REBELS, FROM THE BEGINNING TO THE END: REBEL ORIGINS AND THE DYNAMICS OF CIVIL CONFLICTS

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This dissertation addresses the puzzle of whether rebel group origins have an effect on rebel wartime behavior and the broader dynamics of civil conflict. Using a quantitative approach over three empirical chapters I study the relationship between rebel origins and conflict onset, duration and intensity, and wartime group capacity. Two qualitative cases examine the relationship between rebel origins, wartime group capacity, and adaptation during war, further unpacking the theoretical mechanisms linking group origins and conflict dynamics. I posit that rebel groups emerge from pre-existing organizations and networks that vary along military and civilian dimensions and condition the development of military and mobilization capacity of their successor insurgent groups. Groups with more developed militarization and mobilization mechanisms prior to conflict are likely to enter into civil conflict earlier in their existence and fight in longer and bloodier conflicts. I also find a strong relationship between origins characteristics and the development of military and civilian wartime capacity. Origins exert a strong legacy effect on the type and strength of intra-war capability, indicating that significant rebel adaptation is difficult.

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CHAPTER 1

INTRODUCTION TO THE DISSERTATION

1.1 Introduction

Scholars of civil conflict have learned a great deal about the causes and consequences of civil war since the seminal work of Gurr (1968, 1970) pioneered the empirical study of this phenomenon. In just over fifty years, we have witnessed the study of civil war progress first from largely atheoretical, descriptive work to ever-more sophisticated modeling techniques enabling scholars to quantitatively pursue research questions using datasets with thousands of observations. With improvements in technology have come advances in our ability to gather fine-grained data at sub-national and local levels. This has opened avenues for scholars to ask questions, propose theories, and test hypotheses at the levels of analysis where the dynamics of civil war are actually taking place. These broad advancements have allowed scholars to paint an increasingly comprehensive picture of the correlates of civil war, providing insights into entire research agendas considered inaccessible less than a generation ago. This dissertation is an attempt to make a small contribution to the existing knowledge regarding rebel groups and civil war dynamics. I do so by addressing novel research questions concerning rebel origins across the three constituent chapters of this dissertation. I propose and test theories focused on the relationships between rebel origins and 1) the onset of civil conflict, 2) the duration and intensity of conflict, and 3) the development of rebel group capacity during conflict.

1.2 Contribution to Research on Civil War and Non-State Actors

This paper makes a significant contribution to our understanding of the how and why

civil wars occur as they do. Uncovering the implications of rebel group origins is fundamental to advancing scholarship on not only civil conflict, but also the organization of violent and nonviolent resistance movements writ large. Some resistance movements turn to violence that escalates to the level of civil war, while others remain peaceful. Existing work finds that movements that stay committed to nonviolence are more successful in achieving their goals and extracting concessions from a government (Chenoweth and Stephan 2011). Applying the origins framework to better understand how this dichotomy emerges is just one possible extension of this research agenda that illustrates the explanatory power of studying group origins.

Whether a group ceases to exist at some point in time or continues indefinitely, all non-state actor groups have a beginning. If these varied group beginnings have the potential to reveal more or less likely outcomes, strategies, behaviors, and decision-making frameworks, the study of rebel origins can illuminate pathways forward for expanding our knowledge of rebel (and other) groups. In this sense, studying the formation of non-state actor groups can provide insight into all resistance organizations, both violent and nonviolent, and shed light on the strategies and behavior they pursue. In other words, studying the influence of group origins is a meaningful exercise that holds tremendous potential for opening new avenues of research into how and why rebels behave as they do.

1.3 Situating Rebel Origins in the Existing Literature

This dissertation addresses prior civil war scholarship in several within several research agendas. A small number of scholars have addressed the notion of rebel group formation. The

most notable of these studies is Braithwaite and Cunningham's Foundations of Rebel Group Emergence (FORGE) Dataset (2019). The research aims and parameters of the FORGE data project are very closely related to those of this dissertation project. Both projects develop a coding framework and quantitative dataset that captures the group characteristics of rebel organizations prior to the outbreak in conflict. The primary difference between these two projects is the primary unit of analysis in the coding process.

This research agenda also builds upon prior research that addressed the avenues through which civilians mobilize to challenge the state (McAdam et al. 1996; Tarrow 2011; Tilly 2003; Wood 2003). Several pieces stand out as salient predecessors to the rebel origins research agenda. Weinstein (2006) found that the structure and composition of insurgent groups influences organizational strategies regarding the use of violence. Staniland (2012, 2014) was among the first to offer a theoretical account of the effects of group formation, differentiating between group types based upon their pre-existing social networks. I argue that the above literature is the body of work that this dissertation speaks most directly to as these scholars made significant contributions to our understanding of the processes by which resistance movements, political violence, and civil conflict come to fruition. The most important contribution of this dissertation is to advance our understanding of the same analytical time period and process discussed by the aforementioned group of scholars.

Finally, this dissertation and the novel data produced as part of it contributes to a community of data collection efforts aimed at capturing novel aspects of resistance movements and organizations, political violence, and civil war. In addition to the FORGE dataset discussed above, there are a series of exciting new data projects that are contemporaries of this rebel

origins research agenda. The Revolutionary and Militant Organizations dataset (Acosta 2019) and the Anatomy of Resistance Campaigns project (Braithwaite, Butcher, and Pinckney - In Progress) explore new aspects of resistance organizations, while the Nonviolent Action in Violent Contexts (NVAVC) dataset studies the occurrence of peaceful resistance in states experiencing civil wars (Chenoweth, Hendrix, and Hunter 2019). The rebel origins data produced as part of this dissertation accompanies the data collection efforts above in expanding our understanding of how non-state actor groups mobilize, organize, and the implications of the variance in these characteristics.

1.4 A Theory of Rebel Origins – The Broad Framework

The three chapters of the dissertation present and test constituent pieces of the broad, overarching rebel origins theory that serves as the foundation for the broader project. Here I will outline the broad strokes of the larger origins theory. At its core, the rebel origins theory makes the argument that the characteristics possessed by rebel organizations prior to the onset of conflict play a role in conditioning rebel organization and behavior during the subsequent conflict. Rebel groups do not emerge spontaneously – they generally emerge as extensions of or modified versions of pre-existing groups or networks. In many cases, insurgent organizations are built upon formally organized, coherent groups of a political, civilian, or military nature. I refer to these predecessor groups as *proto-groups*, which serve as the foundation upon which the eventual civil war combatant is developed. *Proto-groups* take a variety of forms – political parties, grassroots protest movements, pre-existing rebel groups, factions of government military forces, labor unions, networks of ethnic or religious kin, or groups organized on

ideology, among many others. Many aspects of *proto-groups* are fundamental to their existence and remain embedded in the successor rebel group – their composition of their membership, organizational goals, and their leadership, for example. Yet the most fundamental and path dependent aspects of proto-groups relevant to wartime behavior are its military capacity and ability to mobilize popular support. I characterize these attributes as *militarization* and *mobilization.* These are umbrella terms that are intended to encompass all of the relevant characteristics and *proto-group* experience/history that facilitate rebel groups' ability to establish and maintain a coherent, comprehensive wartime organization capable of challenging regime forces. This top-line account of the origins story is intended to paint a broad picture of the dissertation's theoretical framework. As mentioned above, the subsequent discussions of the individual chapters will provide greater detail on the component pieces of the origins theory.

1.5 The Core Components of Origins Theory

Chapter 2 is concerned with the relationship between rebel origins and the onset of conflict. As such, this chapter's theory is focused upon the causal processes at work during the formative stages of groups' existence. Empirically, this period is conceptualized and later operationalized as the time from group formation to the onset of civil conflict.[1] I refer to this period in rebel groups' lifespans as their "incubation period." I posit that this period of time is of exceptional salience in understanding rebel behavior and success during war. While in the incubation period, rebels have more freedom (relative to active conflict period) to organize,

[1] Using the UCDP definition of civil conflict onset of 25 battle deaths in a calendar year.

recruit, and build military and civilian-based infrastructure. While some groups may be subject to regime repression and/or be involved in low-level armed conflict, rebels face a substantially lower threat to their survival during this period. Given this relative autonomy, groups build capacity and establish a lasting identity. Characteristics of origins within the militarization and mobilization labels are established as groups proceed toward conflict onset. In the quantitative analysis, I examine the relationship between origins, the age of groups, and the likelihood of the outbreak of conflict. I argue that both militarization and mobilization have a negative relationship with the time to outbreak, with militarization exhibiting a stronger substantive effect.

Chapter 3 focuses upon the long-run conflict outcomes of duration and intensity. While Chapter 2 examines the period from group formation to conflict onset, this chapter considers the time from onset to termination, in other words, the entire scope of civil conflict. The theory of this chapter is thus tasked with accounting for the broadest analytical span of time and the most comprehensive set of theoretical mechanisms. In this chapter, I refer to the organizations and networks that precede formal rebel groups as *proto-groups.* During the aforementioned rebel incubation period, *proto-groups* coalesce into the rebel organizations that fight against the government during conflict. This chapter's theory builds upon Chapter 2 by providing a theoretical account of the legacy effect or path dependency of *proto-groups* as conflict progresses. I argue that the characteristics present in *proto-groups* become embedded in the "fabric" of rebel groups and are difficult to change – political parties turned rebel groups lack the experience and expertise to conduct a military campaign, while a former government military faction will likely have difficulty developing popular support in the civilian population.

Built upon the notion that levels of conflict intensity are to a degree dependent upon how long a conflict lasts, I make the argument that groups able to survive the initial stages of conflict will be those most likely to not only survive longer but also take part in bloodier wars. The asymmetric balance of power between rebels and the state is most pronounced early in conflict, particularly for groups that have weak military capacity. Thus, I hypothesize that militarization is the critical attribute allowing groups to survive this dangerous phase of war, making longer and bloodier conflicts more likely. I hypothesize that mobilization also has a positive effect on both duration and outcome, with militarization exerting a stronger substantive effect.

1.6 Rebel Group Origins Data

As part of the dissertation project, I coded original variables to empirically quantify the phenomenon of rebel group origins. This data collection effort resulted in the production of three novel origins variables – *Militarization, Mobilization,* and *Rebel Group Age.* These variables are meant to capture the variance in characteristics across rebel groups at/prior to the onset of conflict. The coding of the *Militarization* and *Mobilization* is based upon information gathered on rebel groups pertaining to the time period prior to the group's engagement in civil conflict, hence its origins. The theoretical basis for using onset as the analytical "end" of group origins is that the commencement of large-scale hostilities with a regime is accompanied by an entirely different set of circumstances for the rebel group. At that point, a group faces a daunting new set of challenges and pressures. Most notably, it faces a government intent upon eliminating the armed opposition it faces – a group is now tasked with

survival.

Mobilization and *Militarization* are coded as ordinal variables ranging from one to three, with these values representing low, medium, and high levels of the origins characteristics. A series of criteria must be met for a group to be coded as either medium or high along these dimensions. I do not assign a value of zero on either origins dimension based on the on a simple assumption concerning rebel capacity and conflict escalation. I assume that rebel groups that have exhibited the organizational capacity to escalate hostilities with the government to full-scale civil war possess at least a minimal degree of *both* militarization and mobilization capacity. The full coding scheme including the specific criteria for assigning values of the origins variables can be found in Appendix A.

1.7 Blueprint for the Dissertation

Below I provide an outline of the dissertation, presenting each chapter sequentially. Each section will frame the individual chapters with a brief discussion of how the chapter builds upon existing literature, the component origins theory within the chapter, and the findings of the empirical analyses contained within the chapters. As each chapter is focused upon distinct aspects of rebel origins and its implications, I will highlight the key takeaways form each and its contribution to the study of violent non-state actors and civil conflict.

1.8 Chapter 1 – Rebel Origins, Group Age, and Conflict Onset

This chapter examines the link between group formation and the outbreak of conflict, in particular, addressing the following research questions:

- *What is the relationship between the origins of rebel groups and the onset of civil conflict?*
- *Do pre-conflict rebel group characteristics have an influence on the likelihood of civil war occurring?*
- *Do rebel origins condition the relationship between the age of groups and conflict onset?*

This chapter focuses on the time period I refer to as the rebel group "incubation period." This component of a rebel group's lifespan lies between the formal establishment of a group and the onset of civil conflict. This analytical time period has been of great interest to and the subject of voluminous research on the part of scholars of the mobilization of rebellion and social movements (Tilly 1978; della Porta 1995; Davenport 2015). However, scholars of civil war have largely treated this aspect of rebel group development as a "black box," an avenue of research to be explored in the future. I attempt to tackle this unexplored phenomenon from a civil war perspective – that is, conceptualizing the period of rebel formation as a source of explanatory power for research questions concerning rebel behavior and the dynamics of civil wars.

In this chapter, I investigate the correlates of the duration of the rebel incubation period – essentially, what are the drivers of the age of groups upon entering into conflict with a government? In other words, what are the factors influencing the "duration of peace" following the formation of rebel groups? I argue that the rebel origins characteristics militarization and mobilization are the key explanatory variables of rebel group age at conflict onset. Specifically, I hypothesize that both militarization and mobilization exert a negative effect upon the duration of peace, with militarization having a stronger influence on the outbreak of conflict. These

theoretical propositions are tested using Cox proportional hazard models to determine the effect of the covariates on the likelihood of peace failure. I find mixed support for the hypotheses outlined above. *Militarization* exhibits a strong and negative and statistically significant relationship with the duration of peace across all Cox model specifications. On the other hand, *mobilization* unexpectedly has a positive (and significant) relationship with the peace duration of the incubation period. This indicates that rebel groups with greater military capacity will initiate conflict *earlier* in their lifespan while those with highly developed mobilization capacity go to war as older groups. I account for this counterintuitive finding by arguing that groups with more a sophisticated political infrastructure and deeper roots in civilian organizations are more likely to exhaust all avenues for gaining concessions from the government using non-violent, institutionalized political channels. These findings reveal a great deal potential for subsequent research that further explores the interplay between militarization and mobilization during the formative period for rebel groups prior to conflict onset.

1.9 Chapter 2 – Rebel Origins and Conflict Duration and Intensity

Chapter 2 explores the relationship between origins and two broad dynamics of civil war that capture the societal "cost" of war – its duration and battle deaths inflicted as a result of the conflict. In this chapter, I offer a theory and quantitative analyses in an effort to address the following research questions:

- *What is the relationship between rebel group origins and the duration of civil conflict?*
- *What is the relationship between rebel group origins and the intensity of civil conflict?*

- *Does militarization exert a stronger effect on conflict duration and intensity than mobilization?*

The theoretical argument and subsequent analyses included in Chapter 3 are perhaps the most ambitious application of the origins framework in the dissertation. This is due to the fact that this chapter attempts to account for conflict dynamics that are substantial in scope – the duration and intensity of conflict are affected by a multi-dimensional set of factors. Using rebel origins to account for these outcomes – a phenomenon that occurs analytically and temporally prior (often significantly prior) – is a challenging test of the explanatory power of rebel origins. That caveat aside, I posit that this chapter navigates the aforementioned challenges successfully and contributes to our understanding of conflict dynamics.

The component theory in this chapter makes the argument that the path dependent nature of rebel origins influences the manner in which rebel groups are able to conduct wartime operations. In the Chapter 3 analyses, rebel origins are operationalized as an additive variable, *Origins Capacity.* This decision is made to simplify the theoretical mechanism accounting for the duration and intensity of conflict, given the breadth of this chapter's theory as discussed above. I argue that conceptualizing rebel origins as a comprehensive collection of attributes represented by a single variable allows for a more straightforward analysis based upon simple hypotheses. Thus, I hypothesize that *Origins Capacity* will exhibit a positive relationship with the duration and intensity of conflict. *Militarization* and *Mobilization* are also included in the analyses. I additionally hypothesize the origins variables will individually have positive relationships with conflict duration and intensity, with *militarization* exerting the stronger substantive effect on both dependent variables.

The logic behind these hypotheses is simple and clear – greater military capacity at conflict onset will allow rebel groups to survive the initial phases of war when the asymmetry in power relative to the regime is often most pronounced. To this point, many groups are in fact defeated outright in this early phase of war. Intuitively, these groups experience conflicts with short durations and have little opportunity to inflict battle deaths. In other words, *Militarization* "buys time" for groups to not only survive, but also become better organized and strengthen existing capacity. To the extent that they do so, they will remain engaged in conflict longer, which will increase the likelihood that more battle deaths occur.

I generally find support for the above hypotheses. Across all specifications of Cox proportional hazard models, *Origins Capacity* has a negative and statistically significant relationship with the likelihood of conflict termination. Individually, the origins variables performance is fairly consistent with that of the additive *Origins Capacity.* Across two model specifications, both *militarization* and *mobilization* have a negative relationship with conflict termination and are significant on three of four coefficients. Negative binomial models are used to test hypotheses regarding conflict intensity. All three origins variables have a positive effect on intensity across seven model specifications, with coefficients exhibiting statistical significance in all but three cases. There is mixed support for the expectation that *militarization* will have a greater substantive impact on duration and intensity than *mobilization.* In the most rigorous test of the explanatory power of rebel origins in the dissertation, the findings of this chapter indicate fairly robust support for the theoretical expectations above. The analyses indicate that the greater the development of group' rebel origins, the longer and bloodier the conflicts they participate in will be.

1.10 Chapter 3 – Rebel Origins and Group Capacity during Conflict

The third dissertation chapter explores the link between rebel military and political origins and the development of these characteristics as civil conflict progresses. The analyses and findings that follow represent one of the foremost contributions of this project as they provide a multi-faceted empirical test of a challenging conceptual mechanism – the path dependence of rebel origins. I attempt to address the following research questions in Chapter 3:

- *What is the relationship between rebel origins and group capacity during conflict?*
- *Does a group's pre-conflict militarization (or mobilization) exhibit a relationship with the development of the same group characteristic during conflict?*
- *What were the key factors accounting for the development of group capacity for the deviant cases of the MDJT and UFDD rebel groups in Chad?*

I utilize a multi-method approach to unpack the aforementioned relationship between origins and the development of group capacity during conflict. I conduct preliminary quantitative analyses to test for evidence of a path dependent relationship between origins characteristics and intra-war rebel military and political capacity. Two qualitative case studies are conducted to closely examine the influence of the rebel origins mechanism over the course of a civil conflict. The case study analyses trace the civil conflict experience of the Movement for Democracy and Justice in Chad (MDJT) and the Union of Forces for Democracy and Development (UFDD). These two rebel group cases were chosen as the trajectory of their military and political development deviates from what would be expected for groups possessing

their origins characteristics. Studying these deviant cases allowed for a broader understanding of the functioning of the causal mechanism underlying the effect of origins. The MDJT was a group that had minimal militarization or mobilization upon entering into conflict with the Chadian regime, yet managed to sustain its insurgency against the regime for roughly five years and exhibited the ability to adapt to changing conditions on the ground. It did so by appealing to defectors and potential allies outside of its ethnic group and geographic space. While the MDJT eventually ceased to exist after joining a rebel coalition, it serves as a clear illustration of a group that "over-performed" relative to expectations based upon its origins strength. The UFDD, on the other hand, illustrates a case of a rebel group "under-performing" expectations for intra-war group capacity. As a rather large union of distinct insurgent factions with extremely capable and experienced leadership and deep roots in an ethnic community, the UFDD exhibited strength in both militarization and mobilization origins characteristics. However, the UFDD experience was one defined by factionalism and the splintering of groups from the UFDD alliance. This pattern was extremely common during the late 1990s and 2000s among armed groups challenging the regime of Idriss Deby. With the defection of the FUCD, and later the splintering of the faction that would become the UFDD-F, the UFDD sustained losses that severely undermined the group's military and political capacity over time. This led to the UFDD eventually joining another rebel union of multiple factions, the Alliance Nationale. As a group that possessed significant endowments at the onset of conflict, the UFDD was beset by personnel losses due to the splintering of meaningful groups. As a result, its conflict with the Chadian regime was relatively short (roughly fourteen months) and resulted in minimal battle deaths given the size and scope of the organization at the start of conflict. While much of the

UFDD's under-performance can be attributed to the extreme factionalism and disagreement among Chadian rebel groups and an inhospitable conflict environment for the survival of rebel mergers, this case is still a clear illustration of an initially well-endowed group falling short of theoretical expectations.

The theory of this chapter, much like the quantitative analyses discussed in the next paragraph, is preliminary and presented in the chapter as an unpolished account of rebel capacity. In short, this theoretical argument centers on the notion that rebel origins are deeply embedded in the "DNA" of groups, which makes adaptation difficult. For example, a rebel group that emerged from a former political party is likely extremely well-versed in the machinations of politics in its country but in all likelihood will have little to no military experience within its ranks, leadership with military training or expertise, or access to weapons. Origins theory states that this political group should have success in developing a rebel political wing and mobilizing popular support for its cause within the civilian population. This is not to say that the former political party rebel organization cannot learn or adapt – a series of intervening factors will condition its likelihood of doing so. Instead, I argue here that adaptation is simply difficult for organizations born into purely military or civilian contexts. Those groups with origins of a more diverse composition will have an easier time developing capacity along both dimensions. In sum, rebel origins are "sticky" and play an outsized role in influencing the pathways through which rebel organizations build and maintain their military infrastructure and political or civilian networks.

In the quantitative analyses, I examine the relationship between the origins variables, militarization and mobilization, and a series of Non-State Actor Dataset (Cunningham,

Gleditsch, and Salehyan 2013) measures that capture rebel capacity during war. The NSA variables are modeled as the dependent variables and include the primary variables of interest, *Rebel Fighting Capacity* and *Rebel Mobilization Capacity,* among others. I find robust support for the preliminary theoretical expectations outlined in this chapter. The origins militarization and mobilization variables have a positive and highly significant effect on all of the NSA dependent variables, indicating that rebel origins do condition the degree to which groups develop militarily and politically during conflict. These findings represent the clearest evidence that rebel origins are "sticky" and impart a path dependent influence on groups throughout the course of conflict.

1.11 Conclusion

This dissertation project has attempted to fill a gap in the existing civil conflict literature, particularly research devoted to rebel organization and the small but emerging scholarship on the formation of rebel groups. I have examined the influence of rebel group origins on four distinct civil war phenomena across three chapters – the onset, duration, and intensity of conflict, and the development of rebel capacity during war. The most meaningful and broad conclusion that can be drawn from the research conducted as part of this dissertation is that *the origins of rebel groups matter* – the characteristics possessed by rebel groups at the onset of conflict have an real impact on group and conflict dynamics in the future. Rebel origins are a salient component of attempts to truly understand a single rebel group, or perhaps more importantly, differences among rebel groups across space and time. As the analyses in this dissertation project reveal, there is a clear link between origins and group organization and

behavior throughout the course of conflicts. The fact that origins exert an effect on conflict dynamics, including the duration of conflicts, illustrates the far-reaching effects of the roots of insurgent groups. Given these findings, the path dependency of rebels' initial characteristics illustrates the substantial explanatory power of rebel origins. Civil war scholars should tap into this potential and expand upon the research outlined in the following chapters. I suggest that avenues for future research incorporating rebel origins include studying the effect of rebel origins on the use of terror tactics in civil wars, the implementation of rebel governance mechanisms, and rebel transitions to political parties post-conflict.

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CHAPTER 2

REBEL GROUP ORIGINS AND THE ONSET OF CIVIL CONFLICT

2.1 Introduction

What is the relationship between the origins of rebel groups and the onset of civil conflict? Do pre-conflict rebel group characteristics have an influence on the likelihood of civil war occurring? Furthermore, do rebel origins condition the relationship between the age of groups and conflict onset?

