues that MEND should be seen as an idea rather than a distinct group. Similarly, bandits act as one group for larger attacks but also operate in smaller units independently. Multilayer network analysis could conceptually capture these shifts by including the most granular units in one layer and the larger groups that integrate several of the smaller units in the other. The connection between the layers would indicate in which of the bigger groups the smaller units participate. However, such an analysis would likely fail empirically due to the lack of sufficiently fine-grained data.

I have developed a binary distinction between informal and formal armed groups to strike a trade-off

author.

[23]Informal conversation with a journalist in Abuja, October 2021.

[24]Recall that the stability of the groups' structure is one criterion for distinguishing formal and informal groups. This criterion focuses on internal stability and does not put into question the stability of the group as a unit.

between capturing heterogeneity across groups while keeping the complexity of the argument manageable. The binary distinction is a simplification and the empirical analysis highlighted the continuous nature of the attributes used to differentiate between both types. As a result, the groups that are "just informal" and "just formal" can be quite similar. For example, the VGN is classified as formal because of its self-identification as an armed group and its stable, depersonalized structures. Nevertheless, the VGN might use many of the operational tactics as an informal vigilante group like Yan Sakai. Similarly, MEND is coded as a formal armed group while the bandits are coded as informal, despite the fact that both entities can be seen as loose militant networks. These objections notwithstanding, the binary distinction was expedient for this study. In addition, I have conceptualized the binary distinction in such a way that scholars can easily adapt a continuous conceptualization fitting their needs in the future.

The fourth point in this discussion concerns the importance of ethnicity. The theoretical framework of this study did not theorize the role of ethnicity, except for considering ethnic favoritism as an alternative explanation — which I was able to refute. Still, the empirical analysis demonstrated the importance of ethnicity in explaining the conflict dynamics in the Nigerian case and beyond. The qualitative analysis of the Nigerian case showed that ethnicity was relevant to understanding the behavior of the non-state armed groups. On the one hand, a unifying ethnic identity might explain why the conflicts between informal groups spread so rapidly in the Northwest. Violent incidents between individuals spilled over to other communities because groups retaliated against members of the same identity group, irrespective of their involvement in the original incident. On the other hand, the *lack* of a common ethnic identity slowed down other escalatory processes. For example, it might have impeded the cooperation between the bandits and JAS and prevented impoverished non-Kanuri communities from joining Boko Haram.

The analysis of the case of South Sudan highlighted how differently the Nigerian conflict could have developed if the civil war parties and the opposed informal groups had been divided along the same ethnic cleavage. In Nigeria, such a cleavage was not relevant because the state has an ethnic power-sharing regime, which also manifests itself in ethnically mixed armed forces with an integrated command and control. This observation also highlights the relevance of the regime type, which could be incorporated as a theoretical factor in future iterations of my argument.

The fifth and last avenue for theory refinement concerns my decision to conceptualize the conflict network as a purely national, rather than transnational, collection of actors and relationships. The national scope followed existing SNA of armed conflicts (e.g., Dorff et al. 2020; Metternich et al. 2013). Theoretically, this decision was consistent with the focus on the role of the national government. Empirically, however, the Nigerian actors are embedded in "a global conflict system" (Chen 2021, p. 382) and have ties to actors outside the country. Discounting these ties in the SNA bears the risk of a "partial system fallacy," which means that conclusions about the whole network are drawn from an analysis of parts of the network (Laumann et al.

1989, p. 75).

Concretely, transnational connections were most relevant for ISWAP and the government. ISWAP's financial ties to the so-called IS and its operations in the wider Lake Chad region, including Chad, Cameroon, and Niger, likely had consequences for the group's behavior in Nigeria.[25] For example, I have suggested that ISWAP's transnational activities can explain why the group did not expand to Nigeria's Northwest. These activities also make the group more resilient to attacks by the Nigerian government.

In the case of the government, its embeddedness and recognition in the international system allowed the government to mitigate the resource allocation problem by entering into an international alliance, the MJTF, to fight Boko Haram. An interviewee from an international organization suggested, however, that the priorities of the neighboring countries shifted away from the Lake Chad region.[26] This development abroad might weaken the Nigerian government in domestic conflicts. In addition, it is noteworthy that my analysis showed not only are the conflicts in Nigeria affected by the transnational realm but that the developments of the Nigerian conflicts also have consequences abroad. Specifically, the Nigerian government withdrew its personnel from international peacekeeping missions to respond to civil war (McGregor 2013). Future research should scrutinize the consequences of this decision.

Despite these considerations, the focus on the national conflict network appears reasonable in the Nigerian case. Walther et al. (2020, p. 172) conducted a network analysis of the regional conflict network of North and West Africa and found that the Nigerian conflicts can be identified as a single cluster. This means they are relatively separate from other conflicts in the region. Similarly, Idler and Tkacova (2023, p. 13) point out that the Nigerian government was always the main target of ISWAP, even after they withdrew to neighboring conflicts as part of their military strategy. Therefore, it is justifiable to analytically separate the Nigerian case from the wider region.

[25] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author; Interview 261, researcher, Abuja, September 2021, interviewed by the author; Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

[26] Interview 215, HDP interest group, Abuja, September 2021, interviewed by the author.

Chapter 10

Conclusion

This study is motivated by a desire to contribute to the scientific understanding of complexity in internal armed conflict theoretically and empirically. Thereby, it also seeks to provide impetus to the integration of macro- and micro-level conflict research. The concluding chapter synthesizes the central insights for the study of internal armed conflict and identifies avenues for future research. It then assesses the viability of SNA as an approach for conflict studies, focusing on conceptual implications, data availability challenges, and analytical methods. Finally, the chapter discusses the implications of the study's findings for conflict management and resolution in Nigeria, emphasizing the need for a comprehensive approach that combines dialogue, enforcement, and economic policies.

10.1 Advancing research on internal armed conflicts

This study theorized the short-term ripple effects of civil war onset for conflicts between informal armed groups in the same national context. Based on the Nigerian case, the argument suggests that the outbreak of civil war sets in motion multi-causal and non-linear processes that manifest themselves in countervailing ways in social and geographic space. Overall, these processes strengthen formal and informal armed groups while weakening the government. This result is more than the sum of independent, micro-level processes because said processes are self-reinforcing and feed back into the macro-level structure of the conflict network. These structural changes, in turn, shape how the processes continue to play out. An interest group representative in Kaduna put it in a nutshell when I asked about the information flow in the conflict: "You mean the crisis in Kaduna or in the country? There is really not clear-cut demarcation, they are all [...] directly or indirectly linked."[1]

[1] Interview 172, ethnic/livelihood interest group, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

The acknowledgment of the complexity and endogeneity of conflict processes is not new (Brosché et al. 2023). Yet, the contribution of this study is to present a concrete and novel argument of how these processes arise, interact, and develop in tandem with the conflict structure. Tracing this argument empirically for the Nigerian case was made possible by using a mixed-methods SNA that linked evidence on structure and processes with methodological innovations in the qualitative and quantitative components. These innovations included the disaggregation of informal armed groups in ACLED and the use of participatory network drawings. The comprehensive perspective on the Nigerian conflict network was decisive for gaining a deeper understanding of how Africa's powerhouse could be destabilized so fundamentally within 12 years only (Pilling 2022).

The study advances our understanding of internal armed conflicts in at least three ways. First, it adds to the current literature by theorizing the interplay of structure and agency. With regard to agency, the study builds on recent micro-level research that emphasizes the agency of conflict actors but brings the structure — and, by extension, the state — back in. The second wave of conflict research, with its focus on micro-level processes, emphasized the agency of armed groups and civilians in shaping conflict dynamics through their violent tactics, governance, or resistance. I extend these perspectives by showing how the structure of the conflict network constrains and enables the conflict actors. On the one hand, this perspective allowed me to show the relevance of structural constraints: the mobilization of informal armed groups in northern Nigeria was not a question of choice or even greed but the result of a shift in resource allocation by the government. Without the state's three core functions of rule implementation — enforcement, prosecution, and adjudication — a few violent groups were sufficient to force others to react with similar means. On the other hand, I could demonstrate how the network structure enabled formal armed groups — in the Nigerian case, the violent extremists. These groups could exploit an opportune structural context to assert their position in the civil war. Research on the bandit-Boko Haram cooperation had empirically documented this process but did not embed it in a more abstract conceptual framework (e.g., Barnett et al. 2022; Samuel 2021).

With regard to structure, this study's network analytical framework can add nuance to structuralist explanations of conflict that emphasize the role of state capacity. Related studies either conceptualize state capacity as a national-level factor which can experience shocks like regime changes (e.g., Hegre et al. 2001; Tajima 2014) or as a temporarily stable factor with subnational variation measured by rough terrain or infrastructure penetration (e.g., Buhaug and Rød 2006; Fearon and Laitin 2003; Müller-Crepon et al. 2020). This study departs from these perspectives on state capacity by showing how the allocation of coercive resources leads to a much more dynamic subnational variation in the state's ability to maintain order. This implies that state capacity is immediately shaped by the conflict processes. This perspective on state capacity is less static and conceptualizes it as endogenous to conflict rather than (only) as its cause. Thereby, the study also qualifies interpretations of the Nigerian conflicts that highlight the importance of "ungoverned spaces"

(e.g., Lenshie et al. 2021; Ojo 2020; Onwuzuruigbo 2020). The spaces to which the non-state armed groups can retreat are relevant, but they alone cannot explain variation in violence if they are conceptualized as the static result of a weak state. This new perspective on state capacity was only possible by going beyond the compartmentalization of the conflict literature along conflict types, e.g., focusing on civil wars *or* communal conflicts.

A second way in which this study contributes to the understanding of armed conflict is through a new conceptualization of non-state armed groups as formal and informal. This conceptualization enabled me to integrate and extend existing research on third actors, that is, armed groups that are not aligned with a civil war party. Existing research on third actors focuses either on militias, vigilantes, criminal gangs, or communal groups (Schuberth 2015). I contrast with this common practice by introducing a much simpler distinction of non-state armed groups. This conceptualization has the advantage that it is parsimonious, analytically manageable, and still captures key sources of heterogeneity among non-state armed groups. The heterogeneity is relevant to explain how groups react to the constraints and opportunities associated with the network structure. From a social network perspective, the binary distinction is a critical innovation because the SNA of armed conflict treated the involved armed groups as a homogeneous population (e.g., König et al. 2017). The application of this conceptualization in the Nigerian case demonstrated its added value in understanding a highly complex conflict. Aggregating vigilante groups, ethnic community militias, and bandits under the label of informal groups was essential to describe the close interwovenness of their conflicts. Looking at these groups separately would have prevented a comprehensive understanding of the escalation process in Northwest Nigeria.

Third, the theoretical focus on interdependence generated new insights for the study of civil war and communal conflict. A central theoretical contribution of this study is to theorize how these conflicts influence each other and to empirically analyze their interdependence with quantitative and qualitative data and methods. In so doing, my work contributes to research on extra-dyadic dependencies in civil wars, which highlights strategic interdependence between indirectly connected armed groups. It confirms the key insight of this research strand that the relationship between the state and one non-state armed group indirectly influences other conflict dyads. For example, I proposed that the infighting between ISWAP and JAS in Nigeria's Northeast might be related to the shift of attention of the government to the Northwest of the country. This would be in line with the window of opportunity theory on inter-rebel war by Pischedda (2018). Yet, my work goes beyond the existing research by theorizing extra-dyadic dependencies beyond the civil war parties. In addition, I link the existing research on extra-dyadic dependencies with the research on cooperation and alliances by showing how extra-dyadic dependencies shape the non-violent relationships between armed groups by creating opportunity spaces for cooperation. In the Nigerian case, this refers to the attempts of JAS to cooperate with the bandits while the government exerted pressure on the group in the

Northeast.

My research adds to our knowledge of communal conflicts, building on recent studies rejecting a purely resource-driven or instrumentalist interpretation of these conflicts (Benjaminsen and Ba 2021; Krause 2018, 2019). To start, I established that communal conflicts should not be seen as independent from civil wars in the same context — even if the involved groups are not part of an alliance or directly oppose the civil war parties. I highlighted that the connection between communal conflicts and civil wars is a *two*-way relationship. The escalation of the informal group conflicts in the Northwest fundamentally changed the conflict landscape, creating new constraints and opportunities for the civil war parties. It is thus insufficient to theorize the unidirectional impact of the civil war on these conflicts, as it has been done in the research strand on the link between national and local conflicts.

Furthermore, the aforementioned research strand was an important starting point to identify potential mechanisms linking civil war and communal conflict. Notwithstanding, the related contributions faced the shortcoming that the theorized mechanisms remained relatively vague or generic. I extended these insights by integrating the mechanisms into a network analytical conceptual framework. This allowed me to theorize systematically when which mechanisms are relevant and how they manifest empirically. For example, I provide micro-level evidence from the Nigerian case on how alliances between formal and informal groups are forged and why they might fail. This links back to the issue of agency because I could carve out that it was the bandits' decision to reject JAS' overture. The role of the bandits contrasts with the literature, which portrays communal groups as being passively co-opted by the civil war parties. The bandits' agency can only be understood in the context of their empowered position in the network structure. Finally, I can explain spatiotemporal variation in the impact of civil war on informal group conflicts, which had not received sufficient attention before. My findings underline that interdependence is relevant across long distances and not just between groups in immediate proximity. This was possible by conceptually anchoring the role of the government as the nominal wielder of force in the state territory.

10.2 Avenues for future research

The study raised several new questions that concern conceptual issues, the theoretical argument, and methodological next steps. For the conceptual issues, future work could theorize how and when groups transition from formal to informal and vice versa. The relevance of this question was visible in the Nigerian case for the CJTF in the Northeast, among others. The CJTF began as an informal vigilante group to expel Boko Haram from Maiduguri and subsequently began to formalize, probably due to its collaboration with the Nigerian military. It is unclear whether the formalization of the CJTF was relevant for taking on its role as a regulating actor in the Northeast. The transition as well as the behavioral implications pose interesting

theoretical questions.

Another way forward is to leverage the group classification to develop a typology of conflicts rather than groups. For the purpose of this study, I defined the civil war concept and delineated this concept from informal group conflict. Yet, I did not provide a comprehensive typology of conflict types. A potential starting point is to consider combinations of the group type, the conflict issue, and the conflict intensity. Note, however, that it was a key contribution of this study to provide a conceptual lens that is aggregated enough to analyze informal group conflicts as cutting across cleavages and goals. Future conflict typologies should seek to maintain this perspective.

Furthermore, it will be fruitful to develop more systematically how the group type shapes agency in the context of the conflict network. I have argued that the structure of the conflict network creates constraints and opportunities for non-state armed groups. Future work could explore whether formal and informal groups react similarly to the structural environment and have the same opportunities in shaping the network structure. One hypothesis is that the formal groups have more possibilities to act against structural constraints and that their behavior has stronger repercussions for the network structure. Moreover, there is a theoretically interesting tension between the power and capacity of the government — not least due to its embeddedness in the international system — and the constraints on the government through the network structure. This tension will be worthwhile exploring.

Future research could investigate how the government makes use of its different security agencies in its resource allocation, for example, where it deploys the police and where the military. In contrast to the non-state armed groups, I considered the security agencies of the state as one unified actor in my conceptual framework. Typically, the police are in charge of internal security, and the military is in charge of external security. However, when a civil war breaks out, this division is blurred, and both agencies can become targets of and perpetrators of violence against the non-state armed groups in question. One possibility is that the military is primarily deployed against formal groups due to their higher capacity, but this requires further empirical investigation.

I now turn to potential research avenues for the theoretical argument. First, this study focused on the ripple effects of a sudden civil war outbreak in a country that has been relatively stable before. Future work can expand on this work by applying the conceptual framework to other constellations. For example, informal group conflicts could already be highly violent or a criminal war could be ongoing with the same context. Also, the consequences of the civil war outbreak for formal rather than informal groups have received less attention in this study. It is noteworthy that the Biafra conflict equally escalated in the shadow of the Boko Haram conflict. My argument suggests that IPOB could exploit the power vacuum left by the government to mobilize. A security dilemma might also have played a role because the formation of IPOB's armed wing was

justified by the increase in violence by Fulani militias.

Second, more theory development is necessary to explain under which conditions the power vacuum outside the civil war conflict zone is filled by non-state actors. In the Nigerian case, the informal group conflicts escalated and fragmented over the course of years without a formal or informal group becoming a new ruling actor replacing the state. As a member of the armed forces put it: "Everyone is just on its own, it is just madness, it is like the wild wild west."[2] This is mirrored in the quantitative network analysis, which showed that no group could be identified as dominating the situation. This is puzzling, as state formation theories would predict that armed groups become stationary to tax and fill the vacuum (Olson 1993, 2000). Possible explanations could be the lack of capacity of the bandits to project their power over larger areas, the infighting between them, which prevented one group from prevailing, or the lack of incentives to become stationary as roving still paid off.

Third, future research could connect the group-level argument introduced in this study with individual-level research on participation in conflict and civilian resistance. My argument is agnostic about which specific communities mobilize in response to the security dilemma. Instead, it focuses on whether, on average, the communities become more likely to use violence. Shedding light on this mobilization process will be a useful extension, not least to inform conflict prevention efforts.

Last but not least, the theoretical framework of this study could be extended to incorporate the impact of peacebuilding and peacekeeping interventions. This would constitute a major contribution to the peacebuilding literature on the link between national and local conflicts. A key challenge for this research has been that theories on the interdependence between these conflicts were limited, which in turn impeded systematic theorizing of the impact of interventions. The conceptual framework provided in this study can provide impetus for theory development in this regard.

Methodologically, a promising next step is to compare the evolution of the Nigerian conflict network with other cases quantitatively. This will require some preparatory work to classify the actors as formal and informal groups and — if subnational networks are to be considered — an understanding of how internal conflicts map onto geographic regions. Once these two things are completed, the visualization and description approach, as introduced in this study, is easily transferable. Future work could seek to develop a cross-country quantitative test of the argument. Still, modeling network emergence as an endogenous process and combining social and geographic space remain methodological challenges for SNA, as I discuss in the subsequent section.

[2]Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

10.3 The viability of social network analysis in conflict studies

The study adopted SNA as a theoretical and methodological approach because its focus on relationships and their direct and indirect effects seemed promising. I used a mixed-methods design to ensure that I could capture both the structural and process dimensions. To the best of my knowledge, the application of mixed-methods SNA to the field of conflict studies has been an innovation. In this section, I thus seek to assess whether social network is a viable approach for conflict studies. I focus on the conceptual implications, the challenge of data availability, and analytical methods.

Conceptually, SNA was an expedient approach to represent interdependence between armed conflicts, striking the balance between assuming their complete integration and complete separation. The emphasis of SNA on the co-construction of structure and agency was fruitful in explaining the development of the Nigerian conflict network. I furthermore demonstrated how network analysis offers innovative ways to operationalize established theoretical concepts like conflict fragmentation. The cluster-based measure of fragmentation developed in this study could easily be integrated as a variable in other types of quantitative conflict analysis.

Nonetheless, at least two conceptual challenges require attention in future applications. First, more theoretical work is required on the specification of the boundaries of conflict networks. This concerns the geographic boundaries because states and internal conflicts are embedded in the international system (Riofrancos 2021, pp. 107, 112). This is rarely captured by the existing SNA focusing on specific countries (for an exception, see Walther et al. 2020). A promising avenue is the work by Chen (2021), who proposes the conceptualization of armed conflict as multilayer networks with an international and a domestic level. In addition, the boundary specification concerns the more fundamental question of which nodes are to be included in a conflict network. In this study, I focused on the military dimension of the conflict but the network drawings clearly showed the importance of civilian actors for the conflict network. If civilian actors are to be included, the critical question is where the boundary is then to be drawn. Thinking in this direction could be one way to counter the "violence bias" in conflict studies as identified in ongoing work by Arjona (2021) and Arjona and Castilla (2020).

Second, conflict networks typically conceptualize violent conflict as negative relationships and cooperation as positive. Yet, the majority of network analytical concepts are developed for networks with positive edges, and more work is required to adapt them for networks with negative edges. Positive edges are conceptualized as pipelines that transmit something, e.g., information, or as affection that binds nodes together, e.g., through friendship (Marin and Wellman 2014, p. 10). The challenge of transferring concepts developed for such positive relationships to negative ones can be seen in concepts such as centrality and brokerage. These positive-tie concepts assume that a central or bridging position makes actors powerful because they can control transmission in the network, for instance of information. However, from a conflict point of view, a

party that bridges two conflict clusters might actually be highly vulnerable because it is challenged across conflicts. To my knowledge, this ‘translation’ of network concepts to the conflict realm has not been done systematically so far.

Turning to the issue of data availability, a major challenge to future network analysis of armed conflict is the lack of suitable data. SNA is demanding because it requires fine-grained information on the actors and their interactions. Existing cross-country conflict data often does not include all the information required, for instance, by lacking the actor information, only including some types of armed groups, or focusing on violent relationships only. This problem becomes even more severe when considering non-armed actors as well. In this study, I introduced an approach to mitigate the lack of actor information for informal groups in existing conflict data through spatial event clustering. This is a contribution to the quantitative analysis of conflicts with informal groups, but the limitations of the approach have been discussed in the previous chapter.

One way forward is to collect new quantitative data on specific cases. A positive example is the ongoing work by Emily Gade, Shahryar Minhas, and colleagues on a dataset of Syrian armed groups and their network of conflict and cooperation (Minhas and Gade 2024). The scholars have analyzed tens of thousands of social media posts of these armed groups in which they make statements about their activities to their rank and file. An alternative approach is to move away from armed groups as the analytical unit and to focus on the ego networks of individuals like former fighters. This information can be compiled more easily through surveys or archival work (e.g., Themnér and Karlén 2020; Vásquez-Cortés 2024). Focusing on individuals is also a promising avenue for graphic elicitation exercises considering the challenges I faced with the non-exclusivity of the included collective actors. Turning to the individual level, however, risks losing the actors’ societal embeddedness out of sight.

In terms of analytical methods, this study aimed to establish the added value of mixed-methods SNA for conflict studies. The mixed-methods research design enabled me to develop a novel argument that I would not have conceived based on just a qualitative or quantitative analysis. Using a mixed-methods SNA was only possible due to a research context with sufficient resources and access to domain experts. Mixed-methods research is demanding in terms of time and skills and even more so if used for SNA because it is less well established than other mixed-methods designs (Hollstein 2014a, pp. 15, 21; Johnson and Onwuegbuzie 2004).

Other analytical challenges include integrating social and geographic space and modeling dynamic networks, i.e., those changing over time. According to Hollstein (2014b), dynamic networks are “one of the biggest theoretical and methodological challenges for network research.” In recent years, more models for dynamic networks have become available, but they require advanced quantitative methods skills. This makes them less suitable for mixed-methods studies that need to balance the required efforts across the quantitative and qualitative components. Similarly, the link between geographic and social space is intuitively important

because violence clusters in geographic space while also being a relational concept by definition. Yet, modeling this link is not straightforward. Scholars have suggested integrating geographic space as another network layer in which geographic contingency or distance constitutes one type of network edge (Emch et al. 2012; Chong et al. 2017). In my understanding, these models have yet to make it into the analysis of internal armed studies.

10.4 Practical implications for conflict management and resolution in Nigeria

A central goal of this study is to inform future peacebuilding efforts and contribute to the reduction of armed conflict. The study is part of fundamental research that seeks to explain conflict dynamics without directly investigating the effectiveness of interventions. Despite this, its theoretical and empirical findings have implications for the management and resolution of internal armed conflicts.[3] The implications discussed in this section focus on the Nigerian case since more research is required to fully understand the transferability of the argument to other cases. The implications are relevant to the Nigerian government as well as national and international third parties.

The starting point for this discussion is the finding that the military status quo is not sustainable for the government. If the government continues with its current strategy — concentrating on military interventions and prioritizing the Boko Haram conflict — it will ultimately become weaker while the non-state armed groups become stronger. Therefore, the government should reconsider its military priorities and adopt a more holistic strategy that combines dialogue, enforcement, and economic policies. Based on the theoretical argument, I identify concrete and pertinent starting points for such a strategy.

A holistic strategy requires resources. However, the resource limitations of the government have been highlighted throughout this study. Therefore, the following implications require a reconsideration of military priorities, a budget redistribution, and eventually soliciting support by international organizations, foreign governments, and international and national NGOs. Either way, fighting corruption will be essential to ensure that the invested resources materialize. I now turn to the implications in detail.[4] They are structured along the main elements of my theoretical framework: the resource allocation of the government, the dynamics within the civil war conflict zone, the informal group conflicts outside the civil war conflict zone, and the feedback effects across conflicts.

[3]Conflict management and resolution are closely related, and the differences between them are not always clear-cut. Conflict management refers to the efforts to limit the negative effects of conflict and contain it, while conflict resolution aims to address the underlying causes of the conflict and find a lasting solution (Badache et al. 2022).

[4]The subsequent discussion builds on and extends the policy brief “Time to make ‘peace’ with the bandits” written by the author and Medinat Malefakis (Wiehler and Malefakis 2024).

To start, the severity of the government's resource allocation problem needs to be mitigated to stabilize the situation in Nigeria. Currently, the government is thin-spread, trying to defeat the violent extremists in the Northeast while intervening with air strikes in the banditry and Biafra conflicts. Yet, despite these efforts, violence continues to increase throughout the country (recall Figure 9.1 in the previous section). I identify four ways in which a mitigation of the resource allocation problem might be possible. First, the resilience of communities needs to increase so that disputes do not escalate to violence if the state's presence is weak. Specifically, non-state conflict management mechanisms should be strengthened (*Herders against farmers* 2017, p. 16). The study emphasized that traditional rulers and religious institutions can be critical in complementing the state and that their weakness likely contributed to the current situation.

Second, the police need to be strengthened and decentralized to enable them to enforce and prosecute rule transgressions like reneging on agreements, crime, and the use of violence immediately (*Herders against farmers* 2017, p. 15; Samuel 2021). If the police were stronger, shifts in the allocation of military resources would have less dramatic downstream effects. In the Nigerian case, the federal government waited too long to intervene in the Northwest, which allowed the informal armed groups to build up their capacity — to a level that they became stronger than the state security agencies on the ground. The centralization of the police at the federal level, in turn, prevented state governments from reacting swiftly and independently from the federal government (Ojo 2020, p. 101). Yet, immediate intervention is critical because the state's repeated non-intervention undermines its legitimacy and thus weakens it even more in the long run.

Third, the government should reevaluate its prioritization of the civil war. A speedy termination of the Boko Haram conflict seems unlikely. The negotiation of a peace agreement is politically undesirable due to the groups' extremist demands, and a military victory appears elusive. The violent extremist groups have proven resilient to several transnational military offensives during the last decade. Therefore, the government should consider containing the Boko Haram conflict for at least some time rather than aiming at defeating the groups. Assuming that containing a conflict requires fewer means, the freed-up resources could be used in other parts of the country, particularly to address banditry and prevent its geographic spread. This strategy entails a risk, however, that the violent extremists use the breathing space to increase their capacity, thereby becoming an immediate threat to the survival of the Nigerian state and endangering civilian lives. The resource allocation problem is intricate, and there is no single right solution.

The fourth and last way to mitigate the government's resource allocation problem is to tackle corruption in the security sector, especially in procurement. The severity of the resource allocation problem directly depends on the available resources. The government sought to enlarge the resources at its disposal by drastically increasing military expenditure (*Military expenditure* 2024). However, parts of the additional budget seem to have disappeared into private pockets. According to Transparency International, "corruption in the defence sector [...] has resulted in the waste of billions of dollars' worth of public funds through

corrupt defence procurement practices" (*Nigeria* 2024). This critically undermines the government's ability to respond to the current crises.