While the study of civil conflict has benefitted greatly from increased attention on rebel groups, a lacuna in the scholarship remains concerning the origins of rebel groups. This study addresses the "puzzle" of the implications of the origins of insurgent organizations – do the beginnings of these groups have any bearing on the conflicts in which they participate? While scholars have studied how and why insurgent organizations are created, we know very little about the implications of group origins on the dynamics of civil war. General agreement exists that the phenomenon of civil war has changed over time due to broad changes in the global environment such as the end of the Cold War (Kalyvas 2001; Kalyvas and Balcells 2010) and the proliferation of information technology (Walter 2017). To this point, existing research has viewed insurgent organization as a constant across groups, leaving the "black box" unopened (Bakke, Cunningham, and Seymour 2012; Staniland 2014). Why is it important to devote research to studying rebel[2] origins? This is a worthwhile enterprise as unpacking internal

[2] As the concepts "rebels" and "rebel groups" lie at the core of this paper, the frequent use of these terms is necessary. Though distinctions are often made among them, the terms "insurgents, combatants, revolutionaries, insurgent groups, etc." are used interchangeably here with the term rebels. Furthermore, the terms "rebellion, insurgency, revolution" are used interchangeably to represent the phenomenon of organized, violent challenges to the state coded as reaching civil conflict by UCDP. When necessary, distinctions will be made between the

organization of rebel groups has the potential to uncover a great deal about internal organization of rebel groups tells us a lot about how they operate, how decisions are made, their goals, their ability to evolve, their potential willingness to engage in negotiations, and numerous other group behaviors impactful to the trajectory of a conflict. The manner in which a group is structured, the types of individuals in leadership positions, and its ability to carry out the fundamental military, administrative, and political tasks necessary for a well-functioning insurgent group are all deeply rooted in the origins of rebel groups. This paper is the first scholarly attempt to offer a holistic theoretical and empirical framework for studying the implications of rebel group origins for aspects of civil conflict. While a contemporary project has produced a comprehensive dataset (Braithwaite and Cunningham *Forthcoming*), this study has produced both novel data and a theoretical mechanism to account for the implications of rebel origins. I do so by presenting an analytical scheme for understanding rebel origins, grounded in the concepts of *militarization* and *mobilization*. Militarization is defined as the degree of military capacity possessed by a rebel group prior to the onset of conflict and broadly consists of several component pieces. These include conflict experience as a rebel or government force, access to weaponry, access to safe havens, and assistance from a foreign power. Mobilization is conceptualized as the degree of civilian and political organizational development during a group's pre-conflict period of existence. This can include experience in grassroots movements, electoral politics, organization along ethnic or religious lines, or the presence of a coherent leadership structure. Militarization and mobilization are both considered necessary aspects of

aforementioned process and other forms of domestic/intrastate violence, including social conflict, political violence, protests, social movements, etc.

conflict combatants, thus all groups that engage in civil war possess some degree of both characteristics.

The RFDG (*Rassemblement des forces democratiques*) was a rebel group that fought against the Guinean government from 2000-2001. The RFDG was given a great deal of support by both the Liberian government and the Revolutionary United Front rebel group in Sierra Leone, yet had very little domestic support within Guinea (UCDP Conflict Encyclopedia). As such, I argue that the RFDG possessed a high level of militarization and a low degree of mobilization. Furthermore, the RFDG existed for less than nine months prior to engaging in conflict with the government of Guinea.

A contrasting case is that of the Zapatista National Liberation Army (EZLN) in Mexico. The EZLN briefly engaged in armed conflict with the Mexican government in 1994, though the group has continued to exist as a political organization since. The EZLN initially came into existence as a grassroots indigenous movement in 1983, operating covertly until launching attacks in 1994. Prior to the conflict with Mexico, the EZLN possessed minimal military capacity as it had no connection to formal rebel or military forces, external support or training, or access to weaponry. However, the EZLN was deeply rooted in the indigenous communities of the Mexican state of Chiapas. Building its ranks from peasants in rural villages, the EZLN has enjoyed tremendous support from a broad base of civilians in Chiapas. As a group with little initial military capacity and a highly developed civilian network, the EZLN existed for over a decade before engaging in conflict. These two cases illustrate the rebel group origins mechanism central to this project. The EZLN case illustrates the critical role of militarization in allowing groups to challenge regimes early in their lifespan, as even highly mobilized groups will

need more time to be prepared to challenge the state in the absence of significant military capability. The story of the RFDG is that of a rebel group with substantial military capacity and little domestic popular support entering into full-fledged civil war with the government early as a "young" rebel group.

This paper is situated within several strands of literature in the study of collective action and political violence. This research spans a broad swathe of literature, ranging from nonviolent social movements to civil conflict. This project attempts to contribute to the growing literature on non-state actors in particular, with a focus on the implications of rebel group formation and organization. I introduce a novel dataset, the *Rebel Group Origins Database (RGOD),* which codes the origins of all rebel groups that participated in civil conflicts between 1992-2011. As I demonstrate in what follows, the behavior of rebel groups during war is linked to the initial movements and organizations from which they emerge, so identifying rebel origins can be of great utility in attempts to further understand the dynamics of civil conflict. Advancing our understanding of rebel origins can provide insight into how and why groups emerge, the types of extant organizations from which they are likely to form, and the roles played by origins in influencing future rebel group behavior.

What is missing in the literature on rebel groups is an examination of their beginnings, their roots as non-state actors prior to conflict. I argue that their existence and experience as proto-groups embeds them with "DNA" that shapes who and what they are as rebel groups in the future. This embryonic period of pre-conflict organizational development can be critical in understanding both the genesis of rebel groups and their future behavior during conflict.

This study is also salient to the understanding of the initial conditions that make civil war more or less likely in conflict-prone societies. Identifying the organizations and networks from which rebel groups form can serve as a tool for policymakers aiming to proactively mitigate conditions likely to result in conflict. The presence and strength of organizational characteristics can serve as indicators of a group's propensity to initiate conflict with the government. The configuration of and connections across dissident non-state actor groups can thus be viewed and studied as an aspect of the initial conditions present prior to the onset of intrastate conflict. This project thus has the potential to equip policy practitioners with the tools to identify non-state actor groups with the potential for extreme violence before violence is escalated to civil war. A theoretical process through which rebel groups come into existence and interact with an incumbent regime in a process that culminates in conflict will be outlined in the subsequent pages.

Finally, a note regarding the scope of this project. The universe of cases for this paper includes those non-state actor groups that, in challenging a standing regime, engage in hostilities that escalate to civil conflict. I acknowledge that studying those groups who *do not* achieve "success" in resistance efforts due to being eliminated by the state or simply ceasing to exist is an important aspect of this research puzzle. Examining this aspect of rebel origins is germane to our understanding of conflict onset and insurgent group formation. However, I consider the study of this set of "unsuccessful" cases outside the scope of this project. The theoretical focus here is to examine how and why groups' origins influence the length of time a group exists until the onset of conflict. A study including or focusing solely upon the

unsuccessful cases of resistance groups is an avenue of research I intend to pursue in the future.

2.2 Literature Review

2.2.1 Organization of Non-State Actors

While there have been a number of explanations for the onset of conflict, this paper addresses a gap in this literature concerning the influence of rebel origins on the likelihood of civil war. A great deal of recent literature has been devoted to non-state actors and their role in challenging regimes, whether it is through peaceful or violent means. Non-state actors take on a variety of forms, including full-fledged rebel or terror groups, grassroots protest movements, state-sponsored militias (Ahram 2011), criminal organizations (Sullivan and Bunker 2002), and less-organized clandestine resistance networks. All of the aforementioned variations of non-state actors are relevant when examining the origins of rebel groups, as they often serve as the pre-cursors to traditional rebel groups. The uprisings that occurred as part of the "Arab Spring" illustrated the mechanisms examined by scholars of non-violent resistance (Chenoweth and Stepan 2012; Cunningham 2013; Schock 2003, 2013; Shellman, Levey, and Young 2013).

Relatively little research has been devoted to the initial formation and organization of violent non-state actors. Rebel origins are understudied and deserve far greater attention as they elucidate vital aspects of group composition that may impact their behavior during war. The *Foundations of Rebel Group Emergence (FORGE)* shares many similarities with this project as it also examines the origins of rebel groups (Braithwaite and Cunningham *Forthcoming*). The key distinction between *FORGE* and the *RGOD* project is Braithwaite and Cunningham's focus

on the "parent groups" from which rebel groups emerge. *FORGE's* "parent group" is akin the to "proto-group" theoretical concept used in the theory below, illustrating the critical nature of pre-existing organization to both projects. However, *FORGE* places much greater emphasis on group type from a coding perspective. They do so by employing the "parent group" as a primary unit of analysis, whereas this study utilizes the disaggregated measures of militarization and mobilization as independent variables representing group origins. Examples of their parent groups include religious organizations, labor unions, political parties, rebel splinters, former armed forces, or foreign fighters. Thus the key difference between the two coding schemes is that *FORGE* employs group "type" as the unit of analysis, while *RGOD*'s coding framework examines origins through the lens of the central group characteristics militarization and mobilization. These two data collection projects can be viewed as conceptually similar, yet still unique, efforts at capturing the origins of rebel groups.

Until recently, scholars of civil war did little to distinguish between different types of rebel groups or the characteristics that differentiate them from one another, instead taking these factors as given. Two broad dimensions were prevalent in the early literature differentiating between types of conflicts – wars with revolutionary vs. secessionist aims, and those based in either ethnic or ideological claims (Sambanis 2001; Quinn, Mason, and Gurses 2007; Dixon 2009). Weinstein (2005, 2007) examines the structure of rebel groups with a focus on the types of participants in rebel groups and their effect on patterns of violence. However, few studies to date have explored the degree of initial military and civilian organization and capacity possessed by rebel groups prior to conflict. Staniland (2014) was among the first to unpack the origins and internal organization of insurgent groups, creating a typology consisting

of *integrated, vanguard, parochial, and fragmented* structures inherited from pre-conflict social networks. These types delineate the degree of cohesion and control at the central and local level present within groups. Staniland argues for the resilience of group organizational origins, stating, "the prewar networks in which insurgent leaders are embedded determine the nature of the organizations they can build when a war begins" (2014: 1-2). Research in this area of conflict studies has also focused on other aspects of rebel organization. Parkinson (2013; 2016) unpacks organizational divisions within groups; Asal and Rethemeyer (2008) examine group organization and terror attacks, while Jha and Wilkinson (2012) study the relationship between military experience and organizational skill in ethnic groups.

2.2.2 The Mobilization of Rebellion

The process by which citizens collective organize to resist an incumbent government has been widely studied by scholars of peace and conflict. Much has been written regarding the individual motivations for overcoming the collective action problem to engage in political violence (Gurr 1970; Hardin 1997; Humphreys and Weinstein 2008; Lichbach 1990; Lichbach 1995; Mason 2004; Olson 1965) and how these processes shape conflict. The sum of these individual decisions to participate (or not) in political violence aggregate to the collective phenomenon of mobilization. Tilly defines the term mobilization as "the process by which a group goes from being a passive collection of individuals to an active participant in public life" (1977: 3-26). Work on rebel organization has touched upon rebel factions defecting, competing, or changing allegiances within insurgent movements (Asal et al. 2012; Bakke, Cunningham, and Seymour 2012; Cunningham et al. 2012; Hafez 2017; Kalyvas 2008; Lawrence 2010; Seymour et

al. 2016; Staniland 2012) and alliances between distinct insurgent organizations (Akcinaroglu 2012; Christia 2012; McLaughlin and Pearlman 2012; Seymour 2014). This project attempts to build on prior work concerning rebel group organization and the manner in which it is shaped by groups' means of mobilization.

In recent years, scholars of intrastate conflict have increasingly turned their attention to the meso-level by examining the internal dynamics of non-state actors. These efforts have included work on the relationship between group leadership and civil conflict dynamics (Johnston 2012; Prorok 2016; Tiernay 2015). Some of the most promising work has been devoted to the organization of groups and networks (Jackson 2006; Parkinson 2013; Shapiro 2013; Staniland 2012). Research has been devoted to the classification of non-state violent actors, such as the distinction between rebel groups that employ conventional tactics of warfare and those that engage in acts of terror (Boulden 2009; Findley and Young 2012a; Fortna 2015; Sambanis 2008).

Finally, a fair amount of scholarly work on dissident mobilization and organization explores the process by which protest movements transition to violent resistance of the state. This paper builds upon the literature that delves into this point in time in the lifecycle of opposition groups. Extant research that explores the mechanisms behind insurgent mobilization (McAdam et al. 1996, 2001; Tarrow 2011; Tilly 2003; Wood 2000, 2003) have illustrated the distinct pathways taken by civilians willing to overcome the collective action problem to resist the state. A common thread amongst these seminal pieces is their illustration of the methods by which popular mobilization takes place in conditions analytically prior to the

outbreak of civil conflict. This project utilizes this literature as a foundation for outlining the process by which rebel groups emerge.

2.3 Theory

2.3.1 A New Perspective on Rebel Organization

Social movements and civil wars do not always exist as mutually exclusive or independent processes – the same can be said for groups' use of terrorism and political campaigns for secession or territorial autonomy. In many cases, these seemingly distinct forms of contentious behavior are taking place as part of a connected sequence of events moving rebels and the state toward conflict. That being said, not all rebel groups mature to the same degree prior to entering into conflict with the state. If we define conflict onset as a battle death threshold (an arbitrary point in time from the perspective of the government and rebels engaged in a series of violent interactions), do we then see rebel groups at different stages of development when a conflict reaches twenty-five or one thousand battle deaths? Essentially, the broad history of rebel organizational development and conflict onset is one of groups entering into full-fledged civil war with a regime at varied levels of preparedness. The maturity level of the rebels at this threshold is a function of circumstances on the ground, many of which outside of the rebels' control. These include regime approaches to repression and accommodation, popular support for the regime and rebels, socio-economic conditions in the state, and behavior of other insurgent groups, among others. This project posits a conceptual framework for capturing the stage of rebel development when conflict between the state and

rebels crosses the civil war threshold,[3] which provides a snapshot of the variance in rebel group capacity at this critical point in time.

As the organization of rebel groups has become more relevant to the study of civil conflict, the logical next question regards the approaches by which scholars can reasonably attempt to unpack this concept. When studying the onset of civil conflict, one must naturally consider aspects of rebel groups that occurred prior to the start of conflict. In other words, characteristics and development processes of rebel groups that may affect the outbreak of conflict must occur analytically *prior* to hostilities between rebels and the state. This temporal analytical focus can lead us to examine a range of phenomena regarding insurgent organizations – group leadership (Prorok 2016), the development of groups, transitions from informal grassroots social movements, and the formation of groups, amongst others. For this study, I have chosen to examine the formation of rebel groups due to the fact that rebel origins encompass all of the alternative aforementioned phenomena to some degree.

The term "origins" is employed here to capture the broadest possible array of characteristics that differentiate groups from one another. In exploring any concept within the social sciences, we strive to explain the complete spectrum of variance (or as much as is possible) that exists in reality for said concept. The notion of rebel group origins is conceptualized here as the degree of military capacity and popular support possessed by a group at the onset of conflict. These concepts are broad enough to sufficiently capture the array of salient group capabilities and characteristics necessary to facilitate a comprehensive understanding of what rebel groups "look like" prior to engaging in conflict. Why is this? Simply

[3] For the empirical analyses, the UCDP civil conflict threshold of twenty-five battle deaths is used.

stated, in order to successfully wage war against a government, an insurgent group needs to possess two assets – defined here as militarization and mobilization. Any and all aspects of rebel group operations over the course of a conflict likely fall into these two broad categories. To add a bit of nuance, the concept *militarization* would encompass all aspects military in nature. This would include weaponry, ammunition, training, military experience, central command, and the ability to deploy military forces. For example, the United Islamic Front for the Salvation of Afghanistan (UIFSA)[4] was created as a union of multiple insurgent groups and the deposed Afghan President (UCDP). As such, UIFSA enjoyed a great deal of military experience with ready access to munitions and weaponry. Conversely, the Niger Delta People's Volunteer Force (NDPVF) is a case of a civil war combatant that existed with very little initial military capacity. As a group claiming self-determination for the ethnic Ijaw population in the Niger Delta, including control over oil revenues, NDPVF was a small group that grew out of a militant youth organization with minimal capability along any of the aforementioned military dimensions (UCDP, RefWorld). On the other hand, the term *mobilization* captures all political and civilian components of a rebel organization. These include experience in conventional politics, ties with communities based upon ethnicity, religion, or language, a background in grassroots protest movements, roots in organized labor unions, and experience in governmental service or leadership. The Real Irish Republican Army in the United Kingdom was a group exhibiting a high degree of mobilization, as it grew out of both political, separatist, and ethno-religious origins as a splinter of the Irish Republican Army. Another illustration of rebel group mobilization is that of Tehreek-e-Taliban Pakistan (TTP). The TTP was a union of radical

[4] UIFSA was also referred to as the Northern Alliance.

Islamic organizations with close ties to the Afghani Taliban and al-Qaeda, and grew from networks in multiple provinces and tribal areas in Pakistan (UCDP). Much like the Real IRA, the TTP's mobilization was robust due to the development of roots in distinct yet complementary aspects of Pakistani society.

Identifying the presence (or absence) of these characteristics in groups *prior* to conflict onset reveals a great deal about the manner in which these groups are structured, and furthermore, the strengths and deficiencies they are endowed with as they engage in conflict. Each group that engages in civil war possesses some degree of these two broad characteristics – I argue here that the variance in these capabilities helps to explain the onset of conflict. Groups' development along the militarization and mobilization spectrums endows them with particular strengths and weakness in terms of their ability to establish and maintain an insurgency. A rebel group built from a former military faction will likely possess a high degree of militarization, as it will already have military training, experience, leadership, and possibly access to weaponry. We can expect this type of group to be competent in conducting the military aspects of an insurgency. However, lacking any form of civilian organizational attributes, one would expect this group to have a more difficult experience mobilizing popular support amongst civilians or carrying out the political aspects of a rebel movement. A rebel origins typology illustrating the possible combinations of militarization and mobilization is presented in Table 2.1 on the following page, including an example of a rebel group that fits each type.

Table 2.1. Rebel Group Origins Typology

	Mobilization		
Militarization	Low	Medium	High
Low	Low-Low *God's Army* (Myanmar)	Low-Medium *Justice and Equality Movement* (Sudan)	Low-High *National Transitional Council* (Libya)
Medium	Medium-Low *Jihad Islamic Group* (Uzbekistan)	Medium-Medium *Allied Democratic Forces* (Uganda)	Medium-High *Boko Haram* (Nigeria)
High	High-Low *Husseinov Military Faction* (Azerbaijan)	High-Medium *ISI/Jama'at Al-Tawhid wa'al-Jihad* (Iraq)	High-High *Taliban* (Afghanistan)

2.3.2 The Role of Proto-Groups

Though the only groups included in this study's analyses are those that engage in violence that reaches civil war status, each emerges from proto-groups that take a wide variety of forms – some with non-violent origins and others that were involved in violent behavior from their beginnings. Thus, the evolution of non-state actors from proto-groups to civil war combatants encompasses a range of experiences and mechanisms as these organizations have a wide array of different starting points.

The aforementioned attempts at distinguishing between or classifying groups have merit and have furthered our understanding of non-state actors in conflict. This project builds upon these efforts by establishing a theoretical and methodological framework for capturing the variation of rebel groups at their origin along the most salient group characteristics. I argue here that the pre-cursor movements, networks, or organizations that precede the rebel groups that engage in conflict with the state. I refer to these initial organizations as *proto-groups*. I take

the proto-groups that precede rebel groups as the analytical starting point for rebel group origins. In terms of explaining rebel origins, tracing from proto-groups to their precursor organizations is a process that would yield diminishing returns the farther back in time one explores. Thus, I assume that the group(s) that immediately precede and evolve into rebel groups are the precursor organizations that account for a high majority of the variance in rebel origins. I conceptualize this phenomenon from the framework of the series of pre-existing networks, organizations, and associations that serve as the precursors to actual insurgent groups that violently challenge the state. I refer to this spectrum of military and civilian associations as *proto-groups.* A *proto-group* serves as the building block of what becomes a rebel group in the future, as the operating code of a group is ingrained in resistance groups regardless of whether it is operating in times of peace or conflict. At this analytical point in time, we can begin to think of the path dependence of the characteristics of *proto-groups.* Attributes of *proto-groups* can be "sticky" into the existence of the rebel group during conflict despite the forces pulling them to adapt to the conditions on the ground. This is because non-state actor groups have existed as an entity defined by a cause, mission, or driving force.

For example, political party *proto-groups* are formed to further the political aims of a segment of society, contest elections, and represent its constituents' interests in government, amongst other political functions. Thus, a political party typically has no exposure to or knowledge of the mechanisms of armed conflict, as its goals and experience are political or civilian in nature. Upon engaging in resistance (peaceful or violent) against the government, the group's revisionist efforts may escalate to the point of armed civil conflict. This political party *proto-group* has thus become a rebel group. Whether it be prior to or after the onset of

conflict, the group must find a way to develop military capacity sufficient to challenge the government and survive as long as possible. Nonetheless, the group's roots as a political party still remain the functional "DNA" of the new rebel group, and whatever adaptation that occurs may require a good deal of time. Some aspects of building military capacity can be acquired relatively quickly, while others take significantly more time to develop. For example, gaining access to weaponry and fighters can be facilitated if a group has financial means or components of its population that can be mobilized for military means. However, fighting experience, functional central command and leadership, and the ability to effectively deploy armed forces may only be possible after gaining actual battlefield experience. In these cases, groups lacking military experience prior to conflict must rely upon their existing endowments to survive. As these endowments are political or civilian in nature, progress in developing military capacity may initially be hindered as the group uses civilian support networks within its base to survive the initial stages of war. In essence, change is difficult for insurgent groups. That being said, change is certainly possible for rebel groups, particularly in the nascent stages of their development or while still proto-groups. In Bosnia and Herzegovina's civil war in the 1990s, we see an illustration of a group that transitioned from political origins to an effective militant group. The rebel group known as the Serbian Republic of Bosnia and Herzegovina was built upon the Serb Democratic Party (SDS), a political party established in 1990 representing Bosnian Serbs (UCDP). The Serbian Republic existed as a viable fighting force that maintained its insurgency against the Bosnian government for over three and a half years. This political-to-military transition was made possible by significant support from a large contingent of the former Yugoslav National Army (JNA) in addition to militias from Bosnia and Serbia mobilized by

the JNA (UCDP). Many of these irregular forces were recruited from local populations, a process facilitated by the presence of the deep ethnic divisions motivating the hostilities in the former Yugoslavia. Further, the Serbian Republic of Bosnia and Herzegovina's military leadership during the war included Radovan Karadzic, Ratko Mladic, and Slobodan Milosevic – individuals well-known for orchestrating large-scale campaigns of "ethnic cleansing" against rival ethnic groups in the region (UCDP). In sum, the political group SDS was augmented with vast military resources, recruits, organization, and leadership based in ethnic Serbian networks in both Serbia and Bosnia-Herzegovina. The resulting Serbian Republic of Bosnia and Herzegovina proved to be extremely well developed both in its ability to wage war and mobilize popular support.

A rebel group can be composed of one or multiple *proto-groups*, depending on the circumstances under which the organization develops prior to engaging in conflict. While this variation is certainly important, I argue that the multiplicity of proto-groups is secondary in importance to the *character* of the group(s) themselves. This claim rests on several assumptions. First, many rebel groups considered in this study are unions or mergers of multiple proto-groups, both military and civilian in nature. A consistent anecdotal pattern within the origins data coded for this project is that the size and strength of proto-groups along the military and civilian dimensions is more strongly associated with greater levels of the origins variables than the sheer number of component proto-groups. Furthermore, many rebel organizations formed as unions or mergers of component groups were actually weak, loosely organized groups that were largely ineffective in challenging the state. In a majority of instances

of highly militarized or mobilized groups, they were formed from a single well-organized and coherent proto-group.

The process by which rebel organizations come to exist as legitimate threats to the state and its monopoly on the use of violence is not instantaneous or rapid in *most* cases. Instead, rebel group emergence can be viewed as a process of evolution that occurs over a series of months, if not years. Accepting that the genesis of rebel groups is a multi-faceted temporal-spatial affair, one must necessarily conclude that this phenomenon is a more complex sequence than has previously been acknowledged in the literature. Unpacking this process thus logically deserves greater attention by scholars, and tracing this back to group origins can be a natural point of departure for this research program. *Thus, we can view rebel group emergence as a function of two dimensions – the proto-group(s) serving as the seed for the eventual rebel organization, and the series of interactions between regime-rebels occurring over time.* The characterization of rebel group emergence as an "evolution" is an important aspect of advancing our understanding of rebellion and insurgency. With an acceptance of the need to look "under the hood" of rebel groups *prior* to conflict onset, a more holistic comprehension can be gained of the interplay of varied actors, processes, and forms of contentious politics that serve as antecedents to the outbreak of civil war.

2.3.3 Militarization and Mobilization Mechanisms

The origins of rebel groups are conceptualized here as the aggregation of two broad characteristics – *militarization* and *mobilization.* I argue that all of the organizational attributes relevant to identifying the nature of insurgent groups can be grouped into these two

categories. A rebel group's militarization and mobilization are mutually exclusive characteristics in rebel groups' formative stages, but can be interactive and reinforce one another in both positive and negative directions once conflict begins. The individual origins mechanisms are mutually exclusive in the sense that they arise from distinct sources in society and operate independently prior to the onset of conflict. As noted above, uni-dimensional proto-groups (i.e. grassroots movements) are able to operate to serve the purpose for which they were created. However, as groups enter into conflict and confront conditions requiring organizational adaptation, the interaction between military capacity and mobilization becomes more prominent. An organization with largely civilian roots faces the challenge of raising a fighting force, a significant obstacle to overcome when building an army from the ground up. On the other hand, a rebel group with a very similar mobilization background that has a moderate degree of military capacity in its origins will enter conflict with a more balanced organizational profile that leaves the group relatively better positioned to grow. The development of an origins characteristic during war is more easily attained when the accompanying origins component is possessed in abundance. A highly militarized group is in a more advantageous position than a weaker one to develop popular support, as it can "buy time" on the strength of its military forces. I expect the same process to be at work for groups that vary on the mobilization concept. These pools of characteristics together represent a holistic picture of the ingredients necessary to understand rebels' capacity to challenge the state.

The origins of rebel groups are key to understanding civil war onset due to several central mechanisms. 1) Institutionalization of origins characteristics – traits inherited from proto-groups are sticky; 2) Framing of core drivers of group behavior and decision-making –

military and civilian genetic code provides core code regarding how rebel group operates; 3) Strengths and weaknesses inherent in origins attributes conditioning perspective on time horizon for rebel success – militarily strong groups better able to initiate conflict and survive initial phases, while groups with deeper mobilization better prepared to sustain protracted conflict. *Militarization* refers to the collective set of characteristics that represent a group's military capacity. Most broadly, this term captures the military experience, access to weaponry, and fighting force possessed by an insurgent group. *Mobilization* refers to the assortment of attributes that indicate a group's popular support. Theoretically, this concept defines the degree to which a group has developed a following in the non-combatant population and experience in political or civilian networks and organizations.

I argue that the development of both militarization and mobilization should make rebel groups more capable and better prepared to pose a military challenge to a regime. Thus, groups with higher degrees of the origins mechanisms should need *less* time to develop capabilities along these dimensions *after* group formation. Following this reasoning, groups with more developed militarization and mobilization will enter into conflict sooner after their formation than those groups with lower levels of development. In other words, stronger groups can go to war at a younger age.

While both militarization and mobilization have positive effects on conflict onset, I expect militarization to have a stronger influence on the likelihood of war. This distinction is based on the aforementioned premise that rebel groups' primary aim early in conflict is survival. At the onset of conflicts, the government often maintains a preponderance of power over rebel forces. Facing an asymmetric balance of power relative to the regime, it is generally

unrealistic for insurgents to have a strategic focus upon military victory in the short term. Overcoming this early asymmetry in power is easier for some groups than others, as those with military roots will have a more equitable balance of power with the government than those with civilian beginnings.[5] Given this asymmetry, I posit that groups that have advanced military capabilities will a) be more likely than groups with lesser militarization to enter into a conflict in the first place, and b) be more likely to engage in conflict than a group that is only strong on the mobilization dimension. Implicit in this argument is the assumption that rebel group leaders are aware of the critical importance of military capacity, and their behavior reflects this perspective. This understanding creates a mechanism in which rebel leaders will self-select into a commitment to engage in conflict based on estimates of the balance of military power. Thus, groups with weaker levels of militarization and highly developed mobilization are less likely to risk the strong possibility of outright defeat. Highly mobilized groups lacking in military capability can bide their time and focus on the recruitment of fighters, training, and gaining access to weaponry. As a result, the ideal types we should see are highly militarized groups going to war at a "younger" age and highly mobilized groups entering into conflict as much "older" organizations. Based on this logic, once a sufficient military infrastructure has been established, groups become much more likely to engage the state militarily. Organizations that emerge with highly developed civilian or political networks are initially not in a strong position to initiate conflict. These groups require further time to develop the requisite fighting capabilities to compliment their mobilization attributes. Upon surviving the early phases of

[5] This is, of course, conditional upon the state military capacity of the government during the early phases of conflict. Thus, the strength of rebel groups along the military dimension does not exist in a vacuum – the implications of rebel military power are conditional upon the strength of the state.

conflict, the capacity for rebels' to increase their ranks through recruitment and gaining popular support should improve (Mason, Weingarten, and Fett 1999). Thus, I expect groups with high levels of militarization to enter into civil wars *earlier* in their lifespans than those with significantly developed civilian or political networks. I provide several illustrations of these mechanisms below.

In the Central African Republic in 2002-2003, former armed forces chief of staff General Francois Bozize led a sizeable force from a safe haven in neighboring Chad that eventually captured the capital Bangui (NSA case descriptions). This group possessed a significant and diverse military endowment from its origin, yet had little to no domestic popular support. The military success achieved by the Francois Bozize faction was largely due to the advantages provided by its roots in the Central African Republic's military. However, for many groups, conducting an insurgency entails augmenting initial military capacity and building upon their pre-existing popular support. Thus, most groups engaged in rebellion must change to some extent in order to sustain a military campaign and broader insurgency against an advantaged regime. However, in practice, the degree to which groups varies widely. Adaptation proves difficult for rebel groups, particularly within the dynamic and stressful environment of an ongoing conflict with the state and/or other insurgent groups. Thus the nature of rebel groups is ingrained, and their development is affected by a degree of path dependency. For example, a rebel group that emerged from a former political party or grassroots protest movement may have little military experience amongst its members. This group will face a steep initial learning curve in attempting to recruit and train fighters, acquire weaponry and munitions, and effectively deploying their military forces against the state. For rebel groups engaged in

conflict, change is difficult. Insurgent organizations are attempting to simultaneously survive to fight another day and build upon existing capacity. In the context of these circumstances, organizations with civilian foundations are likely to find it difficult to learn the tradecraft of warfare early in their existence. Due to this, we are likely to see groups with substantial mobilization endowments enter into conflict later in the group's lifespan.

2.3.4 The Civil Conflict Incubation Period

A primary contribution of this paper is to augment the extant literature on the *processes* leading to civil war. This civil conflict *incubation period* has been studied using a diverse set of approaches and perspectives in related bodies of literature The framework for this concept encompasses work on non-violent resistance (Chenoweth and Stephan 2011), the mobilization of rebellion (Tilly 2003), dissident-state interactions (Skocpol 1979), and social networks (Parkinson 2013; 2016), among others. In other words, the incubation period can be thought of as a catchall concept capturing the range of formative group processes occurring prior to rebel-government conflict. To this point, I conceptualize the conflict incubation period as the set of processes that encompass social movements, social conflict, rebellion, revolution, self-determination movements, political violence, social movements and collective action campaigns aimed at resisting the state. This incubation period conceptually occurs within all intrastate conflict dyads, and takes place from the founding of a rebel group through the outbreak of war. Rebel origins as conceptualized here will account for the vast array of forms that armed groups take prior to engaging in civil conflict. The umbrella terms militarization and mobilization are conceptualized to sufficiently capture all of the precursor organizational forms

from which formal insurgent groups are built upon. This empirical and theoretical advancement provides a new framework for studying questions related to rebel groups and civil conflict.

At some point during the incubation period leading to conflict onset, the degree to which the government exercises authority over society begins to change. Particularly if nascent rebels already exercise control over physical territory, the regime begins to lose "the monopoly of the legitimate use of physical force within a given territory," Weber's classic definition of a state (Weber 1946: 4). This conceptualization is important here as the erosion of this monopoly can lead to the establishment of dual sovereignty, as "a condition of dual sovereignty exists when an opposition group has the organizational capacity and popular support to initiate and sustain an armed challenge to the incumbent regime's claim to sovereign authority in the nation" (Quinn, Mason, and Gurses 2007: 173). Rebel groups' immersion in civilian communities and networks and representation of constituent interests can establish environments akin to those created when rebels provide governance and social services (Arjona 2016; Huang 2016; Stewart 2018). Thus, while rebels may not be able to truly establish dual sovereignty as described above prior to building substantial military capacity, they can significantly advance their mobilization efforts while concurrently undermining the legitimacy of the state. I argue that the occurrence of these mechanisms *prior* to conflict is an overlooked, but critical aspect of the development of rebel groups and conflict processes. The socialization that occurs as a result of the mobilization of popular support and recruitment of fighters helps to shape the character of groups during the incubation period prior to conflict. This process is one of several rebel group development mechanisms that occur both prior to *and* during conflict. This further illustrates the continuum of dissident activity that exists, ranging from

peaceful demonstrations through full civil war with rebel organizational development occurring across the entire spectrum.

A critical aspect among the multiple mechanisms occurring during the incubation period is the decision faced by groups to employ violence or non-violence in their resistance efforts (Chenoweth and Stephan 2011; Cunningham 2013). As identified above, the escalation from lower forms of political violence to full-fledged civil war is often a series of iterated interactions between the opposition and the regime. The choice between violence and non-violence is a part of the decision calculus for both parties at each rebel-state iteration during the process of escalation to conflict.

2.4 Hypotheses

H1 – Militarization will exhibit a negative effect on the time to peace failure.

H2 – Mobilization will exhibit a negative effect on the time to peace failure.

H3 – Militarization will exhibit a stronger substantive effect on the time to peace failure than mobilization.

Militarization is expected to have a larger substantive effect on the failure of peace as it is the key mechanism facilitating rebels' ability to escalate hostilities with the government to the point of civil war. While mobilization is expected to shorten the time from group formation to onset, militarization has a more direct and instrumental effect on the likelihood that rebels will engage militarily with regime forces. Groups with lower degrees of military capacity will not only be less capable of challenging the government, but as a result, less likely to attempt to do so until they are able to augment their fighting capacity. On the other hand, mobilization has a more diffuse effect on the initiation of large-scale conflict. Groups with low or high degrees of

civilian mobilization may escalate conflict with the government, contingent upon the group's military capabilities. Mobilization does have a positive effect on overall group capability, and can help to sustain insurgency long-term, but has a secondary effect on conflict onset relative to militarization.

2.5 Research Design

The pool of dyad-year observations comprising the data is drawn from the time period ranging from the formation of a rebel group through the onset of civil conflict. The dataset has a pooled cross-sectional design, constructed using the aforementioned time period for each rebel group-state conflict dyad. While the spatial domain for this study is can be considered global, the selection of cases in the *RGOD* dataset was determined by the inclusion criteria used by the Non-State Actor dataset and the time parameters of the temporal domain. Given the temporal component of the coding scheme, the geographic distribution of cases skews heavily toward Africa. Approximately fifty-four percent of the conflict dyads and forty-five percent of the dyad-year observations come from Africa. Further information regarding the distribution of cases can be found in Table 2.2 below.

Table 2.2. Geographic Distribution of Cases in *RGOD Dataset*

Region	# of conflict dyads	Pct. of conflict dyads	# of dyad-years	% of dyad-years
Sub-Saharan Africa	69	54.3%	164	45.4%
Eastern Europe	16	12.6%	25	6.9%
Middle East / North Africa	15	11.8%	75	20.8%

(table continues)

Region	# of conflict dyads	Pct. of conflict dyads	# of dyad-years	% of dyad-years
South Asia	14	11.0%	46	12.7%
Central Asia	8	6.3%	35	9.7%
North America / Caribbean	4	3.1%	15	4.2%
Western Europe	1	< 1%	1	< 1%
Totals	127	100	361	100

The temporal domain consists of conflict dyads that *began* between the years 1992-2011. This temporal domain was selected due to limitations on the availability of data, as several key explanatory variables are not available prior to 1992. Furthermore, detailed accounts of the formative phases of rebels in existing literature are far more prevalent for more recent conflicts and rebel groups. As the dependent variable of interest is the *onset* of war, conflicts initiated prior to 1992 are excluded while those that terminated after 2011 are included in the analysis. While the temporal domain begins in 1992, there are rebel groups in the data that formed *prior* to 1992. The rationale behind these coding rules is twofold. First, I aimed to allow for a wide temporal variation on the origins variable to capture the as much variance as possible in terms of origins characteristics and group age at the onset of conflict. In regards to the conflict component, the goal was to limit the temporal domain to the post-Cold War environment to focus only on those cases of civil conflict onset that occurred after this significant historical cut point. The unit of analysis is the civil conflict dyad-year. The origins variables *militarization* and *mobilization* are originally coded by the author and cover the years 1992-2011. The resulting data encompasses 127 total rebel groups and 361 conflict dyad-year observations based upon the time-series coding format. The cases are drawn from the Non-

State Actor Dataset (Cunningham et al. 2013), which captures all groups that engaged in civil conflicts between 1945-2011 as determined by the UCDP Dyadic Dataset (Harbom, Melander, and Wallensteen 2008). Each conflict included in the Dyadic Dataset reached 25 battle deaths within a calendar year as defined by the UCDP/PRIO Armed Conflict Dataset (Gleditsch et al. 2002; Themner and Wallensteen 2012). The following paragraph will describe the coding process for the origins variables.

The author as part of this project originally coded the origins variables *militarization*, *mobilization*, and *group age*. Using primary and secondary sources, the "origin" of a rebel group was determined as the date when a group either: 1) made a public statement declaring the existence or formation of said group, 2) the existence of group was reported by a news, NGO, or academic source, 3) the existence of group was identified due to conflict activity, or 4) the group's existence was made known by a statement from a government. It was not always possible to identify an exact day or month for a group's formation, so in many cases the group origin date was estimated based upon the author's judgment.[6] Once established, this date was used as the developmental line of delineation between proto-group and rebel group for each organization in the data. This coding scheme was chosen as it best approximates the point that a group becomes an active militant group challenging a government. It is assumed here that the behavior of the rebel organization changes once a group coalesces, crossing the theoretical threshold from proto-group to rebel group. This threshold is conceptualized as simply the point at which hostilities with the regime reaches the status of civil conflict. As discussed above, rebel

[6] In cases where the only information available was a calendar year, January 1 of the given year was used. Furthermore, the first day of a month was used if a month was the only information found. These coding rules were also used across all calculations of the *group age* variable.

organizations are often created as a synthesis of multiple proto-groups, thus the point at which these groups begin to operate as one coherent body is the best approximation of group birth. The coding scheme outlined above effectively captures the variance in accessible data on group formation.

To facilitate the statistical testing of the relationship between rebel origins and the onset of conflict (incorporating time), survival analysis is the most appropriate methodological approach and is thus utilized here. The dependent variable used for each statistical model is the UCDP Dyadic Dataset binary variable *Startdate2* (Harbom, Melander, and Wallensteen 2008; Eck and Pettersson 2018). *Startdate2* captures the point at which a conflict dyad episode reaches twenty-five battle deaths. Survival analyses are conducted here by employing the Cox proportional hazard model to determine the relationship between the independent variables and the likelihood of conflict onset. In order to assure that the proportional hazard assumption is not violated (Box-Steffensmeier and Zorn 2001), Schoenfeld residual analysis is administered on the models specified here. As no evidence of violation of the proportional hazards assumption was found, Cox models were employed to conduct the duration analyses. In an effort to check the robustness of the relationships between origins variables and conflict onset, a total of eighteen unique Cox model specifications are constructed and analyzed. Further robustness checks were conducted using logistic regression analyses for the similar model specifications as those used for the Cox models. Logistic regression was chosen as the modeling technique as the dependent variable, onset of conflict in a given year, is dichotomous in nature. For these models, the same binary dependent variable of conflict onset is used. However, the logistic analysis allows me to determine the relationship between the independent variables

and onset without considering time as in the case of the proportional hazard models. In the Cox models, each instance of "failure" in the data occurs when a rebel group enters into civil conflict. In these models, duration is thus bounded by the formation of a rebel group at one end and the failure of peace at the other.

The *RGOD* dataset is employed here to conduct hypothesis tests and statistical analyses. *RGOD* is an original dataset coded by the author with the primary goal of capturing the origins of rebel groups via quantitative measures of their initial military and political capacities. The coding process used to assign numeric values to the militarization and mobilization concepts entailed the examination of each group's history for the presence of criteria indicating their roots in military and civilian networks. Each group is assigned a numerical value for militarization and mobilization that does not vary over time. The origins code is intended to capture rebel group capacity at the point of conflict onset. I assume here that origins capacity likely fluctuates over time from group formation to onset and that cases exist in which rebel capacity peaked *prior to* conflict onset. Nonetheless, the goal of the coding scheme was to provide the best approximation of mobilization and militarization at the point of conflict initiation.

As rebel military and civilian origins have taken a wide variety of forms, three progressive lists of criteria are used to capture the breadth and depth of these organizations. The three criteria lists correspond with group characteristics associated with high, medium, and low levels of *militarization* and *mobilization*. *Militarization* and *mobilization* are coded as ordinal variables that ranging from one to three to reflect low, medium, and high levels of the two variables. In order to receive a "High" code, a group must possess one (or more)

characteristic(s) from the “High” list or two (or more) attributes from the Medium list. Groups are coded as “Medium” if at least one characteristic from the “Medium” list could be identified. Those groups coded as medium generally have an intermediate degree of development on a given criteria or possess multiple criteria at lower levels. Examples of medium groups include small protest movements, political parties specific to a particular region or ethnic group, a splinter of a small insurgent group, or a militant group that received a limited degree of support or training from a foreign power. Finally, groups coded as “Low” for either variable are those in which no criteria could be identified from the “High” or “Medium” lists. These characteristics vary across groups in terms of the *number, kind, and degree* of criteria typical of highly developed organizations. In other words, groups are considered more developed if they possess developmental characteristics in greater volume (more), of critical salience (kind), or of a more advanced nature (degree). For example, a group that was formed as a splinter of an existing rebel group can receive a code of “High” or “Medium” on the militarization variable, depending on whether the original group was a large, well-organized group or smaller and less coherent. In terms of salience, foreign sponsorship or creation of a group is considered to be a more impactful influence on group development than the mere presence of a formal military organization. Finally, groups identified as possessing multiple list characteristics (union of distinct factions *and* leadership had insurgency experience) are considered more advanced, and are coded with higher values as a result. In addition to the logic discussed above, the author faced data availability limitations that made it especially difficult to capture small degrees of origins characteristics. I assume here that every rebel group that has engaged in violence with a government that reaches civil war thresholds possesses a minimal, appreciable degree of both

militarization and mobilization. Thus, all rebel groups in the dataset carry a non-zero value on the militarization and mobilization dimensions. This assumption is based on the aforementioned premise that rebels need both militarization and mobilization in order to conduct organized militant operations on a large scale.[7] Full detail on the criteria for the coding scheme and lists can be found in the *RGOD* Codebook in the Appendix A below.

The age of rebel groups at the onset of civil conflict is coded as an original variable as well. The origin of groups is coded as the date in which a representative declaring the founding of the organization made a public proclamation of some fashion. In lieu of this information, the date of first activity, whether it be armed resistance or political, is used as the founding date of the rebel group. This window of time varies widely across groups, ranging from 0.13 to 401.53 months. *Rebel Group Age* is captured as the length of time (in months) that a rebel group has existed at the point of conflict onset. Table 2.3 provides detail on the *Rebel Group Age* variable, giving the percent and number of cases falling into each quartile. The values of *Rebel Group Age* range from a minimum of 0.13 to a maximum of 401.53 months. For further detail on the criteria used to determine the values of the above origins variables, the full coding scheme is presented in Appendix A Table A.1.

Table 2.3. *Rebel Group Age* Variable Distribution by Quartile

Quartile	0-25%	25-50%	50-75%	75-100%
Group Age (in months)	0.13 – 6.63	6.77 – 18.83	19.0 – 53.60	54.63 – 401.53
Total Cases	91	89	90	91

[7] Even in cases where no developmental criteria were identified as part of coding process (see below), it is assumed that a latent degree of militarization and mobilization exists.

A wide variety of sources were used for the coding of the three origins variables. For a small number of cases, different sources were used to code *Rebel Group Age* versus the *Militarization* and *Mobilization* variables as the date of founding was relatively easier to find and required significantly less information to code. For the *Militarization* and *Mobilization* variables, a minimum of three sources was consulted to provide diverse perspectives on the concepts of interest. The goal was to attain agreement across all three sources for the *Militarization* and *Mobilization* variables coding decisions. A fourth or fifth source was consulted (if available) if agreement was not attained using three sources. If additional sources were not available, I attempted to establish a degree of consensus on coding decisions among the three sources. For a handful of cases, a third source could not be found. Here I made the best judgment possible, either finding agreement between the two sources or using the middle ground between the two sources as the coding decision. For most cases, secondary sources were used to gather relevant information for coding. In a few instances, I was able to find active, "official" created by the rebel groups in the dataset. For these cases, the groups were either still active or existed in the present-day as a post-conflict version of itself (political party or movement for example). For the large majority of rebel groups, secondary sources were used to complete the coding. These sources varied widely, including academic books and journals, intergovernmental and nongovernmental organizations, academic research center websites, think tanks, governmental websites, and media outlets among others. Detailed bibliographic and website location is documented in the supplemental material accompanying the dataset. To provide insight into the distribution of values for the origins variables in the

dataset, Table 2.4 illustrates the count and percent of Low/Medium/High cases for *Militarization* and *Mobilization* across all rebel group cases.

Table 2.4. Distribution of Values for *Militarization* and *Mobilization* Variables

	Value of Origins Variable		
	1 (Low)	2 (Medium)	3 (High)
Origins Variable	Count (% of total)	Count (% of total)	Count (% of total)
Militarization	59 **(16.3%)**	169 **(46.8%)**	133 **(36.8%)**
Mobilization	46 **(12.7%)**	127 **(35.2%)**	188 **(52.1%)**

An additional time variable is coded to capture the initial phases of violence between rebel groups and the state. *Onset difference* is calculated as the difference between the *Startdate* and *Startdate2* variables in the UCDP Dyadic Dataset Version 18.1 (Harbom, Melander, and Wallensteen 2008; Eck and Pettersson 2018), which respectively code the dates of the first and twenty-fifth battle deaths in a given dyad. The *onset difference* thus captures the length of the time period in which conflicts escalate to an episode with significant battle deaths. Are groups that undergo long stretches of escalation time also more likely to exist longer before meeting the twenty-five-battle death threshold? This variable allows this question to be addressed. Further detail on the variance of the four origins variables described in the preceding paragraphs is provided in Table 2.5 below.

Table 2.5. Summary Statistics for Origins Variables

Variable	Mean	Std. Dev.	Minimum	Maximum
Militarization	2.20	0.70	1	3
Mobilization	2.39	0.70	1	3
Group Age (in months)	48.41	73.58	0.13	401.53
Onset Difference (in months)	33.79	62.35	0	209.53

In an effort to empirically isolate the effect of rebel origins on civil conflict onset, a host of factors are accounted for here as control variables. As this paper focuses on the rebel group incubation period occurring from the birth of groups through the conflict onset, the control variables included here are among those traditionally utilized in onset studies. First, government respect for human rights is also controlled for in several ways. Measures for human rights are operationalized using data from the CIRI Human Rights Data Project (Cingranelli, Richards, and Clay 2014) and The Political Terror Scale (Gibney et al. 2017). The annual number of terror attacks in a state is included in the analyses to account for the political and socially salient form of political violence occurring outside of the context of conventional battle deaths, and is taken from Hendrix and Young (2014).