I now turn to the implications for the civil war conflict zone. I have already pointed out that containment of the civil war might be preferable if neither a military victory nor a comprehensive peace agreement seems likely any time soon. The containment strategy can be complemented with attempts to undermine Boko Haram by encouraging desertion. The two existing reintegration programs, Operation Safe Corridor and Suluh, are considered a step in the right direction as they enabled thousands of fighters to leave the extremists groups (*Exit from Boko Haram* 2021; Anyadike 2021a).[5] Despite its alleged success, the Operation Safe Corridor program has been accused of detaining the applicants for long periods under dire conditions (Abdullahi 2022; *Exit from Boko Haram* 2021). These practices should stop not only for normative reasons but also because they lower the program's attractiveness, thereby frustrating its very purpose. When undermining the support for Boko Haram, the governance-related dimension of the conflict needs to receive more attention. The groups are often reduced to their extremist ideology, and their reintegration focuses on deradicalization. This emphasis on ideology discounts that Boko Haram's origin is also related to grievances over bad governance and corruption in Borno state and beyond (Ebimboere 2020).[6]

The study furthermore highlighted that any strategy to end the civil war needs to think through the consequences for informal group conflicts in the civil war conflict zone. My argument suggests that there is a latent potential for violent conflict in the region due to resource competition between livelihood communities. The competition did not escalate to a violent level because it was suppressed by the civil war; for example, ISWAP introduced mechanisms to resolve the disputes resulting from this competition. If the civil war de-escalates and the civil war parties withdraw, this could create a power vacuum that leads to an increase in these conflicts. Assanvo et al. (2019) warned against a similar development in the case of Mali. A carefully crafted transition phase is thus needed, for instance by specifying how control is transferred from ISWAP to the government.

The third set of implications addresses conflicts between informal groups outside the civil war conflict zone. Specifically, the study offers several impulses for managing and resolving informal group conflicts in Nigeria's Northwest and Northcentral. Here, reducing banditry should be a key priority because it reinforces tensions and conflicts between ethnic and livelihood communities. One avenue forward is the negotiation of granular, humanitarian agreements with the banditry groups that emphasize the protection of civilians and a reduction in violence. On the one hand, a military solution to these conflicts appears impracticable. The informal groups are too numerous, embedded in the civilian population, and geographically dispersed to be defeated with kinetic measures. Recall that Hassan and Barnett (2022) estimate that 30,000 bandits

[5] Interview 357, researcher, Abuja, September 2021, interviewed by the author.
[6] Interview 443, violent extremist (FGD), Maiduguri, September 2021, interviewed by Hauwa Abubakar Abdullahi.

operate in the Northwest, not even counting the other informal groups including the highly violent Yan Sakai. On the other hand, the conclusion of a comprehensive peace agreement is literally impossible due to the proliferation of informal groups in combination with the lack of an integrated command and control structure and a unified political agenda.[7]

Such humanitarian agreements would be deals between the government and the bandits in which the bandits commit to the protection of civilians and are, in turn, rewarded with legal and economic concessions like amnesty and the right to administrate a national park. These agreements could be inspired by the Total Peace policy pursued by the Colombian government of Gustavo Pedro (*Road to "Total Peace"* 2023). This policy aims to conclude agreements with any armed group willing to talk to the government, no matter their goals. Caution is warranted, however, as the Colombian policy is at an experimental stage and has not yielded the anticipated results so far. Another example has been reported in Indonesia, where a community increased its security situation by concluding an agreement with the informal groups operating in the surrounding areas. The groups were paid a monthly salary to function as security guards (Tajima 2014, p. 102). Still, entering into dialogue with the bandits will likely not be a popular political strategy, considering that the groups are labeled as terrorists, the heated anti-Fulani discourse, and the ongoing high levels of violence. Smith (2007, p. 172) furthermore argues that the Nigerian public favors an "iron hand" to curb conflict, likely a legacy of the decades of military rule and the proliferation of violence after democratization.

Previous attempts to negotiate deals with the bandits and vigilantes further highlight that dialogue needs to be coordinated across states and complemented with enforcement. Previous agreements were ineffective because groups continued to operate — either because they evaded the areas covered by the agreement and continued their activities elsewhere or because violations of the agreement did not have any consequence. At the same time, the enforcement of the agreements needs to be targeted and avoid civilian casualties. As the empirical analysis showed, the current strategy relying on the air force only aggravated the situation and led to numerous deaths of civilians mistaken as armed groups ("Bombing of herders" 2023).

Such a mix of dialogue and enforcement should be complemented with other non-military measures, in particular economic initiatives and campaigns to reduce polarization between ethnic groups. The bandits' operations are facilitated by informants in the communities and the supply of goods from the local economy. The civilian support for these groups is likely a result of the lack of licit economic opportunities in an extremely poor region. Consequently, economic initiatives are key to undermining the support for the bandits.[8] Such initiatives can include micro-loans and investment in public infrastructure. Importantly, the design of the economic initiatives needs to be sensitive to the pastoralist lifestyle of many Fulani communities. Not least, this could also help the state to rebuild its legitimacy.

[7] Interview 246, Armed Forces, Abuja, August 2021, interviewed by the author.

[8] Interview 149, state-level government official, Kaduna, August 2021, interviewed by Shedrach B. Nghozei and the author.

Campaigns to reduce polarization between ethnic groups are critical because the violence by the bandits increases anti-Fulani sentiments. Accordingly, researchers and think-tank reports have warned that anti-Fulani sentiment and violence are on the rise, not only in Nigeria but across the Sahel (Clarkson 2023; Ejiofor 2022; Kabir 2022a). Positive examples of countering this polarization are agreements against hate speech facilitated by the Centre for Humanitarian Dialogue and the trauma healing work of the Neem Foundation (*HD brokers landmark agreement* 2021; *Mental health* 2021). At the same time, the government should reconsider existing non-military measures, which tended to hurt the civilian population and the economy more than the armed groups. These included disrupting the mobile phone network, prohibiting the riding of motorcycles, and introducing novel Nigerian banknotes.

Last but not least, practical implications can be derived based on the feedback effects suggested by the theoretical argument. Addressing them is critical to interrupt the self-reinforcing dynamics and stabilizing the situation. Accordingly, the potential connection between the violent extremists and the bandits is a particularly urgent issue and should be a priority for the Nigerian government. Gaining access to the Northwest could strengthen the violent extremists, advance the military sophistication of the bandits, and thereby increase the pressure on the government — not least due to the sheer geographic extent of the crisis. Hence, I propose that the government prioritizes the dismantling of the violent extremists' bases in the Northwest and impedes the cooperation between the groups as much as possible. Nonetheless, dialogue to address the root causes of the Boko Haram conflict should not be forgotten as a critical means to interrupt the groups' expansion and de-escalate the conflict.

Several strategies are available to impede cooperation. To start, as Blair et al. (2021, p. 4) point out, "cooperation requires communication, contact, and transactions between group members." The government should seek to repress these interactions as much as possible. Then, the government should seek to lower the incentives for the bandits to cooperate. This links back to the former point on the conclusion of humanitarian agreements. These agreements could make cooperation with the government more attractive than entering into an alliance with violent extremists. In contrast, a military crackdown on the bandits would only increase their incentives to cooperate with Boko Haram. This concern was expressed by an interviewed religious leader who is worried that Boko Haram is able to communicate and "sit down" with the bandits while the government attacks them.[9] Finally, the government so far profited from the ideological differences between Boko Haram and the bandits because they prevented a deeper connection between the groups. Thus, future interventions should strengthen these differences by increasing Preventing Violent Extremism (PVE) measures like spreading alternative religious narratives to the extremist views of Boko Haram.

To conclude, this study demonstrated that the complexity of internal armed conflicts requires a twofold

[9] Interview 103, Muslim religious leader, Kaduna, August 2021, interviewed by the author.

perspective. First, researchers and practitioners must pay attention to the conflict drivers and dynamics specific to each conflict within the larger conflict network. Second, they must adopt a comprehensive perspective that appreciates the interdependence between conflicts and their mutual reinforcement. Only then, armed conflict can be acknowledged and tackled as a joint product of local and national-level processes. In the case of Nigeria, the self-reinforcing dynamics and the rapid and widespread escalation of violence within one decade might make one hopeless as to how the situation could improve in the near future. However, this study demonstrated that these processes are neither deterministic nor unstoppable. The situation is the result of an interplay of structure *and* agency. Agency implies that armed and non-armed actors have leeway and power to shape the future trajectory of the conflict. As I proposed in this section, a stabilization of the situation is possible if the horizon is broadened beyond a purely military solution.

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Appendix A

Supplementary material: Quantitative data and analysis

This appendix provides supplementary material for the quantitative analysis. It adds to the analysis of unattributed violent events, specifies details on the coding procedure for distinguishing formal and informal groups, presents alternative network layouts, and introduces several robustness checks. Furthermore, the supplementary material includes the visualizations of all country-level and regional networks.

A.1 Additional analyses of unattributed violent events

The analysis of unattributed events aims at understanding whether the actor information is missing systematically or at random. Table A.1 compares descriptive measures for events with and without actor attribution. The table shows pronounced differences between the two, which are discussed in the research design chapter 4.2.2. The map in Figure A.1 indicates the location of unattributed events. The attributed events are displayed as solid squares and the unattributed events as empty squares. The map shows a strong geographic overlap between the two.

	Attributed	**Unattributed**
Average fatalities	7.66	2.51
Battles	45%	30%
Remote	11%	5%
Civilians targeted	44%	65%
Government involvement	45%	23%
Northwest	18%	17%
Northcentral	16%	22%
Northeast	47%	12%
Southwest	6%	13%
Southsouth	10%	28%
Southeast	3%	8%
Number of events	8887	4220

Table A.1: Comparing the characteristics of attributed and unattributed events

Source: Own figure based on ACLED data by Ordu (2023) and Raleigh et al. (2010).

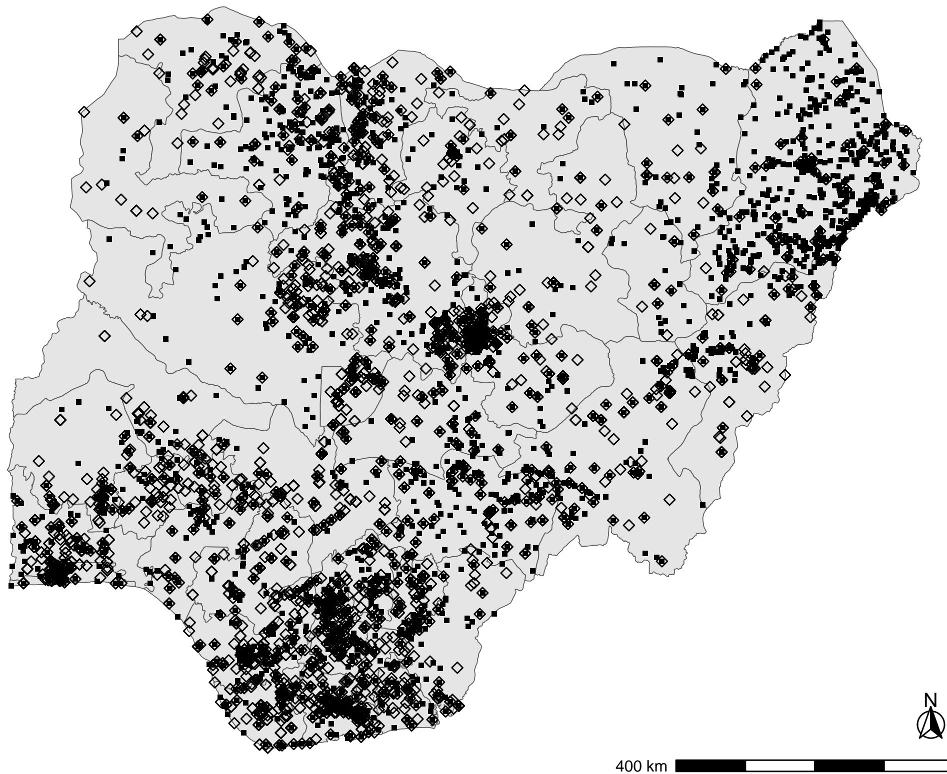


Figure A.1: Comparing the geolocation of attributed and unattributed events

Furthermore, some violent events can be attributed to Boko Haram but not to a specific faction. I compare

the descriptive measures for these events in Table A.2. The subsequent Table A.3 disaggregates the data to the annual level to show how the number of fatalities is distributed between JAS, the ISWAP factions, and unattributed events. Last but not least, Table A.4 presents the results of a logistic regression model to test whether the actor information is MAR. The model uses the availability of the actor attribution as an outcome and tests whether independent variables like the event type or the number of fatalities make it significantly more likely that the actor information is missing. I run the model for the completely unattributed events (Model 1) and for the Boko Haram events (Model 2).

	Attributed	**Unattributed**
Average fatalities	7.09	6.52
Battles	67%	56%
Remote	22%	23%
Civilians targeted	11%	21%
Government involvement	82%	65%
Number of events	1221	1146

Table A.2: Comparing attributed and unattributed events for Boko Haram

Year	Faction	Fatalities	% per year
2016	JAS	323	11.69
2016	ISWAP	1787	64.68
2016	ISWAP/JAS	653	23.63
2017	JAS	11	0.42
2017	ISWAP	95	3.66
2017	ISWAP/JAS	2492	95.92
2018	JAS	7	0.31
2018	ISWAP	247	11.02
2018	ISWAP/JAS	1987	88.67
2019	JAS	510	24.79
2019	ISWAP	339	16.48
2019	ISWAP Lake Chad	985	47.89
2019	ISWAP Lake Chad/JAS	141	6.85
2019	ISWAP/JAS	82	3.99
2020	JAS	463	13.85
2020	ISWAP Lake Chad	1487	44.49
2020	ISWAP Lake Chad/JAS	1392	41.65
2021	JAS	467	14.09
2021	ISWAP Lake Chad	2100	63.35
2021	ISWAP Lake Chad/JAS	748	22.56

Table A.3: Fatalities per year and known/unknown Boko Haram factions

	Model 1		*Model 2*	
	coefficient	p-value	coefficient	p-value
Year	-0.010	0.000	-0.089	0.000
Event type	-0.063	0.000	0.057	0.023
State	-0.231	0.000	-0.045	0.414
LGA	-0.429	0.000	0.037	0.657
Fatalities	-0.002	0.000	-0.001	0.310
Civilians targeted	0.159	0.000	0.229	0.000
Government involvement	-0.202	0.000	-0.212	0.000

Table A.4: Testing for the category of missingness of actor information

A.2 Coding ACLED's political militias as formal and informal groups

This section offers additional information on the re-coding of political militias in ACLED as formal and informal groups. Table A.5 indicates the coding decision for the eight political militias that were not covered by one of the coding rules introduced in the research design chapter 4.2.1 and provides a brief justification.

Name in ACLED	**Type**	**Reasoning**
Al-Sunna wal Jamma Militia	formal	An Islamist organization and predecessor to Boko Haram: a militant sub-group of Yusuf's followers, which was active in the early 2000s and violently clashed with the government (Afoaku 2017, p. 33).
Area Boys Militia	informal	The label Area Boys describes an "individualistic phenomenon" rather than a specific group (Ismail 2013, p. 88). They emerged in Lagos and are made up of deprived youths who engage in crime to sustain themselves (Emordi 2005).
Bakassi Boys Militia	formal	The Bakassi Boys is an organization that brought together several urban vigilante groups in Southeast Nigeria. It is classified as formal because it has a name, is recognized by the government, and is organized in state chapters, which are headed by the respective chairman (Felbab-Brown 2021, p. 19).
BVYG: Borno Vigilance Youths Group	informal	The BVYG is a vigilante group in the Northeast next to the CJTF (Taft and Haken 2015, p. 6). It was very difficult to find information about the group in secondary sources or online. I coded the group as informal because it is likely less institutionalized than the CJTF.
Okada Motorcycle Militia	informal	The Okada Motorcycle Militia is not a specific group but a generic label for criminal groups involved in the motorcycle taxi business. Okada is a colloquial term for a motorcycle in Lagos. The ACLED events assigned to this group only mention "a motorcycle gang" (or a variation thereof) and do not specify any particular group.
Pirates (Nigeria)	informal	Coded as informal because pirates is a generic label for criminal groups operating on the Nigerian coastline.
VGN: Vigilante Group of Nigeria	formal	Cf. case chapter 5.3.4
Yansakai Militia	informal	Cf. case chapter 5.3.4

Table A.5: Manual re-coding of ACLED's political militias

A.3 Alternative network layouts

The choice of layout algorithm has strong implications for network visualization. In the main analysis, I used the Davidson-Harel layout algorithm, as it achieved the best interpretability. In the following, I present examples of two other layout algorithms and of the geographical rooting of nodes. In the latter, the groups are positioned in two-dimensional space based on the centroid of their events.

Source: Own figure based on ACLED data by Raleigh et al. (2010).

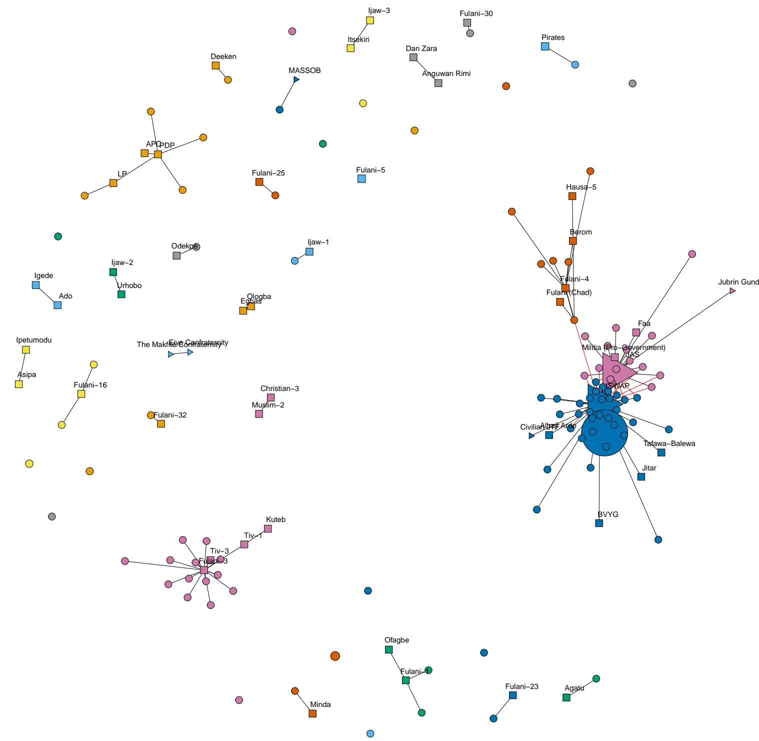


Figure A.2: Country-level network in 2015 with Fruchtermann-Reingold layout

Source: Own figure based on ACLED data by Raleigh et al. (2010).

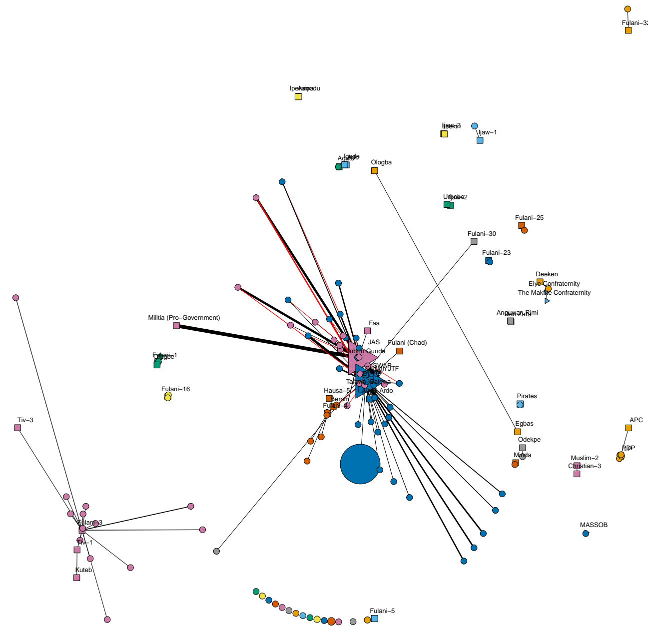


Figure A.3: Country-level network in 2015 with Kamada-Kawai layout

Source: Own figure based on ACLED data by Raleigh et al. (2010).

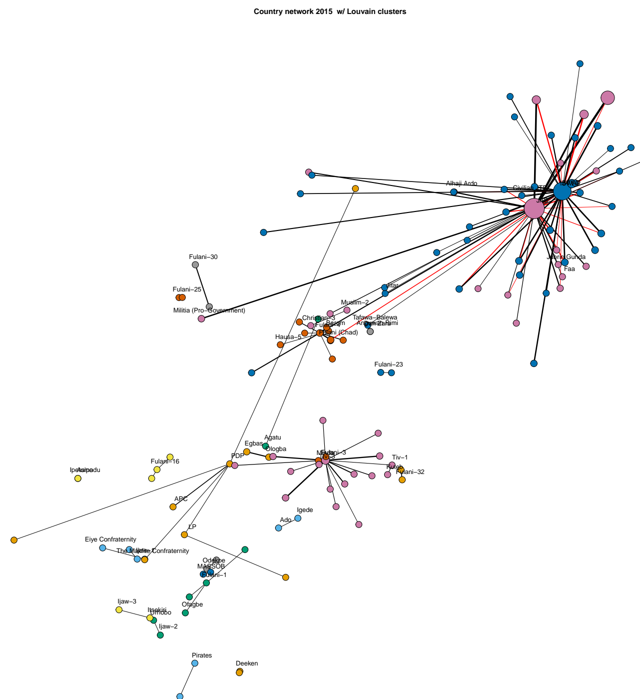


Figure A.4: Country-level network in 2015 with geographically rooted vertices

A.4 Robustness checks for the quantitative analysis

Robustness checks are critical to ensure that results are not driven by specification decisions during the quantitative analysis. If the results are robust across specifications, this increases my confidence in the results. I conducted four different robustness checks. First, I used two different fixed thresholds when clustering the actors with DBSCAN. I also used DBSCAN for the bandits instead of the k-means clustering, leveraging the camp information. Second, I dropped all events that cannot be attributed to one of the Boko Haram factions. In the main analysis, I included these events and distributed them between the factions active in the respective year. Third, I operationalized the edge weight by using the number of events rather than the number of fatalities. This change consequently affects the measurement of the government's fighting effort. Finally, I present the results for the various community detection algorithms to show that the number of network clusters detected, and thus the increasing fragmentation of the network, is robust to the algorithm specification.

A.4.1 Setting fixed DBSCAN thresholds for disaggregating informal groups

In this study, I introduce an approach to identify distinct informal armed groups that are embedded in their communities of origin based on spatial clustering. Specifically, I developed one method that uses the DBSCAN algorithm and one method with k-means clustering. The latter can be used for groups for which the location of their base is available. DBSCAN requires the specification of two thresholds: the maximum distance r and the minimum density threshold k (Sander 2010). In the main analysis, I manually specified the DBSCAN thresholds for each group. In the robustness checks, I evaluate whether the results of the quantitative analysis are robust to changes in the threshold specifications. To do so, I cluster all groups with DBSCAN and the same threshold settings.

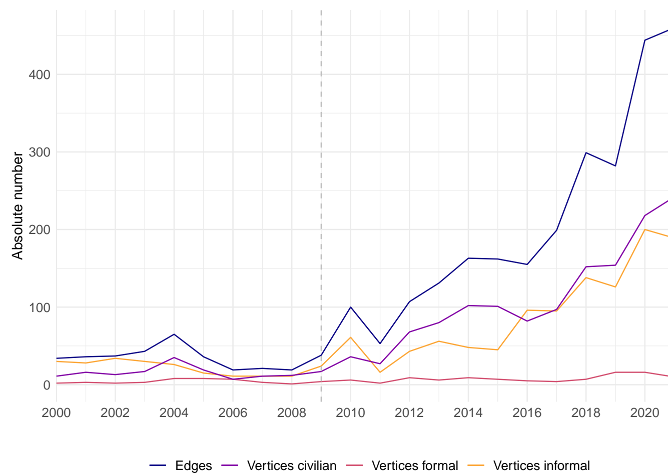
In the first robustness check, I set the thresholds to a lower level than for most groups in the main analysis. The distance threshold is specified at a radius of 0.25 degrees latitude/longitude (in Nigeria, approximately 27km) and the density threshold to two events. In the second robustness check, I set the thresholds to a higher level than in the main analysis. Here, the distance threshold is specified at a radius of 0.75 degrees latitude/longitude (in Nigeria, approximately 81km) and the density threshold to five events.

The quantitative results for the network size and fragmentation are robust to changes in the DBSCAN specification. Figure A.5 compares the network size over time for the specifications of the main analysis (a), the low DBSCAN thresholds (b), and the high DBSCAN thresholds (c). The network size is similar across specifications and, most importantly, the growth trend of the network after the onset of the Boko Haram conflict is equally pronounced. Since higher DBSCAN thresholds assign events from a larger area to the same group, it was to be expected that the number of informal groups would be lower. Also, a few smaller social

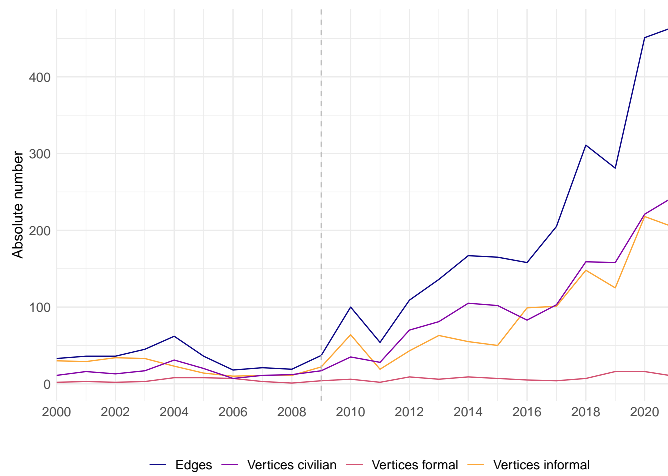
identity groups drop out completely because their events do not meet the higher thresholds.

The same holds for the fragmentation of the network. Figure A.6 juxtaposes the number of network clusters across time for the three specifications of the DBSCAN algorithm. As expected, the absolute number of clusters is lower for higher DBSCAN thresholds. For example, the main analysis identifies around 140 clusters at the peak of fragmentation. In the robustness check with low thresholds, the maximum lies at around 150 clusters, and with the high thresholds at around 110 clusters. Notwithstanding, the figures clearly show that the trend in fragmentation is the same across the specifications. That said, the results regarding the domination of the fighting by specific groups are more sensitive to changes in the DBSCAN specification. Since the higher thresholds create more aggregated actors for high-activity areas, they appear very dominant in the visualizations (cf. Figure A.7). This highlights that network community detection might be the more reliable method to measure fragmentation.

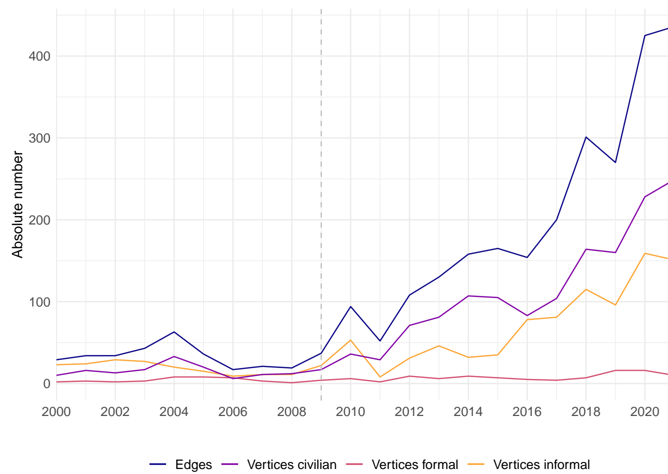
Source: Own figure based on ACLED data by Raleigh et al. (2010).