Other factors traditionally controlled for in studies of civil conflict are also incorporated in the subsequent analyses. The level of democracy in a society is widely used in research on conflict and is thus included as a control, with data gathered from the Polity IV Project (Marshall, Gurr, and Jaggers 2017). Several measures of state capacity from Hendrix and Young (2014) are used to account for the role of the state in providing opportunities or limitations for

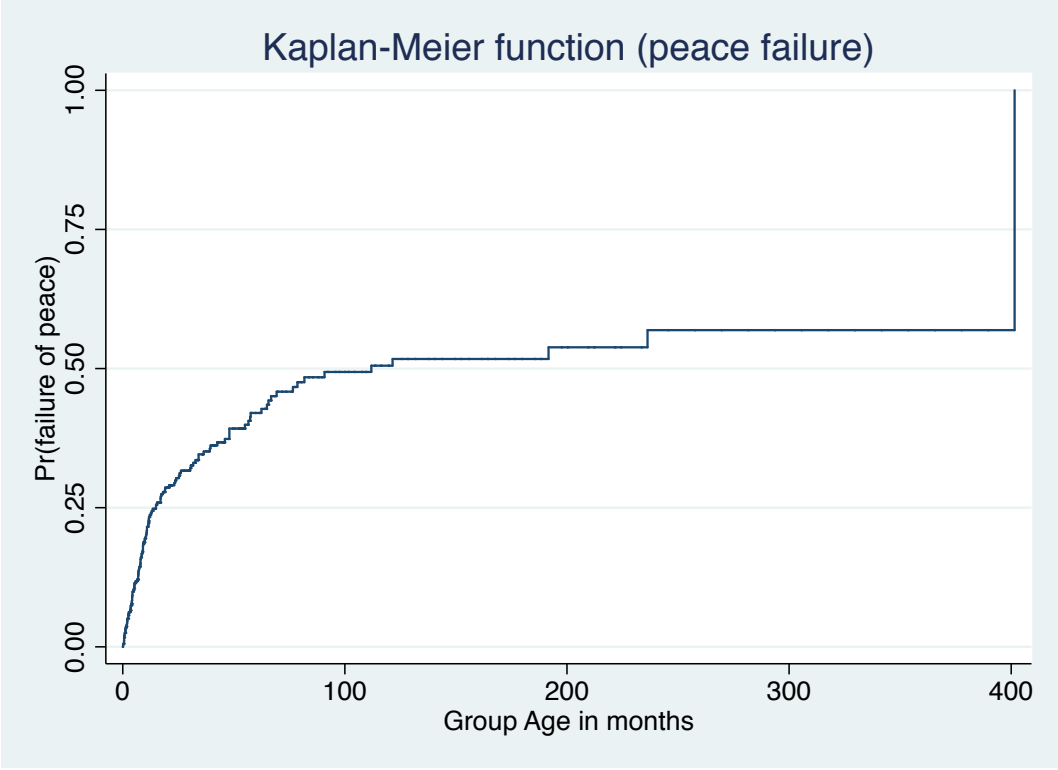
armed groups. In particular, the variable *relative political reach (hereafter RPR)* is considered salient to the analyses herein. Several other common intervening variables incorporated as controls concern state population and gross domestic product (GDP), sourced from Hendrix and Young (2014). Due to the asymmetric distribution of these two measures in the data, the natural log is used here. To ascertain the effect of negative economic trends on rebellion, the change in GDP versus prior year is the measure of wealth chosen here. Regime type has been found to have an influence on the outbreak of conflict, as such, several measures of this concept are modeled into the analyses. Data from Geddes, Wright, and Frantz (2014) is utilized to measure personalist and military regimes as well as the occurrence of recent regime failure. The presence of multiple active simultaneous conflict dyads has exhibited a relationship with civil war dynamics. An original measure is coded to identify those dyad-years in which two or more rebel groups were actively in the incubation period between the group's founding an conflict onset. Finally, ethno-religious dynamics have proven to be prominent factors surrounding both the formation of insurgent organizations and armed conflict. The widely used ethnic, linguistic, and religious fractionalization data from Alesina et al. (2003) is included here to operationalize these factors.

2.6 Findings and Discussion

The results from the duration analyses can be found below in Tables 2.6-2.8, which present a range of model specifications testing the relationship between rebel origins and conflict duration. Figure 2.1 below illustrates the likelihood of peace failure (or conflict onset) across the full range of group ages in the dataset. This graph indicates that the probability of

conflict increases dramatically over the first several years after group formation, with relatively little difference between groups that are 200-400 months old.

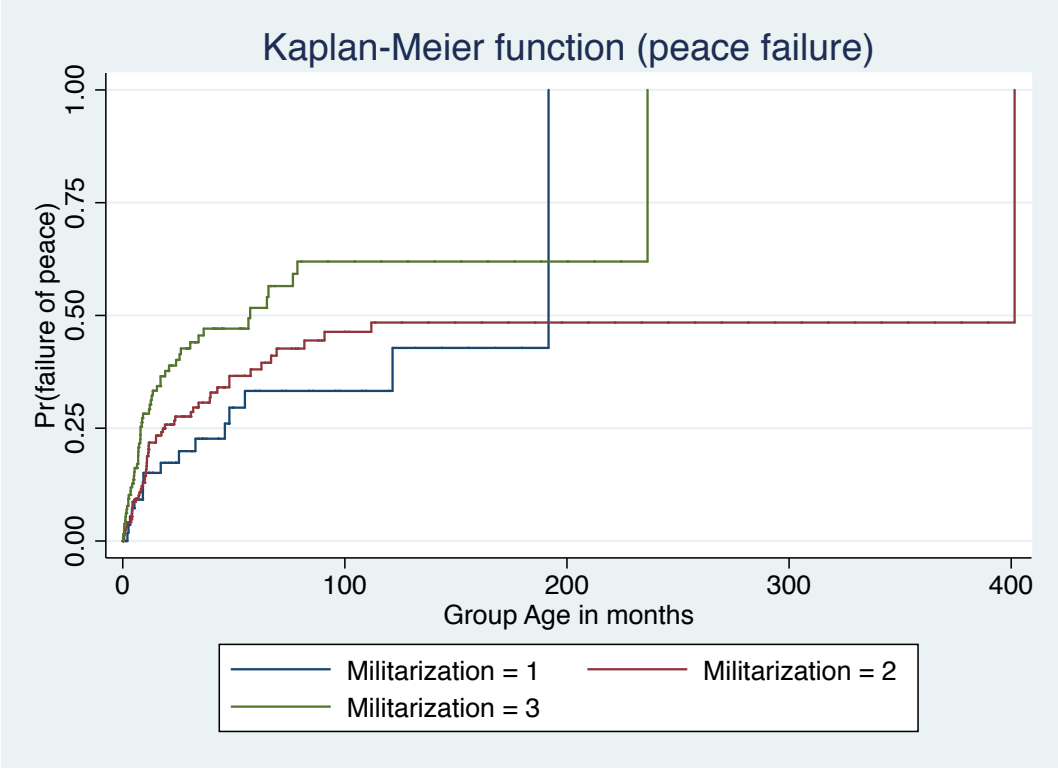
Figure 2.1. Probability of Peace Failure over Lifespan of Rebel Groups



Consistent support is found across all Cox proportional hazard models concerning the expected performance of the primary origins variable *Militarization*. Thus, Hypothesis 1 receives strong support across all model specifications. In each of the fourteen Cox proportional hazards models, *Militarization* is found to increase the risk of peace failure while exhibiting statistical significance. These results hold for all models, with the coefficient for *Militarization* being statistically significant at the highest level of significance. *Militarization* exhibits a substantively strong effect on peace failure, indicating that rebel groups with higher degrees of militarization are likely to cross the conflict onset threshold at a younger age. Figure 2.2 below illustrates this finding, as the greater the level of *Militarization* the more likely a group is to

engage in civil conflict. The difference in the probability of conflict onset among the three levels of *Militarization* is particularly pronounced for younger rebel groups (less than 50 months old). During this period, groups with "High" levels of this variable are roughly 25% more likely than "Low" groups to enter into conflict at several different group ages. Across the model specifications, a one-unit increase in the *militarization* variable results in an increased likelihood of failure ranging from twenty-nine to one hundred-one percent. Accounting for all models, the mean increase of peace failure for *militarization* is seventy-one percent.

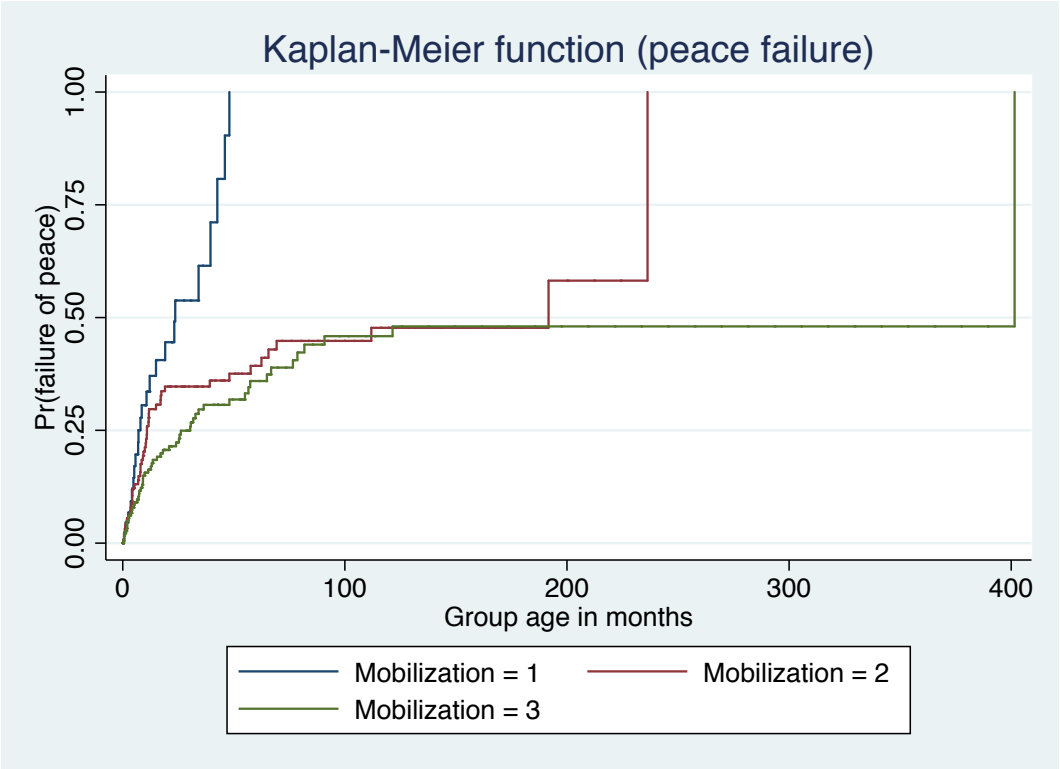
Figure 2.2. Probability of Peace Failure at Values of *Militarization* Variable



Mobilization also exerts a consistent, statistically significant effect on the likelihood of onset. *Mobilization* was found to exert a negative effect on the onset of conflict, contrary to expectations. Contrary to theoretical expectations a one-unit increase in *mobilization* decreases the probability of peace failure across all model specifications. In other words, groups with

greater levels of mobilization enter into civil conflicts *later* in their lifespan, if all other factors are held constant. This finding is demonstrated in Figure 2.3 below. The mean negative effect of *mobilization* on conflict onset taking all models into account is fifty-one percent, ranging from forty-one to seventy-one percent. These findings paint a clear picture of the relationship between the primary origins variables and conflict onset – groups with more developed military infrastructure will engage in full-fledged conflict earlier in their lifespan, while those exhibiting greater levels of civilian and political characteristics will go to war as older groups. The unexpected finding regarding mobilization can be due to the nature of organizations with strong civilian or political roots. These groups are often not predisposed to violence as a tactic, preferring instead to seek accommodation or compromise. In this sense, groups with highly developed *mobilization* characteristics may exercise restraint in abandoning nonviolent forms of resistance, be slow to build military capacity, and opt for conflict only as a last resort.

Figure 2.3. Probability of Peace Failure at Values of *Mobilization* Variable



Finally, a consistent and statistically significant relationship was found between the *onset* difference variable and onset. The greater the difference between the two onset dates, the longer the period prior to conflict onset. Across all models, a one-unit increase in *onset difference* is associated with a five to six percent decrease in the likelihood of onset.

Table 2.6. Time from Rebel Group Origin to Conflict Onset

Cox Proportional Hazard Models

	Model 2.1	Model 2.2	Model 2.3	Model 2.4	Model 2.5	Model 2.6	Model 2.7
Failure= Conflict Onset	Coef. (Std.Err)	Coef. (Std.Err)	Coef. (Std.Err)	Coef. (Std.Err)	Coef. (Std.Err)	Coef. (Std.Err)	Coef. (Std.Err)
Militarization	1.64* (.33)	2.01*** (.38)	2.00*** (.38)	1.86*** (.31)	1.65* (.34)	1.73** (.30)	1.79** (.30)
Mobilization	0.40*** (.07)	0.46*** (.08)	0.46*** (.08)	0.49*** (.08)	0.44*** (.08)	0.51*** (.07)	0.50*** (.07)
CIRI - Physical Integrity	1.03 (.12)	X	X	X	X	X	X
PTS – State	X	1.09 (.19)	X	X	X	X	X
PTS – Amnesty	X	X	1.08 (.19)	1.03 (.14)	1.15 (.25)	1.02 (.14)	1.07 (.16)
Onset Difference	0.94*** (.01)	0.95*** (.01)	0.95*** (.01)	0.94*** (.01)	0.94*** (.01)	0.94*** (.01)	0.94*** (.01)
Terror Attacks	1.01** (.00)	1.01* (.00)	1.01 (.00)	1.00 (.00)	1.01 (.01)	1.01* (.00)	1.01* (.00)
Democracy	1.06 (.04)	1.07* (.03)	1.07* (.03)	1.08** (.03)	1.06 (.04)	1.08** (.03)	1.08** (.03)
Relative Pol Reach	1.67 (.62)	2.15* (.67)	2.10* (.63)	X	X	X	X
Military Capacity	X	X	X	1.33 (.24)	X	X	X
State Capacity	X	X	X	X	1.48 (.46)	X	X
Log Population	X	X	X	X	X	0.98 (.09)	X
Log GDP Change	X	X	X	X	X	X	1.11 (.16)
Levels of significance		*** < .001	** < .01	* < .05			
TABLE 2.6 MODEL SUMMARY	N=214 LRChi2= 113.57 Pr>Chi2= 0.00 LogLike= -250.7 #subjects= 214 #failures= 65 RiskTime= 11643	N= 253 LRChi2= 132.77 Pr>Chi2= 0.00 LogLike= -314.8 #subjects= 253 #failures= 78 RiskTime= 12902	N= 252 LRChi2= 132.24 Pr>Chi2= 0.00 LogLike= -314.8 #subjects= 252 #failures= 78 RiskTime= 12883	N= 269 LRChi2= 149.05 Pr>Chi2= 0.00 LogLike= -351.4 #subjects= 269 #failures= 85 RiskTime= 14424	N= 190 LRChi2= 90.23 Pr>Chi2= 0.00 LogLike= -210.6 #subjects= 190 #failures= 56 RiskTime= 10809	N= 297 LRChi2= 151.05 Pr>Chi2= 0.00 LogLike= -397.2 #subjects=297 #failures= 93 RiskTime= 15075	N= 297 LRChi2= 151.50 Pr>Chi2= 0.00 LogLike= -396.9 #subjects= 297 #failures= 93 RiskTime= 15075

Table 2.7. Time from Rebel Group Origin to Conflict Onset

Cox Proportional Hazard Models

	Model 2.8	Model 2.9	Model 2.10	Model 2.11	Model 2.12	Model 2.13	Model 2.14
Failure = Conflict Onset	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)
Militariz	1.69** (.29)	2.01*** (.38)	1.98*** (.37)	1.45* (.26)	1.73** (.29)	1.77** (.30)	1.53* (.31)
Mobiliz	0.51*** (.07)	0.46*** (.07)	0.46*** (.08)	0.59*** (.09)	0.51*** (.07)	0.51*** (.07)	0.54*** (.09)
CIRI - Domestic Movement	X	1.00 (.01)	X	X	X	X	X
CIRI – Free Association	X	X	1.00 (.01)	X	X	X	X
PTS - Amnesty	1.03 (.14)	X	X	1.05 (.14)	1.03 (.14)	1.03 (.14)	1.16 (.20)
Onset Difference	0.94*** (.01)	0.95*** (.01)	0.95*** (.01)	0.94*** (.01)	0.94*** (.01)	0.94*** (.01)	0.94*** (.01)
Terror Attacks	1.01** (.00)	1.01* (.00)	1.01* (.00)	1.01** (.00)	1.01* (.00)	1.01* (.00)	1.01* (.00)
Democracy	1.07* (.03)	1.06* (.03)	1.06* (.03)	1.11*** (.03)	1.08** (.03)	1.08** (.03)	1.12** (.04)
Relative Pol Reach	X	2.01* (.64)	2.04* (.65)	X	X	X	2.80** (.90)
Military Regime	0.70 (.28)	X	X	X	X	X	X
Personalist Regime	X	X	X	2.14** (.62)	X	X	3.11** (1.05)
Regime Failure	X	X	X	X	1.01 (.33)	X	X
# of Dyads	X	X	X	X	X	1.08 (.09)	X
Levels of significance		*** < .001 ** < .01 * < .05					
TABLE 2.7 MODEL SUMMARY	N= 292 LRChi2= 147.89 Pr>Chi2= 0.00 LogLike= -392.8 #subjects= 292 #failures= 92 RiskTime= 14873	N= 248 LRChi2= 126.96 Pr>Chi2= 0.00 LogLike= -315.0 #subjects= 248 #failures= 78 RiskTime= 12515	N= 242 LRChi2= 122.77 Pr>Chi2= 0.00 LogLike= -311.0 #subjects= 242 #failures= 77 RiskTime= 12294	N= 292 LRChi2= 154.16 Pr>Chi2= 0.00 LogLike= -390.0 #subjects= 292 #failures= 92 RiskTime= 14873	N= 292 LRChi2= 147.06 Pr>Chi2= 0.00 LogLike= -393.2 #subjects= 292 #failures= 92 RiskTime= 14873	N= 298 LRChi2= 152.26 Pr>Chi2= 0.00 LogLike=-402.1 #subjects= 298 #failures= 94 RiskTime= 15082	N= 247 LRChi2= 140.20 Pr>Chi2= 0.00 LogLike= -305.1 #subjects= 247 #failures= 77 RiskTime= 12682

Table 2.8. Time from Rebel Group Origin to Conflict Onset

Cox Proportional Hazard Models

	Model 2.15	Model 2.16	Model 2.17	Model 2.18
Failure = Conflict Onset	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)
Militarization	1.74** (.36)	1.56* (.32)	1.38 (.30)	1.29 (.29)
Mobilization	0.45*** (.09)	0.50*** (.09)	0.52*** (.10)	0.45*** (.09)
PTS - Amnesty	1.26 (.23)	1.10 (.19)	1.07 (.19)	1.12 (.20)
Onset Difference	0.94*** (.01)	0.94*** (.01)	0.94*** (.01)	0.92*** (.01)
Terror Attacks	1.01* (.00)	1.01 (.00)	1.01** (.00)	1.01 (.00)
Polity	1.14*** (.04)	1.12** (.04)	1.10** (.04)	1.12** (.04)
Relative Political Reach	3.88*** (1.36)	2.96** (.98)	2.37* (.81)	3.26** (1.20)
Personalist Regime	4.00*** (1.42)	3.55*** (1.19)	2.62** (.96)	3.71** (1.43)
Ethnic Fractionalization	X	0.30* (.18)	X	0.09** (.08)
Religious Fractionalization	0.16* (.13)	X	X	0.10** (.09)
Linguistic Fractionalization	X	X	2.16 (1.38)	25.65*** (22.72)
Levels of significance	*** < .001 ** < .01 * < .05			
TABLE 2.8 MODEL SUMMARY	N=247 LRChi2=145.79 Pr>Chi2=0.00 LogLike=-302.3 #subjects=247 #failures=77 RiskTime= 12682	N=247 LRChi2=144.30 Pr>Chi2=0.00 LogLike=-303.1 #subjects=247 #failures=77 RiskTime= 12682	N=240 LRChi2=137.72 Pr>Chi2=0.00 LogLike=-285.1 #subjects=240 #failures=73 RiskTime= 12602	N=240 LRChi2=155.50 Pr>Chi2=0.00 LogLike=-276.2 #subjects=240 #failures=73 RiskTime= 12602

Results from the logistic regression indicate robust results generally consistent with the findings produced in the hazard models. Each of the three logit models revealed a positive relationship between *militarization* and onset, with *mobilization* exhibiting a negative effect. The results were statistically significant for *mobilization* for all three models, and were so in two

models for the *militarization* variable. For both the key origins variables and the controls, the findings from the logit models indicate a consistent story with that of the proportional hazards models – *militarization* exerts increases the likelihood of conflict onset, while *mobilization* decreases the probability of war. The full set of findings from the logistic regression models is presented in Table 2.9 below.

Table 2.9. Origins and the Likelihood of Civil Conflict Onset

Logistic Regression Models

	Model 2.19	Model 2.20	Model 2.21
DV = Conflict Onset	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)
Militarization	0.34* (.17)	0.49 (.28)	0.52* (.26)
Mobilization	-0.37* (.16)	-0.71** (.26)	-0.69** (.26)
Group Age	-0.01** (.00)	0.02** (.01)	0.02* (.01)
PTS Amnesty	X	0.34 (.24)	0.42 (.23)
Onset Difference	X	-0.05*** (.01)	-0.05*** (.01)
Terror Attacks	X	0.00 (.00)	0.00 (.00)
Democracy	X	0.10* (.04)	0.12** (.04)
Relative Political Reach	X	1.48** (.53)	1.52** (.50)
Personalist Regime	X	1.04* (.47)	1.21** (.46)
Religious Fractionalization	X	-2.08^ (1.09)	-1.82^ (.95)
Ethnic Fractionalization	X	-1.06 (1.17)	X
Linguistic Fractionalization	X	1.33 (1.10)	X

(table continues)

	Model 2.19	Model 2.20	Model 2.21
DV = Conflict Onset	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)
Constant	-.143 (.51)	-2.38 (1.57)	-2.84 (1.29)
Levels of significance	*** < .001 ** < .01 * < .05 ^ <.06		
TABLE 2.9 MODEL SUMMARY	N=361 LRChi2=31.26 Pr>Chi2=0.00 Pseudo R2= .067 LogLike= -218.5	N=240 LRChi2=63.30 Pr>Chi2=0.00 Pseudo R2= .215 LogLike= -115.8	N=247 LRChi2=64.00 Pr>Chi2=0.00 Pseudo R2= .209 LogLike= -121.3

The statistical analyses contained herein provide mixed results in terms of the theoretical expectations outlined in the theory. As expected, groups with higher levels of *militarization* are more likely than weaker ones to engage in conflict early in their existence. However, *mobilization* has a negative effect on conflict outbreak – groups with more developed civilian support *decrease* the likelihood of onset and will go to war later in their lifespan. This runs counter to H2, but is not entirely confounding when considered closely. The nature of proto-groups that serves as a foundation for rebel groups with highly developed mobilization is largely civilian and non-violent. While this may change as groups mature and move closer to conflict, the cores of the civilian proto-groups themselves are not constructed to serve violent purposes. Thus, it is not entirely surprising to see highly mobilized groups to take longer to curb efforts within the organization to engage in conflict. These civilian elements would be more inclined to achieve group aims, particularly concessions from the government, via diplomatic efforts such as negotiations. H3 posits that *mobilization* will have a positive effect on onset, though weaker than militarization. This hypothesis is also not supported, though this lack of support is more a matter of degree than purely contradictory in nature. Mobilization makes

conflict onset less likely than that of militarization as hypothesized as it has a negative effect on the dependent variable.[8]

2.7 Conclusion

This study illuminates the empirical linkages between rebel origins and conflict onset. The quantitative analyses conducted here illustrate a strong relationship between rebel groups' initial characteristics and the length of time they exist prior to conflict onset. These findings are meaningful for scholars of civil war and policy practitioners alike. Groups that emerge from proto-groups that are military in nature inherit endowments that allow them to mount a legitimate challenge against the government. On the other hand, groups that have a well-developed mobilization capacity are likely to have existed as a group for much longer before entering into civil conflicts. This is perhaps because these groups need further time to pursue and develop the requisite military capabilities to challenge the state. These findings reveal a great deal about the window of time available for external actors to intervene in states experiencing the processes that typically escalate toward civil war. In the case of insurgents that have emerged from military roots, there may be little time to intervene. On a more positive note however, resistance groups that grow out of civilian or political organizations seem to provide a greater opportunity for diplomatic mechanisms to be implemented by foreign powers or international organizations. This study has thus provided additional insight into the nature of violent non-state actors and their role in the processes leading to civil conflict.

[8] Analyses were conducted that included an interaction term between militarization and mobilization. These tests revealed that the interaction of the two origins variables has a negative but (extremely) insignificant effect on the time to peace failure.