(a) Main analysis



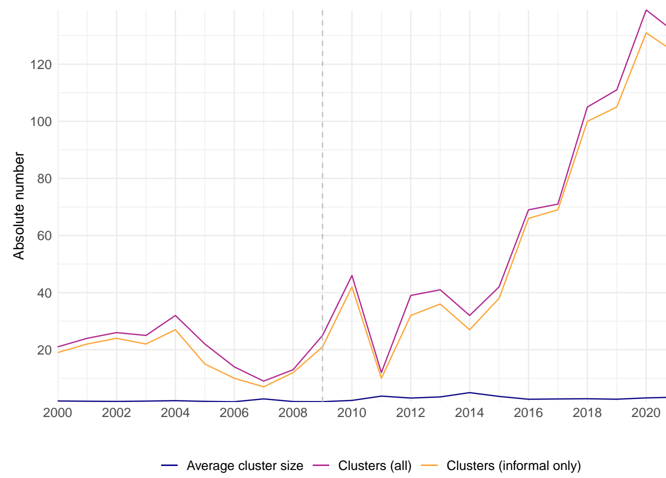
(b) Robustness check — low thresholds



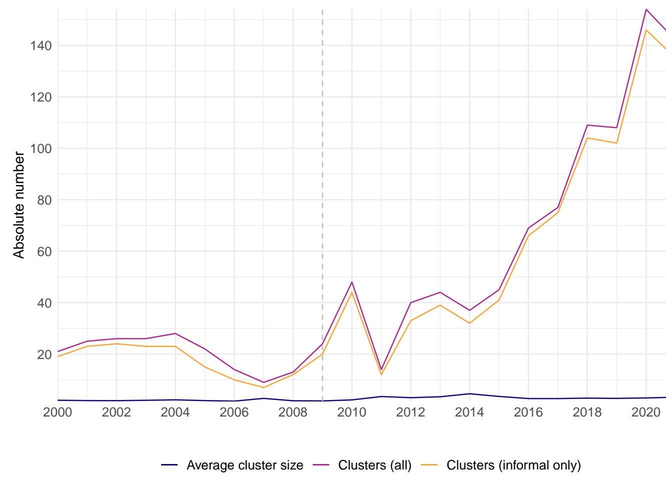
(c) Robustness check — high thresholds

Figure A.5: Robustness of network size to different DBSCAN specifications

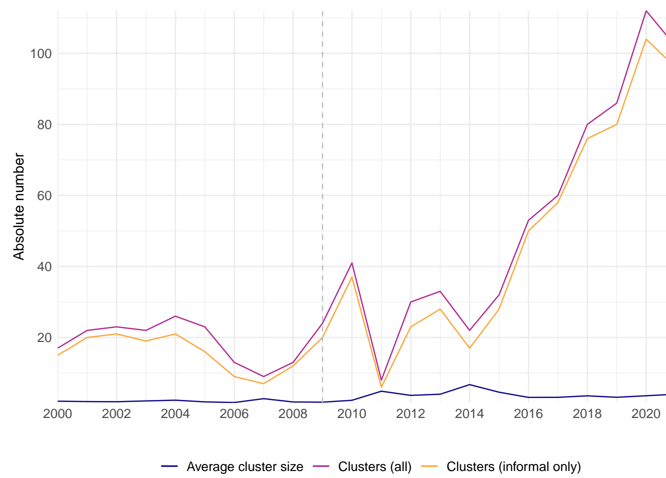
Source: Own figure based on ACLED data by Raleigh et al. (2010).



(a) Main analysis



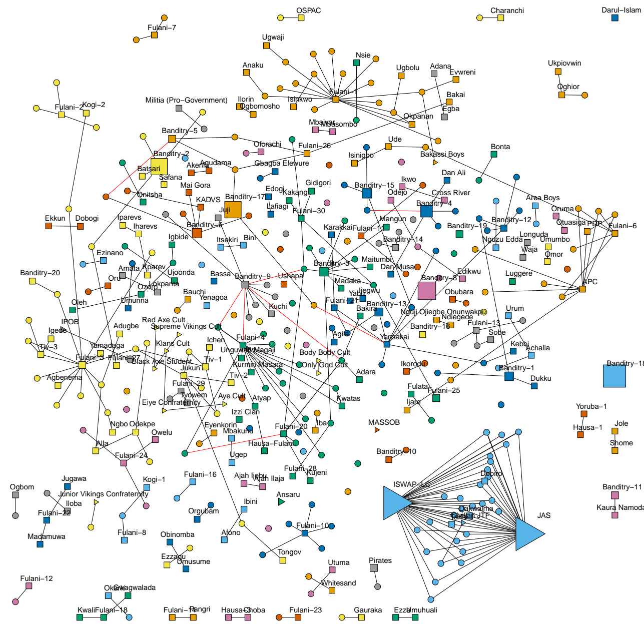
(b) Robustness check — low thresholds



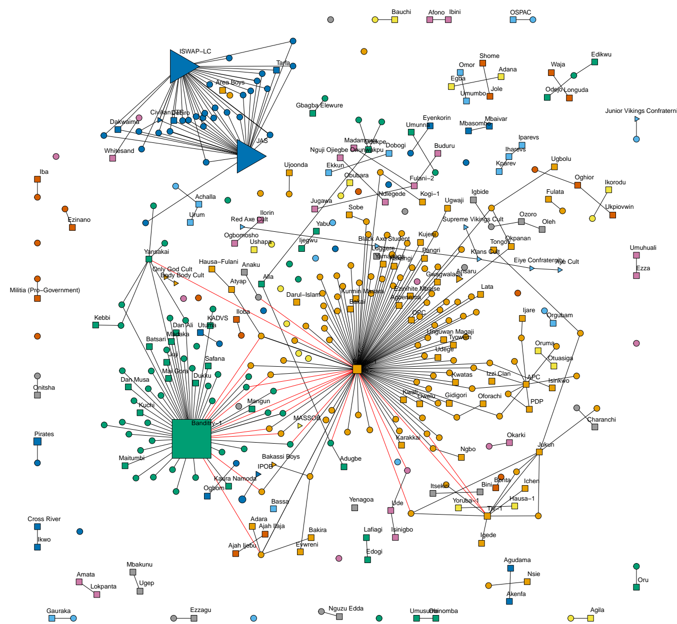
(c) Robustness check — high thresholds

Figure A.6: Robustness of network fragmentation to different DBSCAN specifications

Source: Own figure based on ACLED data by Raleigh et al. (2010).



(a) Main analysis



(b) Robustness check — high thresholds

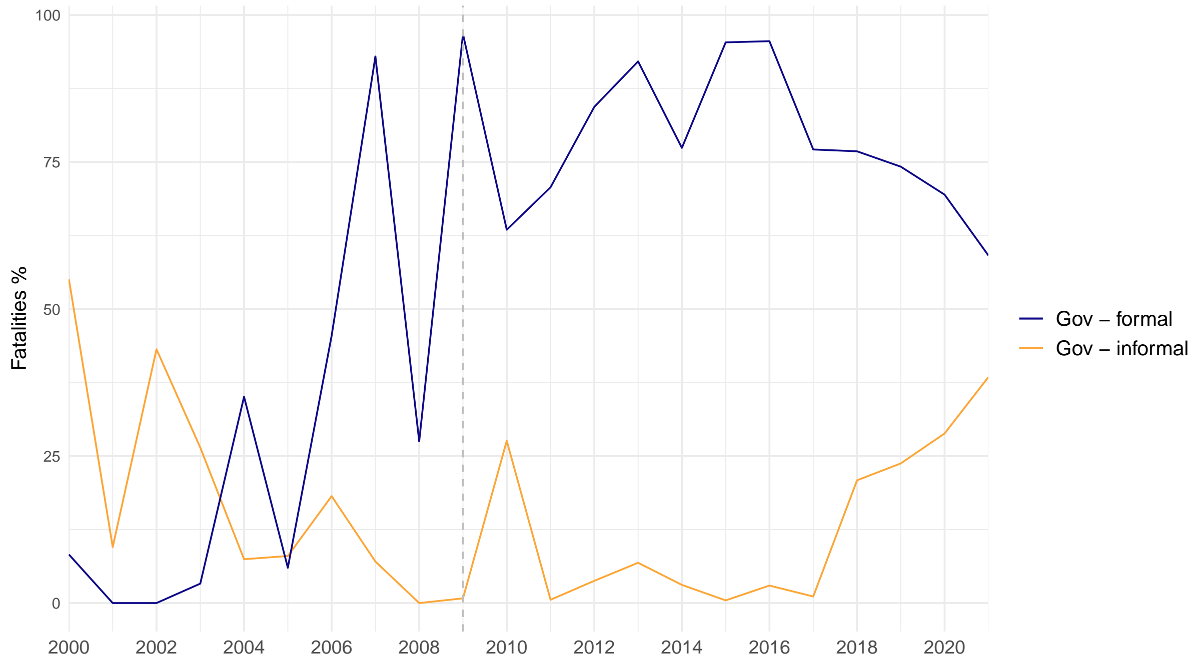
Figure A.7: Network visualization with different DBSCAN specifications

A.4.2 Dropping all unattributed Boko Haram events

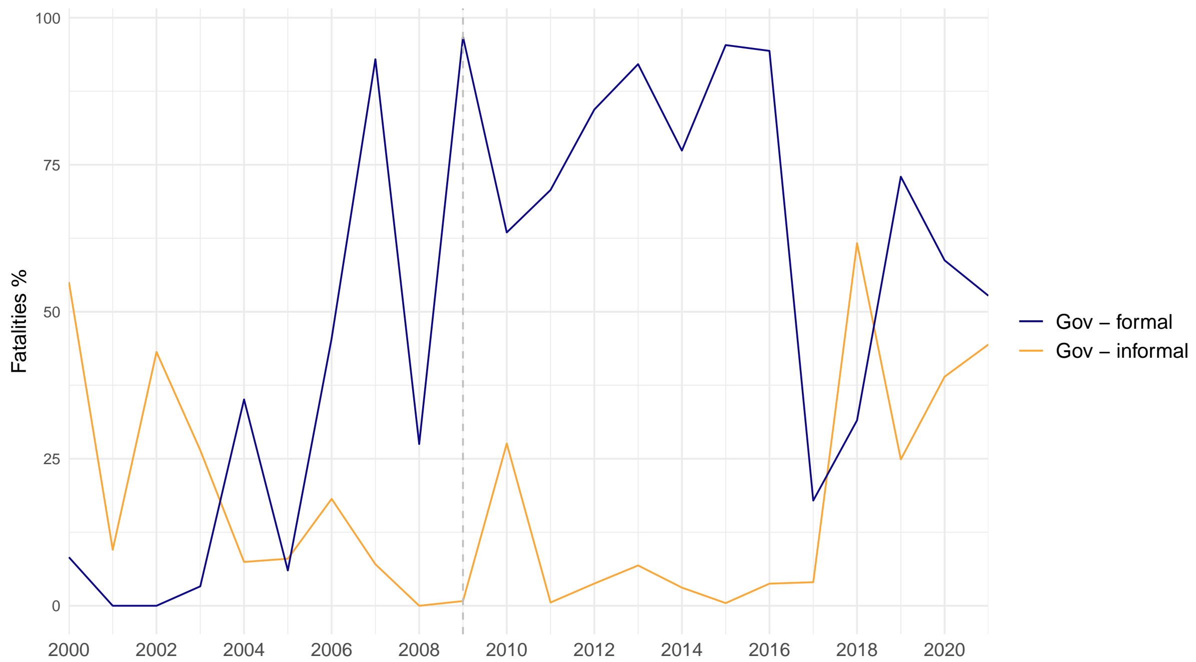
Violent events that cannot be attributed to specific actors pose a challenge to the quantitative analysis of conflict. In the Nigerian case, some events can be attributed to Boko Haram but not a specific faction. I decided to include the events and re-assign their aggregated fatalities to the Boko Haram factions active in the respective year because of the pervasiveness of the problem. In 2017, for example, more than 90% of events cannot be attributed (cf. Table A.3). Here, I demonstrate the impact of this decision on the analysis. Note that the expectation is that the results are *not* robust because dropping most of the Boko Haram events in some years will likely have a strong impact. Here, I seek to justify that including the events was preferable.

Indeed, dropping the unattributed Boko Haram events would strongly underestimate the government's fighting effort invested in this conflict and downplay Boko Haram's role in the network. Figure A.8 shows the distribution of the government fighting effort across formal and informal groups. The main analysis found that the government first concentrated on the formal groups and then began to redistribute its efforts towards the informal groups while still being predominantly engaged with the formal armed groups. Dropping the unattributed events would have mischaracterized the situation after Boko Haram's split in 2016 because it appears as if the government suddenly completely switched and began to prioritize the informal groups. The difference is also glaring when comparing the network visualizations in 2017 (cf. Figure A.9). Still, the network visualizations also show one shortcoming of my decision to redistribute the fatalities between the factions. This decision creates a peculiar network structure for the Boko Haram cluster. It appears as if the violent extremists always attack the same civilian communities. This is most likely not an artifact of the redistribution of fatalities and not an accurate depiction of the actual violence patterns.

Source: Own figure based on ACLED data by Raleigh et al. (2010).



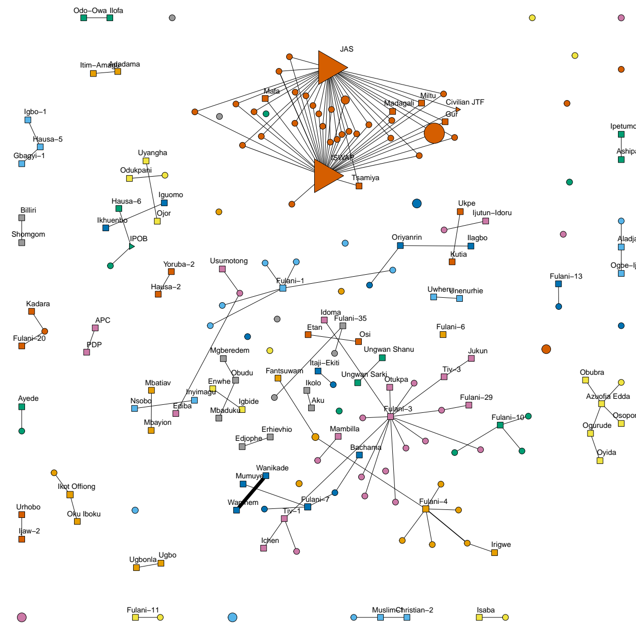
(a) Main analysis



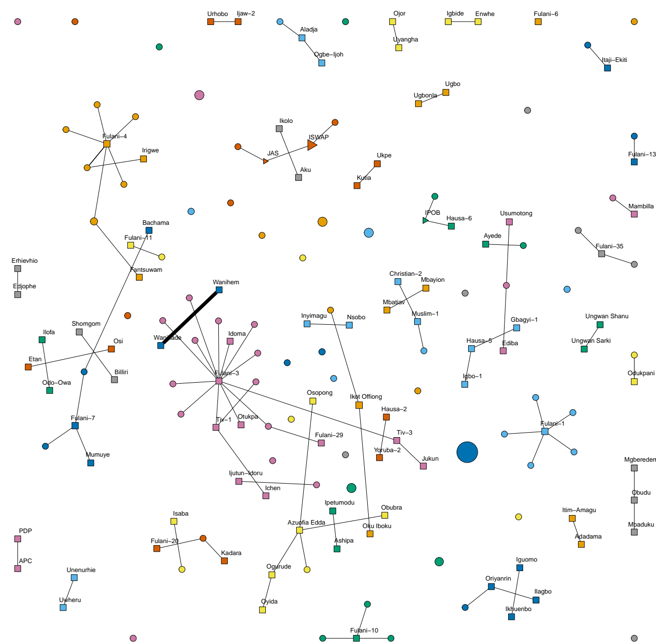
(b) Excluding unattributed Boko Haram events

Figure A.8: Relative government fighting effort with and without unattributed Boko Haram events

Source: Own figure based on ACLED data by Raleigh et al. (2010).



(a) Main analysis



(b) Excluding unattributed Boko Haram events

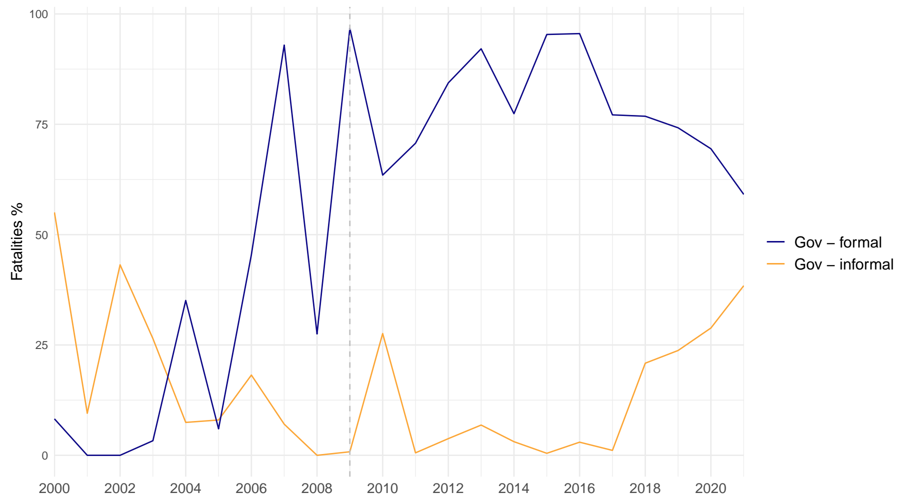
Figure A.9: Country-level network in 2017 with and without unattributed Boko Haram events

A.4.3 Using the number of events as edge weight

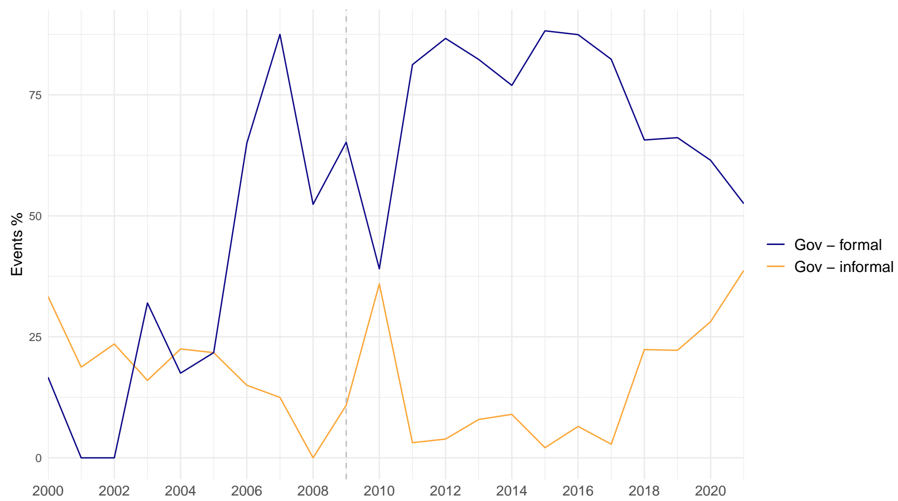
In the main network analysis, I use the number of fatalities to operationalize the weight of the violent relationships and, by extension, the government fighting effort. To ensure the robustness of the results to this decision, I repeated the analysis using the number of violent events as the edge weight. The results are robust as, for example, Figure A.10 shows. The main finding that the government prioritized the formal groups for a long time before turning towards the informal groups also holds up when measured with violent events instead of fatalities.

The robustness check offers three additional insights. First, the visualization of the 2021 country-level network in Figure A.11 indicates that the redistribution of the government fighting effort to the informal groups might be less concentrated on a few groups when operationalizing it with the number of events instead of fatalities. This fits with the observation that the government relied heavily on air strikes in the Northwest. Air strikes likely cause high levels of casualties for only a few events. As a result, these events stand out when using a fatalities-based measure. Second, the violent relationships between the various ethnic communities and the bandits appear more pronounced when using violent events. My interpretation is that the informal groups attack each other frequently but create few casualties per attack. Last but not least, using violent events to weigh the relationships reveals stronger differences between the government's engagement with JAS and ISWAP, respectively. For an event-based measurement, ISWAP and the government engage significantly more with each other than JAS and the government.

Source: Own figure based on ACLED data by Raleigh et al. (2010).



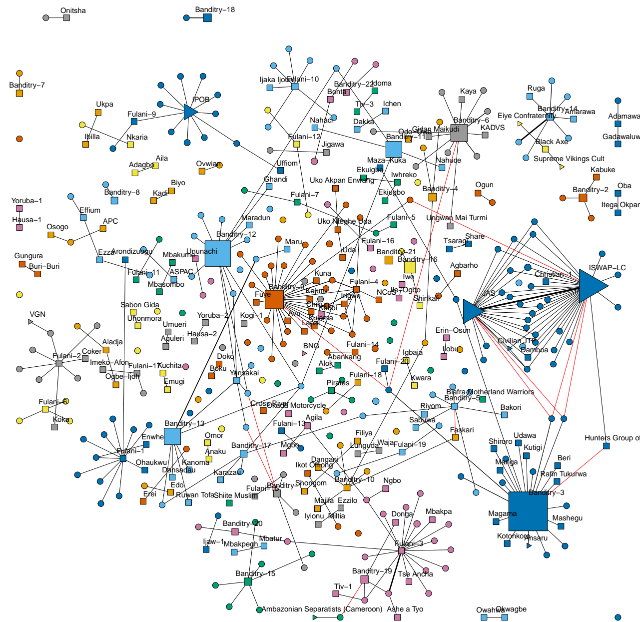
(a) Main analysis



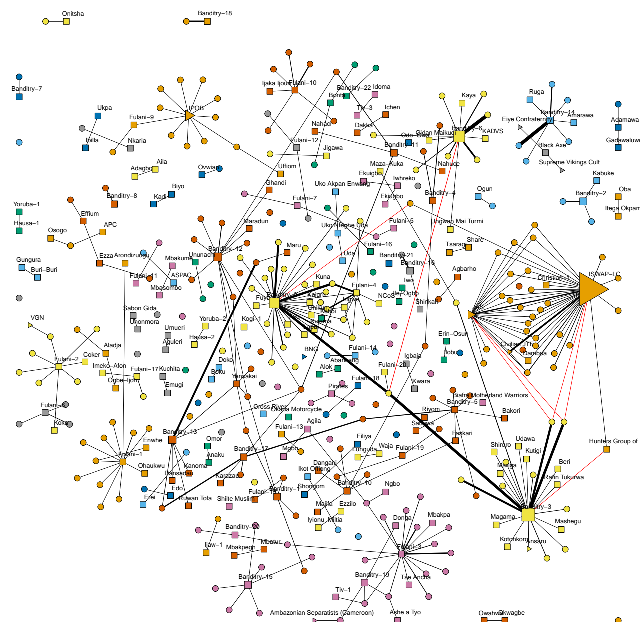
(b) Using number of events as edge weight

Figure A.10: Relative government fighting effort with fatalities or violent events as edge weights

Source: Own figure based on ACLED data by Raleigh et al. (2010).



(a) Main analysis



(b) Using number of events as edge weight

Figure A.11: Country-level network in 2021 with fatalities or violent events as edge weights

A.4.4 Comparing community detection algorithms

The last robustness check is concerned with the community detection algorithms used to detect the network clusters. Table A.6 compares the results for three different community detection algorithms and three different specifications of the Louvain algorithm to choose the most suitable one and to ensure that the results on the number of network clusters — and therefore conflict fragmentation — are not dependent on the algorithm. The left side of the table indicates the modularity scores, and the right side indicates the number of clusters. The comparison shows that the results are very similar and even identical in some years. The increasing fragmentation of the conflict network is thus not an artifact of the community detection algorithm.

	Modularity score					*Number of clusters*				
year	Louvain (1)	Louvain (.5)	Louvain (.3)	edge-betw	walktrap	Louvain (1)	Louvain (.5)	Louvain (.3)	edge-betw	walktrap
2000	0.711	0.856	0.913	0.711	0.711	21	21	21	21	21
2001	0.756	0.878	0.927	0.756	0.756	24	24	24	24	24
2002	0.831	0.915	0.949	0.831	0.831	26	26	26	26	26
2003	0.781	0.890	0.933	0.775	0.781	25	25	25	24	25
2004	0.524	0.762	0.857	0.524	0.524	32	32	32	32	32
2005	0.806	0.903	0.942	0.806	0.806	22	22	22	22	22
2006	0.716	0.858	0.915	0.716	0.716	14	14	14	14	14
2007	0.445	0.722	0.833	0.445	0.445	9	9	9	9	9
2008	0.719	0.854	0.913	0.719	0.719	14	13	13	14	14
2009	0.663	0.831	0.899	0.663	0.663	25	25	25	25	25
2010	0.397	0.641	0.780	0.326	0.371	48	46	46	45	69
2011	0.668	0.816	0.875	0.614	0.662	12	12	12	12	18
2012	0.384	0.662	0.791	0.384	0.382	40	39	39	41	51
2013	0.587	0.793	0.876	0.587	0.586	42	42	41	42	43
2014	0.433	0.713	0.826	0.412	0.429	34	33	32	33	38
2015	0.515	0.715	0.794	0.319	0.512	42	42	42	52	60
2016	0.770	0.883	0.928	0.754	0.769	69	69	69	67	72
2017	0.737	0.869	0.921	0.737	0.737	71	71	71	71	71
2018	0.858	0.927	0.955	0.856	0.857	106	106	105	104	111
2019	0.874	0.928	0.949	0.819	0.838	111	111	111	111	125
2020	0.859	0.925	0.954	0.832	0.848	143	140	139	140	158
2021	0.889	0.936	0.956	0.847	0.885	132	131	131	129	140

Table A.6: Comparing community detection algorithms

A.5 Visualizations of the country-level networks

This section presents the country-level networks in chronological order. The shape of the vertex corresponds to the group type: triangles to formal groups, squares to informal groups, and circles to civilians. The vertex size indicates the engagement with the government measured by the number of fatalities. The color of the vertex indicates the cluster membership. Red edges connect network clusters to each other. The width of the edges indicates the weight measured by the number of fatalities. All figures are my own and based on ACLED data by Raleigh et al. (2010).