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CHAPTER 3

REBEL GROUP ORIGINS AND THE DURATION AND INTENSITY OF CIVIL CONFLICT

3.1 Introduction

The intersection of research on violent non-state actors and civil conflict dynamics has evolved significantly in recent years. In particular, more attention has been devoted to unpacking the internal structure and characteristics of rebel, terrorist, and criminal organizations. Gaining an understanding of the internal characteristics of rebel organizations has the potential to shed light upon the degree of variance that exists among these groups that has traditionally been understudied. Efforts in this direction are a significant contribution to civil war scholarship (Prorok 2016; Mampilly 2011; Parkinson 2013; Parkinson and Zaks 2018; Staniland 2014) as a wide range of questions regarding the implications of internal rebel characteristics can be addressed with this data. The utility of exploring the origins of rebel groups for the most fundamental questions in the study of civil war – those concerning how war begins and ends, the length of war, and conflict severity – is readily apparent as studies have yet to consider the effect of this factor on the dynamics of conflict. This paper examines the internal characteristics of rebel groups from the perspective of their origins – how organizations were initially constructed, the pre-existing groups from which they emerged, and the varying capabilities of rebels prior to the onset of conflict. Furthermore, this paper attempts to address the following question - *What is the relationship between rebel group origins and the duration and severity of civil conflicts?* This project examines origins from a theoretical and methodological perspective as a function of two broad sets of characteristics – militarization and mobilization. The findings are consistent with the theoretical expectations – militarization

and mobilization both exhibit a positive relationship with conflict duration and intensity, with militarization exerting a stronger influence on the outcome variables. This study illustrates the salience of the characteristics of rebel groups at their origins as a critical component of our understanding of the length and severity of civil wars.

Much remains to be explored concerning the implications of insurgent group beginnings. In particular, do group origins have a lasting effect on rebel behavior beyond the initial formative period? Do rebel roots have a path dependent effect on groups, shaping the course of civil wars as they progress? This study pursues these questions by exploring the effect of origins on two critical aspects of civil wars, duration and severity. These concepts are salient indicators of the scope of civil wars, as they clearly represent the cost of conflict on a society in terms of time and lives lost. Studying the degree to which duration and severity vary together (Balcells and Kalyvas 2014) vis-à-vis rebel origins is an important contribution to our understanding of civil conflict. Policymakers' efforts to peacefully resolve conflicts and mitigate the impact on civilians can be better informed by knowledge of relationships between rebel formation and the length and intensity of civil wars. The degree to which duration and severity follow similar patterns in their relationship with rebel origins reveal peacekeeping circumstances of varying complexity, and add another piece to the puzzle of understanding civil war outcomes.

The primary origins mechanisms *militarization* and *mobilization* are the conduits through which the formation of rebel groups is conceptualized. *Militarization* refers to the collective set of characteristics that represent a group's military capacity. This term captures the military experience, access to weaponry, and fighting force possessed by an insurgent

group. *Mobilization* refers to the assortment of attributes that represent a group's support within the civilian population. Theoretically, this concept defines the degree to which a group has developed a following in the non-combatant population as well as its experience in political or civilian networks and organizations.

An illustrative example of the origins mechanism is the case of Tehreek-i-Taliban Pakistan (TTP), an extension of the Afghan Taliban. This group fought a civil war in Pakistan for over seven years in a conflict that resulted in over twenty-four thousand battle deaths over that span. The TTP is identified as both a highly militarized and mobilized rebel organization in the rebel origins framework. TTP possessed an extensive mobilization structure due to ties to various Islamic networks and organizations in Pakistan such as those based in madrassas, domestic political parties, and the use of ideology to attract followers. In military terms, the TTP had extensive ties with not only the Afghan Taliban but also Al-Qaeda. Access to Al-Qaeda's global terror networks, the military resources of AQ and the Taliban, tens of thousands of fighters, and leadership with extensive operational experience gave the TTP a vast array of military resources. These endowments positioned the TTP well to remain engaged in sustained conflict with both the Pakistani military domestically and NATO forces in Afghanistan. The long and bloody conflict waged by the TTP was in large part enabled by the substantial and diverse civilian, political, religious, and military resources at its disposal dating to its origins prior to the onset of conflict.

To consider a contrasting rebel origins story, we can examine the case of the Chadian rebel group Forces Armees pour la Republique Federale (FARF). FARF was a rebel organization that fought a civil war against the government of Chad that was relatively short at around six

months in length, but had very few battle deaths with less than one hundred over the entire duration of the conflict. FARF was the sole active rebel organization that refrained from entering into a peace agreement with the Chadian government following hostilities in 1994, until eventually signing a deal with the regime in March of 1997 (Minorities at Risk 2009). Conflict between FARF and Chad was reignited in late 1997, lasting until May 1998 when another peace deal was agreed to (The Europa World Year Book 2004). FARF was group that was not able to sustain armed conflict for extended periods of time or inflict consequential casualties on the Chadian regime due to minimal military capability and little to no discernable civilian network infrastructure. Due to a complex conflict environment that included multiple active combatant groups and the Chadian government's track record of peace agreements, FARF entered into a settlement with Chad in 1998 that included terms for transformation into a legal political party (The Europa World Year Book 2004). Despite the peaceful conflict outcome, the FARF illustrates the origins mechanism at work in a contrasting fashion to that of the TTP in Pakistan.

3.2 Literature Review

3.2.1 Rebel Group Organization and Formation

Research devoted to the duration and intensity of civil conflicts has largely ignored insurgent group formation and organization as factors influencing these outcomes. Prior work has distinguished between different types of regimes involved in civil conflicts (Gurses and Mason 2010; Hegre 2001), as well as distinct categories of civil wars themselves (Gleditsch et al. 2002; Fearon and Laitin 2003; Buhaug 2006). However, much less research has been devoted to

differences amongst the *rebel groups* challenging the state. Most prominent among research on rebel group formation has been the work of Staniland (2012; 2014). Staniland broke new ground by conceptualizing rebel groups in terms of the social bases that preceded the eventual armed groups, providing differentiation along the lines of organizational cohesion and structure (2014). He also provides accounts for the processes of insurgent change and how they differ across the four types of rebel organizations he identifies (Staniland 2014). Mampilly also contributed to empirical research differentiating between "types" of rebel groups by analyzing the variance in rebel governance processes during conflict (2011). Both Staniland (2014) and Mampilly (2011) supplement their contributions with richly informative case studies of rebels in conflict that illustrate their theoretical mechanisms and the variance within real-life cases. Research has been devoted to group organizational characteristics and the lethality of terror attacks (Asal and Rethemeyer 2008; Heger, Jung, and Wong 2012), but these analyses have not considered dynamics of conventional conflict as a dependent variable. Group characteristics that have been operationalized in conflict studies have generally concerned a broad swathe of attributes of groups present *during* conflict (Buhaug 2006; Christia 2012; Horowitz 1985; Krause 2014; Mampilly 2011; Salehyan 2007, 2010; Staniland 2012). For example, the *Non-State Actor Dataset* (Cunningham, Gleditsch, and Salehyan 2013) codes for rebel group attributes possessed during civil war, ranging from rebel troop count, to the presence of central command, to rebel control of territory. The aforementioned body of work employs measures that capture group characteristics *at some point* during a conflict. In fact, codebooks accompanying these data often lack clarity regarding the point in time *during* the conflict that the measure is intended to represent. In practice, variables representing dynamic rebel

characteristics that are coded at one particular point in time (or more ambiguously cover a wide swathe of time) are ineffective in capturing change over time and may over-represent a small period when the group was at its strongest. The origins variables coded as part of this project undoubtedly suffer from some of the same time-based drawbacks as the above examples. However, capturing characteristics prior to the onset of conflict is useful in isolating organizational attributes prior to groups being exposed to the influential forces of civil war that can cause large swings in-group capacity.

3.2.2 Conflict Duration and Intensity

The factors that contribute to the length of civil wars have received a large amount of attention in conflict research, with rebel group characteristics being a relatively recent addition to the literature. However, as existing work on rebel origins is still in its infancy, it lacks a direct discussion of the connections between rebel origins and the duration or severity of civil conflict. A large body of scholarship has been devoted to the factors that are associated with the length and intensity of intrastate wars. These correlates include structural, state-level variables such as economic wealth and the distribution of ethnic populations (Collier, Hoeffler, and Soderbom 2004), the presence of natural resources (Fearon 2004; Lujala 2010; Ross 2004a, 2004b; Wiegand and Keels 2019), alternative sources of funding (Walsh et al. 2018), geographic factors (Buhaug, Gates, and Lujala 2009); and interventions by third-party actors (Regan 2002).

The correlates of civil war intensity have also received a significant amount of attention by conflict scholars over time (Lacina 2006), and these findings are generally well understood. Conflict severity has been examined as a function of the presence of natural resources (Lujala

2009), the type of warfare used during hostilities (Balcells and Kalyvas 2014), and pre- versus post-Cold War conflicts (Melander, Oberg, and Hall (2009) among others. The role of origins in the level of violence in conflict can thus serve as a welcome addition to a long-standing strain of conflict research. This phenomenon is conceptualized in the literature in several ways, with variables measuring battle deaths, civilian casualties, or a combination of both.

3.2.3 Prior Data Collection Efforts

Within existing research on civil war, very little work has been devoted to empirically capturing the origins or foundations of rebel groups. While a fair amount of literature exists that narrowly discusses the individual components or underlying assumptions constituting the rebel origins mechanism, scholars have yet to holistically address the broader phenomenon of rebel group formation. In contrast to the dearth of theoretical work on this topic, data collection efforts have produced more fruitful discoveries concerning both the behavior of non-state actor groups prior to civil war and the processes leading to group formation. While progress has been made in this area with recent projects, the "the initial formation of rebel groups is often poorly measured," leaving significant room for improvement in quantitative data collection efforts (Larson and Lewis 2018: 871).

Several data projects have been conducted (or are currently ongoing) that attempt to empirically capture the organization and behavior of non-state actor groups prior to the onset of conflict. *The Foundations of Rebel Group Emergence (FORGE) Database* (Braithwaite and Cunningham 2019) is a project that addresses many of the same research objectives posed in this project, and is the only other cross-national, quantitative data collection effort to date

devoted to the emergence of rebel organizations. Along with *FORGE*, this project breaks new ground in unpacking the processes of rebel group inception. A related data collection effort titled *The Anatomy of Resistance Campaigns Project* codes the organizational aspects of groups working alongside rebel groups and nonviolent campaigns (Braithwaite, Butcher, and Pinckney 2019). The aforementioned projects explore the internal characteristics of organizations, and represent recent work unpacking the processes leading to the outbreak of conflict.

The *Nonviolent and Violent Campaigns and Outcomes (NAVCO) Data Project* is a foundational data collection effort as it codes resistance campaign and event data, including those that did not escalate to social or civil conflict (Chenoweth, Pinckney, and Lewis 2018). A recent project related to *NAVCO* and the *Non-State Actor Dataset* is the *Nonviolent Action in Violent Contexts (NVAVC) Data* Project, which examines nonviolent forms of organized resistance in civil war settings (Hunter, Hendrix, and Chenoweth 2019). These data projects have advanced our understanding of the processes at work in the period preceding civil conflict for violent non-state actors as well as instances of group resistance that do not escalate to civil war or turn violent at all.

However, the rebel origins data produced for this project offers several advantages over the aforementioned prior data collection efforts. The organizational attribute focus of this data allows for an in-depth exploration of the defining characteristics of groups that evolve into rebel organizations. The level of detail provided here is an advancement upon prior efforts to unpack the processes of insurgent formation. I also further civil conflict research in this project by exploring the development of violent non-state actors from their pre-existing military and civilian networks. Providing a theoretical and empirical account of this transformation and its

influence on conflict dynamics is a major contribution to existing work as this puzzle has been understudied in existing work. This project thus contributes to these valuable recent efforts to broaden our understanding of the dynamics of contention and civil conflict at the group level.

3.3 Theory

3.3.1 Conceptualizing Rebel Group Origins

Rebel groups come into being in a variety of ways, with some existing for many years prior to conflict onset while others form mere days before engaging in large-scale violence with a government. This range of formative processes is captured empirically in the origins coding scheme outlined below. While the proportion of groups that have emerged as offshoots of existing rebel groups is sizeable, most groups have their origins in organic processes independent of other organizations (Walter 2019). The forthcoming theoretical mechanism accounts for the myriad of rebel group emergence processes, and the core argument is focused on how groups emerge from pre-existing organizations. Some of these organizations are military in nature, while others have roots in civilian or political networks. I refer to the organizations that serve as the predecessors to eventual rebel groups as *proto-groups.* This concept builds upon Byman (2007), who argues for the existence of precursor networks referred to as *proto-insurgencies.* This term is also analogous to the notion of the *proto-state,* which concerns the administrative pre-cursors to secessionist movements (Griffiths 2015). The *proto-groups* conceptualized in this project exist prior to the development of cohesive insurgencies and operate in a variety of forms.

Rebel origins are conceptualized here as an interactive combination of the militarization and mobilization mechanisms. These components do not operate individually or in a vacuum, they interact to form the basis of what constitutes rebel beginnings and the functioning of the origins mechanism. The effect of origins on civil war dynamics is posited as a function of both the individual components and the aggregated variable. Examining the constitution of rebel groups from a holistic, comprehensive perspective is necessary as the decision-making and behavior of rebels is a function of the synthesis of the component origins elements. Key to this process is the idea that the civilian, social networks, and military structure within rebel groups are not mutually exclusive entities during organizational development (Parkinson 2013). In other words, the characteristics present in *proto-groups* blend to form group identity and capability as groups mature and enter into conflict.

The origins of rebel groups are key to understanding civil war duration and intensity as a function of several central mechanisms: 1) the institutionalization of origins characteristics – traits inherited from proto-groups are "sticky;" 2) the framing of core drivers of group behavior and decision-making – military and civilian "genetic code" provides core modus operandi helping to determine how rebel group operates; 3) the strengths and weaknesses inherent in origins attributes condition the parameters of the time horizon for rebel success – different combinations of origins attributes condition the likelihood of observing given values of the dependent variables.

The process by which rebel groups come into existence is a salient aspect of the factors conditioning rebel behavior during war. As outlined above, insurgent groups are a "work in progress," evolving and maturing over a period of time prior to the onset of conflict. While

organizational change may continue to occur to varying degrees during war, the escalation of hostilities with the state from low-level conflict to all-out civil war serves to "lock in place" and entrench the nature of rebel groups. At this point in a group's opposition efforts, its operating environment drastically changes. Whereas existence as an opposition or fledging revolutionary group allows for greater overt freedom of movement, recruitment, and organization-building efforts, the context of war places severe limitations on groups' ability to pursue these efforts. Wood (2008).

3.3.2 Rebel Group Incubation Period

The critical temporal period for the analysis of rebel origins spans from the birth of the group until conflict onset. I refer to this process as the rebel group *incubation period*. This civil conflict incubation period, as formulated here, has been studied using a diverse set of approaches and perspectives in the past. This analytical framework composing the spectrum of political resistance includes nonviolent resistance, social conflict, low-level armed conflict, and latent, or unobserved, periods of non-state actor group organization. Further, the latent aspect of the incubation period encompasses the processes *preceding* social movements, rebellion, revolution, self-determination movements, political violence, and other collective action campaigns aimed at challenging the state over political demands. This incubation period conceptually occurs within all conflict dyads, and takes place from the founding of a rebel group through the outbreak of war. Rebel origins as conceptualized here will account for the vast array of forms that armed groups take prior to engaging in civil conflict.

3.3.3 How Rebel Origins Shape Rebel Goals

Upon the initiation of civil conflict, rebel groups typically face a substantial deficit in military capacity relative to the government (Mack 1975; Arreguin-Toft 2001). This asymmetry in fighting ability disadvantages rebels to a degree that defeating regime forces is less an attainable short-term outcome than that of simply surviving the early phases of the conflict (Mason, Weingarten, and Fett 1999). Conceptualizing rebel objectives as a matter of maintaining viability and eventually reaching parity with government forces depicts a more accurate picture of the realities faced by rebels early in conflict. With complete defeat being significantly more likely than concessions or outright victory, survival is the more appropriate framework for rebel operations. In other words, the immediate aim of rebel groups early in conflict is to survive to fight another day. Rebels planning for a more immediate time horizon that does not include pursuing outright victory in the near term necessarily involves reliance upon existing capabilities. Early in war, rebel capabilities are likely those inherited from their precursor *proto-groups.*

This perspective is a refinement of traditional "winning vs. losing" characterizations of conflict and allows for a more sophisticated picture of rebel goals and decision-making. When accounting for the duration and intensity of civil wars, a more nuanced vision of the classic win-loss dichotomy is advantageous. Given that the empirical record of civil conflicts contains relatively few outright rebel victories (Pettersson, Hogbladh, and Oberg 2019; Harbom, Melander, and Wallensteen 2008), scholars can draw richer inferences by conceptualizing conflict outcomes in terms of being favorable or unfavorable for the rebels (Prorok 2016; Stanton 2017). Any outcome that involves a revision of the pre-conflict status quo concerning

rebel objectives necessarily results in a favorable rebel outcome. This framework allows us to move away from conceptualizing rebel objectives in a dichotomous fashion towards a more nuanced scheme that includes a significant "grey area" between outright winning and losing.

Rebel origins constitute the history and experience of the organization, and thus help to frame rebels' approach to its wartime behavior. Additionally, origins determine the military and civilian endowments possessed by a group at the onset of conflict. Taken together, these dynamics facilitate the development of rebels' short- and long-term aims. I argue here that these goals are intimately linked to the nature of a group's origins, in particular its precursor proto-group. Rebels that emerge from military organizations will be immediately focused upon military objectives and be equipped to approach organization building from a military perspective. This should result in a tactically hawkish approach to engaging with the government (relative to groups with civilian roots) and a perspective that achieving outright victory is an achievable goal to be pursued in an aggressive fashion. Conversely, groups with a civilian background will be inclined to develop its infrastructure in a fashion consistent with its civilian background, be it ethnic, religious, political, etc. This focus will result in a long-term view on growing group capabilities and military tactics rooted in a comparably conservative approach. Thus, while all groups view survival as the near-term objective, rebel origins play a prominent role in shaping how rebels envision the feasibility of military objectives and the urgency with which they should be pursued. In sum, the nature of proto-groups condition rebels' approach to organization building and the group characteristic it prioritizes for growth in the early phases of conflict.

3.3.4 Analytical Sequence of Origins Mechanism

Here I will deconstruct the temporal sequence of the effect of rebel group formation on the intra-war processes of duration and intensity. This theoretical mechanism accounts for a significant analytical period, encompassing the processes of the organization of rebellion through conflict termination.

The greater the presence of origins characteristics, the more viable the rebel group is from the very beginning of the conflict. From this, we can anticipate that groups will be better equipped to survive for a longer period of time once the conflict commences. Finally, the longer a rebel group is an active combatant against a government, the greater the battle deaths we can expect, ceteris paribus. These simple, straightforward claims are based on the intuitive notion that rebel strength in the early phases of conflict is critical to the observation of a positive effect on the duration and intensity variables.

Rebel groups emerge from the incubation period with varying degrees of connections with and integration into the civilian population. These civilian networks help to produce popular support, which allow rebels to hide amongst the population, receive food and other supplies, receive intelligence regarding government forces, and facilitates rebel movement in and around noncombatant populations. Groups with a larger degree of popular support from which to draw recruits, receive auxiliary support, and operate among densely populated areas will be better equipped to wage a full-scale conflict effort against the government. This civilian network serves as the "domestic infrastructure" from which rebels can operate during war. The larger the infrastructure in terms of both breadth and depth, the greater the functionality possessed by the organization. The infrastructure consists of a collection of characteristics

inherent in non-state actor groups – number of followers, geographic spread, distribution across socio-economic or ethno-religious groups, and connections with political networks, among others. I make several assumptions regarding the organizational attributes that facilitate cohesion over the life of groups. First, a larger and stronger network with deeper roots in society provides opportunities to conduct war operations with a broader scope. Further, these networks can be sustained for a longer period of time with more resilient capacity to absorb shocks to its system. Nascent groups with developed, coherent mobilization should also be better able to establish crosscutting ties between sub-groups within the broader movement.

Finally, the development of ties and cooperation between sects within the movement is an important aspect of a group's cohesion over time. Organizations that establish "institutionalized" behaviors across sub-groups that are based on accepted norms and processes aid the coordination of the movement and lower the risk of fragmentation over time (Bakke, Cunningham, and Seymour 2012). These ties thus allow for mechanisms to be established that enforce cooperation within the movement (Larson 2016). This process has been found to occur via collective threat framing within social networks (Shesterinina 2016). In sum, mobilization that occurs across a variety of distinct societal cleavages (i.e. ideological, ethnic, religious) better positions the organization to build a sustained following over the course of a prolonged conflict.

Essential to this mechanism is that the aforementioned military and civilian infrastructures are in place *prior* to conflict. Thus, to an extent, the civilian and military networks are already embedded within society prior to the escalation of hostilities to full-fledged civil war. Despite this, organizations are still often fragile or easily disbanded by

concerted counterinsurgency operations, as the asymmetry in force projection allows regimes to pick off weaker organizations. As mentioned above, group origins are "sticky," making adaptation difficult. As the eventual rebel group is borne out of the pre-existing proto-group, a level of path dependency is inherent in the makeup of the organization. Professional soldiers will presumably be good at fighting and face a learning curve when attempting to establish political networks within the organization. On the other hand, members of civilian grassroots movements will need to undergo military training in order to become a competent fighter or tactician.

The aforementioned civilian network apparatus operates in regards to the military component of rebel operations as well. Theorizing military capacity in terms of a "military infrastructure" is a comprehensive and accurate means of capturing this group trait, as rebel capabilities are grown out of a variety of entities and networks. In the case of military proto-groups, infrastructure comes in the form of military experience, insurgent or former military organizations, and access to weaponry, training, financing, leadership, and foreign support.

Repression has an effect on mobilization processes and the likelihood that a proto-group is able to sufficiently develop to the point of challenging the state militarily. This is particularly true in cases of civilian proto-groups emerging from grassroots or protest movements, as repression can either hinder anti-government dissent efforts (Siegel 2011) and facilitate broader mobilization collective action processes (Bell and Murdie 2018).

3.3.5 Link between Origins and Duration and Intensity

Intuitively, the more capable the group is militarily prior to the onset of conflict, the greater the threat it will be to the state. This allows for group to pose a legitimate challenge to government's monopoly on use of force/control over territory. Groups with a larger degree of military capacity (access to weaponry, experience, leadership) will have reduced the critically important *initial* asymmetry in relative capability typically seen in civil wars. Beyond reducing the asymmetry in power, military capacity increases the likelihood that groups can survive the early phase of conflict when this disadvantage is most pronounced. Even marginal shifts in this imbalance in favor of the rebels allows for groups to "buy time," thus prolonging conflict while further developing their organizational and fighting capacity. Even if the most likely conflict outcome occurs – outright government victory – it will be less likely to take place in the early phase of war in cases where militarization is stronger. In sum, rebels with significant military strength will fight longer wars. Militarization serves to help rebels survive early in war, greater mobilization is the engine that sustains rebels over a prolonged conflict.

The militarization and mobilization characteristics that underlie rebel origins is linked to the duration of civil wars through the interactions between rebels and civilians. At its essence, it is easier for groups to recruit (and/or coerce) combatants than to establish loyalty within a local community of civilians. Recruiting fighters is a process that allows rebels to offer non-combatants selective incentives that can be tangible (material goods, committing violence, looting) or intangible in nature (sense of belonging, promises of future benefits, spoils of victory, protection from indiscriminate government violence). Thus, rebel leaders can offer prospective recruits a great deal to offset the inherent risks involved with joining an insurgency.

Further, rebels have the option of forcibly coercing civilians into becoming a part of the organization. On the other hand, it can be difficult to convince neutral or unsympathetic civilians to become loyal to the insurgency. Thus, intra-conflict mobilization is more difficult to build than intra-war militarization. Civilians are out of sight, out of mind much of the time while recruits become combatants integrated into the rebel organization. Based upon this logic, I argue here that initial militarization exerts a stronger influence upon duration and intensity variables relative to mobilization. Militarization is thus the key driver of the mechanisms that affect groups' ability to survive and endure conflict, thus increasing the time period over which battle deaths accumulate. As it was in the previous chapter in regards to conflict onset, militarization is the primary catalyst for the occurrence of the conflict outcomes being examined here.