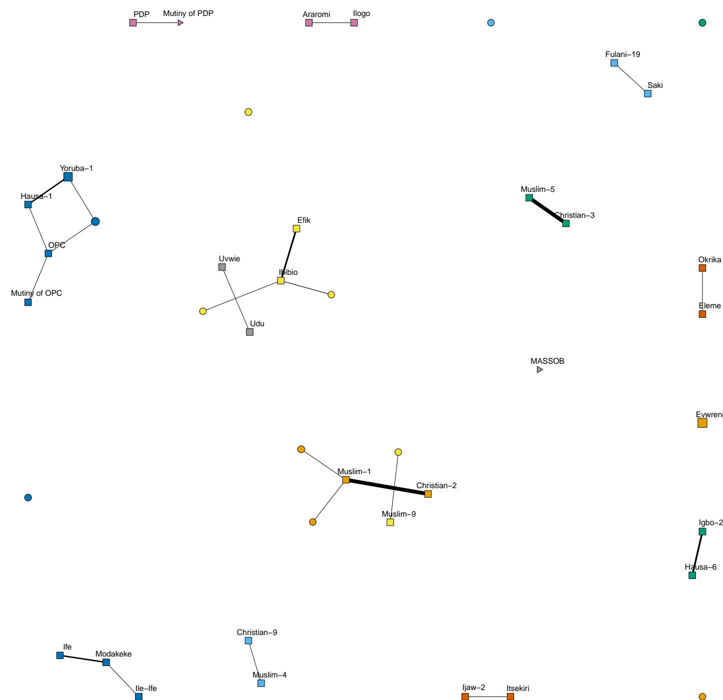


Figure A.12: Country-level network in 2000

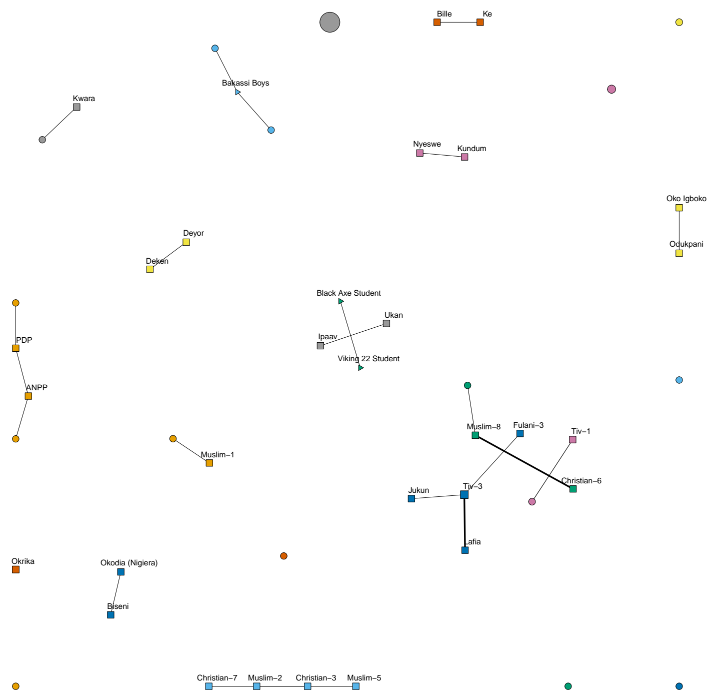


Figure A.13: Country-level network in 2001

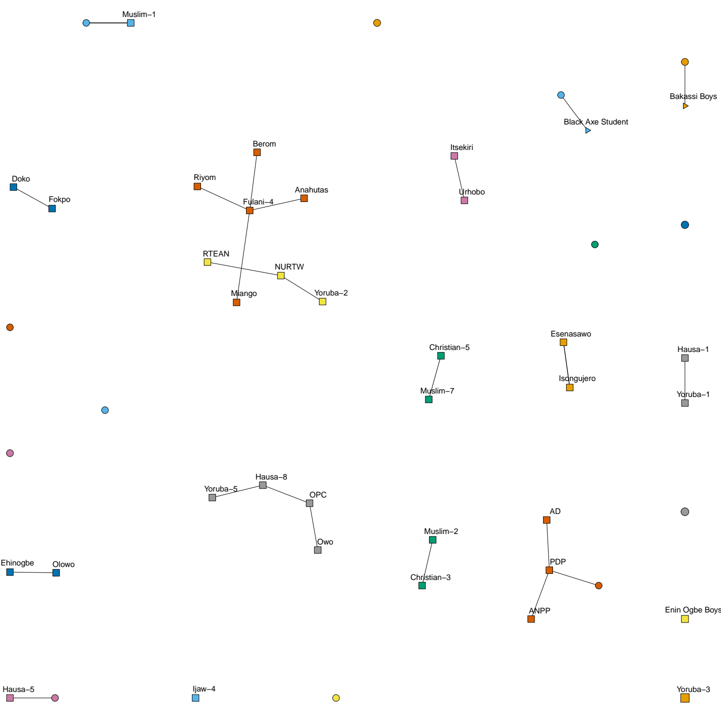


Figure A.14: Country-level network in 2002

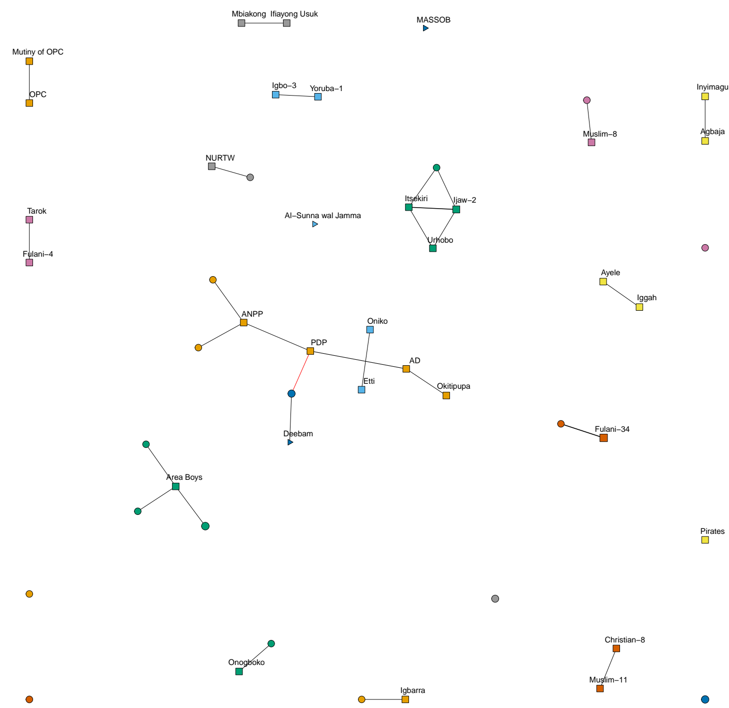


Figure A.15: Country-level network in 2003

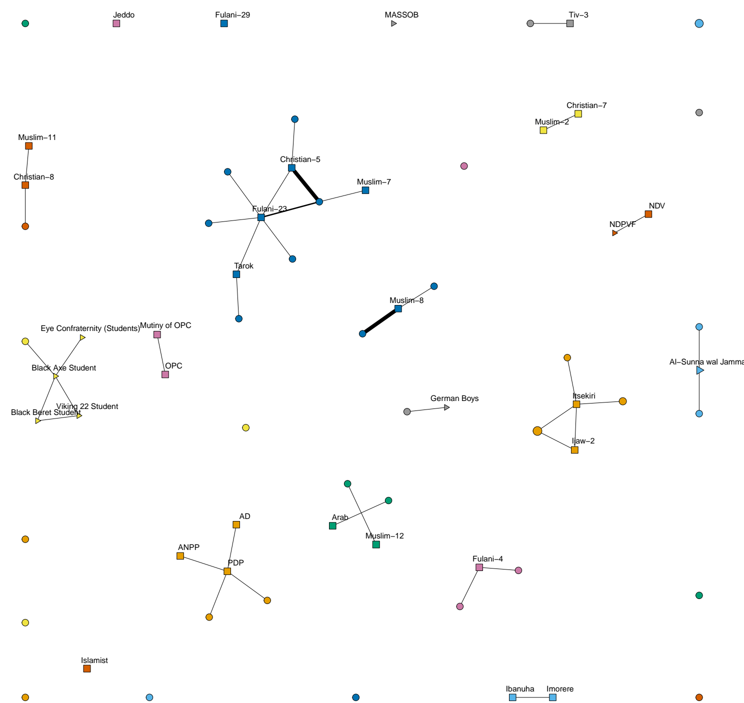


Figure A.16: Country-level network in 2004

Figure A.17: Country-level network in 2005

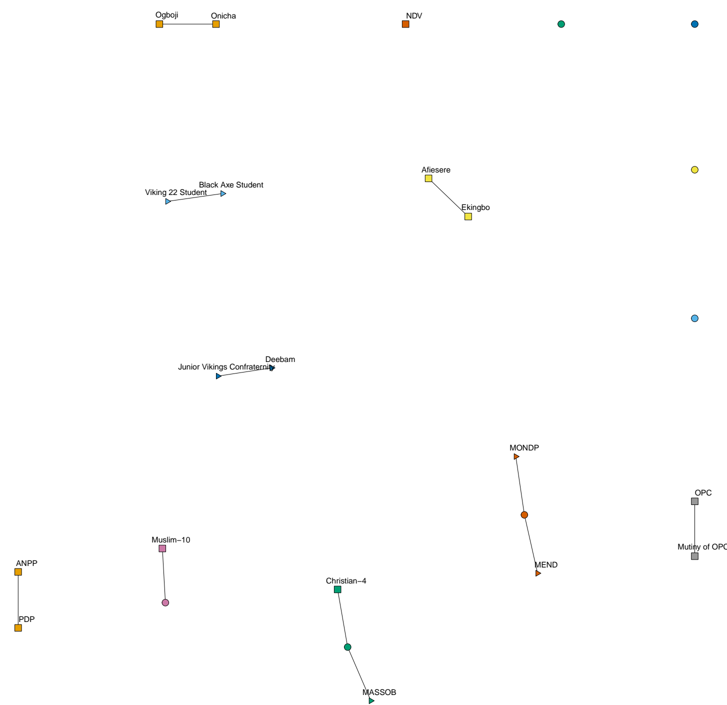


Figure A.18: Country-level network in 2006

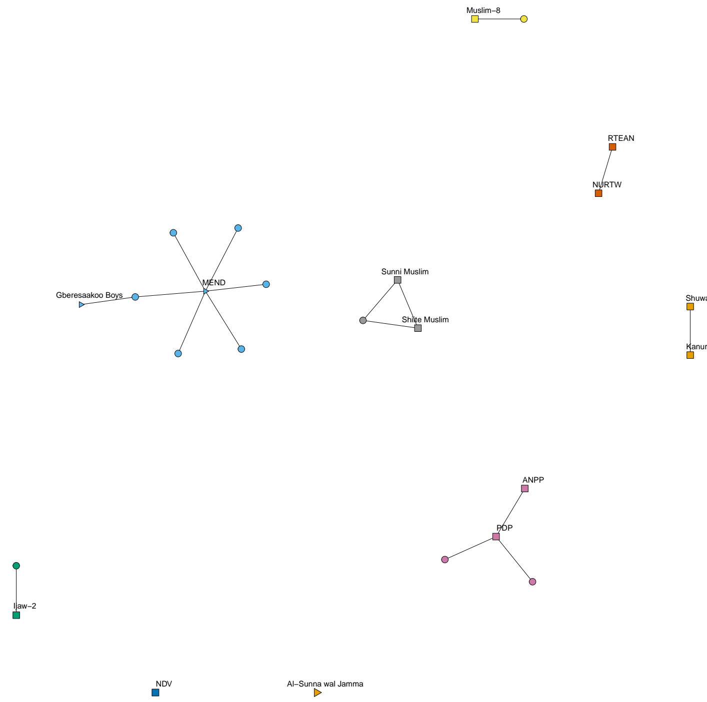


Figure A.19: Country-level network in 2007

Figure A.20: Country-level network in 2008

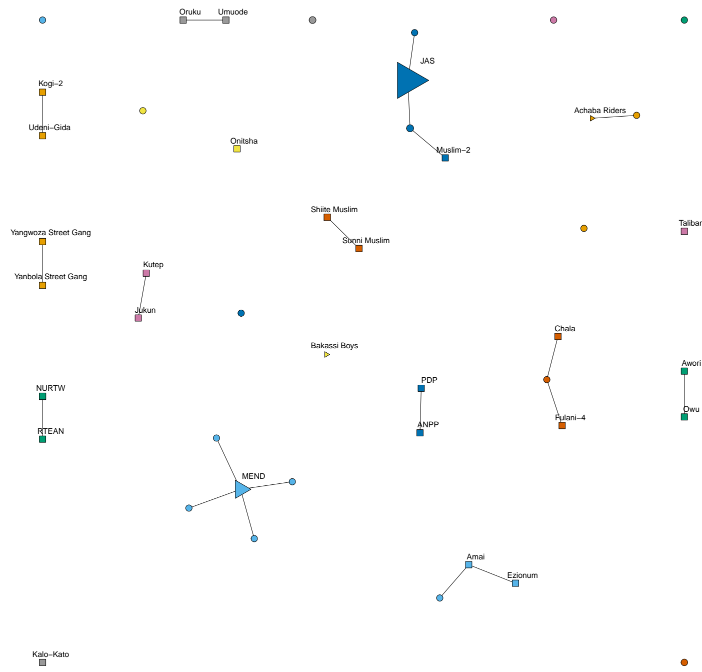


Figure A.21: Country-level network in 2009

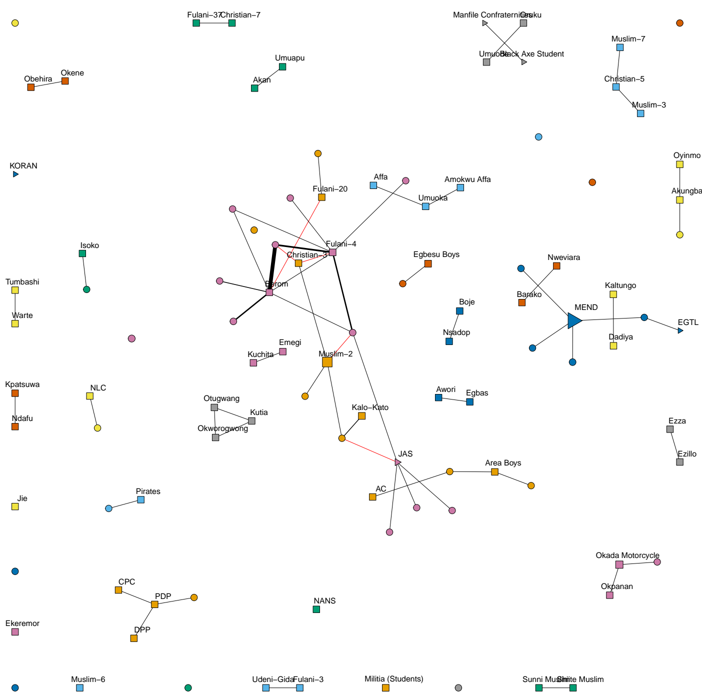


Figure A.22: Country-level network in 2010

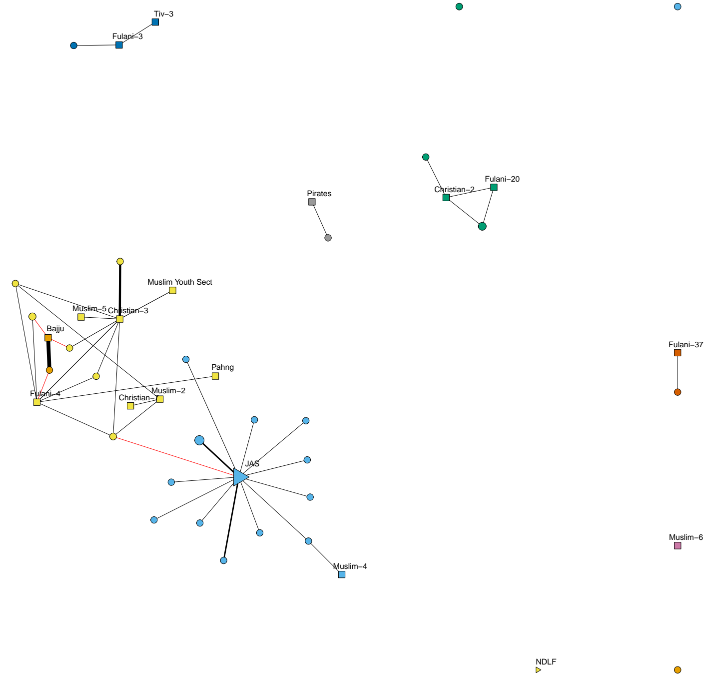


Figure A.23: Country-level network in 2011

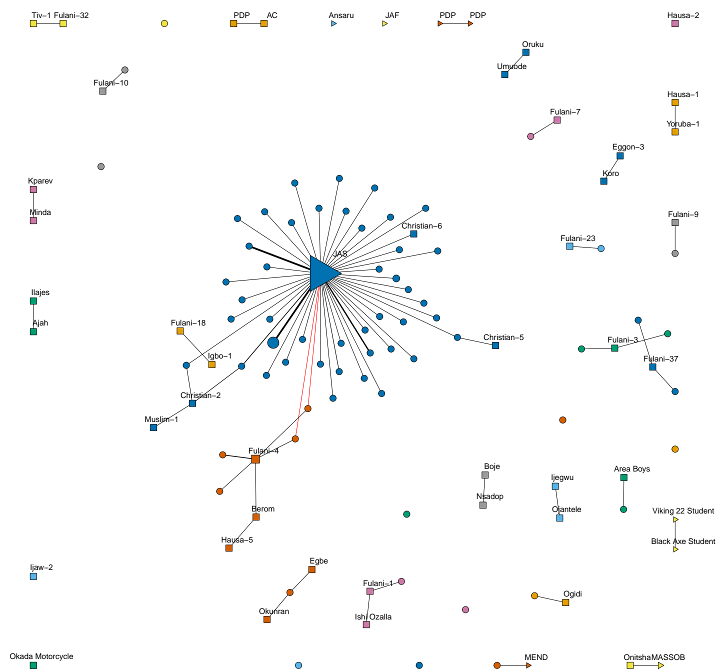


Figure A.24: Country-level network in 2012

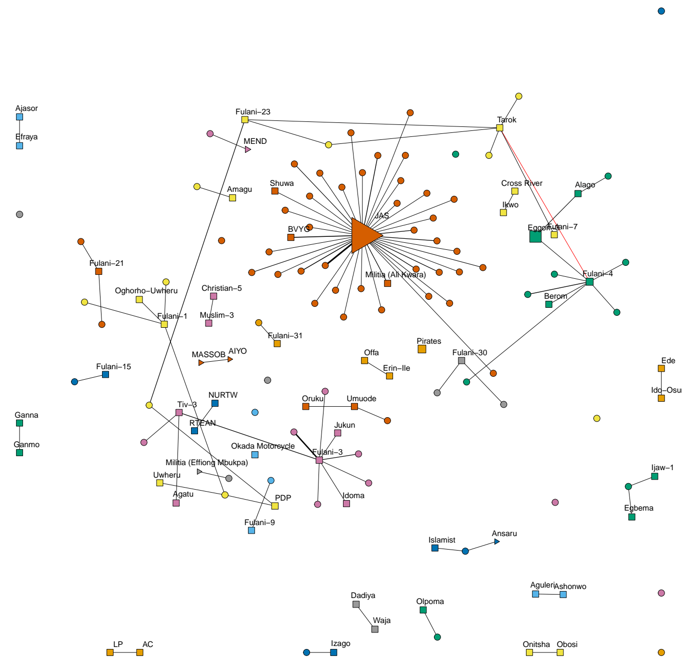


Figure A.25: Country-level network in 2013

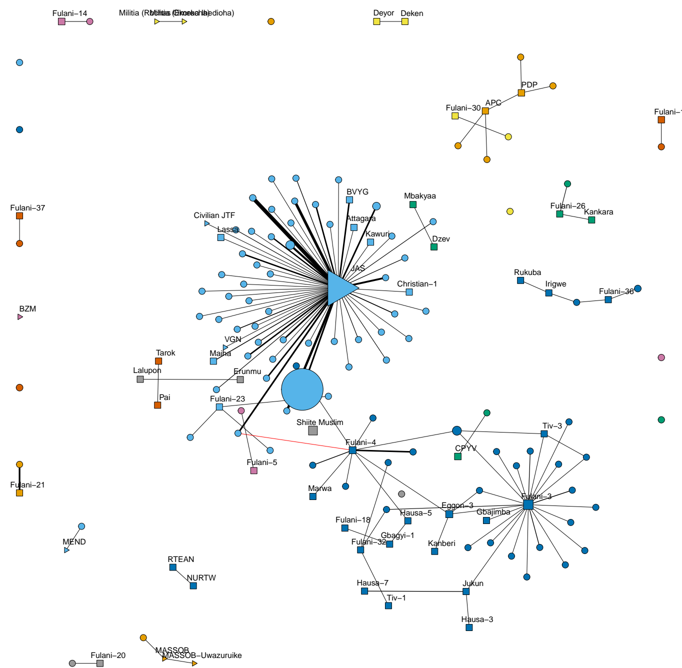


Figure A.26: Country-level network in 2014

Figure A.27: Country-level network in 2015

Figure A.28: Country-level network in 2016

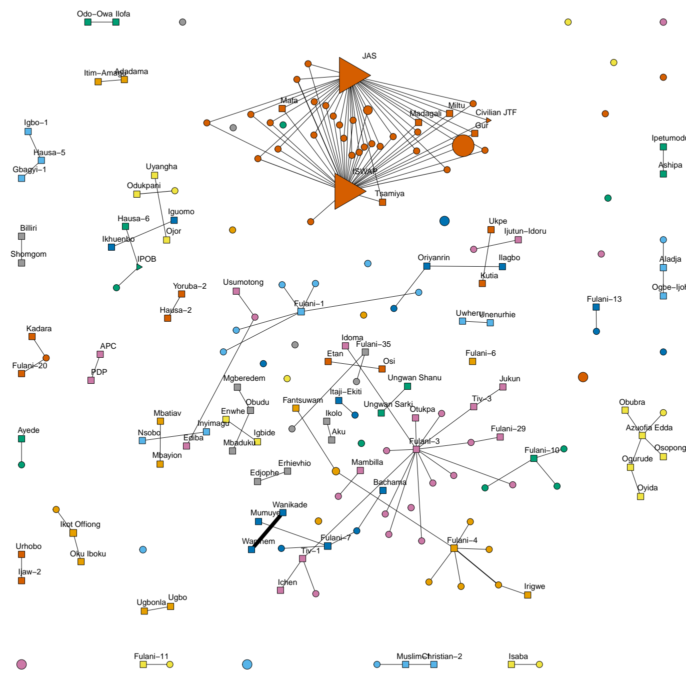


Figure A.29: Country-level network in 2017

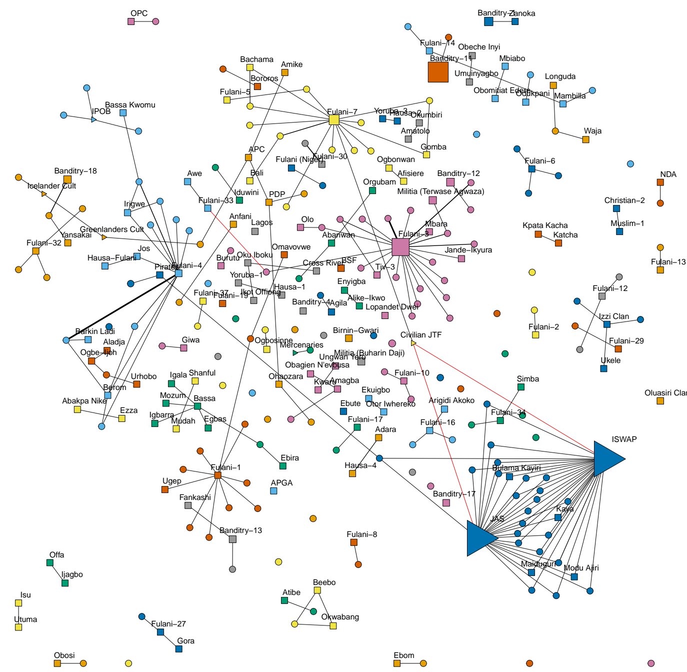


Figure A.30: Country-level network in 2018

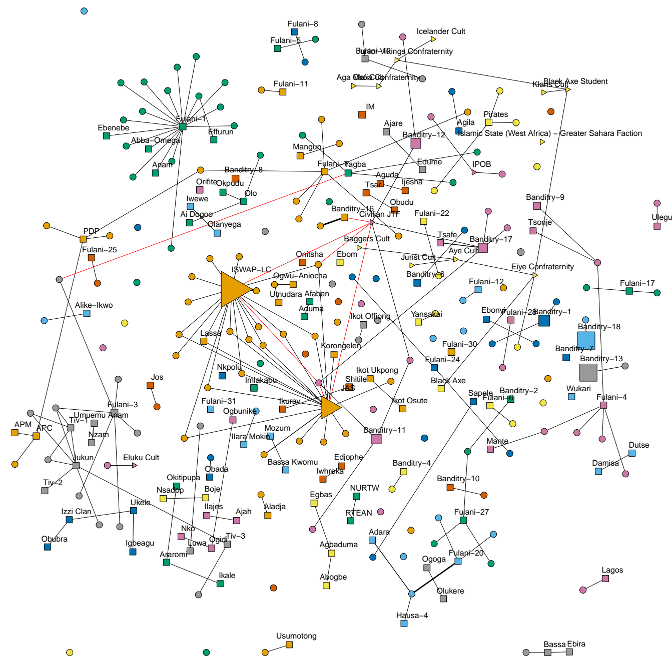


Figure A.31: Country-level network in 2019

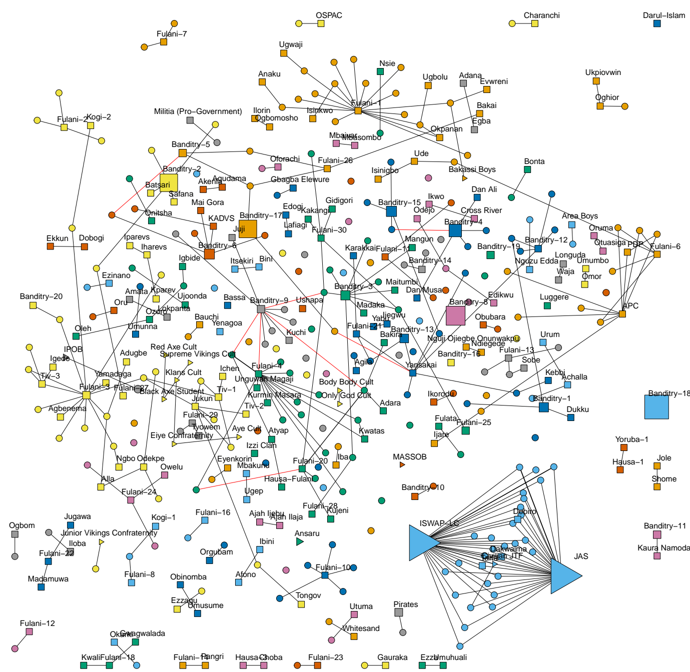


Figure A.32: Country-level network in 2020

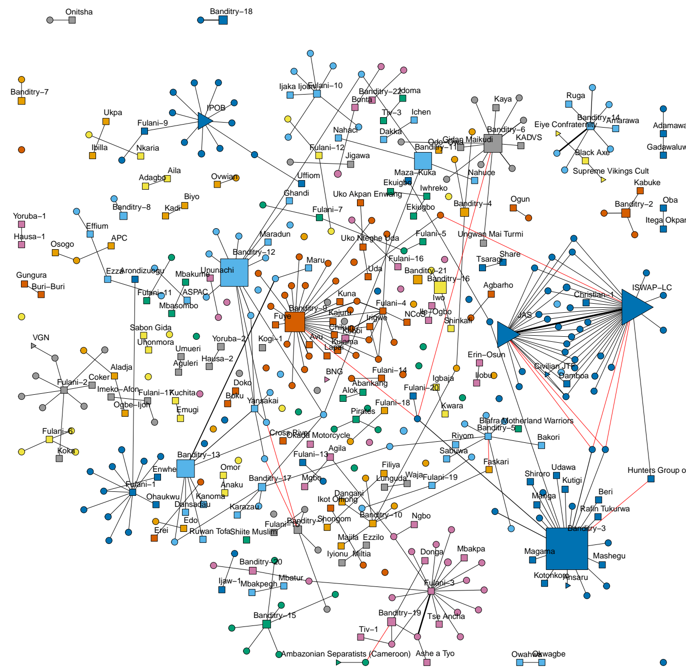
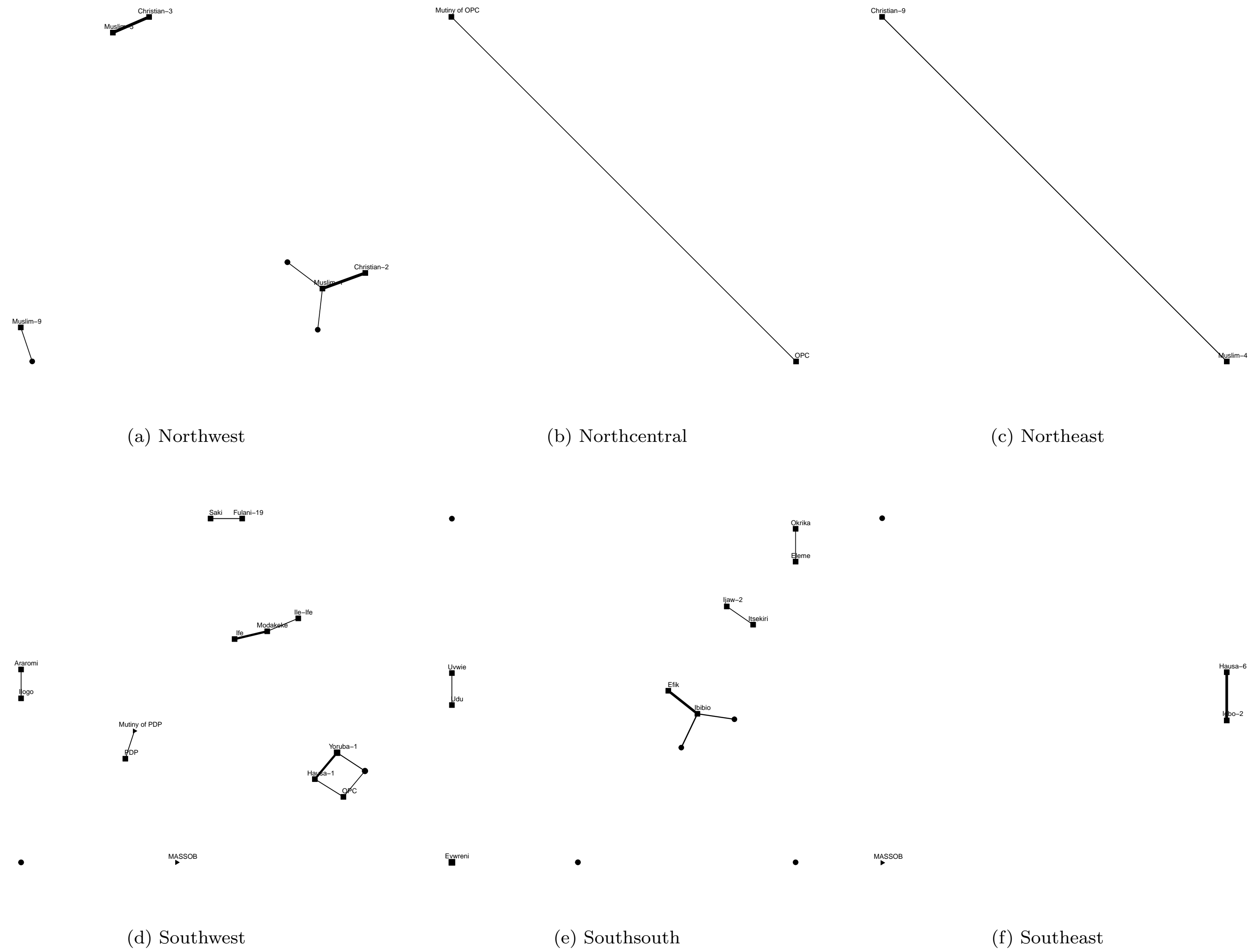


Figure A.33: Country-level network in 2021

A.6 Visualizations of the region-level networks

This section presents the region-level networks in chronological order. As for the country-level networks, the shape of the vertex corresponds to the group type: triangles to formal groups, squares to informal groups, and circles to civilians. The vertex size indicates the engagement with the government measured by the number of fatalities. Blue edges connect violent extremist groups and civilians, green edges connect violent extremist groups and informal groups. The width of the edges indicates the weight measured by the number of fatalities. All figures are my own and based on ACLED data by Raleigh et al. (2010).



(a) Northwest

(b) Northcentral

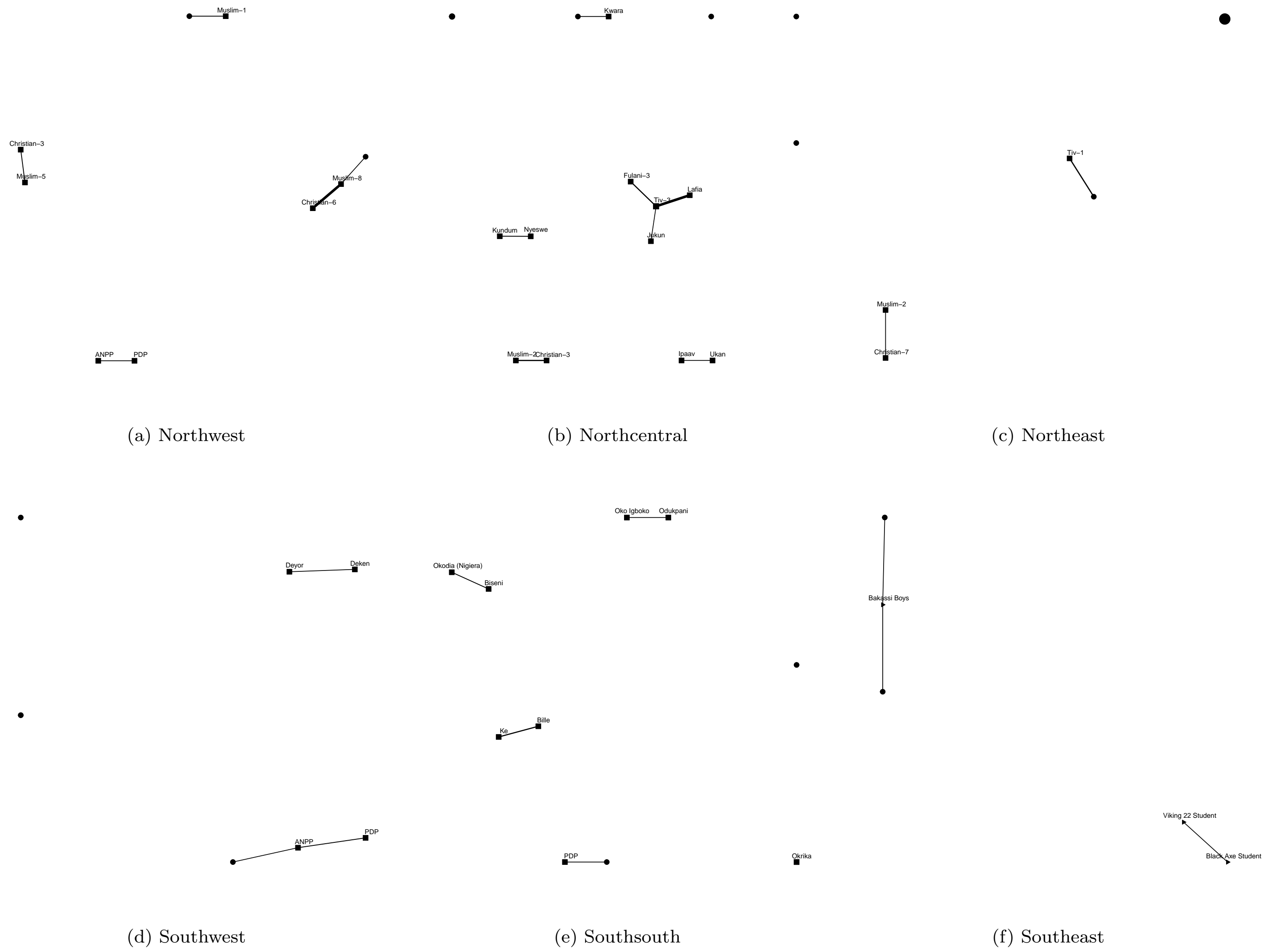
(c) Northeast

(d) Southwest

(e) Southsouth

(f) Southeast

Figure A.34: Regional networks in 2000



(a) Northwest

(b) Northcentral

(c) Northeast

(d) Southwest

(e) Southsouth

(f) Southeast

Figure A.35: Regional networks in 2001

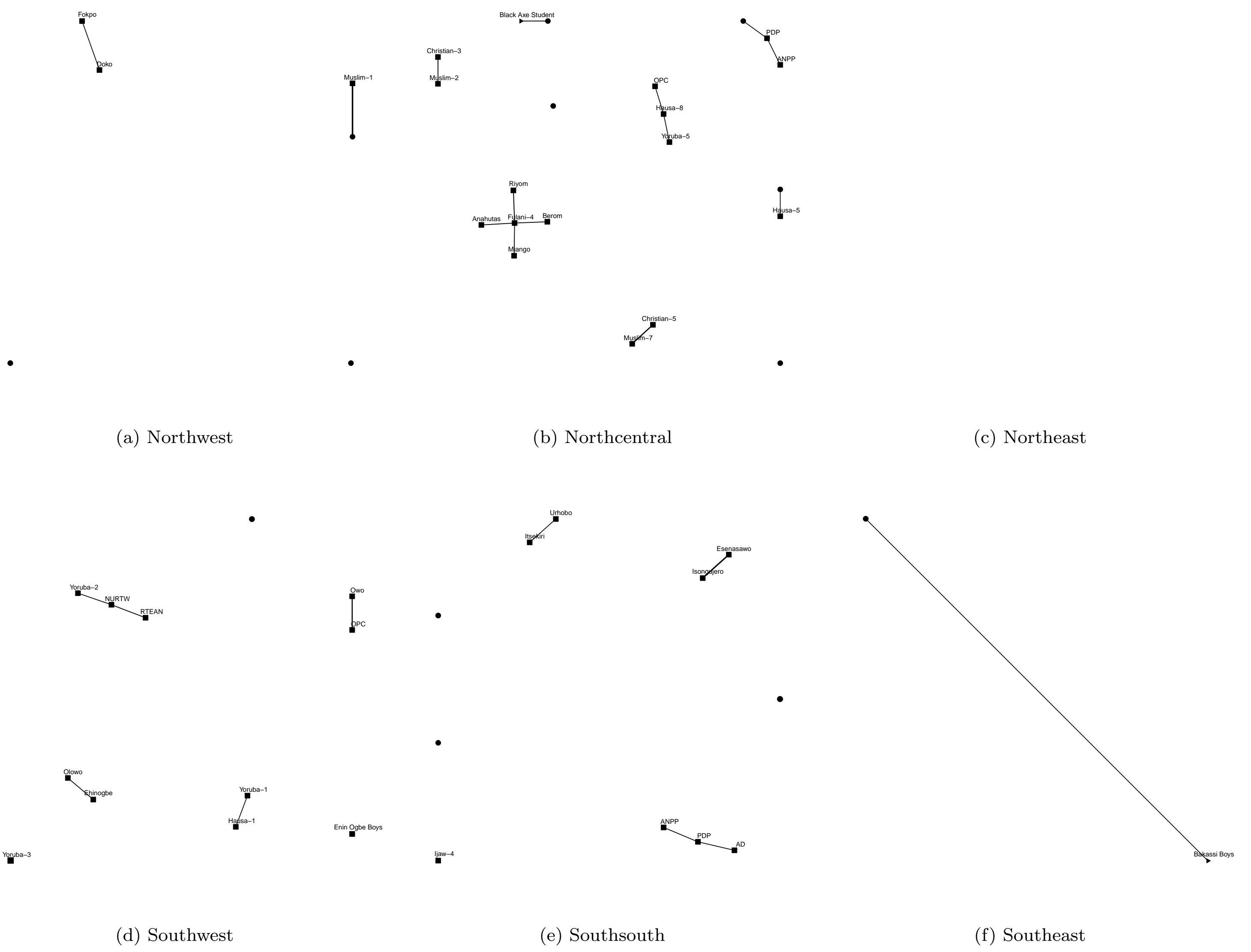
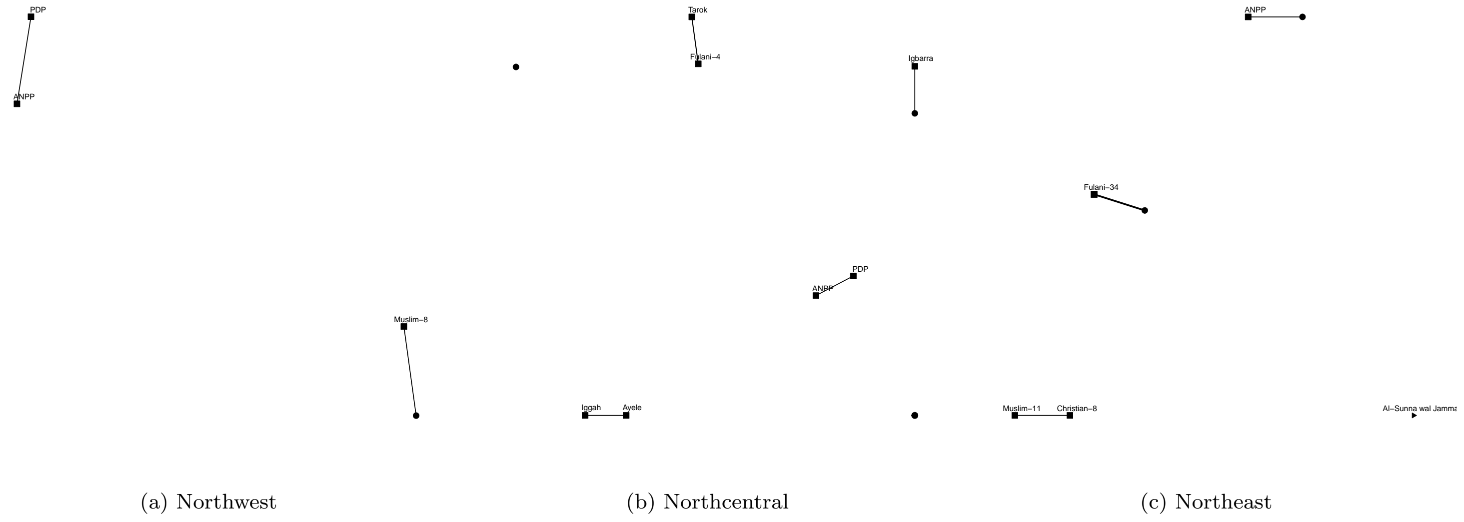
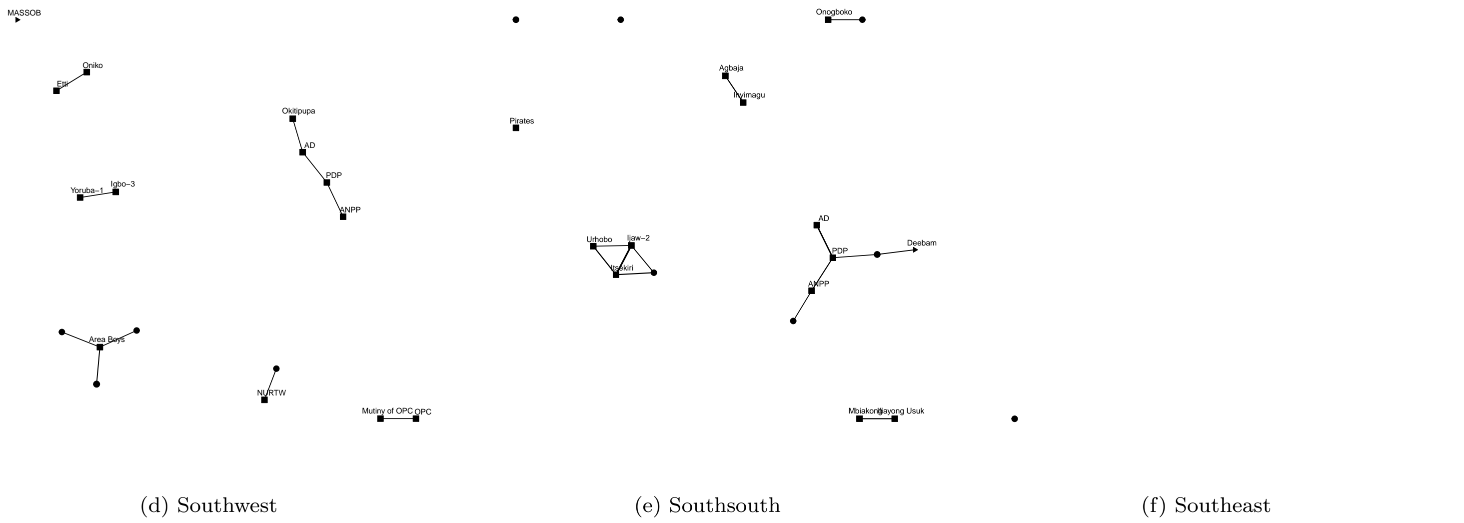


Figure A.36: Regional networks in 2002

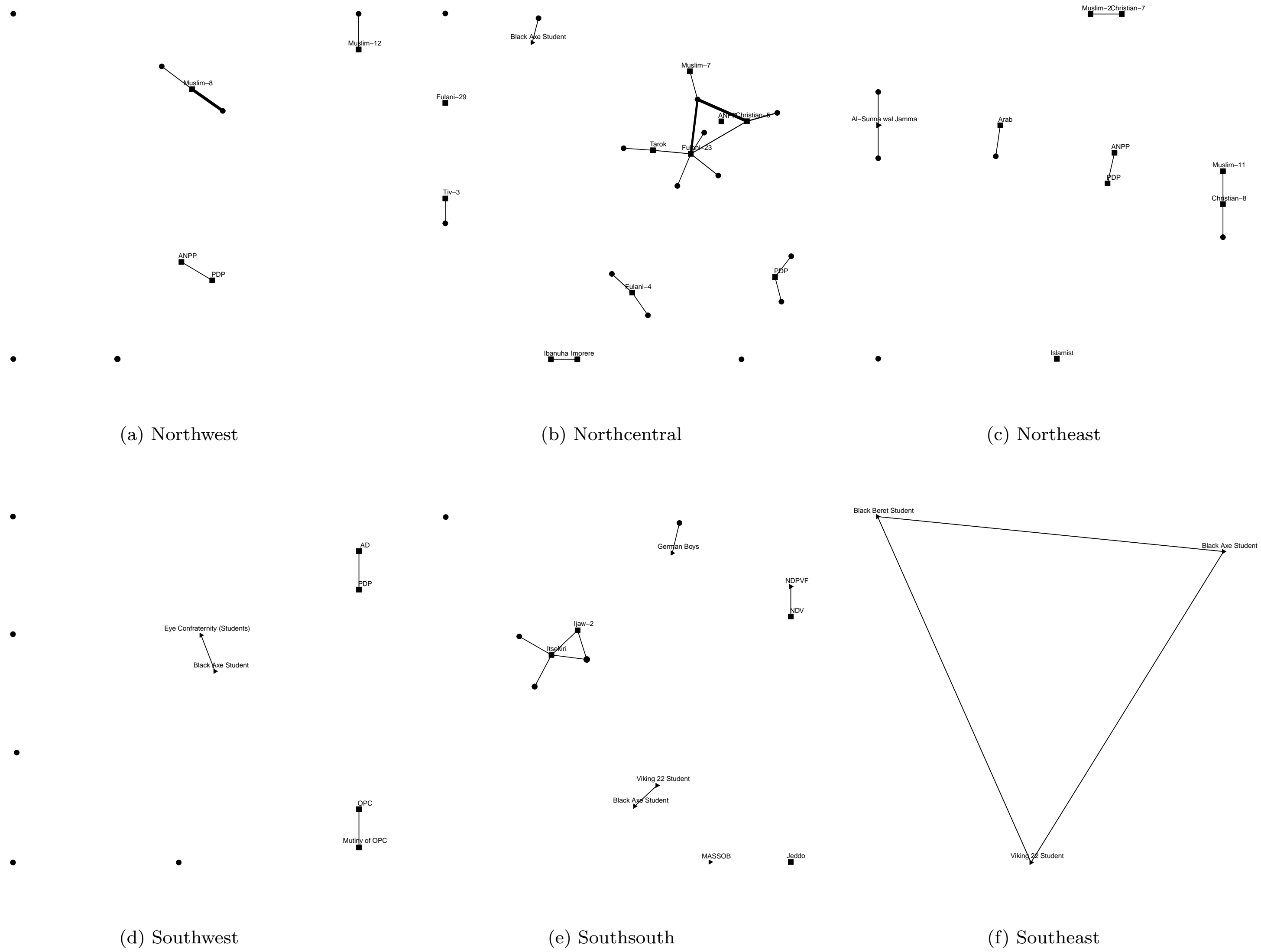


(a) Northwest (b) Northcentral (c) Northeast



(d) Southwest (e) Southsouth (f) Southeast

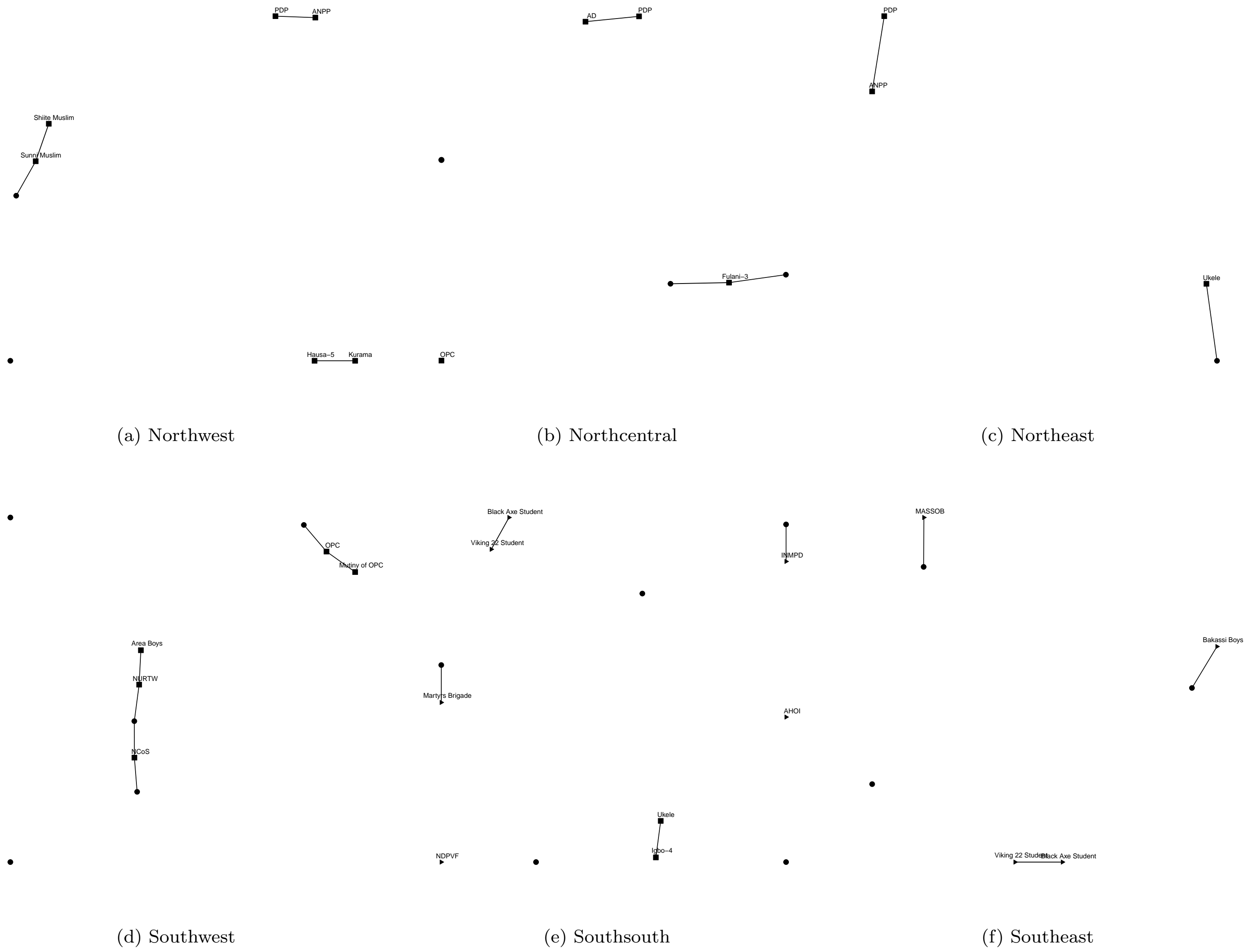
Figure A.37: Regional networks in 2003



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

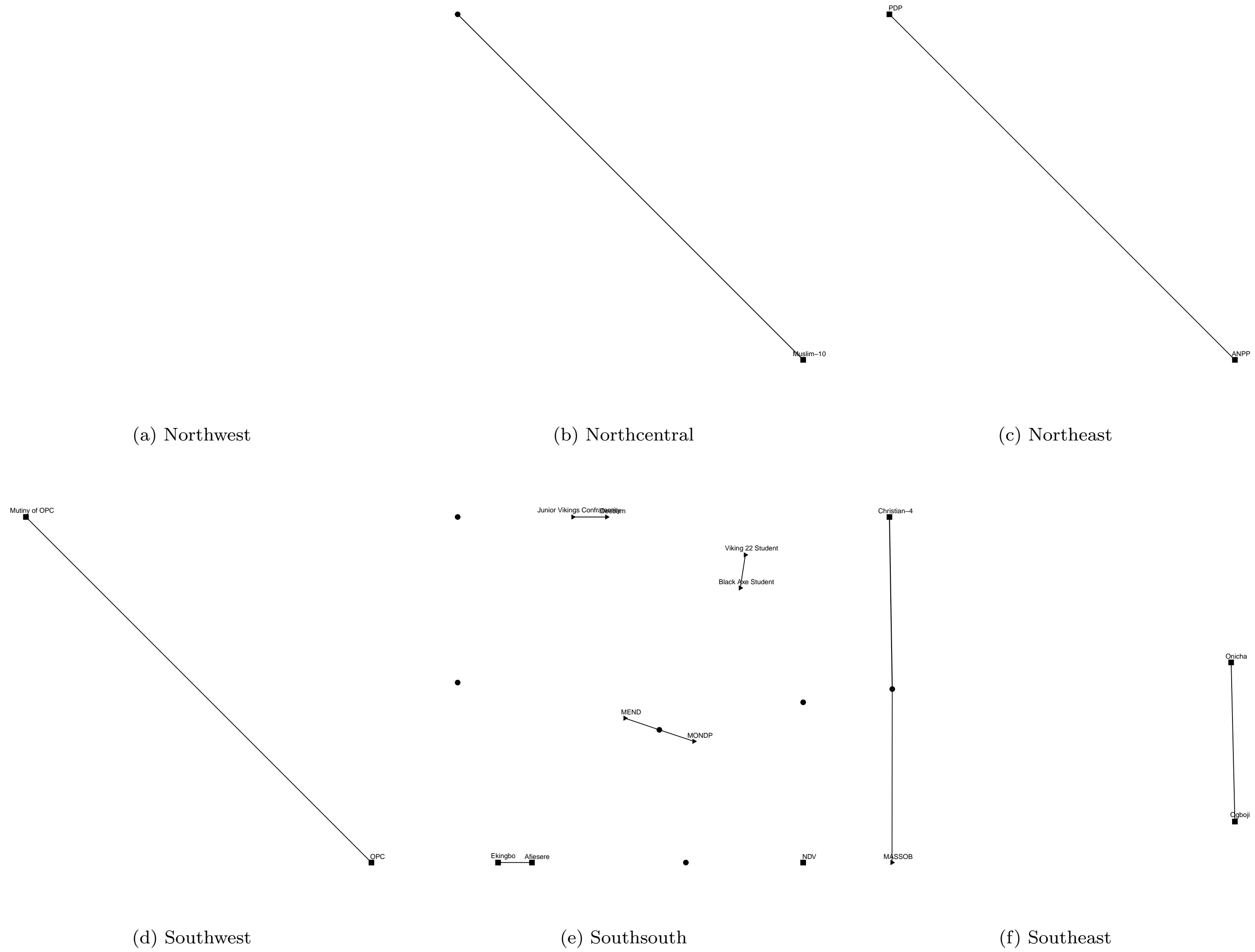
Figure A.38: Regional networks in 2004



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.39: Regional networks in 2005