The relationship between the origins variables and conflict intensity should be largely consistent with that of the duration variable. This is due to the fact that groups that are able to survive and fight longer will have a larger window of time to inflict losses and lose troops of their own. Furthermore, groups that are able to survive for extended periods of time, those possessing high levels of militarization, should be better equipped and trained with stronger leadership and deeper pools of resources. These groups "bigger and better" military organizations will be those that possess the strength to inflict the greatest damage on government forces as they will operate relatively closer to power parity with the regime. Thus, the degree of conflict intensity we witness is conditional on both rebel military strength and time, two factors that interact and mutually reinforce one another. Stronger groups will do

more damage to the government based not only upon their capacity, but also due to their ability to stay in the fight for a longer period of time.

3.4 Hypotheses

H1 – The greater the level of origins capacity, the longer the duration of civil conflict.

H2 – The greater the level of origins capacity, the greater the intensity of civil conflict.

H3 – Militarization should exhibit a greater positive effect on conflict duration than mobilization.

H4 – Militarization should exhibit a greater positive effect on conflict severity than mobilization.

3.5 Research Design

The unit of analysis for the hypothesis testing is the conflict dyad-year. This approach is chosen as it allows for the analysis of the interaction between *individual* rebel-state conflict interactions. This approach is more appropriate for drawing inferences relative to conflict-year populations that do not capture the dynamics at work with simultaneous rebel-state dyads (Harbom, Melander, and Wallensteen 2008; Cunningham, Gleditsch, and Salehyan 2009). The population of cases was determined by conventional spatial and temporal parameters often used in studies of civil conflict. The spatial domain is global, while the temporal domain is bounded by the years 1992-2011. This timeframe was selected based on the premise that the environment in which civil wars occurred (and ended) was fundamentally altered with the end of the Cold War. In an effort to focus on the contemporary era of civil war, post-Cold War conflicts constitute the dataset. To this point, civil war cases are included in the dataset if they

terminate between the aforementioned years, as conflict termination is a necessary component of both dependent variables used in the analysis. Thus, conflicts that begin prior to 1992 *are* present in the data.

There are two dependent variables used in the analyses, conflict duration and conflict intensity. Conflict duration captures the length of time from civil conflict onset to termination as defined by UCDP. Given the large number of cases with a duration clustering around one year, this variable is re-coded by the author in a monthly format. The second dependent variable in this study is the annual number of battle deaths for each civil war. This data is gathered from the UCDP Battle-Related Deaths Dataset Version 18.1 (Pettersson and Eck 2018). A Cox proportional hazard model is used for the conflict duration models to analyze the relationship between the origins variables and conflict duration, chosen as the goal of the analysis is to determine the effect of the independent variables on the likelihood of conflict terminating in a given year. Negative binomial models are conducted for the conflict severity models. This modeling technique is appropriate for this hypothesis test as the dependent variable can be considered a "count" of battle deaths occurring in each conflict.

The primary independent variables of interest for the analyses are the origins variables *Militarization, Mobilization*, and *Origins Capacity*. *Origins Capacity* is a simple additive measure of the two primary origins variables, included in the analyses after conducting factor analysis. The factor loadings indicated that the additive origins measure is a suitable representation of the origins concept. The factor analysis can be found in Table B.3 in Appendix B. As stated above in Hypotheses 1 and 2, *Origins Capacity* is expected to exhibit a positive relationship with both conflict duration and intensity.

A series of intervening forces serve to conditionally affect the relationship between rebel origins and conflict duration and intensity. The intervening variables incorporated in the statistical models are largely focused on the intra-war factors affecting conflict duration and intensity. A range of control variables were gathered from the Non-State Actor Dataset (Cunningham, Gleditsch, and Salehyan 2013), including *Rebel Support*, *Government Support*, *Relative Rebel Strength*, *Rebel Central Control*, *Rebel External Participants*, *Rebel Troop Count*, *Rebel Arms Procurement*, and *Rebel Mobilization Capacity, and Conflict Previously Active.* These variables are included in models using both of the primary origins variables to control for a wide range of inter-war factors related to rebel and government capabilities. Additional variables were included in the models to control for conventional civil conflict covariates that may influence the dependent variables. The controls include *Ethnic* and *Religious Fractionalization* (Alesina et al. 2003)*, Battle Deaths,* used in duration models (Pettersson, Hogbladh, and Oberg 2019), and *Terror Attacks* (Hendrix and Young 2014)*.*

3.6 Correlation between Origins and Non-State Actor Variables

In order to determine the relationships between variables of interest, several preliminary analyses were conducted. A correlation analysis was run to determine the collinearity between the origins militarization and mobilization variables and the corresponding Non-State Actor variables. The goal was to ascertain the degree to which these sets of variables explain the same mechanisms across different points in time. Table 3.1 below illustrates the correlation between two origins and five NSA variables. The origins *militarization* variable is correlated with the NSA variables at the following rates – *relative rebel strength (0.33), rebel*

fighting capacity (0.29), rebel arms procurement (0.39), and rebel central control (-0.12). The origins *mobilization* variable is correlated with NSA variable *rebel mobilization capacity* at 0.29. Here we see that the origins variables co-vary with the corresponding NSA variables at a rate that, while not extremely large, is significant enough to indicate the presence of some degree of origins path dependence. Put another way, these correlations illustrate that rebels' initial conditions explain between twenty-nine and thirty-nine percent of the eventual strength of rebels. Thus, origins play a meaningful role in accounting for rebel group capability and development during war.

Table 3.1. The Correlation between *Origins* and *Non-State Actor* Variables

	Origins Variables		Non-State Actor Variables				
N = 346	Militariz	Mobiliz	Mobiliz Capacity	Rebel Strength	Rebel Fight Capacity	Rebel Cent Control	Rebel Arms Procurement
Militarization	1.00						
Mobilization	0.32	1.00					
Mobilization Capacity	0.18	0.29	1.000				
Rebel Strength	0.33	0.09	0.62	1.00			
Rebel Fight Capacity	0.29	0.11	0.46	0.70	1.00		
Rebel Cent Control	-0.13	-0.09	-0.16	-0.24	-0.14	1.00	
Rebel Arms Procurement	0.39	0.03	0.41	0.67	0.80	-0.21	1.00

3.7 Findings

The empirical analyses provide consistent support for the theoretical expectations stated in the above hypotheses. Regarding conflict duration, I find that rebel origins exhibit a

negative and statistically significant effect on the hazard of conflict termination. This finding indicates that the greater the origins capacity for a rebel group, the longer the expected duration of conflict. The magnitude of this effect is fairly consistent across models, ranging from having a roughly twenty to twenty-nine percent negative impact on the likelihood of conflict "failure." *Origins Capacity* is statistically significant in each model at either the 0.01 or 0.05 level of significance. Figure 3.1 disaggregates the *Origins Capacity* variable, graphically demonstrating the effect of this variable at each of its values on conflict termination. At *Origins Capacity* values of two and three, the length of conflict is relatively short. This indicates that weaker groups are likely not able to mount sustained conflict against a government. On the other hand, at greater values of *Origins Capacity,* more groups are able to engage in protracted conflict, consistent with theoretical expectations. The full results from the Cox proportional hazard models can be found in Tables 3.2 and 3.3 below. Figure 3.2 demonstrates the relationship between *Militarization* and conflict duration, while Figure 3.3 does so for the *Mobilization* variable.

Table 3.2. Origins and the Duration of Civil Conflict

Cox Proportional Hazard Models (Time variable = length of conflict in months)

	Model 3.1	Model 3.2	Model 3.3	Model 3.4	Model 3.5
Failure = Conflict Termination	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)
Origins Capacity	0.72** (.09)	0.71* (.09)	0.74* (.10)	0.80* (.09)	0.75* (.10)
Ethnic Fractionaliz	0.78 (.54)	0.42 (.28)	0.74 (.52)	0.59 (.31)	0.99 (.72)
Religious Fractionaliz	4.57* (3.38)	4.19* (3.00)	4.61* (3.42)	3.46* (2.05)	3.41 (2.65)
Government Support	0.75* (.11)	0.68 (.10)	0.76 (.11)	0.72** (.08)	0.78 (.12)

(table continues)

	Model 3.1	Model 3.2	Model 3.3	Model 3.4	Model 3.5
Failure = Conflict Termination	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)
Rebel Support	0.79 (.11)	0.80 (.11)	0.80 (.11)	0.80 (.09)	0.76* (.10)
Relative Rebel Strength	0.83 (.23)	x	0.83 (.23)	1.22 (.23)	0.71 (.21)
Rebel Central Control	2.09 (2.28)	5.65 (6.02)	2.26 (2.49)	3.65 (3.92)	1.66 (1.83)
Rebel Arms Procurement	1.97* (.61)	1.71 (.48)	2.01* (.63)	1.75* (.48)	2.19* (.69)
Rebel External Participants	x	0.86 (.10)	0.92 (.11)	0.96 (.11)	0.94 (.11)
Rebel Troop Count	1.00** (.00)	1.00* (.00)	1.00** (.00)	x	1.00** (.00)
Rebel Mobilization Capacity	1.15 (.38)	0.96 (.29)	1.15 (.39)	x	1.18 (.40)
Battle Deaths	1.00** (.00)	x	1.00* (.00)	1.00* (.00)	1.00* (.00)
Terror Attacks	x	x	x	x	0.58 (.19)
Levels of significance	*** < .001 ** < .01 * < .05				
TABLE 3.2 MODEL SUMMARY	N=258 LRChi2=41.13 Pr>Chi2=0.00 LogLike=-302.6 # subjects=93 # failures=87 Time at risk=2294.8	N=258 LRChi2=30.62 Pr>Chi2=.001 LogLike=-307.9 # subjects=93 # failures=87 Time at risk=2294.8	N=258 LRChi2=41.58 Pr>Chi2=0.00 LogLike=-302.4 # subjects=93 # failures=87 Time at risk=2294.8	N=311 LRChi2=46.37 Pr>Chi2=0.00 LogLike=-412.2 # subjects=118 # failures=111 Time at risk=2723.8	N=258 LRChi2=44.66 Pr>Chi2=0.00 LogLike=-300.9 # subjects=93 # failures=87 Time at risk=2294.8

Table 3.3. Origins and the Duration of Civil Conflict

Cox Proportional Hazard Models (Time variable = length of conflict in months)

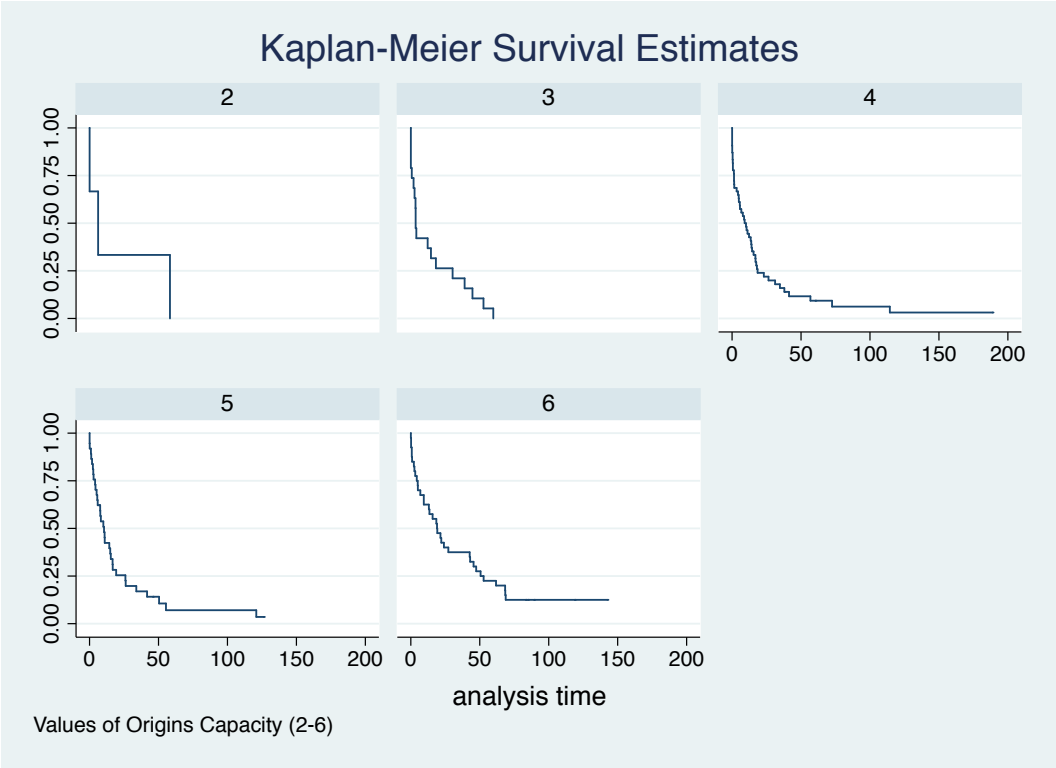
	Model 3.6	Model 3.7	Model 3.8	Model 3.9
Failure = Conflict Termination	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)	Hazard Ratio (S.E.)
Origins Capacity	0.78* (.08)	0.75** (.07)	x	x
Militarization	x	x	0.67* (.13)	0.71* (.12)
Mobilization	x	x	0.67* (.12)	0.87 (.13)
Ethnic Fractionalization	0.51 (.28)	0.56 (.30)	0.54 (.38)	0.66 (.35)
Religious Fractionalization	2.40 (1.47)	2.29 (1.40)	4.07 (2.93)	2.45 (1.52)
Government Support	0.68*** (.08)	0.67*** (.07)	0.66** (.09)	0.72** (.08)
Rebel Support	0.77* (.09)	0.76* (.09)	0.78 (.11)	0.77* (.09)
Relative Rebel Strength	1.01 (.20)	1.01 (.20)	0.88 (.25)	1.13 (.22)
Rebel Central Control	5.68 (6.03)	5.25 (5.55)	4.82 (5.17)	2.84 (3.04)
Rebel Arms Procurement	1.84* (.51)	1.80* (.49)	1.74 (.57)	1.98* (.56)
Rebel External Participants	0.91 (.10)	x	x	x
Rebel Troop Count	x	x	1.00* (.00)	
Rebel Mobilization Capacity	x	x	1.06 (.36)	x
Battle Deaths	x	x	x	1.00* (.00)
Terror Attacks	0.59* (.16)	0.57* (.15)	x	0.59 (.17)

Levels of significance *** < .001 ** < .01 * < .05

(table continues)

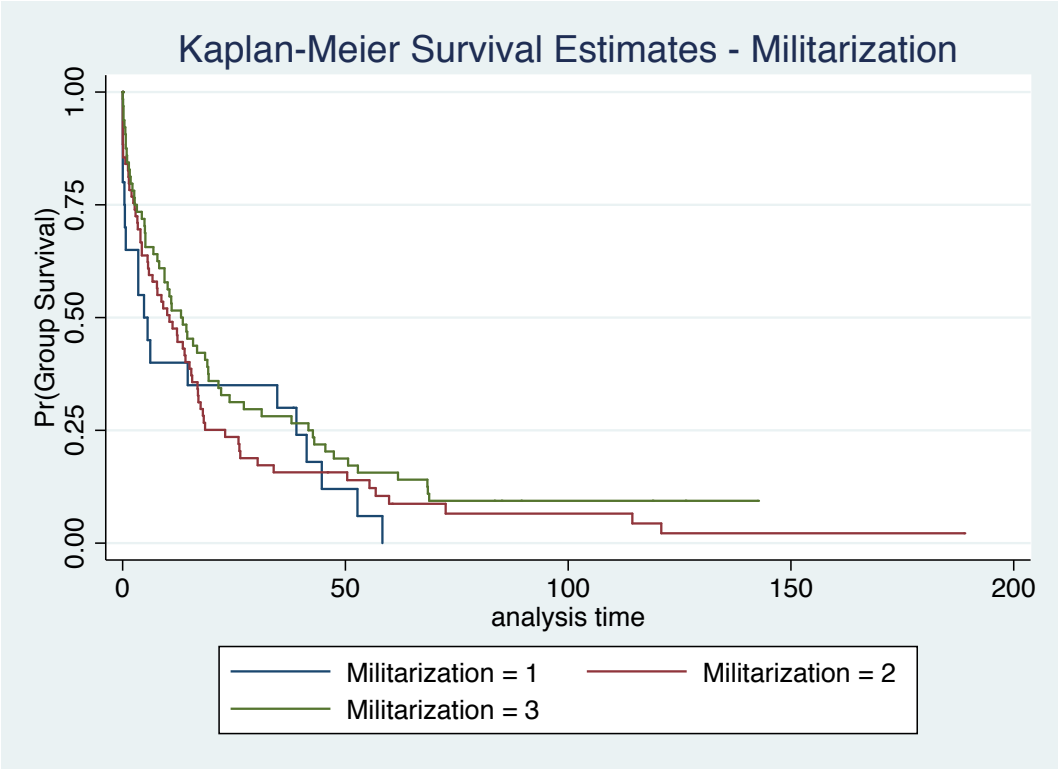
TABLE 3.3 MODEL SUMMARY	N=311 LRChi2=40.56 Pr>Chi2=0.00 LogLike=-415.1 # subjects=118 # failures=111 Time at risk=2723.8	N=311 LRChi2=39.70 Pr>Chi2=0.00 LogLike=-415.6 # subjects=118 # failures=111 Time at risk=2723.8	N=258 LRChi2=29.16 Pr>Chi2=.002 LogLike=-308.6 # subjects=93 # failures=87 Time at risk=2294.8	N=311 LRChi2=50.00 Pr>Chi2=0.00 LogLike=-410.4 # subjects=118 # failures=111 Time at risk=2723.8

Figure 3.1. Probability of Conflict Termination at Values of *Origins Capacity*



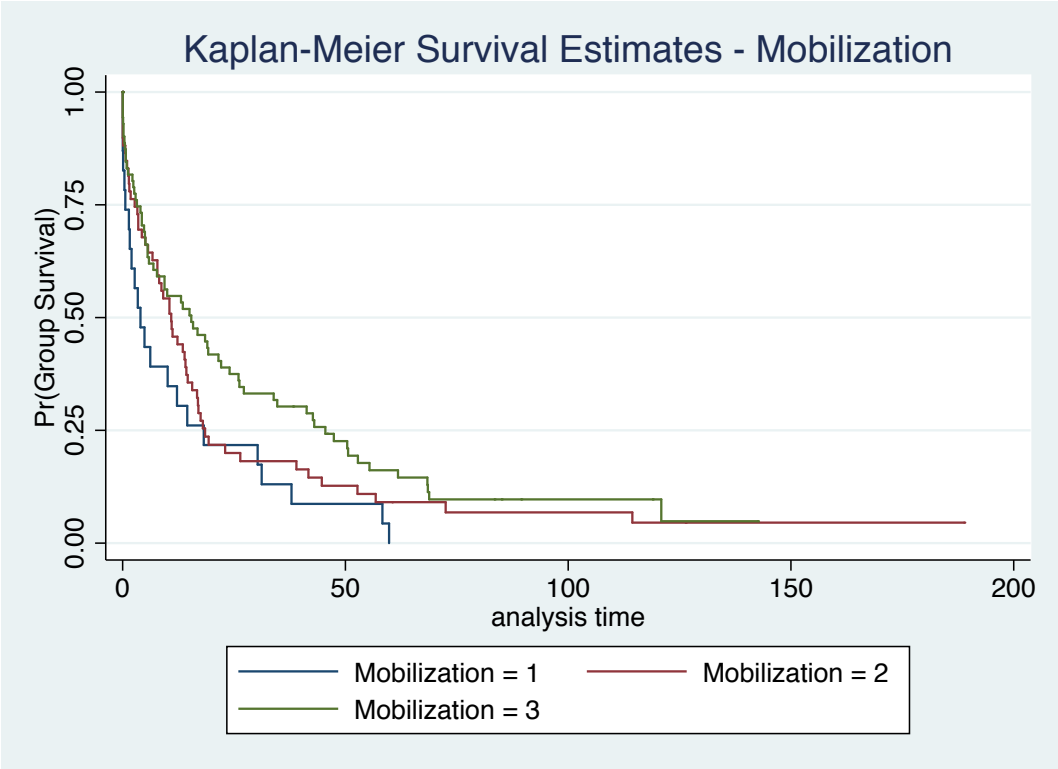
Corresponds with findings in Table 3.3 – Model 3.7

Figure 3.2. Probability of Conflict Termination at Values of *Militarization*



Corresponds with findings in Table 3.3 – Model 3.8

Figure 3.3. Probability of Conflict Termination at Values of *Mobilization* Variable



Corresponds with findings in Table 3.3 – Model 3.8

Tables 3.4 and 3.5 below present the results of the regression models employing conflict intensity as the dependent variable. When looking at the empirical results for the conflict intensity models, the three origins variables again produce statistically significant and robust results. As the coefficients produced by the negative binomial regression models employed herein cannot be directly interpreted in terms of the substantive impact of variables, post-estimation analyses were necessary. Incident rate ratio (IRR) analysis was used to determine the direct substantive effect of the primary independent variables on conflict severity. The results of these analyses can be found in Table 3.6. Across the seven model specifications, the three origins variables are found to have a positive and largely statistically significant (seven of ten instances) relationship with conflict severity. The aggregated *Origins Capacity* variable

increases battle deaths from twenty-six to forty-one percent among the significant measures, depending on the model construction. Figure 3.4 demonstrates the effect of *Origins Capacity* on conflict intensity across all five values of the variable. Support is found for Hypotheses 1 and 2, with mixed findings for Hypotheses 3 and 4. However, *Militarization's* effect on the dependent variables is larger than that of *mobilization* in only some of the models, revealing limited, conditional support for Hypotheses 3 and 4 contingent on model specification. Nonetheless, I find consistent and statistically significant coefficients on the individual origins variables in the expected direction. These findings lend additional support to Hypotheses 1 and 2, as the component pieces of *Origins Capacity* perform in an identical fashion as that of the additive measure. The relationships between the individual Militarization and Mobilization variables and conflict intensity are illustrated in Figures 3.5 and 3.6, respectively. Both variables exhibit a positive relationship with conflict intensity. An increase in the value of *Militarization* and *Mobilization* from one to two has a greater effect than that of moving from two to three for both variables.

Table 3.4. Origins and the Intensity of Civil Conflict using Time-Series Dataset

Negative Binomial Models

DV – Annual Battle Deaths	Model 3.10	Model 3.11	Model 3.12	Model 3.13
	Coeff (S.E.)	Coeff (S.E.)	Coeff (S.E.)	Coeff (S.E.)
Origins Capacity	0.34*** (.07)	0.26* (.10)	0.23** (.07)	0.16 (.10)
Militarization	x	x	x	x
Mobilization	x	x	x	x

(table continues)

DV – Annual Battle Deaths	Model 3.10	Model 3.11	Model 3.12	Model 3.13
	Coeff (S.E.)	Coeff (S.E.)	Coeff (S.E.)	Coeff (S.E.)
Conflict Duration	0.01*** (.00)	0.01*** (.00)	0.01*** (.00)	0.01*** (.00)
Ethnic Fractionalization	1.84*** (.36)	2.21*** (.41)	1.73*** (.40)	2.17*** (.46)
Religious Fractionalization	1.16*** (.32)	1.59*** (.36)	1.02** (.34)	1.46*** (.38)
Government Support	0.48*** (.08)	0.50*** (.10)	0.47*** (.07)	0.47*** (.10)
Rebel Support	0.08 (.08)	-0.05 (.09)	0.07 (.09)	-0.03 (.10)
Relative Rebel Strength	0.34** (.11)	0.13 (.13)	0.15 (.14)	-0.07 (.16)
Rebel Central Control	-1.17** (.34)	-1.34*** (.35)	-1.39** (.44)	-1.65*** (.44)
Rebel External Participants	0.22** (.07)	0.22** (.08)	0.24*** (.06)	0.26** (.08)
Rebel Troop Count	x	0.00** (.00)	x	0.00* (.00)
Rebel Mobilization Capacity	x	x	0.70*** (.17)	0.60** (.19)
Constant	3.44*** (.57)	3.40*** (.76)	3.06*** (.68)	3.18*** (.83)
Levels of significance	*** < .001	** < .01	* < .05	
TABLE 3.4 MODEL SUMMARY	N=339 LRChi2=169.98 Pr>Chi2=0.00 PseudoR2=.034 LogLike=-2429.5 Dispersion=mean	N=282 LRChi2=151.59 Pr>Chi2=0.00 PseudoR2=.036 LogLike=-2053.7 Dispersion=mean	N=319 LRChi2=190.18 Pr>Chi2=0.00 PseudoR2=.040 LogLike=-2275.1 Dispersion=mean	N=265 LRChi2=163.87 Pr>Chi2=0.00 PseudoR2=.041 LogLike=-1921.6 Dispersion=mean

Table 3.5. Origins and the Intensity of Civil Conflict using Time-Series Dataset

Ordinary Least Squares Model 3.14; Negative Binomial Models 3.15-3.17

DV – Annual Battle Deaths	Model 3.14 (OLS)	Model 3.15	Model 3.16	Model 3.17
	Coeff (S.E.)	Coeff (S.E.)	Coeff (S.E.)	Coeff (S.E.)
Origins Capacity	251.50** (77.04)	x	x	x
Militarization	x	0.24* (.11)	0.19 (.15)	0.32** (.10)
Mobilization	x	0.44*** (.10)	0.31* (.13)	0.12 (.12)
Conflict Duration	7.22** (2.42)	0.01*** (.00)	0.01*** (.00)	0.01*** (.00)
Ethnic Fractionalization	1242.04** (372.94)	1.79*** (.36)	2.15*** (.42)	1.76*** (.40)
Religious Fractionalization	434.37 (367.19)	1.23*** (.32)	1.61*** (.36)	0.95** (.35)
Government Support	189.80* (84.13)	0.49*** (.08)	0.50*** (.10)	0.46*** (.07)
Rebel Support	48.17 (85.64)	0.08 (.08)	-0.05 (.09)	0.08 (.09)
Relative Rebel Strength	245.72* (111.20)	0.36** (.11)	0.15 (.13)	0.11 (.14)
Rebel Central Control	-983.72** (373.57)	-1.19*** (.34)	-1.35*** (.35)	-1.39** (.44)
Rebel External Participants	99.88 (76.77)	0.23*** (.07)	0.23** (.08)	0.23*** (.06)
Rebel Troop Count	x	x	0.00** (.00)	x
Rebel Mobilization Capacity	x	x	x	0.78*** (.18)
Constant	-693.26 (665.29)	3.47*** (.56)	3.48*** (.77)	2.98*** (.68)
Levels of significance		*** < .001 ** < .01 * < .05		
TABLE 3.5 MODEL SUMMARY	N=339 F=7.48 Pr>F=0.00 R2=.170 Adj R2=.147 Root MSE=1305	N=339 LRChi2=171.61 Pr>Chi2=0.00 PseudoR2=.034 LgLike=-2428.7 Dispersion=mean	N=282 LRChi2=152.06 Pr>Chi2=0.00 PseudoR2=.036 LgLike=-2053.5 Dispersion=mean	N=319 LRChi2=191.50 Pr>Chi2=0.00 PseudoR2=.040 LgLike=-2274.4 Dispersion=mean

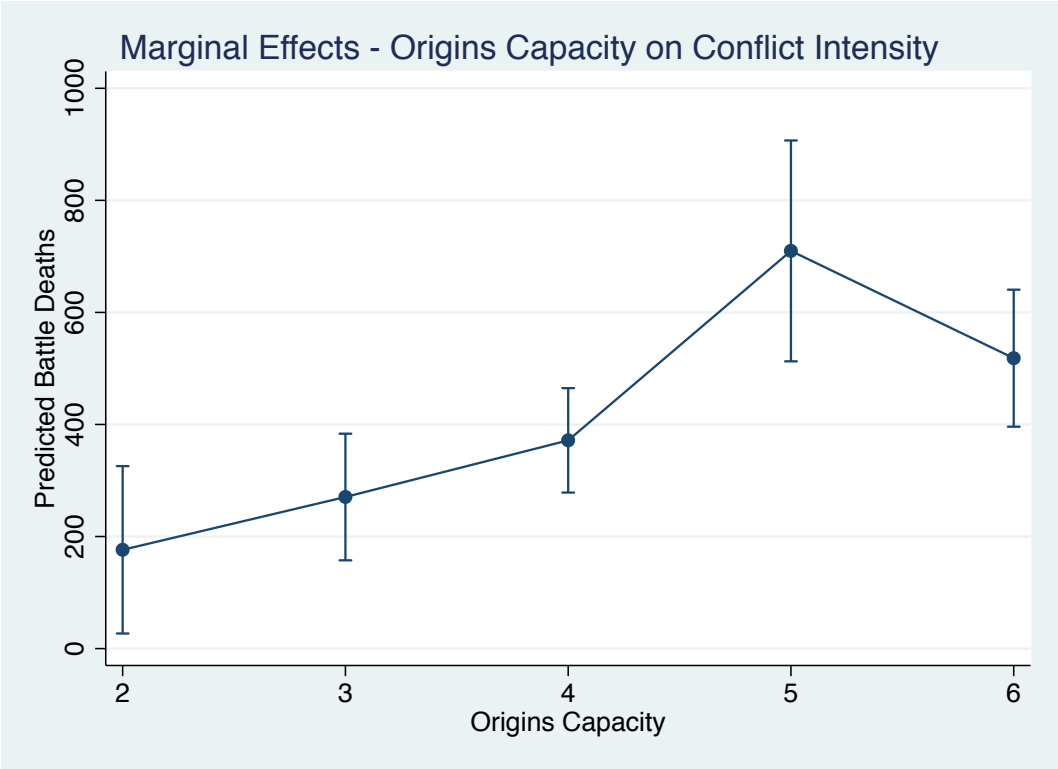
Table 3.6. Incident Rate Ratios for Conflict Intensity Models

Corresponds with Models 3.10-3.13; Models 15-17

	Model 3.10	Model 3.11	Model 3.12	Model 3.13	Model 3.15	Model 3.16	Model 3.17
	IRR (S.E.)	IRR (S.E.)	IRR (S.E.)	IRR (S.E.)	IRR (S.E.)	IRR (S.E.)	IRR (S.E.)
Origins Capacity	1.41*** (.10)	1.30* (.14)	1.26** (.09)	1.18 (.12)	x	x	x
Militarization	x	x	x	x	1.27* (.14)	1.21 (.18)	1.38** (.14)
Mobilization	x	x	x	x	1.55*** (.16)	1.37* (.18)	1.13 (.14)
Conflict Duration	1.01*** (.00)	1.01*** (.00)	1.01*** (.00)	1.01*** (.00)	1.01*** (.00)	1.01*** (.00)	1.01*** (.00)
Ethnic Fractionalization	6.30*** (2.25)	9.15*** (3.76)	5.66*** (2.24)	8.78*** (4.07)	5.96*** (2.14)	8.60*** (3.62)	5.83*** (2.32)
Religious Fractionalization	3.20*** (1.01)	4.90*** (1.75)	2.78** (.95)	4.31*** (1.62)	3.42*** (1.11)	5.00*** (1.80)	2.58** (.89)
Government Ext. Support	1.61*** (.12)	1.65*** (.17)	1.60*** (.12)	1.59*** (.16)	1.63*** (.12)	1.65*** (.17)	1.58*** (.12)
Rebel Ext. Support	1.09 (.09)	0.95 (.09)	1.07 (.09)	0.97 (.10)	1.08 (.09)	0.95 (.09)	1.08 (.09)
Relative Rebel Strength	1.41** (.16)	1.14 (.15)	1.16 (.16)	0.93 (.15)	1.43** (.16)	1.16 (.15)	1.12 (.16)
Rebel Central Control	0.31** (.11)	0.26*** (.09)	0.25** (.11)	0.19*** (.09)	0.30*** (.10)	0.26*** (.09)	0.25** (.11)
Rebel External Participants	1.24** (.08)	1.24** (.10)	1.27*** (.08)	1.29** (.10)	1.26*** (.08)	1.26** (.10)	1.26*** (.08)
Rebel Troop Count	x	1.00** (.00)	x	1.00* (.00)	x	1.00** (.00)	x
Rebel Mobilization Capacity	x		2.02*** (.34)	1.81** (.34)	x	x	2.19*** (.39)
Constant	31.18*** (17.64)	30.00** (22.85)	21.24*** (14.33)	24.05*** (20.00)	32.09*** (18.10)	32.38*** (24.84)	19.71*** (13.35)
	N=339	N=282	N=319	N=265	N=339	N=282	N=319

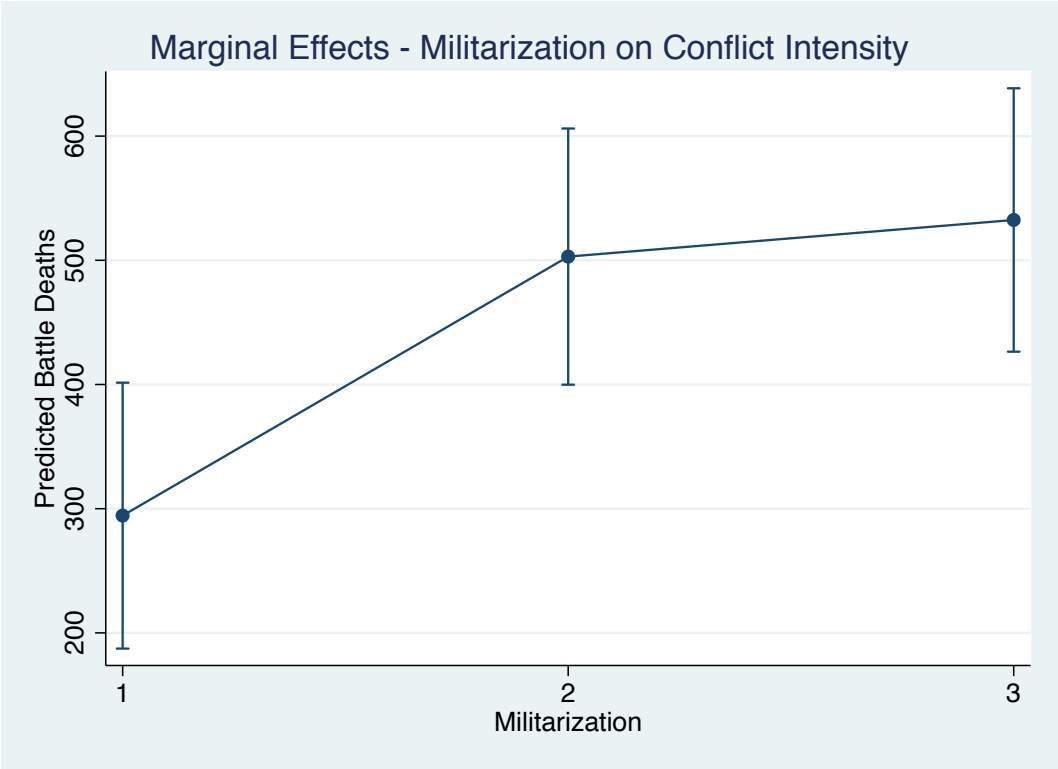
Levels of significance *** < .001 ** < .01 * < .05

Figure 3.4. Marginal Effects of *Origins Capacity* on Conflict Intensity



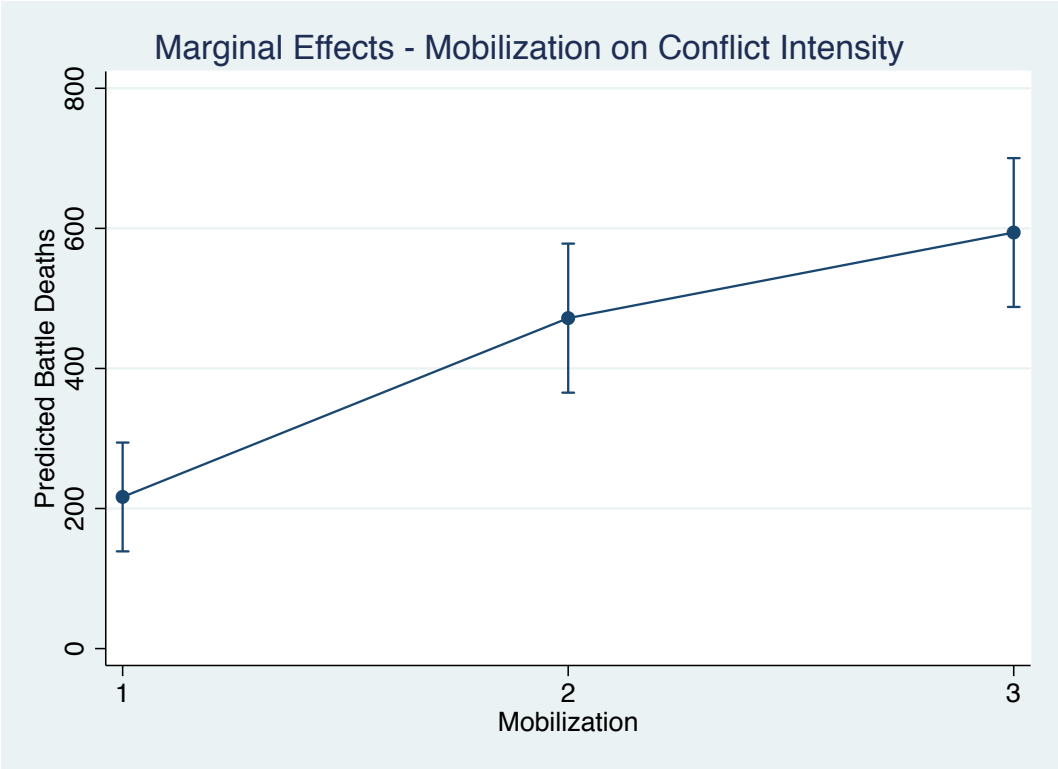
Corresponds with findings in Table 3.6 – Model 3.12

Figure 3.5. Marginal Effects of *Militarization* on Conflict Intensity



Corresponds with findings in Table 3.6 – Model 3.15

Figure 3.6. Marginal Effects of *Mobilization* on Conflict Intensity



Corresponds with findings in Table 3.6 – Model 3.15

An interaction term was also constructed using the *militarization* and *mobilization* variables to test for the potential interactive effect of the origins measures on the dependent variables. Across most model specifications, the coefficient for this variable was statistically insignificant. There were some cases in which the interaction term was significant, but the coefficient was signed in the opposite direction of theoretical expectations. This is likely due to the ordinal (and limited) distribution of the primary independent variables. While *militarization* and *mobilization* variables combine for nine potential combinations, the interactive term only takes on six total values (one, two, three, four, six, nine). I speculate that the narrow distribution limited the explanatory power of the interactive term, in particular for groups coded as low on either of the origins variables.

3.8 Conclusion

The origins of rebel groups have been demonstrated here to be a salient component among the factors that condition the duration and severity of civil wars. I have illustrated here that the precursor networks and organizations to rebel groups have an impact on their ability to sustain a conflict against a government and inflict casualties. It is a meaningful step in the study of civil war to find evidence to support the notion that the initial characteristics of rebel groups have an impact on aspects of subsequent civil wars. Further, those groups possessing substantial capacity at their genesis will be likely to maintain this strength once the conflict begins, exacting a toll in terms of the loss of human life and related externalities of prolonged conflict. This study thus identifies the need for scholars to focus greater attention on the processes through which insurgent organizations form and the nature of the precursor organizations they evolve from. The findings of this project also indicate that the policy community and civil conflict scholars should heed scholarship devoted to the types of organizations identified here as proto-groups. We see here that the forerunner organizations to rebel groups can tell us a great deal about the pathways ahead for them once engaged in conflict. With additional research building upon this work, it may be possible to identify the types of groups that will be likely to fight long and bloody conflicts. This critical information can be identified in the early stages of civil war by employing the rebel group origins framework studied in this paper. This analytical tool thus has potential to aid in efforts by the international community to bring peaceful resolution to ongoing and future civil conflicts.

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CHAPTER 4

REBEL GROUP ORIGINS AND GROUP CAPACITY DURING CIVIL CONFLICT

4.1 Introduction

The origins of rebel groups have been an understudied aspect of both rebel group organization and the broader dynamics of civil conflict. The process through which rebel groups form is multi-dimensional and varies greatly across groups – traditionally, civil conflict scholars have treated this aspect of rebel organization as a constant. In leaving this diversity unexplored, prior research has omitted a critical component of how and why rebel groups behave as they do. By closely examining the origins of insurgent groups, I aim to contribute to our understanding of rebel organization and its impact on the dynamics of civil wars. Furthermore, I attempt to broaden the explanatory power of the origins theory to account for rebel adaptation during conflict. The development of a more robust understanding of the drivers of rebel capacity during war is critical to the advancement of the broader body of scholarship on civil war, as this knowledge can aid efforts to resolve conflict between violent non-state actors through diplomatic avenues earlier in conflict.

The primary aim of this paper is to examine the relationship between rebel group capacity prior to and during conflict. Prior research on civil conflict has left much to be explained regarding the correlates of rebel groups' development (and maintenance) of military capability and popular support during conflict. In an attempt to address this understudied aspect of conflict research, I will examine the link between pre-war levels of rebel military and political capacity and the existence of these group characteristics during civil conflict. While battlefield developments and actions taken by the government (repression, counterinsurgency,

etc.) impact rebel wartime capacity, the origins of rebel groups may also exert a meaningful effect on rebel capability. In particular, I test hypotheses regarding the path dependence of rebel origins on levels of military capability and mobilization of popular support as conflict progresses. If rebel organizational development is in fact largely conditioned by group strength prior to conflict, this finding is a meaningful contribution to the understanding of the dynamics of armed non-state actors. Over the course of this chapter, I will address the following research questions:

- *What is the relationship between rebel origins and the development of group capacity during conflict?*
- *Which characteristics of rebel wartime capacity are linked with pre-conflict levels of rebel militarization and mobilization?*
- *What accounts for the deviant cases in which wartime capacity does not follow directly from group capacity prior to conflict?*
- *To what extent is rebel adaptation during conflict possible?*

To develop a more comprehensive account of the origins-wartime capacity link, I identify the set of cases within the rebel origins data that do not conform to the theoretical expectations outlined below. These "deviant" cases facilitate a close, detailed analysis of individual rebel groups to explore the conditions under which rebel origins exhibit path dependence (and to what degree), and those in which other explanatory variables better account for the development of wartime capacity. Are there particular independent variables that consistently exert an influence on wartime capacity across the deviant cases, or is there no

discernable pattern? To this point, which factors affect the development of the disaggregated militarization and mobilization components of rebel capacity during war?

I expect the quantitative analysis to reveal a robust, positive relationship between rebel origins and wartime militarization and mobilization. This intuition is rooted in the broad origins theory, in which I argue for a path dependent relationship between rebel origins and wartime capacity. I conduct analyses employing a range of dependent variables capturing different aspects of rebel military and political capacity during conflict, including measures for rebel fighting capacity, mobilization capacity, strength relative to the government, presence of a rebel political wing, and rebel arms procurement, among others. As these characteristics of rebel capacity are conceptualized as component pieces of the militarization and mobilization mechanisms, I posit that the corresponding origins attributes will exert a positive effect on each. In other words, I anticipate little quantitative evidence for the presence of rebel adaptation given the expected strength of the legacy effect of origins. As the qualitative analysis of deviant cases is inherently a theory-building enterprise, I refrain from offering explicit theoretical expectations for the individual cases here. However, I will briefly note that the nature of the conflict environment in Chad during the time period in question was one of extreme fragmentation among the armed groups challenging the government. The array of groups present over the course of any given dyad was likely dynamic, with groups entering and exiting the scene, particularly via mergers and splinters. Thus, I offer a conjecture that the deviant course of wartime capacity development for the MDJT and UFDD was rooted to some extent in the unsettled, dynamic set of conflict actors battling the Chadian government.

This paper examines the implications of rebel group origins using a multi-method approach. I conduct a quantitative analysis to test the relationship between rebel origins and intra-war capacity, supplemented by two case studies of Chadian rebel groups that further unpack the theoretical mechanism presented in this paper. While the large-n, quantitative analysis identifies the broad statistical relationships between the variables of interest, the resulting findings are given significantly more explanatory power when supplemented by in-depth analysis of carefully selected cases. To accomplish this, the qualitative analysis contained herein examines rebel origins theory through the lens of two rebel organizations in Chad – the Movement for Democracy and Justice in Chad (MDJT) and the Union of Forces for Democracy and Development (UFDD). I use the UFDD and MDJT to conduct an in-depth investigation of two deviant cases, exploring the mechanisms through which the development of these groups diverges from theoretical expectations. For example, in the case that origins theory would predict a low degree of popular support and a group instead develops a robust mobilization mechanism, how and why did this occur? Which factors were the primary drivers of mobilization in this case? Seeking the alternative processes though which groups foster wartime capacity aids in expanding the scope of origins theory, augmenting the breadth of cases for which it can provide an explanation. This qualitative analysis is also a component of a more ambitious theory-building effort focused on developing a theoretical framework of rebel adaptation. The deviant cases can be considered a population of rebel "adapters," representing cases in which rebel development did not proceed as expected. These cases involve groups developing robust wartime capacity when one would anticipate little, and conversely, organizations exhibiting weak intra-war capabilities after entering into conflict with significant

origins capacity. This paper can be considered a preliminary step in the construction of a comprehensive theory of adaptation. The two cases studies presented here will illuminate a small slice of the variance among the deviant groups in significant depth and will facilitate the future expansion of this theoretical framework. I hope to identify several of the key drivers of adaptation for the MDJT and UFDD and thus lay the groundwork for a more generalizable adaptation theory in subsequent research.

4.2 Goals of this Chapter

This paper attempts to accomplish several goals. First, and most broadly, this paper is an exploratory and theory-building exercise in the nascent research area of rebel group origins. The quantitative analyses contained herein produce a set of initial findings about the relationship between rebel origins and wartime capacity, and the subsequent case studies delve deeper into a pair of cases to reveal new avenues for future theoretical contributions in this research area. A set of simple cross-tabulations also advance efforts to expand upon existing theory by uncovering the distribution of cases across the data vis-à-vis the intersection of origins and wartime capacity variables. Second, I conduct preliminary statistical analyses to examine the extent to which rebel organizations adapt during conflict – how often do groups that are initially weak able to build capacity and become more viable? Conversely, to what extent have groups that possessed substantial initial endowments been unable to maintain their organizational capacity as conflict progresses? Finally, I identify several future directions of research from which scholars can pursue puzzles concerning rebel origins and adaptation during conflict.

4.3 Literature on Rebel Adaptation and Conflict Dynamics

While scholars have recently become deeply engaged with questions concerning the transition of resistance organizations from civil war combatants to political parties (Ishiyama 2016; Manning and Smith 2016; Sindre 2019), relatively little work has been devoted to the adaptation of rebel groups *during* conflict. Early work in this area found that wars in which combatants employ adaptation exhibit more intense violence (Findley 2008), while very recent research has examined the effect of participation in conventional political channels on rebel group behavior (Berti 2019). The rapidly growing body of literature devoted to rebel governance during civil war is one of the primary areas of research that tackles the question of rebel adaptation. Much of this work is concerned with the causes and implications of rebel governance, and generally treats governance provision as a matter of agency for rebel groups. As they can choose to provide services – or not – this is an aspect of rebel life that can and does change over time. Scholars have studied the impact of governance on rebel-regime negotiations (Heger and Jung 2017) and post-conflict democratization (Huang 2016), as well as service provision as driven by civilians and other actors in conflict settings (Mampilly 2011). Rebel governance is thus an avenue through which rebel groups can adapt to conditions on the ground during war and attempt to revise the status quo to their favor.

Another body of research that has addressed rebels making efforts to adapt is the work on rebel fragmentation. As will be discussed below in the case study section of this paper, the fragmentation of rebel factions can exert significant change upon not only rebel groups themselves but the broader dynamics of a conflict as well. Rebels opting to splinter from or ally with other rebel factions is perhaps the most instrumental action organizations can take to

meaningfully alter their status within a conflict. Within the fragmentation literature, Mosinger (2018) argues that rebel connections with civilian networks drives decisions to fragment, while Bakke, Cunningham, and Seymour (2012) posit that characteristics of the constituent factions within a movement determine the likelihood of fragmentation. Rebels also use alliances to bolster their forces and revise asymmetric balances of power vis-à-vis government forces. Gade et. al (2019) find that ideological similarity is the critical factor influencing rebel decisions to join forces with other organizations.