(a) Northwest

(b) Northcentral

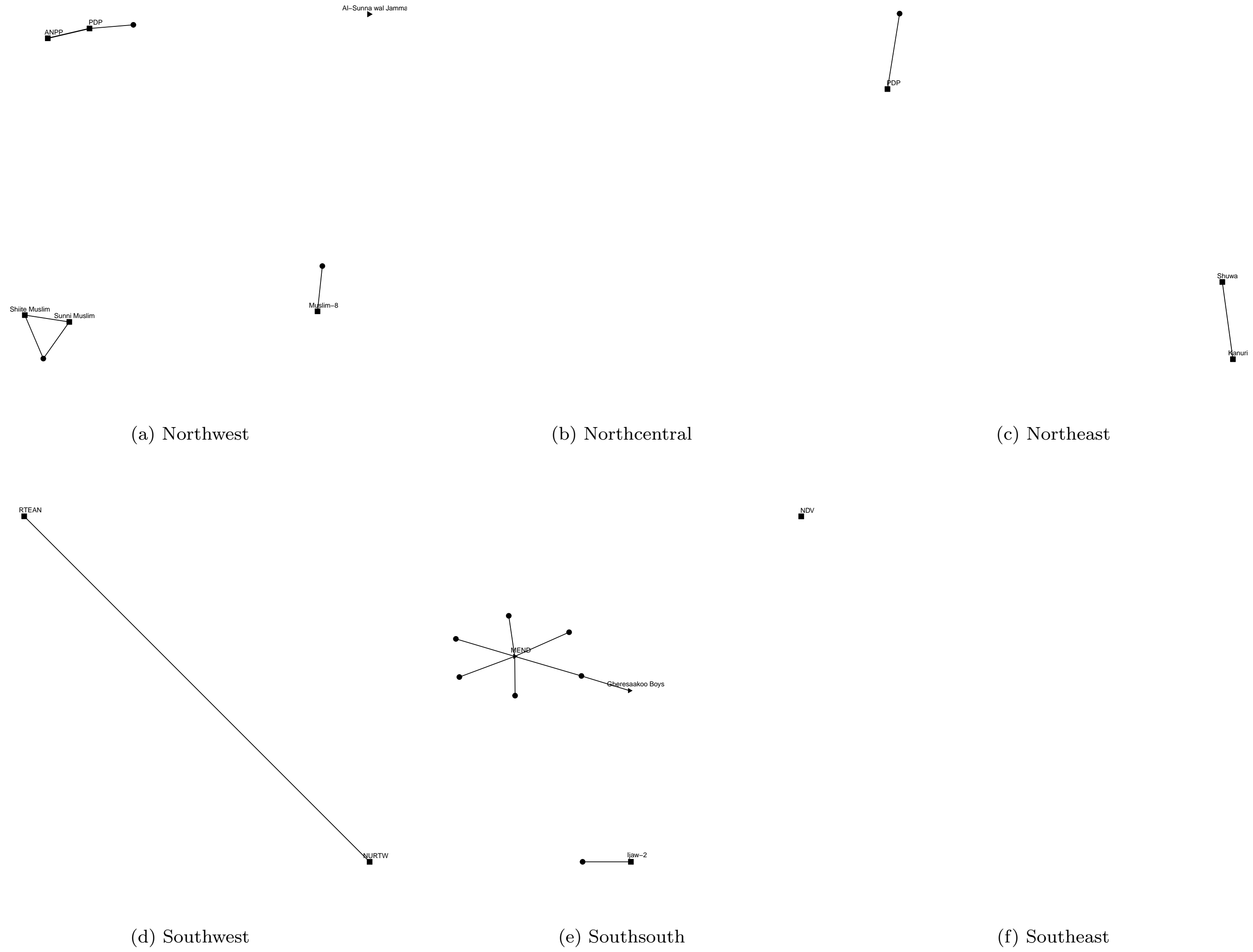
(c) Northeast

(d) Southwest

(e) Southsouth

(f) Southeast

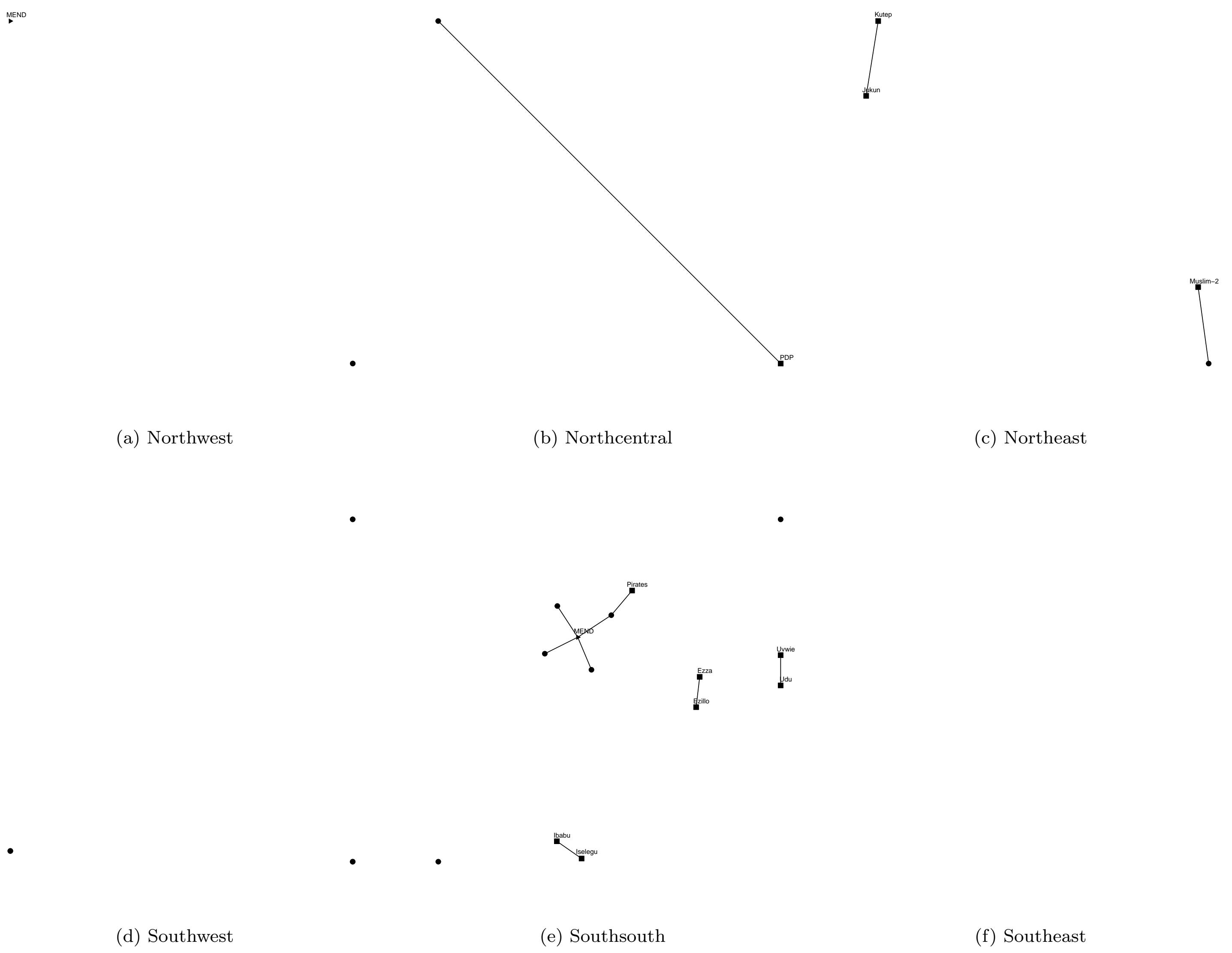
Figure A.40: Regional networks in 2006



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

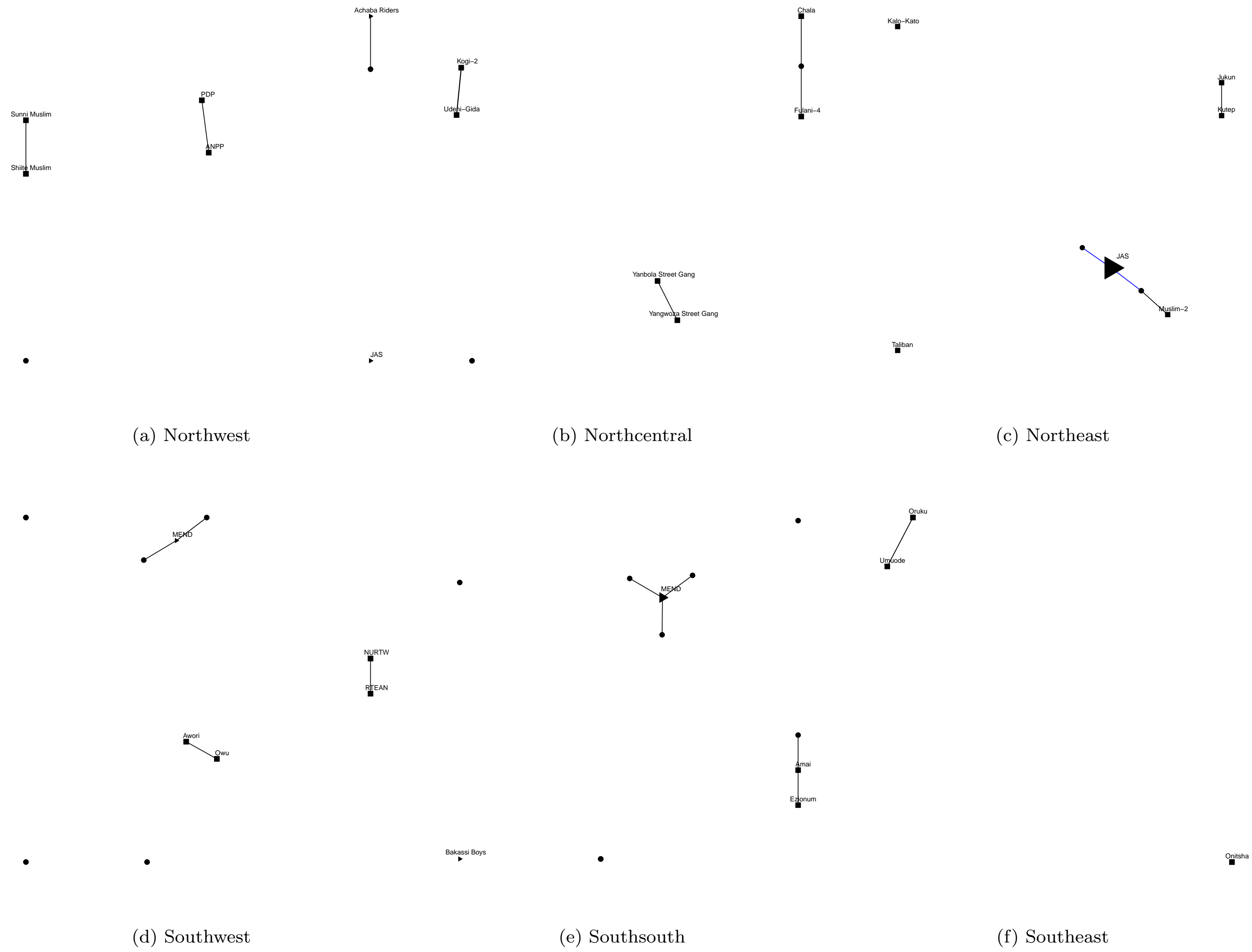
Figure A.41: Regional networks in 2007



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.42: Regional networks in 2008



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.43: Regional networks in 2009

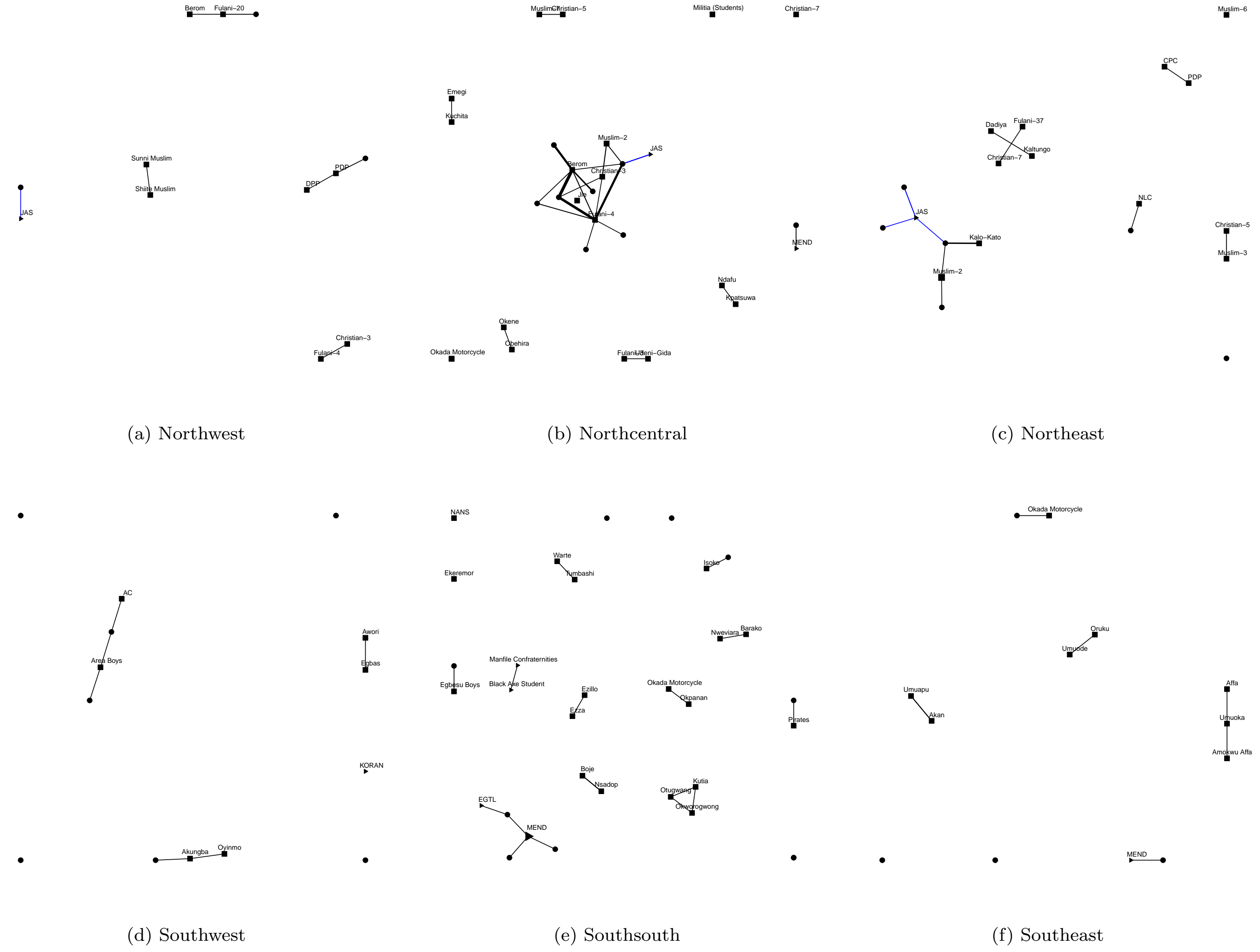
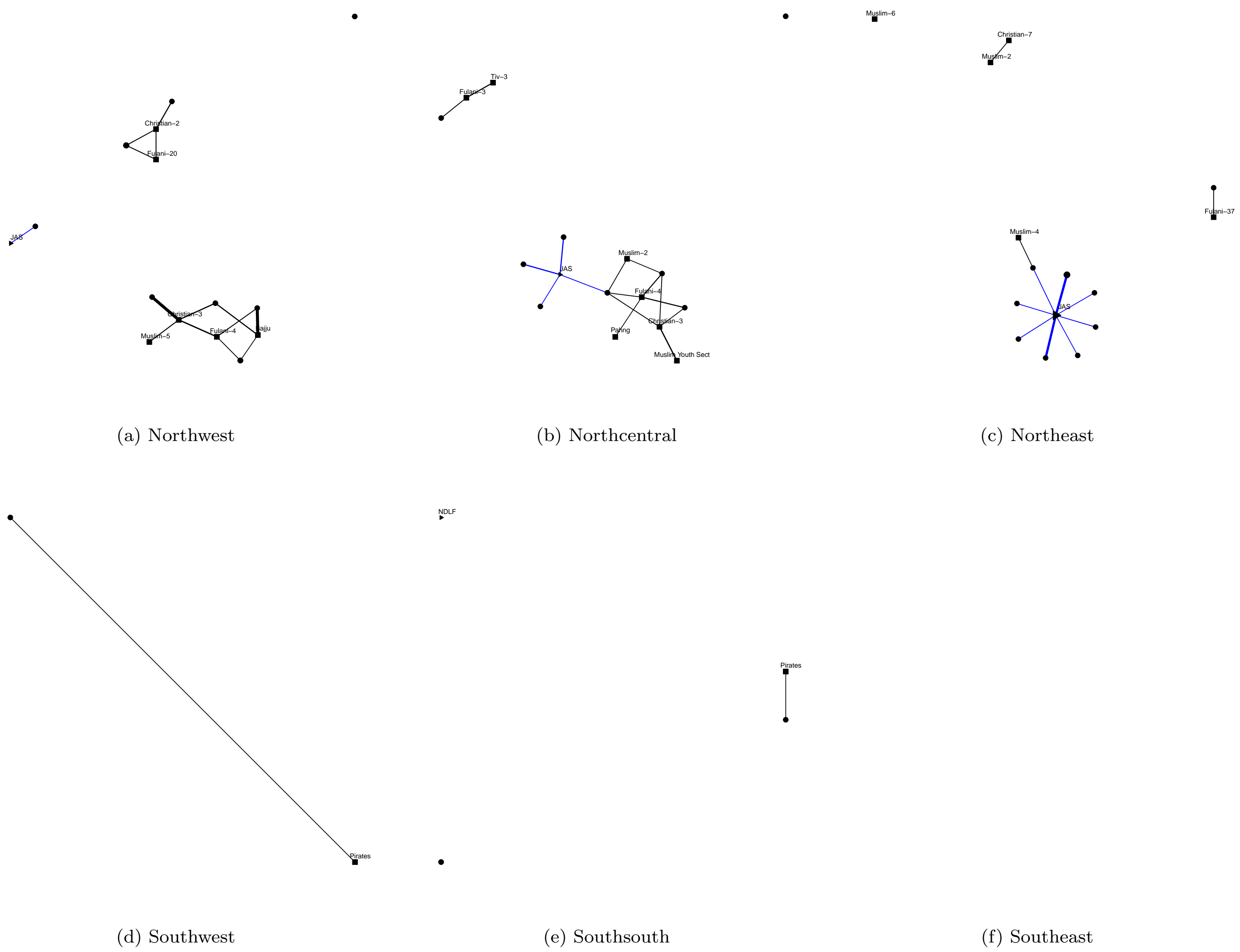


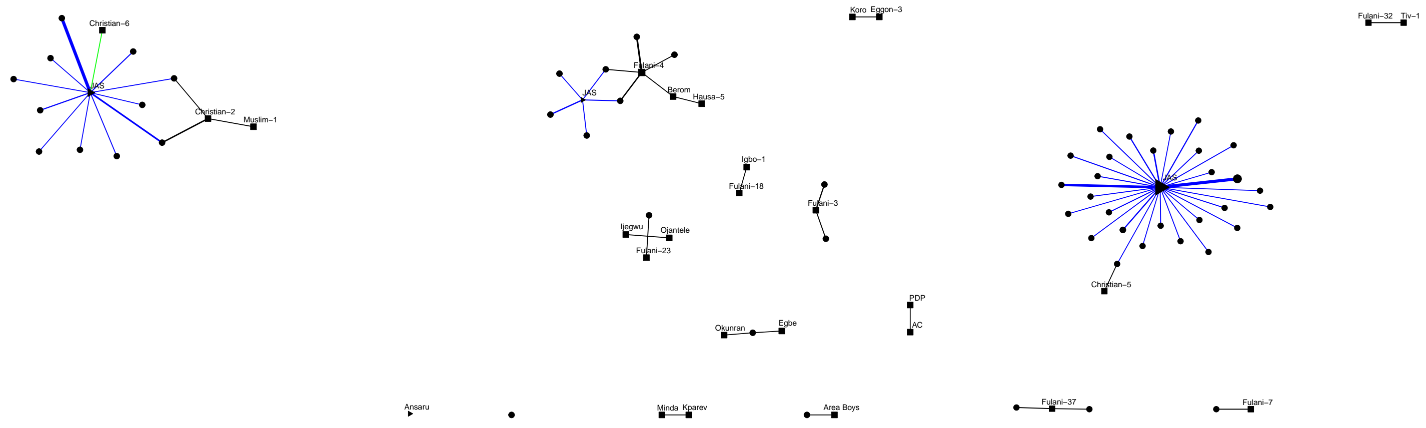
Figure A.44: Regional networks in 2010



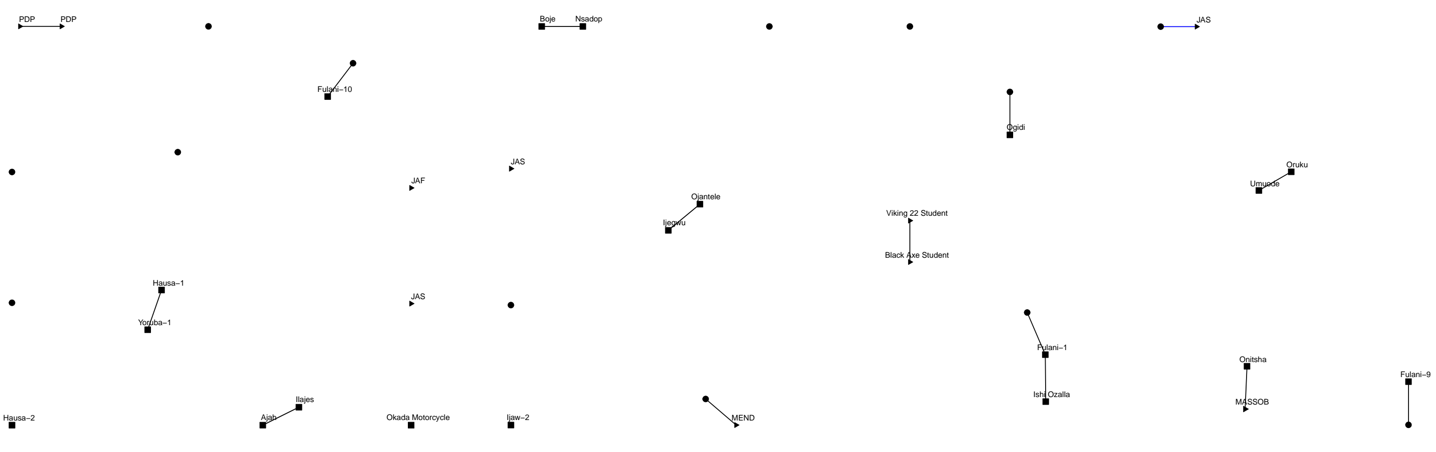
(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.45: Regional networks in 2011

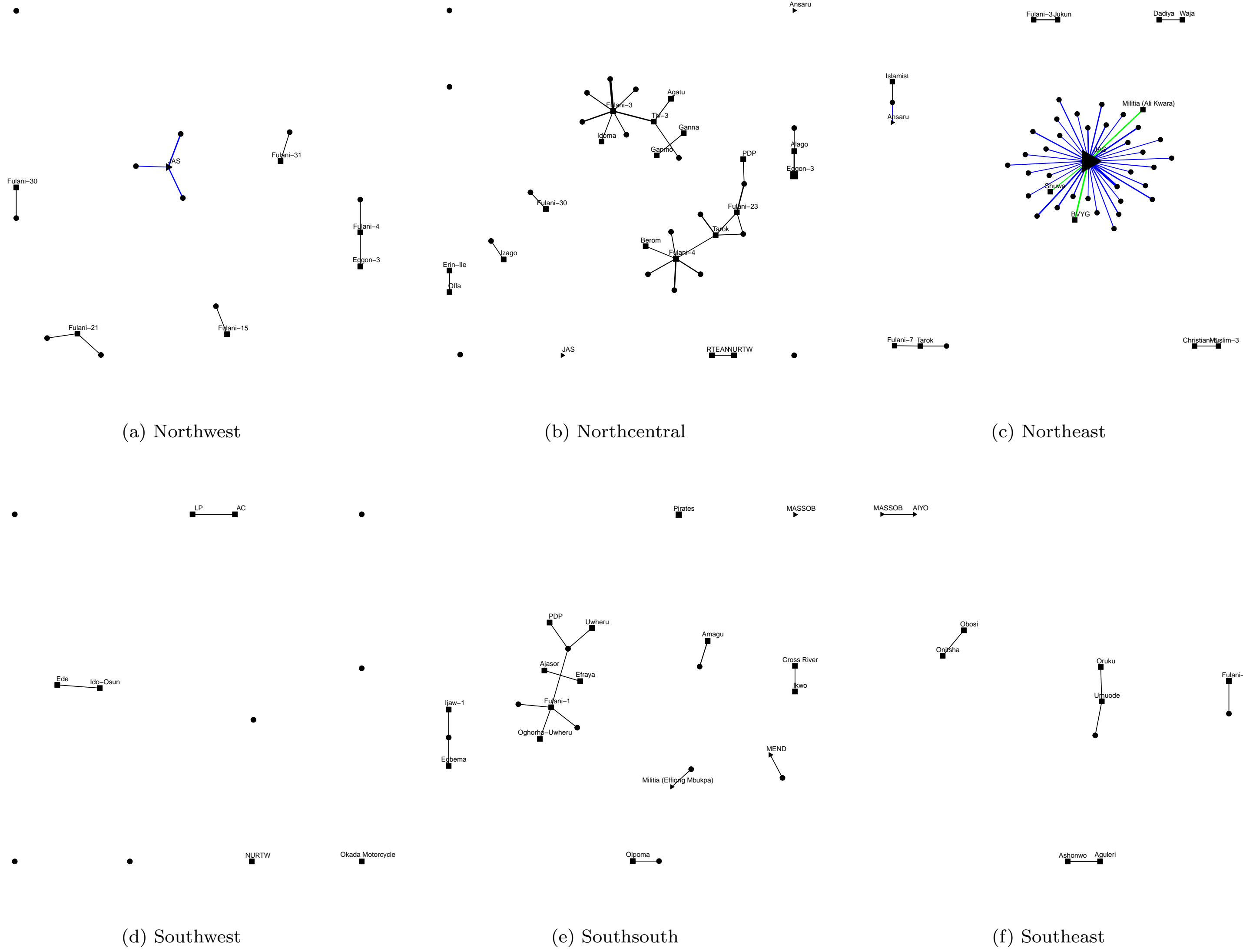


(a) Northwest (b) Northcentral (c) Northeast



(d) Southwest (e) Southsouth (f) Southeast

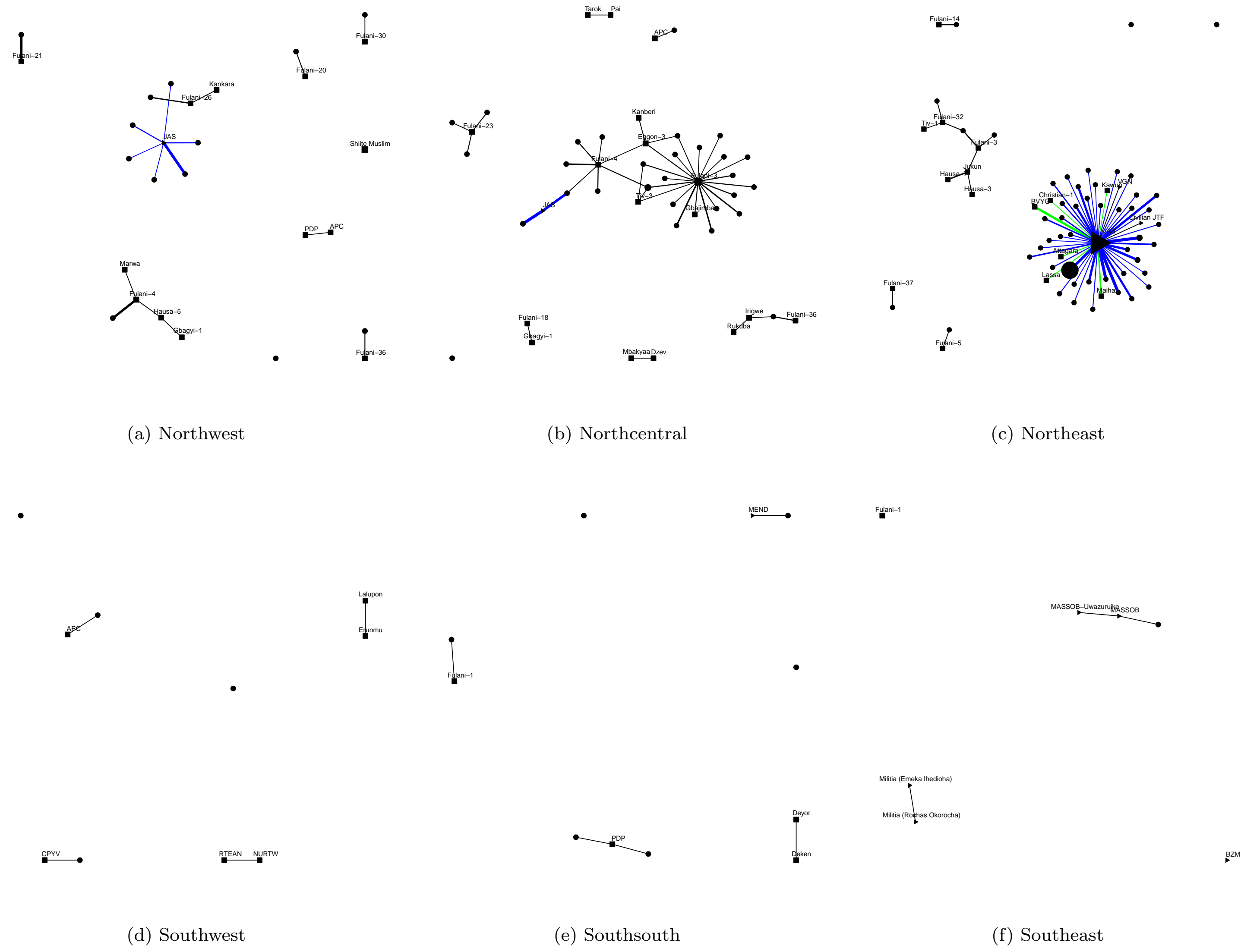
Figure A.46: Regional networks in 2012



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

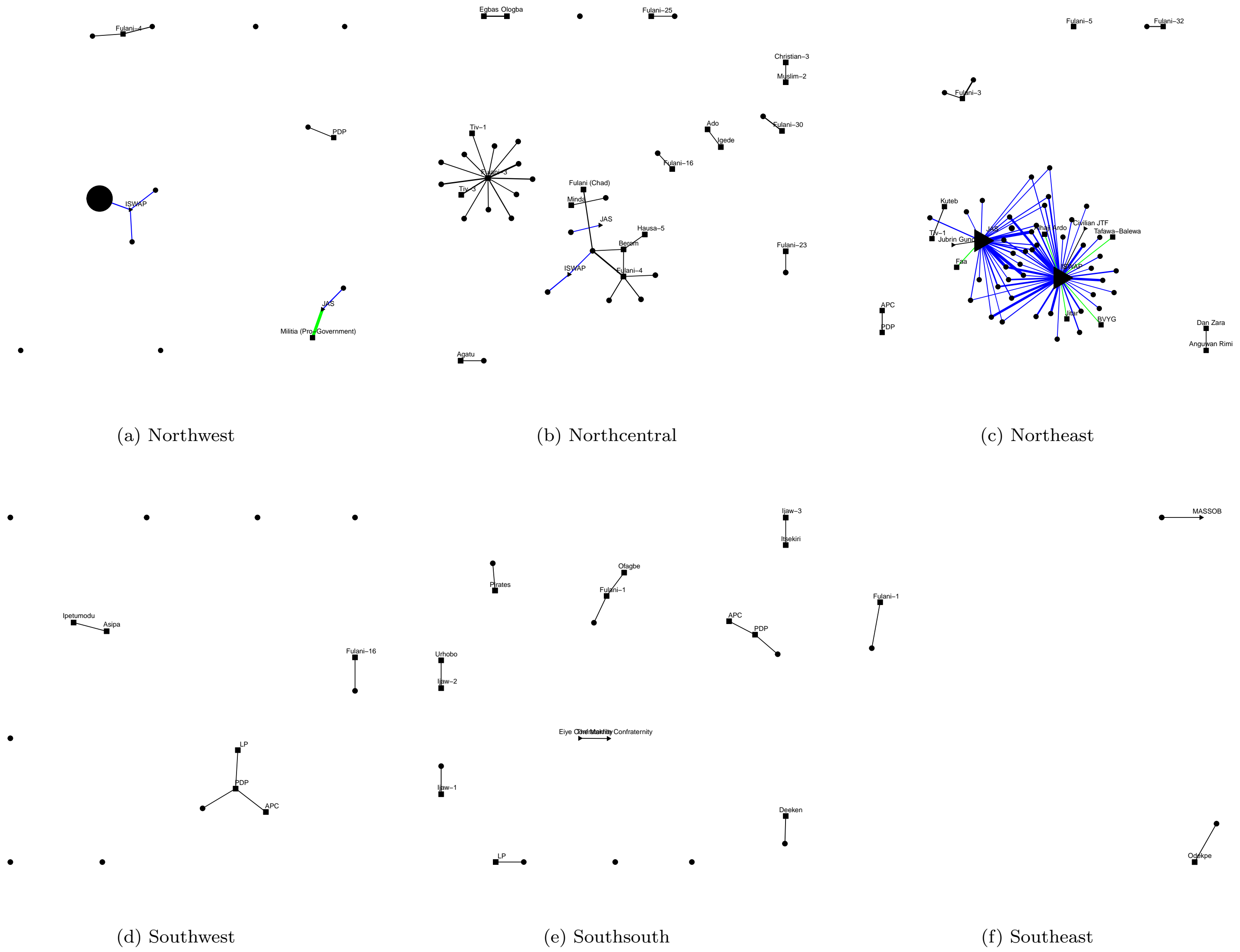
Figure A.47: Regional networks in 2013



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.48: Regional networks in 2014



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.49: Regional networks in 2015

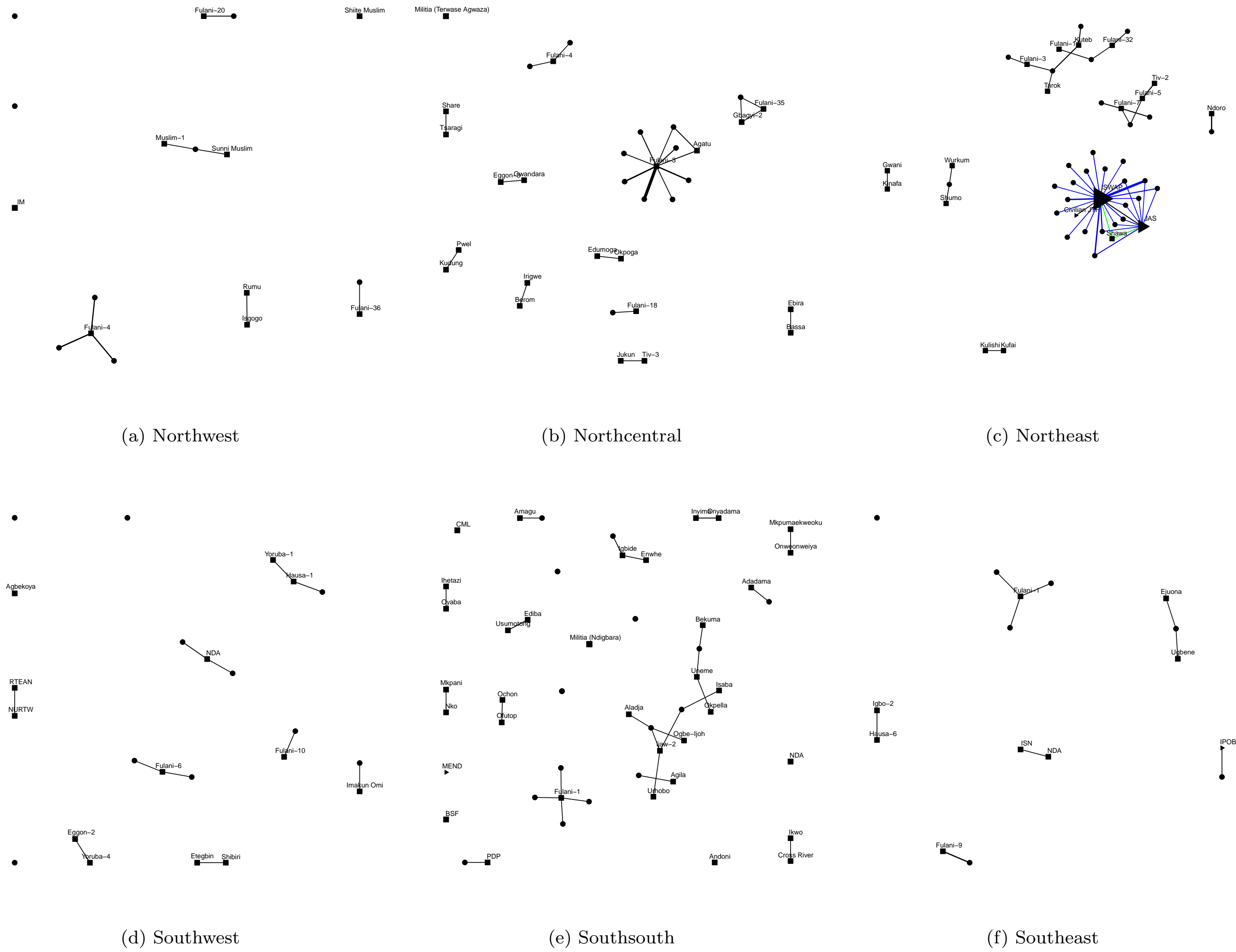
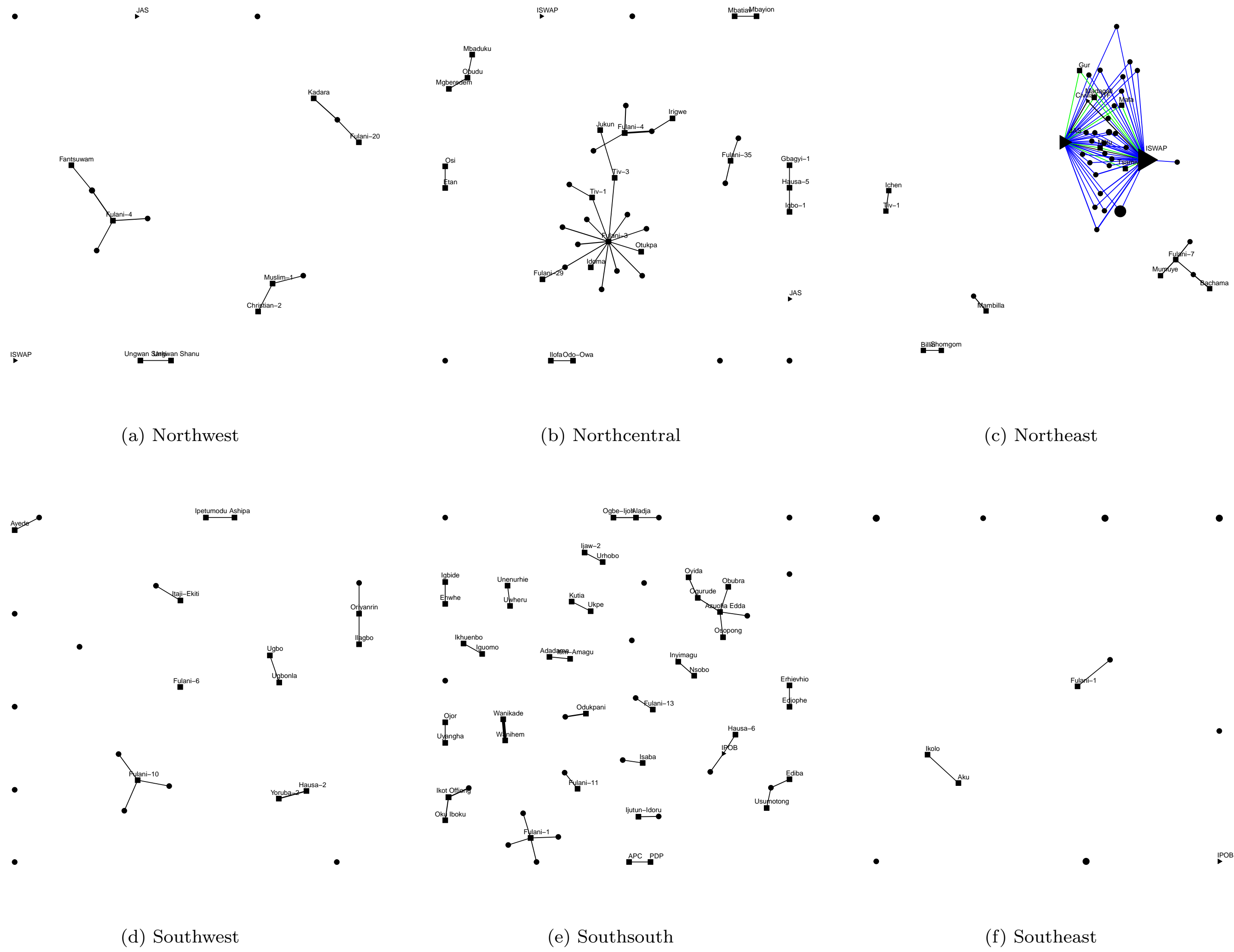


Figure A.50: Regional networks in 2016



(a) Northwest (b) Northcentral (c) Northeast

(d) Southwest (e) Southsouth (f) Southeast

Figure A.51: Regional networks in 2017

(a) Northwest

(b) Northcentral

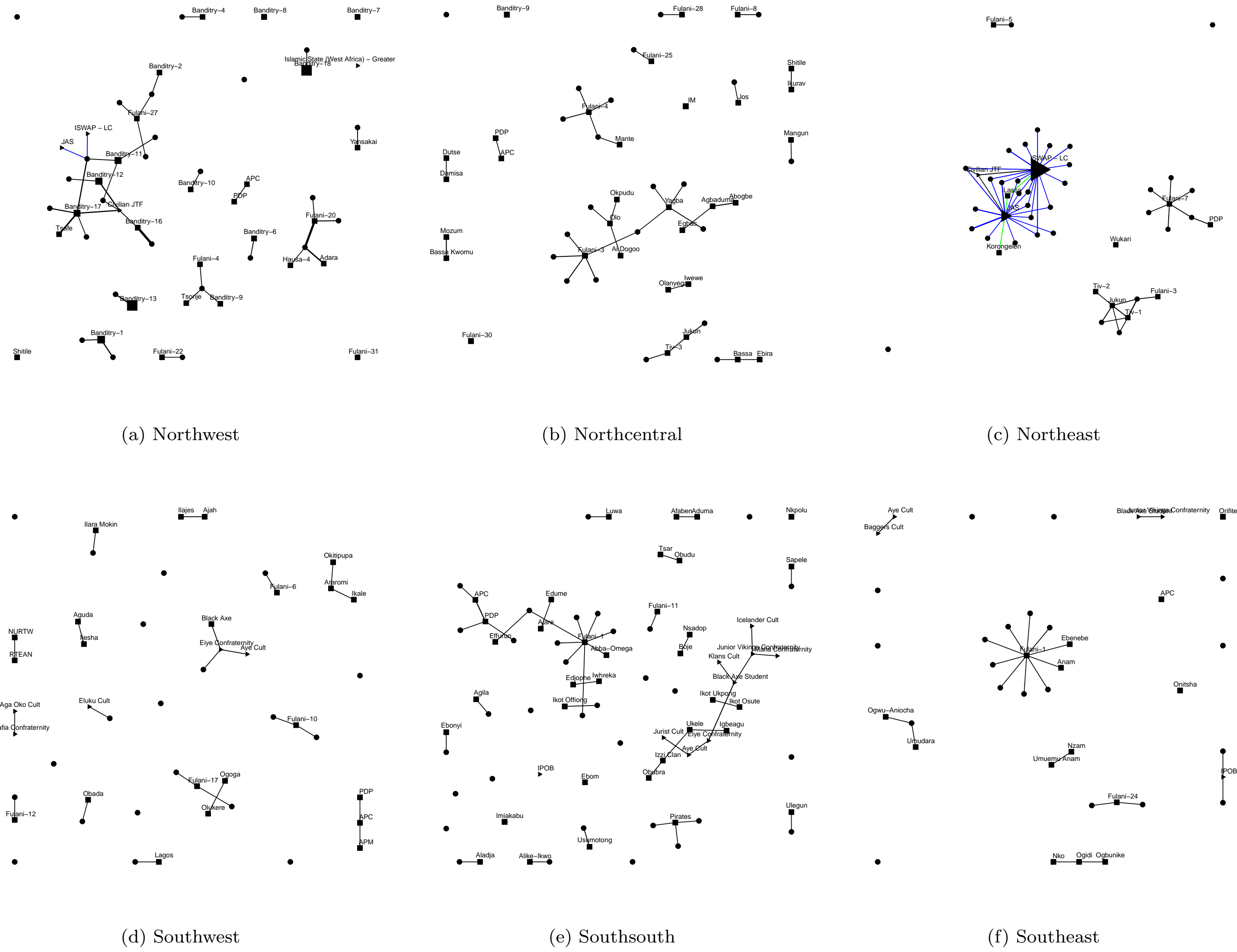
(c) Northeast

(d) Southwest

(e) Southsouth

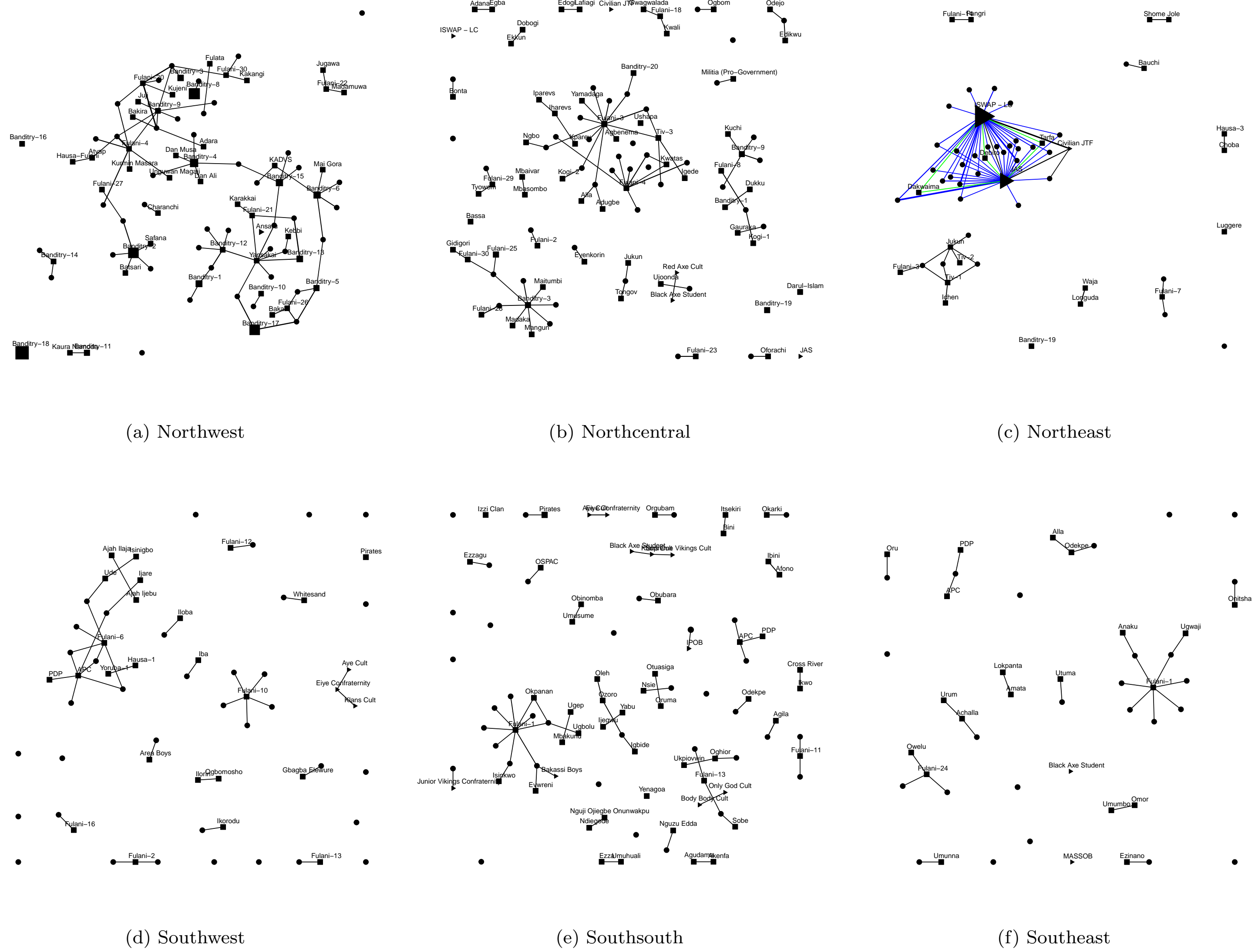
(f) Southeast

Figure A.52: Regional networks in 2018



(a) Northwest
(b) Northcentral
(c) Northeast
(d) Southwest
(e) Southsouth
(f) Southeast

Figure A.53: Regional networks in 2019



(a) Northwest

(b) Northcentral

(c) Northeast

(d) Southwest

(e) Southsouth

(f) Southeast

Figure A.54: Regional networks in 2020

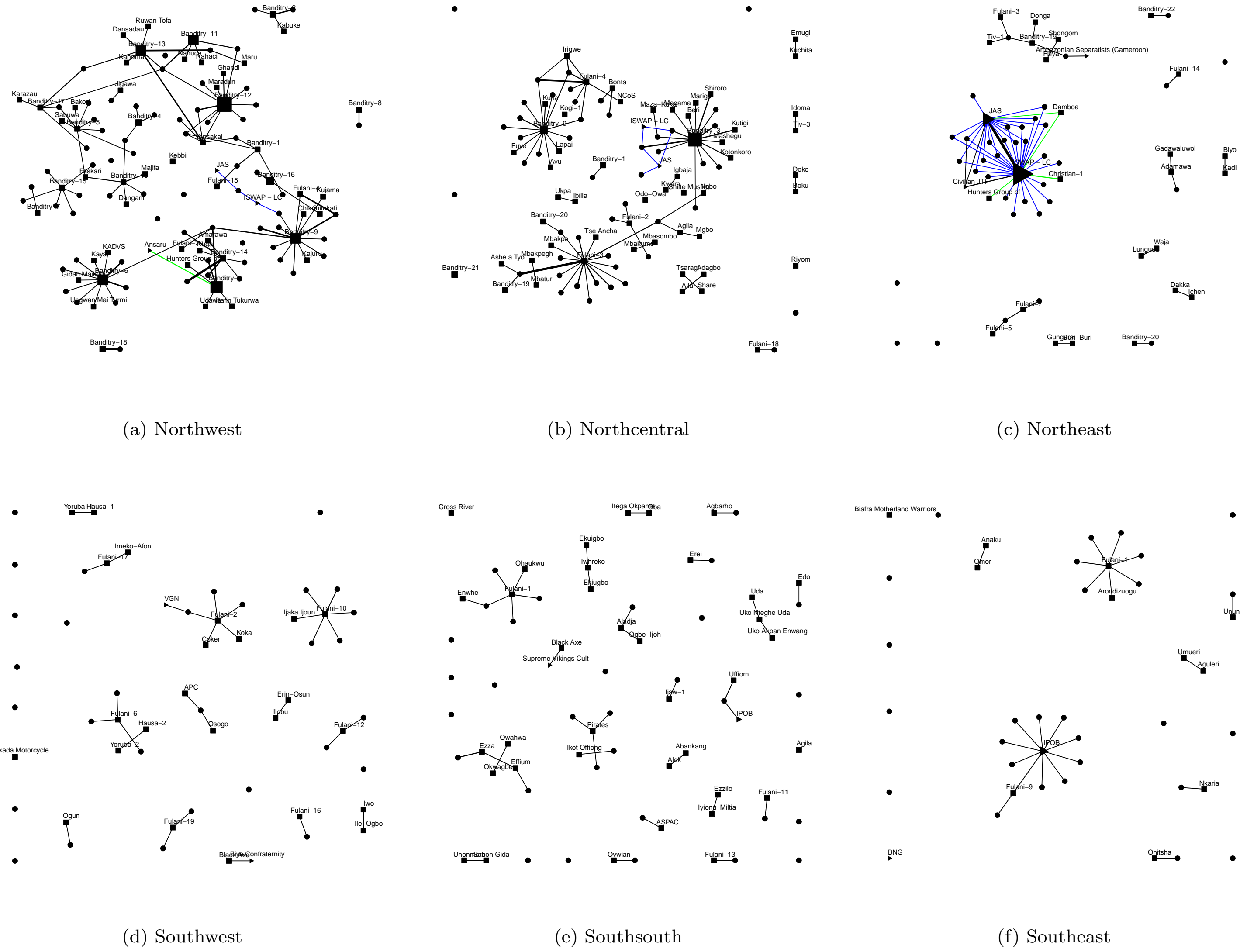


Figure A.55: Regional networks in 2021

Appendix B

Supplementary material: Qualitative data and analysis

This appendix provides additional information on the qualitative data generation process and the coding of the resulting data corpus. Specifically, the appendix includes details on the participant sampling, two example questionnaires, and the coding scheme of the directed content analysis. The last section reflects on the ethics of the field research and my positionality.

B.1 Participant sampling

Table B.1 provides an overview of the number of interviews per research site. Remote interviews with individuals based in other locations within and outside Nigeria are indicated as such. I also specify the absolute and relative number of interviews coded for each research site.

	Total	**Coded**	**Share coded**
Abuja	48	17	35%
Kaduna	21	10	47%
Maiduguri	25	11	44%
Sokoto	18	6	33%
Other Nigeria	4	1	25%
Outside Nigeria	2	0	0%
Total	**118**	**45**	**38%**

Table B.1: Interviews per research site

Table B.2 indicates the number of interviews (semi-structured and graphic elicitation) per participant group that have been included in the directed content analysis.

		Semi-structured	**Graphic elicitation**	**Total**
Community	Traditional rulers	2	2	4
	Community members	3	2	5
Interest groups	Ethnic/livelihood	3	2	5
	Humanitarian, Development, Peace (HDP)	2	2	4
	Religious	0	0	0
NSAG	Bandit	0	0	0
	Vigilante	2	0	2
	Violent extremist	2	0	2
Religious leaders	Christian	0	1	1
	Muslim	1	1	2
State	Local level	0	2	2
	State level	2	1	3
	National level	2	0	2
	Armed Forces	3	0	3
	Foreign diplomat	0	0	0
Expert	Journalist	1	2	3
	Researcher	6	1	7
Total		**29**	**16**	**45**

Note: NSAG = Non-state armed group; 'ethnic/livelihood interest group' refers to organizations that lobby for the interests of a specific professional group like farmers or herders and/or an ethnic group. In many cases, the profession intersects with a specific ethnic identification, e.g., herders are predominately Fulani.

Table B.2: Participant groups of the coded interviews

B.2 Interview questionnaires

This section provides two example interview questionnaires, one for the semi-structured interviews and one for the graphic elicitation of the network. Note that I have adjusted the semi-structured interview questionnaires for each participant group and research site.

B.2.1 Example questionnaire for a semi-structured interview

This example questionnaire was used in an interview with an interest group representative in Sokoto. I selected from these questions and asked follow-up questions when I deemed them appropriate. The personal

background questions at the beginning have been asked in almost all interviews.

Personal background

1. Please tell me a bit about yourself.
2. Which languages do you speak?
3. How old are you?
4. Have you participated in a research interview before?

Banditry

5. Please describe the current situation of insecurity in Sokoto.
6. When did the current situation of insecurity start? How? Where?
7. What is the impact of banditry on the life of the people? How are farmers and pastoralists affected?
8. Have you heard of a community that was successfully able to defend itself?
9. Are there communities that are more victimized than others? Do you know why?
10. Some parts of Sokoto seem relatively calm, unaffected by banditry. Why?
11. Please describe how an attack by the bandits looks like. Do they also kidnap during these attacks? Sexual violence?
12. Please tell me more about the bandits. How are they organized? Do they cooperate with each other?
13. Do the bandits maintain a connection to their communities of origin?
14. What do you think about the alleged link between Boko Haram and the bandits?

Vigilantism

15. When did Yan Sakai start to operate? Why?
16. Please describe the relationship between the government and Yan Sakai.
17. Yan Sakai is officially banned. How is it possible that they still operate?
18. Who are the members of Yan Sakai?
19. What does Yan Sakai do when they arrest someone?
20. Are you aware of human rights violations by Yan Sakai or the VGN?

Other conflicts

21. How did farmer-herder clashes develop in Sokoto in the last 10 years? Are they still happening today?
22. How are disputes between two communities normally solved?
23. What do you know about cattle rustling in Sokoto?
24. What is the relationship between Muslims and Christians in Sokoto?

The role of the government and miscellaneous questions

25. Are you aware of human rights violations by the government?
26. The government does not seem able to deal with the crisis in an appropriate way. Why is that? Why is it not protecting the citizens?
27. How many security officers can you find in Sokoto? How are they distributed across the LGAs?
28. The government claims there was an attack by ISWAP on the security forces in Sabon Birini but everyone seems to know that it was the bandits. Why do they raise this claim?
29. Did the crisis in the Northeast have an effect on Sokoto?

B.2.2 Example questionnaire for a graphic elicitation exercise

This example questionnaire was used for a graphic elicitation exercise conducted in Maiduguri. The graphic elicitation was more standardized than the semi-structured interviews and always followed the same structure. The questionnaire is built on the Netmap Toolbox by Schiffer (2007). I asked follow-up questions when I deemed them appropriate. The personal background questions at the beginning have been asked in almost all interviews.

Personal background

1. Please tell me a bit about yourself.
2. Which languages do you speak?
3. How old are you?
4. Have you participated in a research interview before?

Graphic Elicitation

5. As you have read in the information sheet, this interview includes a drawing exercise. The goal is to draw a network of the violent crisis. The drawing exercise has three steps and I will explain each step to you in detail. In the first step, I would like you to collect the names of people or groups that are involved in the violence in the Northeast. This can be the Boko Haram crisis but it can also include other types of violence. You can put down persons — like an important politician — organizations, or ethnic groups. Whatever comes to your mind. Each person or group is put down separately on one sticky note. The sticky notes are then put anywhere on the sheet. Let's start: Who is involved in the violent crisis in northeast Nigeria?
6. Optional follow-up: How is [name] involved in the violent crisis?
7. Once the participant cannot think of more actors: Are these all the actors that come to your mind at the moment? You can add more names later if you want.
8. In the second step, I will now ask you questions about the relationship between these actors. There are four colors, which will be used for different kinds of relationships. You can use an arrowhead to show the direction of the relationship: one arrowhead means it is one-sided, and two arrowheads mean it is a mutual, two-sided relationship. Using green, please connect all actors that give money or material support like food or weapons to each other. The connection can go in one direction if one side is giving money to someone but also in two directions if they are giving money to each other.
9. Using black, please connect all actors who give security-relevant information to each other. If you have connected the actors already with a green relationship, please just add the arrowheads but not a new line.
10. Using blue, please connect all actors that provide protection to each other. I mean protection in the narrow sense of military protection or security.
11. Using red, please connect all actors who have used violence against each other or have been attacked.
12. In the last and third step, I want to understand who is important in the crisis. Please take the stones – you can ignore the color – and put the more stones on a person or group, the more influence it has on the level of violence. Influence can be either way, that is, to increase or decrease the violence.
13. Do you think there is a relevant relationship between these actors that we have not talked about yet?

B.3 Directed content analysis

This section includes the final coding scheme of the directed content analysis and a list with the basic context information of the interviews coded and used as evidence in the process tracing.

B.3.1 Coding schemes

Here, I present three types of coding schemes: the theoretical codes (Table B.3), the actor- and site-related codes (Table B.4), and the meta codes on the research process (Table B.5). Each table specifies the parent and up to two levels of child codes. The file column indicates the number of text documents, e.g., transcripts and NGO reports, in which the respective code has been coded and the references column indicates the number of text segments coded to each code.

Parent code	**Child code I**	**Child code II**	**Files**	**References**
allocation decision			21	53
background Nigeria			0	0
	history		16	29
	other		21	65
	political_legal		11	22
conflict			1	1
	conflict_other		9	11
	instigation of conflict		9	19
	intensity change		33	56
	link btw conflicts		28	63
	multiple_conflicts		5	11
corruption			29	59
electoral politics			21	54
gender			21	48
group characteristic			0	0
	endowments		36	123
	members		0	0
		composition	36	111
		deployment	25	69
		number	18	37
	permeability		21	55
	skills		16	47
	structure		43	139
idea diffusion			6	12
identity			30	77

illicit economic activity			14	24
	cattle rustling		34	86
	kidnapping		30	81
	mining		15	31
	other_illicit		31	64
	smuggling		10	15
information_informants			33	126
migration			28	67
money			24	48
motivation			0	0
	grievances		19	33
	other_motivation		13	14
	political power		15	26
	private		6	12
	religion_ideology		29	63
	resource competition		22	46
	self-enrichment		35	73
	self-help		35	104
partiality			17	38
public goods			52	99
regulation			4	4
	rule implementation		26	35
		dispute adjudication	49	150
		enforcement	35	77
		prosecution	28	61
	rule production		20	43
taxation			20	37
terrain			23	38
territorial control			20	26
threat			13	21
transnational			33	88
type_relationship			0	0
	cooperation		41	157
	support		35	97
	transaction		22	54
violence			3	3
	attack_killing		49	226
	consequences of violence		41	117
	other violence		12	20
	remote violence		11	15

weapon proliferation		23	34

Table B.3: Coding scheme: theory codes

Parent code	Child code I	Files	References
bandits		53	509
Boko Haram		53	461
Christians		20	61
communities		32	92
elites		24	57
farmers		44	217
Fulani		41	225
generalizability_examples		2	4
government		64	613
Hausa		14	25
herders		47	251
Kanuri		2	6
Muslims		24	62
NGOs		7	11
North		3	3
	Northcentral	9	17
	Northeast	30	233
	Northwest	30	136
other_ethnic group		13	44
other_NSAG		14	33
other_profession		8	17
religious leaders		11	23
South		4	6
	Southeast	7	13
	Southsouth	6	10
	Southwest	2	3
traditional rulers		29	72
vigilantes		37	197

Table B.4: Coding scheme: actor and site codes

Parent code	Child code I	Files	References
methods		21	39
policy implications		25	47
positionality		0	0
	interviewee	42	97

	myself	31	60
	research assistant	13	18
validity		27	52

Table B.5: Coding scheme: meta codes

B.3.2 List of analyzed interviews

Table B.6 states the interviews that I analyzed and thus used for theory building and the process-tracing analysis. I provide limited contextual information for each interview to ensure the anonymity of the respondents. I also specify who conducted the interview in which language.

ID	Participant group	Participant sub-group	Location	Type	Interviewer	Language
164	religious leader	Christian	Kaduna	graphic elicitation	Shedrach B. Nghozei, author	English
172	interest group	ethnic/livelihood	Kaduna	graphic elicitation	Shedrach B. Nghozei, author	English
149	state	state-level	Kaduna	graphic elicitation	Shedrach B. Nghozei, author	English
189	state	state-level	Kaduna	semi-structured	Shedrach B. Nghozei, author	English
193	state	local-level	Kaduna	graphic elicitation	Shedrach B. Nghozei, author	English
103	religious leader	Muslim	Kaduna	semi-structured	Shedrach B. Nghozei, author	English
188	state	local-level	Kaduna	graphic elicitation	Shedrach B. Nghozei, author	English
167	community	traditional ruler	Kaduna	semi-structured	Shedrach B. Nghozei	Hausa
121	expert	researcher	Kaduna	graphic elicitation	Shedrach B. Nghozei	English
195	community	traditional ruler	Kaduna	graphic elicitation	Shedrach B. Nghozei	Hausa
232	interest group	ethnic/livelihood	Abuja	graphic elicitation	author	English
215	interest group	HDP	Abuja	semi-structured	author	English
246	state	Armed Forces	Abuja	semi-structured	Shedrach B. Nghozei, author	English
288	interest group	HDP	Abuja	semi-structured	author	English
279	expert	journalist	Abuja	graphic elicitation	author	English
226	expert	researcher	Abuja	semi-structured	author	English
244	interest group	HDP	Abuja	graphic elicitation	author	English
233	state	national-level	Abuja	semi-structured	Shedrach B. Nghozei, author	English
267	state	Armed Forces	Abuja	semi-structured	author	English
261	expert	researcher	Abuja	semi-structured	author	English

252	interest group	ethnic/livelihood	Abuja	semi-structured	Shedrach B. Nghozei, author	English
281	community	community member (IDP Northeast)	Abuja	semi-structured	Shedrach B. Nghozei, author	Hausa
287	community	community member (IDP Northeast)	Abuja	semi-structured	Shedrach B. Nghozei, author	Hausa
295	state	Armed Forces	Abuja	semi-structured	author	English
243	expert	researcher	Abuja	semi-structured	author	English
239	expert	journalist	Abuja	semi-structured	author	English
212	state	national-level	Abuja	semi-structured	author	English
357	expert	researcher	Abuja (Maiduguri)	semi-structured	author	English
316	NSAG	vigilante	Maiduguri	semi-structured (remote)	author	English
319	expert	researcher	Maiduguri	semi-structured (remote)	author	English
478	community	community member (IDP Northeast)	Maiduguri	graphic elicitation (FGD)	Hauwa Abubakar Abdullahi	Hausa, Kanuri
479	NSAG	vigilante	Maiduguri	semi-structured (FGD)	Hauwa Abubakar Abdullahi	Hausa
421	community	community member (IDP Northeast)	Maiduguri	semi-structured (FGD)	Hauwa Abubakar Abdullahi	Hausa
465	community	community member (IDP Northeast)	Maiduguri	graphic elicitation (FGD)	Hauwa Abubakar Abdullahi	Hausa
440	NSAG	violent extremist	Maiduguri	semi-structured	Hauwa Abubakar Abdullahi	Hausa
443	NSAG	violent extremist	Maiduguri	semi-structured (FGD)	Hauwa Abubakar Abdullahi	Hausa
414	interest group	ethnic/livelihood	Maiduguri	semi-structured	Hauwa Abubakar Abdullahi	English
405	interest group	ethnic/livelihood	Maiduguri	semi-structured (remote)	author	English

583	community	traditional ruler	Sokoto	semi-structured	Dr. Murtala Rufa'i, author	English
592	religious leader	Muslim	Sokoto	graphic elicitation	Dr. Murtala Rufa'i, author	English
506	community	traditional ruler	Sokoto	graphic elicitation	Dr. Murtala Rufa'i, author	Hausa
503	interest group	HDP	Sokoto	graphic elicitation (FGD)	author	English
527	expert	journalist	Sokoto	graphic elicitation	author	English
528	state	state-level	Sokoto	semi-structured	Dr. Murtala Rufa'i, author	English
715	expert	researcher	Enugu	semi-structured (remote)	author	English

Note: NSAG = Non-state armed group;
Interview 357 was conducted in Abuja, but the interviewee is usually based in Maiduguri.

Table B.6: List of analyzed interviews

B.4 Ethics and positionality

One goal of this study was to generate original data on the ongoing armed conflicts in northern Nigeria, including in the Northwest, which received far less scholarly attention. The high levels of violence, poor infrastructure, and poverty constituted an ethically challenging context to conduct interviews. The physical and mental integrity of all people involved — the study participants, middle persons, the research assistants, and me — was a key priority when designing and implementing the field research. In addition to ethical considerations, the data generation and analysis were shaped by my positionality as a white female researcher and the positionalities of my research assistants. I address the three aspects, i.e., (1) ethical considerations, (2) my positionality, and (3) the positionalities of my research assistants, in turn.

B.4.1 Ethical data generation in conflict-affected areas in Nigeria

Research with human participants always requires a careful assessment of its ethical implications, but even more so in a high-risk, post-colonial setting, in which conflict violence is the very focus of the study (cf. Cronin-Furman and Lake 2018; Krause 2021). 'Do no harm' is a key principle when designing such a study, and yet usually some risks remain, which need to be carefully weighed against the potential benefits of a study. To mitigate the risks as much as possible in the case of this study, an extensive catalog of mitigation measures has been adopted based on the analysis of the context (more than 70 pages in total). Ethical approval for the design of the study, including these measures, has been granted by ETH's Ethics Commission (case number EK 2021-N-51). In the following, I provide a brief summary of the security situation at each research site and reflect on the implications of Nigeria's colonial past for today's research endeavors. I then discuss examples of the adopted risk mitigation measures.

In 2021 — the year of the field stay — Nigeria was a high-risk setting due to the ongoing armed conflicts, the high level of crime, and poor public service provision including health services. At that time, 2021 saw the highest number of violent events since independence according to ACLED (Raleigh et al. 2010). While Abuja was considered relatively stable and safe, the other research sites were considered high-risk areas by the German and Swiss embassies (*Reisehinweise für Nigeria* 2021; *Nigeria* 2021). Especially the pervasive kidnapping heightened the risks related to this study. The risk management consultancy Smart Risk Solutions classified the kidnapping risk in Nigeria in 2021 at the highest level possible comparable to Afghanistan and Libya (*Kidnap Risk Map 2021* 2022). The violence aggravated the economic situation with poverty levels as high as 87 percent in some northern states (*Violence in Nigeria's North West* 2020). More than eight million people in the Northeast were considered food insecure, and more than three million people were facing acute hunger (*North Eastern Nigeria emergency* 2021).

With regard to the research sites outside Abuja, Maiduguri in Nigeria's Northeast was considered more

stable than the research sites in the Northwest because the city is under government control, and a large number of national and international humanitarian organizations are operating in the area. Despite this, attacks on the city could not be ruled out during the period of the data generation, as was demonstrated by attacks on the city by JAS and ISWAP in February and December 2021, respectively (Abdullahi 2021d,c). I also had to expect that members or informants of the violent extremists are present in the city and potentially report the research-related activities to the groups. In addition, more than 1,000 former JAS fighters surrendered to the government in 2021 after Shekau's death and came to Maiduguri (Haruna 2021). The security implications of this mass surrender were unclear. Last but not least, the residents of Maiduguri faced increased economic hardship at the time of the data generation as ISWAP interrupted the supply chains to the city, including the electricity network (Abdullahi 2021b). In combination with a security incident just a few days before my intended stay, I ultimately canceled my stay in Maiduguri.

The Northwest was an even more challenging environment for doing research because of the limited presence of the state security agencies and the volatility of the security situation. At the time of the field research, the bandits were growing in number and expanded their activities while the government increased pressure on the groups through military offensives. This not only had security implications for my research assistants and me but also meant that the study participants were especially vulnerable. I visited two research sites in the Northwest, the towns of Kaduna and Sokoto in the eponymous states. Kaduna was most affected by banditry violence. Even though attacks in the city center have not occurred so far, the violence heavily affected the rural areas and the immediate surroundings of the city. To give a few examples, bandits attacked the National Defence Academy — my official cooperation partner during my stay in Kaduna — at the outskirts of the city close to the airport a few days after I had left Kaduna ("Key facts about NDA" 2021). In the months after my stay, bandits conducted attacks on the train line connecting Abuja and Kaduna and on the airport of Kaduna (Maishanu and Lere 2021; Dahiru 2022; "Gunmen kill one" 2022).

In contrast, Sokoto town and its outskirts were less affected by banditry violence. However, counter-terrorism activities and the skepticism of the Nigerian government towards research activities in this remote area made conducting research in Sokoto challenged. Two researchers told me before my stay that they had come under pressure from the authorities. One had been questioned by the secret service while interview material of the other had been deleted by security officers. In addition, the military started a major offensive with air strikes in the neighboring state Zamfara around the time I planned to travel to Sokoto, which entailed a risk of spillovers to Sokoto state ("Bandits flee" 2021). The government also cut the telecommunication networks in Zamfara and parts of Sokoto for several weeks, which not only hampered the recruitment of participants but also had severe security implications (Alechenu et al. 2021). Cutting the telecommunication network also had major economic consequences for the people in the study area, increasing their vulnerability further.

Beyond the immediate security concerns, the field research context was shaped by postcolonial structures, which I define as the continuing impact of colonial relations, institutions, and economic dependence between former colonizing and colonized countries after formal political independence. Consequences of postcolonial structures for doing field research can manifest themselves in extractive relationships between foreign researchers and local research assistants and interviewees, the preferential treatment of white scholars by government authorities, and the study participation of individuals out of their dependence on international humanitarian organizations (e.g., Stys et al. 2022; Cronin-Furman and Lake 2018; Nyenezi Bisoka et al. 2020). Mitchell (2013, p. 1247) warns that exploitative relations between student researchers and their research subjects create a "benefit gap" in which people in conflict zones are "objectified as learning resources for students." The relationship between white researchers and assistants can be exploitative in so far that research assistants often have no job security or perspective of advancing their own academic career, are not recognized in publications, are paid low salaries, and have limited employee rights and social benefits (Iroulo and Tappe Ortiz 2022; Nyenezi Bisoka et al. 2020).

Generating data in the described setting creates risks for all people involved, including the violation of physical integrity, psychological harm for both the researcher team and interviewees, social repercussions for participants, and the exploitation of power and wealth asymmetries, among others (e.g., Cronin-Furman and Lake 2018; Hummel and Kurd 2021). Managing these risks, including constant monitoring of the security situation, consumed a lot of energy and time beyond the research-related tasks of the field stay (Lacher 2020, p. 14). In the following, I will discuss some exemplary risk mitigation measures as the comprehensive risk analysis and description of all adopted countermeasures exceed the scope of this section. I focus on the security protocol, ensuring informed consent, the questionnaire design, data protection, and the relationship with my research assistants.

With regard to the security protocol, one of the central measures was to restrict the data generation to the more stable urban areas. The restriction to the urban areas also meant that I did not request study participants from rural areas to travel to the urban centers. One exception to this was an interview in Sokoto, where I was ensured that traveling from an IDP camp close by to the urban center would have limited risks and is part of the everyday commute of many people. In addition, I followed a detailed protocol for myself to mitigate the risk of kidnapping as a 'high-value target.' Related measures included the completion of a Hostile Environment Awareness Training with the German military, strict information management within Nigeria, not staying in one place over a longer period of time when being outside of Abuja, and adhering to a contact protocol with my home institution and insurance company.

The data generation took place in the second year of the COVID-19 pandemic, which required additional precautions for everyone involved. At the time of the stay, official COVID-19-prevention measures in Nigeria were relatively limited, i.e., offices and shops were open, but masks and disinfection were obligatory in some

public places. While the precise infection rates are unknown, the level of infection seemed relatively low (*Nigeria* 2023b). Not least considering the low vaccination rates in Nigeria and the vulnerability of my participants and research assistants, it was a priority for me to prevent the spread of the virus. This entailed that I conducted the interviews outside whenever possible. When an interview took place inside, my research assistants and I were wearing masks and offered one to the participants. I also asked the participants to use disinfectant at the beginning of the session. The research assistants did COVID-19 self-tests to make sure that they would not transmit the virus without noticing.

Turning to the issue of informed consent, I invested a lot of effort in ensuring the informed consent of the study participants. I provided each participant with an information sheet. The sheet outlined the purpose of the study, the potential risks, and the data protection modalities. It also emphasized that the participants can interrupt and terminate the interview at any time. I provided the information sheet in simple or more sophisticated English, depending on the participant. While I first wanted to use the version in simple English for everyone, it became clear that participants with higher formal education, like researchers or government officials, were irritated or amused by the simple version. My research assistant also translated the information sheet and consent form into Hausa since I expected that not all participants would speak English. However, the lack of command of English correlated strongly with illiteracy, which meant that non-English speaking participants could not read the Hausa documents. In these cases, I asked my research assistants to explain the content of the information sheet in detail. After reading the information sheet, the participants were asked to give their written consent by signing the consent sheet. All participants gave some form of signature, also if they were illiterate (e.g., a cross or one letter).

For the questionnaire design, I aimed to minimize psychological harm caused by confronting participants with their experiences of conflict violence during the interviews. I did this by avoiding direct questions about personal experiences with violence and emphasizing during the interview that the participant could skip any question without providing a reason. In several cases, I made the experience that participants were eager to share their stories and losses, even if not prompted to do so. In these cases, I tried to signal to the participants that I was actively listening and empathetic to their situation.

In terms of data protection, I granted all participants anonymity and combined immediate offloading of the interview material with several layers of encryption (van Baalen 2018). I documented the interview recordings (audio or notes) with a numeric identifier and stored the interview materials separately from the participant list with the names and contact details of the interviewees. I took photographs of the network drawings after each session and then destroyed them. For software that runs on external servers — in the case of this study, Zoom and the transcription software Trint — I ensured that the software complies with the data security standards of ETH.

Finally, I took several measures to ensure a fair employment relationship with my research assistants. These included the conclusion of a detailed contract specifying their rights, defining the salary in consultation with Nigerian contacts, and discussing safety and security issues with them in detail. After the employment ended, I wrote reference letters and promoted two of them on the social media platforms Twitter and LinkedIn to support their search for future employment. Despite this, at least two of the three research assistants continue facing the described challenge that they are sustaining themselves on short-term research contracts without long-term financial security. To contribute to countering north-south inequality in academic research more generally, I organized a methods workshop on SNA for Nigerian junior scholars in Abuja in November 2023 in collaboration with the Conflict Research Network West Africa, financed by a grant of the ETH4D initiative (*Teaching at CORN* 2024).

B.4.2 Reflections on my positionality

Positionality statements have become increasingly common and intend to reflect on the process of knowledge production. They aim at acknowledging how the identities and situatedness of the researcher have influenced the data generation, analysis, and, by extension, the results — not least in contexts of "unequal power dynamics" (e.g., Gani and Khan 2024, p. 1; Fujii 2018; Njeri 2021). Njeri (2021) suggests that reflecting one's positionality is an iterative process throughout the duration of a research project but also across research projects. It is, hence, never fully concluded. To gain a better understanding of my own positionality, I educated myself about the concept, did journaling during the fieldwork, collected meta-data on the behavior of the study participants, and included a code for positionality in my data analysis. The latter captured text segments that reveal insights into how my research assistants or I were perceived by the interviewees. I also carefully observed my emotions when analyzing the data. Positive and negative emotions felt during the interviews, for example, affection and fear, can impact how we interpret the data, even if months have passed (Vorrath 2013; Hellmüller 2014).

In the following, I focus on the qualitative data generation and analysis because this is when I deem the impact of positionality particularly significant. On a more general note, however, I assume that the research project as a whole has been shaped by my upbringing in central Europe and my academic training at the University of Heidelberg and ETH Zurich. These institutions prioritize post-positivist, empirical research which rests on specific assumptions about human behavior and knowledge production. Using a mixed-methods SNA, I am further influenced by American pragmatism and the particular theoretical assumptions of SNA.

During the data generation in Nigeria, I perceived my gender identity, race, (assumed) connections to Switzerland and the Swiss foreign ministry, and my professional background as my most salient characteristics. The most visible identity was the intersection of being a white woman. Interestingly, whiteness seemed

to be more salient than gender. This was in line with one of my Nigerian contacts stating that I should not worry about how I will be perceived as a woman in Nigeria's conservative north because "race beats gender." My position as a white European was made explicit by some of the interviewees and intermediaries, revolving mostly around the following themes: my association with the colonial powers, e.g., visibile in the phrase "when you colonized us;" an appreciation that I have come "all the way to Nigeria" to research the crisis; and extremely high expectations about the contribution of my research to improving the situation. Such exaggerated expectations have to be seen against the background of colonial ideologies that framed the colonizers as "benevolent interveners" and put Western institutions, including those of higher education, above "native" institutions (Ekeh 1975, p. 97).[1] Therefore, I assume that my whiteness also contributed to the surprisingly high response rate. This impression is mirrored in the experiences of Fubara (2023a). Being of Nigerian origin herself, she made the experience that her affiliation with a Dutch institution increased the willingness of potential interviewees to engage with her project.

By contrast, being a foreigner also meant that I was not familiar with cultural and societal norms and that I would transgress some of them without even noticing. I was especially struggling with the importance of hierarchies and seniority, which were related to strong behavioral expectations that I could not fully anticipate. This affected my interactions with the study participants and the research assistants. One example of such an unintended norm transgression is that I usually asked the participants not to mention their names during the recording to ensure their anonymity. In one case, a local elite interviewee felt offended by this because he thought I would not acknowledge his significance as a person. I could counter my otherness in a limited way by signaling that I familiarized myself with the Nigerian context, e.g., by using a few words of Hausa or expressions from Nigerian public discourse, knowing the spelling of Nigerian places, and being familiar with Nigerian food. As Hellmüller (2014) pointed out, conflict settings are symbolically loaded, and small changes in behavior can create or destroy trust. My impression was that these signals of familiarity with the Nigerian context were appreciated a lot, for example when I used the Hausa term 'kwanta kwanta' for robbery in some interviews.[2]

In comparison, I find it more difficult to ascertain whether and how my gender played a role in the data generation as this was rarely made explicit. Sometimes I felt like my competence as a researcher was put in question but this could also be related to being white or at a junior academic level as a PhD student. Outside of the interview context, several men (including policemen) suggested that one should find a husband for me so that I can stay in the country or that I should marry them and take them along to Europe.

Another influential identity was my association with Switzerland because I identified myself as coming

[1] Ekeh (1975) differentiates between imperial ideologies, used to justify colonialism to the taxpayers at home, and colonial ideologies, used to justify colonialism to Africans.

[2] 'Kwanta kwanta' means literally 'Lay down, lay down' and refers to the shouting of the armed robbers.

from a Swiss university and, in some cases, had obtained the respective contact via contacts in the Swiss government. Sometimes, this meant that I was confronted with unrealistic expectations about my ability to connect people with institutions in Switzerland. Interestingly, a key advantage of the Swiss identity was not being perceived as French. While most people did not seem to have particularly positive or negative images of Switzerland, they had many prejudices against France. Conspiracy theories circulated in Nigeria that France would envy Nigeria's wealth and would actively try to weaken Nigeria.[3]

Last but not least, my professional background as a political science PhD candidate mattered because the scientific field determined my research approach, and being a junior scholar meant that I had no prior experience with field research and interviewing. Regarding the research approach, I made the experience that some of my contacts were more used to working with anthropologists using a much more immersive approach. Accordingly, I was criticized for only staying for three months and for not learning a local language. Regarding the lack of experience, I did not feel very confident about how I generated the data at the beginning, and I assume that this was notable during the first interviews I conducted.

The outlined identities and experiences continued to impact my work after my return to Zurich. It was revealing how revisiting some interview transcripts and audio recordings brought up feelings of fear, shame, and anger but also of liking, sympathy, and respect (cf. Shesterinina 2019; Vorrath 2010). I tried as much as possible that these emotions would not affect how I interpret the data and how much significance I assign to the respective statements. It was also challenging to not introduce bias due to my preexisting beliefs about the Nigerian case and the functioning of societies and states more generally. One example is my preexisting belief in the weakness of the Nigerian state. After my stay in Nigeria and especially the interviews in the Northwest, I saw the high level of corruption and the failure of the government to project its power to remote areas as a key factor driving the violence. This emphasis on the role of the state has also to be seen against the background that I had been exposed to narratives of liberal state-building during my studies and work life. Being aware of this 'state bias,' I assessed several alternative explanations during the analysis.

B.4.3 Reflections on the positionality of the research assistants

Not only my own identities but also the identities of my research assistants impacted the access to and the behavior of the interviewees. My research assistant in Kaduna was a male Christian, the one in Maiduguri was a female Muslim, and the one in Sokoto a male Muslim. All assistants used their respective networks to recruit some of the participants. It was notable that, for example, for the Christian assistant, it was easier to recruit fellow Christians. The research assistant in Maiduguri was well connected in the IDP camps in

[3] To give an example, the Twitter account 'Defense News Nigeria' with nearly 70,000 followers posted in December 2021: "Accusations of French economic plunder and complicity with terror groups [in the Sahel] is not a conspiracy theory. They are based on reality" (Defense News Nigeria [@DefenseNigeria] 2021).

Maiduguri due to her previous employment and leveraged these connections for this study. The assistant in Sokoto is a renowned researcher on the conflicts in the Northwest and, accordingly, had an extensive network of relevant stakeholders. To mitigate the influence of the personal connections of my research assistants, I diversified the access seeds in the sampling through my own contacts and cold letters. I further visualized my sampling network in the aftermath to have a more precise understanding of the role of the research assistants in the sampling.

Appendix C

Supplementary material: Curriculum Vitae of the author

The CV of the author is omitted in the digital version of the manuscript.