4.4 Toward a Theory of Rebel Origins and Adaptation

While this paper does not include a full theoretical account for the relationship between rebel origins and intra-war capacity, I offer a series of preliminary expectations for the forthcoming quantitative analyses. Building on prior work (Chapters 1 & 2), I argue that rebel origins exert a "sticky," or path dependent effect on the development of rebel military and civilian/political characteristics during conflict. In other words, characteristics of rebel groups upon their formation are deeply embedded, making meaningful organizational adaptation difficult. When conceptualizing rebel formation through the lens of military and civilian dimensions, groups that emerge from networks within these pre-existing categories are likely to effectively maintain and develop capacity in their origin characteristic. Table 4.1 below provides a simple illustration of the theoretical link between rebel origins and wartime group capacity presented in the subsequent section.

Table 4.1. Chapter 4 Theoretical Expectations

	Wartime Fighting Capacity	
Origins Militarization	Low	Medium/High
Low	Confirms theory	*"Deviant" cases*
Medium/High	*"Deviant" cases*	Confirms theory

The same pattern is expected for the relationship between Origins Mobilization and Intra-War Mobilization Capacity, the graphic representation would be identical to the table above.

4.4.1 The "Stickiness" of Rebel Origins

The origins of rebel groups are a central factor in the development of the organizations as conflict begins and progresses. I argue that origins have a "sticky" effect on the character of rebel groups due to the fundamentals behind the process of group formation. The essential characteristics of insurgent groups are defined in a basic and fundamental manner early in their lifespan, largely determined by the size and scope of the *proto-groups* upon which they were organized. I identify several analytical periods that shape the nature of rebel groups, as discussed above. Proto-groups may exist for a great deal of time prior to the formal declaration of the eventual rebel organization. Once a group comes into existence, it will exist for a period of time prior to the onset of conflict. This "incubation period" can range from a mere several days to several decades. Finally, a group's lifespan carries into the period of civil war, which will *usually* mark the termination of the existence of the rebel group, regardless of the outcome of the conflict[9]. I posit that the influence of group origins remains present across these periods.

[9] There are a few exceptions to this general trend. Some groups continue to exist as insurgent group following the formal cessation of conflict as defined by conventional definitions of civil war, fighting the state at lower levels of violence. Further, other groups may continue to exist as civilian/political organizations that continue to pursue the groups' political goals via conventional channels using existing political institutions. Victorious rebel groups, whether they are revolutionary or secessionist in nature, that emerge as rulers of a new rump state or existing state, would be classified as former rebel groups.

Rebel precursor proto-groups serve as the initial building block of the future civil war combatant. This proto-group (or groups in some cases) defines the universe of interactions that will serve as the experience from which the rebel group will draw. A political party proto-group will run campaigns, contest elections, represent citizens in a legislature, and pursue a range of policies defined by a party platform, among other responsibilities. When considering this background as a resume for a future insurgent organization, it is clear that a political party provides rebels with a very particular set of skills that is purely civilian in nature. This proto-group type should bring a wealth of experience in terms of mobilizing and recruiting civilians, building networks of like-minded individuals motivated by a common cause, and developing bureaucratic infrastructure with layers of accountability. Generally, this proto-group type should bring little to no military experience Conversely, a rebel group formed as merger of two existing insurgent organizations brings an equally particular set of characteristics to future insurgents. Access to weaponry, experience in conducting an insurgent campaign, rebel leadership, and the presence of an operational rebel force are among the attributes provided by a rebel merger proto-group. I would not expect this proto-group type to provide a civilian or political component to the eventual rebel force. The variation in rebel roots provided by proto-groups imparts different degrees of complexity, maturity, and sophistication in both military and civilian contexts.

4.4.2 Prospects for Rebel Group Adaptation

While rebel groups can (and in some cases, do) adapt during conflict, I argue that this process is an inherently difficult process for rebels to undertake. Here, I use the term

adaptation to describe rebel groups' attempts to both build upon extant organizational attributes as well as to develop those that were present to a minimal extent at their origin. I maintain that the decision to invest the organizational time and effort to adaptation is not an easy or straightforward choice for rebel leaders. While every eventual rebel group possesses at least a *minimal* degree of military capacity and popular support, diverting resources from existing strengths to building a more multi-dimensional organization carries risk. The uncertainty ascribed to this trade-off is perceived by rebel leaders as particularly acute during the early stages of conflict, when many groups are under extreme duress as they attempt to gain a foothold in the conflict. Thus, rebel leaders can pursue the easier, safer strategy of "doubling down" on existing organizational endowments by concentrating efforts and resources on the growth of said group characteristics. Faced with this decision calculus, insurgent leadership is more likely to place emphasis on the development of group structures that are familiar with development trajectories that are seen as more predictable. Thus, the "stickiness" of origins characteristics is a function of rebel decision-making and agency, a conscious set of choices by rebel leaders to rely upon existing organizational attributes with which they have expertise and a high degree of familiarity.

Reliance upon existing military or civilian attributes provides groups with advantages or impediments, depending on the stage of conflict, strength of regime forces, and development of the "other" origins attributes. In this vein, there are consequences to these development strategies. Groups that fail to adapt and develop civilian or military capacity beyond minimal levels will likely struggle to maintain an insurgency against a regime with a military advantage. In other words, the development of *both* militarization and mobilization mechanisms is

essential to rebels sustaining an insurgency that can be competitive with government forces over a protracted conflict. Groups that are highly developed on both origins mechanisms will be those most likely to stalemate the conflict to a point of relative parity, significantly increasing the odds of a rebel favorable outcome. However, groups that *both* inherit high levels of both origins variables *and* maintain this capacity over conflict are rare. I assume here that even those groups with substantial levels of militarization and mobilization have difficulty maintaining strength in both areas over conflicts, as losses inflicted by government forces deplete military and civilian capacity to a significant extent. The same obstacles that make adaptation extremely difficult for rebels thus make the *maintenance* of group strength challenging as well. In sum, while rebel adaption is possible, the broad dynamics of civil war produce a landscape that is not conducive to rebels having the latitude in terms of time and resources to do so. The asymmetric distribution of power and unforgiving conflict environment makes significant rebel adaptation unlikely, facilitating the path dependence of rebel origins over time. Tables 1 and 2 below illustrate the distribution of cases across values of the key origins variables and the most direct measures of these characteristics during war. Tables 4.2 and 4.3 are cross-tabulations of the origins militarization and intra-war rebel fighting capacity variables, while Tables 4.4 and 4.5 cross-tabulate the origins mobilization and intra-war rebel mobilization capacity measures.

Table 4.2. 3x3 Cross-Tabulation of Origins *Militarization* & Wartime *Rebel Fighting Capacity* Variables

	Wartime *Rebel Fighting Capacity*			
Origins Militarization	Low	Moderate	High	Total
Low	**38** *10.19%*	**4** *1.07%*	**0** *0%*	**42** *11.26%*
Medium	**100** *26.81%*	**54** *14.48%*	**0** *0%*	**154** *41.29%*
High	**97** *26.01%*	**62** *16.62%*	**18** *4.83%*	**177** *47.45%*
Total	**235** *63.00%*	**120** *32.17%*	**18** *4.83%*	**373** *100%*

Table 4.3. 2x2 Cross-Tabulation of Origins *Militarization* (Low/Moderate & High) & Wartime *Rebel Fighting Capacity* (Low/Moderate & High) Variables

	Wartime *Rebel Fighting Capacity*		
Origins Militarization	**Low**	**Moderate/High**	Total
Low	**38** *10.19%*	**4** *1.07%*	**42** *11.26%*
Medium/High	**197** *52.82%*	**134** *35.92%*	**331** *88.74%*
Total	**235** *63.00%*	**138** *37.00%*	**373** *100%*

Table 4.4. 3x3 Cross-Tabulation of Origins *Mobilization* & Wartime *Mobilization Capacity* Variables

	Wartime *Mobilization Capacity*		
Origins Mobilization	Low	Medium/High	Total
Low	**29** *7.80%*	**13** *3.49%*	**42** *11.29%*
Medium	**114** *30.65%*	**26** *6.99%*	**140** *37.63%*
High	**83** *22.31%*	**107** *28.76%*	**190** *51.08%*
Total	**226** *60.75%*	**146** *39.25%*	**372** *100%*

Table 4.5. 2x2 Cross-Tabulation of Origins *Mobilization* (Low/Med & High) & Wartime *Mobilization Capacity* Variables

	Wartime *Mobilization Capacity*		
Origins Mobilization	Low	Medium/High	Total
Low	**29** *7.80%*	**13** *3.49%*	**42** *11.29%*
Medium/High	**197** *52.96%*	**133** *35.75%*	**330** *88.71%*
Total	**226** *60.75%*	**146** *39.25%*	**372** *100%*

4.5 The Distribution of Cases – Rebel Origins and Wartime Capacity

Tables 4.1 through 4.4 present cross-tabulations of the distribution of cases between Origins Militarization/Mobilization and the measures of wartime capacity. To provide a contextual background for the forthcoming regression analyses, I discuss the distribution of cases here. When looking at wartime military capacity, the most direct measure of this concept is the NSA variable *Rebel Fighting Capacity.* Further, this variable most closely approximates the Origins *Militarization* measure. For the quantitative analyses, the *Rebel Fighting Capacity* variable is coded as an ordinal variable ranging from one to three representing low, moderate, and high values. For the purpose of the regression analyses, The *Rebel Mobilization Capacity* variable is re-coded from its original three-point range of values to a dichotomous measure representing either "Low" or "Medium/High" levels of mobilization. This re-coding was done as only around 1% of the cases fall into the "High" category. The *Rebel Fighting Capacity* variable was included in the regression analyses as a three-point ordinal variable but was also collapsed into "Low" and "Medium/High" values. This was done by collapsing the "Medium" and "High" values into one for both the Origins *Militarization* and *Mobilization* and the *Rebel Fighting*

Capacity and *Rebel Mobilization Capacity* variables. Using these dichotomous measures, I create a two-by-two typology in Table 4.2 for the key independent and dependent variables of interest. This was done for the purpose of identifying "deviant" cases and theory building.

For the Origins *Militarization* and wartime *Rebel Fighting Capacity* link, a significant portion of the cases can be considered "deviant" by falling into quadrants of the typology inconsistent with theoretical expectations. The preliminary theory outlined above would predict that cases are most likely to fall into the "Low-Low" and "High-High" categories in the upper left and lower right quadrants of the typology. The origins theory puts forth the argument that groups with low levels of origins attributes are unlikely to develop significant militarization or mobilization capacity during war, so should have "Low" levels of intra-war capacity. By this same logic, the inverse should be true for groups with high levels of origins militarization and mobilization. Table 4.2 illustrates the distribution of cases in the data for the link between origins *Militarization* and wartime *Rebel Fighting Capacity*. Of the 373 cases that contain values for both variables, 46.11% of the cases fall into the expected quadrants – 10.19% fall in the "Low-Low" category and 35.92% in the "High-High" quadrant. The quadrant with the highest number of cases is where "Medium/High" origins *Militarization* and "Low" wartime *Rebel Fighting Capacity* meet, which contains 52.82% of the cases. Just over 1%, the remaining cases, fall into the "Low" origins *Militarization* and "Medium/High" wartime *Rebel Fighting Capacity* quadrant. Taken together, these distributions reveal several meaningful patterns in the data. First, the majority of the cases do not conform to theoretical expectations, as over half of the cases involve strong groups becoming weak over the course of war. This group accounts for nearly all of the deviant cases. Second, a large portion of cases (just over a third) is

theory confirming and involve strong groups maintaining strength as war occurs. It is important to note here that the distribution of cases across the quadrants is somewhat a function of the overall breakdown across the types. For the origins *Militarization,* nearly 89% of cases have the "Medium/High" value and 63% of the wartime *Rebel Fighting Capacity* cases are coded as "Low." So prior to even considering the intersection of cases across these two variables, it would seem plausible to expect a good number of cases to fall into the quadrant of "Medium/High" origins and "Low" wartime militarization. Nonetheless, the above summary statistics raise the following question – why do so many cases not meet theoretical expectations? More specifically, *why do so many groups have strong levels of militarization prior to conflict yet exhibit weak fighting capacity during war?* These questions are among a broader set of exploratory theoretical inquiries that are raised over the course of this chapter.

A very similar set of findings resulted from the cross-tabulation of the origins and wartime mobilization variables. The theory-confirming quadrants accounted for a total of 43.55% of the 372 cases in the data, with 35.75% falling in the bottom right quadrant representing high values for both variables. As with the militarization variables above, just fewer than 53% of the cases involve "Medium/High" initial capacity and "Low" mobilization during war. The overall breakdown of the data is also very comparable to that of the militarization variables. Nearly 89% of the origins *Mobilization* are coded as "Medium/High," while nearly 61% of the wartime *Mobilization Capacity* variables are coded as "Low." So the central question concerning the dispersal of mobilization cases is identical to that posed for militarization – *why do so many groups have strong levels of mobilization prior to conflict yet exhibit weak mobilization capacity during war?*

A series of additional cross-tabulations are conducted to examine the crossover in distribution of cases between the origins variables and other measures of wartime capacity included in the regression analyses. These variables include *Rebel Arms Procurement, Rebel Territorial Control, Rebel External Support, Rebel Non-State Actor Support, Rebel Troops Abroad, Relative Rebel Strength, and Rebel Political Wing.* The full cross-tabulation tables for each of these variables can be found in the Appendix C,[10] but a will give a brief synopsis of the findings produced by these cross-tabulations. As not all of the cross-tabs involve variables with an equal range of values (there are several 2x3 tables, for example), not all allow for a direct comparison using pairs diagonal quadrants representing cases that do/do not support the theory. The quadrants that pair extreme values of both variables (High-High, Low-Low, High-Low, Low-High) are the most informative in these cases.

For *Rebel Arms Procurement*, roughly 20% of cases confirm the origins theory while around 25% run counter to expectations. The percentage of cases that fall into the extreme value quadrants providing evidence for and against the theory are as follows: *Rebel Territorial Control* (27%, 31%), *Rebel External Support* (30%, 26%), *Rebel Non-State Actor Support* (20%, 25%), *Rebel Troops Abroad* (27%, 22%), *Relative Rebel Strength* (6%, 15%), *Rebel Political Wing* (35%, 29%). It should be noted that many cases and a great deal of the interaction between origins and these outcomes lie in the middle values. These extreme cases are provided here to sketch a simple illustration of where origins theory functions particularly well and where it performs poorly. The most noteworthy pattern from these cross-tabulations is the consistency

[10] As the Non-State Actor militarization and mobilization variables are considered the critical wartime capacity measures, they are displayed within the text. The additional NSA variables are of lesser theoretical and methodological salience to this chapter, so are presented in the Chapter 4 Appendix.

of a pattern seen with the primary wartime capacity variables above – the high number of cases in which rebel origins predict strength, yet low values of wartime capacity result. I must acknowledge that some degree of this pattern could be due to the construction of the rebel origins coding scheme. It is possible that the scheme results in a systematic overestimation of the values of the *Militarization* and *Mobilization*. In other words, it may be the case that the threshold for receiving a coded value of "Medium" or "High" is too low, allowing groups to be consistently receiving inflated codes. On the other hand, the unexpected "under-performance" of these groups may also be a function of the toll that war takes on groups as hostilities escalate. As the intensity of war increases, even early in conflict, the weaker (typically) rebel group will often take significant losses. As the Non-State Actor Dataset gathers and codes data on rebel capacity at an unspecified point in time that varies across groups, it is plausible that many groups had already suffered losses in capacity prior to the point that the NSA snapshot was taken. Finally, as the rebel origins and NSA variables for military and mobilization capacity are not coded using the same criteria, we cannot expect that the two sets of variables should co-vary consistently across cases with different coding criteria. It may be the case that the two sets of variables are coding group attributes that are different enough to expect them to take different ranges of values. These data patterns reveal ample opportunity to further explore the causal links between pre-war and wartime capacity and to expand upon the preliminary theory presented in this paper.

4.6 Explaining the "Deviant" Cases

Based upon the cross-tabulations above, it is clear that the group of cases that were

considered theoretically "deviant" is in fact the modal category. In other words, the notion of path dependency does not play out as expected in terms of the correlational link between origins and wartime capacity. In terms of *Militarization*, the typology quadrant with a majority of the cases involves groups with medium/high origins capacity but end up with low wartime capacity. Regarding *Mobilization,* the same pattern holds – over fifty percent of cases enter into conflict with medium or high mobilization, yet only maintain a low mobilization capacity during war. In sum, it would appear that the aforementioned category of groups enters into conflict with military and political/civilian strength, then essentially underachieve and squander its initial capacity as conflict progresses. In attempting to account for this unexpected balance of cases, I turn to explanatory variables outside of those considered by previous analyses in the dissertation project. In doing so, I offer several hypotheses in an attempt to account for the underperformance of the rebel groups in the modal category. These hypotheses are couched within the theoretical concept of adaptation, building upon and refining the theoretical discussion earlier in this chapter. Here I conceptualize rebel group adaptation as the degree to which a group's militarization or mobilization capacity changes from the groups' origin through the period of conflict. In this sense, adaptation represents both positive and negative changes in groups' attributes over time. Not only do groups adapt in order enhance its prospects during conflict, but also can experience regression in its militarization and mobilization characteristics as they suffer losses on the battlefield or defections. The forthcoming theoretical expectations are in part built upon the findings uncovered in the qualitative analyses presented later in this chapter.

Specifically, I argue here that rebel leadership, rebel group fractionalization, and rebel territorial control are prominent causal factors in the development or regression of group capacity. In the case studies below on the Chadian rebel groups UFDD and MDJT, rebel leadership and group fractionalization were shown to have meaningful effects on the process of group adaptation. I posit that rebel leadership is a salient factor in rebel groups either outperforming or underachieving what could be expected of them given their origins characteristics. Leadership with a significant skill set and experience, particularly in the political civilian realm, can help groups to overcome deficiencies in this area via recruitment of rank-and-file members and non-rebel elites. Conversely, ineffective leadership that results in poor decision-making and strategy can easily squander initial origins endowments by handicapping group cohesion and recruitment. Fractionalization can have a particularly debilitating impact upon insurgent group militarization. I consider fractionalization to encompass several dimensions. On the extreme end of the spectrum, this term can represent the loss of significant group factions via defection. A lesser, but still impactful, form of fractionalization involves incoherence within the organization due to divergent viewpoints on strategy, splits between extreme and moderate factions, or divided loyalties within rank-and-file members between leadership. Finally, rebel control of territory (or lack thereof) should be associated with rebel capacity development vis-à-vis their initial endowments. In cases where rebels control significant territory, they will have the potential to recruit civilians for both military and political purposes, have access to local resources, and have controlled areas from which military operations can be conducted. These benefits can play a critical role in advancing the fortunes of groups, particularly those that began conflict with meager origins characteristics. Guerrilla and

other non-conventional tactics can allow weaker groups to gain territory while limiting exposure to stronger regime forces, which can be an incremental process that yields substantial payoff for rebels over time. Rebels that either never possessed or lost territory during conflict can experience the inverse of the aforementioned process, with a resultant deterioration of resources and access. In these cases, the loss of territory would theoretically have a negative impact on rebel group capacity during war. Three hypotheses derived from this discussion are presented below.

4.7 Hypotheses

H1 – Rebel leadership strength has a positive relationship with rebel group adaptation (Mobilization).

H2 – Group fractionalization has a positive relationship with rebel group adaptation (Militarization).

H3 – Rebel territorial control has a positive relationship with rebel group adaptation, both Militarization and Mobilization.

4.8 Research Design

I conduct a series of quantitative analyses to explore the relationship between rebel origins and capacity during conflict. In particular, my goal is to analyze the degree to which origins variables account for the variation in different aspects of intra-conflict rebel capacity. To operationalize the range of attributes possessed by rebels during civil war, I use the Non-State Actor Dataset (hereafter NSA) (Cunningham, Gleditsch, and Salehyan 2013). These variables

include *Relative Rebel Strength, Mobilization Capacity, Arms Procurement, Territorial Control, Rebel Political Wing, External Rebel Support, External Government Support, Rebel Troop Count, Rebel Fighting Capacity, Rebel Non-State Actor Support,* and *Rebel Troops Abroad.* The Non-State Actor Dataset is a dyadic, cross-sectional database that captures military and political organizational characteristics of rebel groups that fought as civil war combatants. The NSA population of cases is drawn from the UCDP Armed Conflict Dataset (Gleditsch et al. 2002) and covers the time frame of 1946-2010. In addition to the variables listed above, the NSA includes additional measures of rebel and government characteristics and data concerning the onset and termination of the conflicts in which the rebels took part. The aforementioned measures are utilized here as dependent variables. Based on the binary nature of the dependent variables, Models 4.2, 4.4, and 4.8 employ logistic regression. The remainder of the models involve ordinal dependent variables, so ordered logistic regression are used in those cases. The control variables included in the analyses are *Rebel Group Age* (group age in months at onset)*, Ethnic Fractionalization, Religious Fractionalization, Terror Attacks* (whether or not terror attack occurred in that year)*,* and *Previously Active Dyad.* This set of measures was chosen as it captures a range of intra-conflict factors that exert an influence on the dependent variables of interest. These controls are largely confined to aspects of the rebel groups themselves and the interaction between the state and the rebels. In sum, the model specifications were constructed to best capture the set of covariates that affect the development of rebel military and political capacity during the course of conflict. Table 6 provides basic summary statistics and the data sources for each of the variables included in the regression models.

Table 4.6. Variables Included in Chapter 4 Quantitative Analyses

Dependent Variables	Mean	Std. Dev.	Range	Source
Rebel Fighting Capacity	1.42	0.58	1 – 3	NSA Dataset (2013)
Rebel Mobilization	1.39	0.49	1 – 2	NSA Dataset (2013)
Relative Rebel Strength	-1.18	0.71	-2 – 1	NSA Dataset (2013)
Rebel Arms Procurement	1.31	0.48	1 – 3	NSA Dataset (2013)
Rebel Political Wing	0.63	0.91	0 – 2	NSA Dataset (2013)
Rebel Territorial Control	0.34	0.47	0 – 1	NSA Dataset (2013)
Rebel Troop Count	11703.92	22224.23	100 – 194000	NSA Dataset (2013)
External Rebel Support	0.79	0.91	0 – 2	NSA Dataset (2013)
Rebel Non-State Actor Support	0.82	1.17	0 – 3	NSA Dataset (2013)
Rebel Troops Abroad	0.68	0.85	0 – 2	NSA Dataset (2013)
External Govt Support	1.25	0.96	0 – 2	NSA Dataset (2013)
Key Independent Variables	**Mean**	**Std. Dev.**	**Range**	**Data Source**
Origins *Militarization*	2.36	0.67	1 – 3	Coded by author
Origins *Mobilization*	2.41	0.69	1 – 3	Coded by author
Control Variables	**Mean**	**Std. Dev.**	**Range**	**Data Source**
Terror Attacks (annual)	0.36	0.48	0 – 1	Hendrix & Young (2014)
Ethnic Fractionalization	0.61	0.22	0 – 0.93	Alesina et al. (2003)
Religious Fractionalization	0.40	0.22	0.002 – 0.79	Alesina et al. (2003)
Previously Active Dyad	0.32	0.47	0 – 1	NSA Dataset (2013)
Rebel Group Age (in months)	28.98	33.17	0.3 – 188.9	Coded by author

4.9 Findings and Discussion

The quantitative analyses reveal a strong and consistent positive relationship between militarization and mobilization and indicators of intra-war rebel capacity. The results for the analyses are presented in Tables 4.7 and 4.8 below. With the exception of Model 4.4 (DV – external government support), the militarization and mobilization variables were expected to exhibit a positive effect on the dependent variables across all model specifications. For all ten model specifications, either one or both (occurred for Models 4.8 through 4.10) of the coefficients for origins variables are in the expected direction and are statistically significant. Several models are of particular importance as they most directly test the link between pre-war and intra-war militarization and mobilization. Models 4.2 and 4.9 analyze the correlates of *Mobilization Capacity* and *Rebel Fighting Capacity*, respectively. Origins *Mobilization* exerts a positive effect on intra-war *Mobilization Capacity,* while origins *Militarization* has a positive relationship with intra-war *Rebel Fighting Capacity.* Both of these coefficients are statistically significant at the highest conventional level. As mentioned above, the origins variables perform well across the remaining models, with all coefficients statistically significant at the highest level. Origins *Militarization* and *Mobilization* have a joint positive and significant effect on wartime *Rebel Troop Count, Rebel Fighting Capacity, and Rebel Non-State Actor Support.* These findings indicate a strong relationship between both origins characteristics and the two most concrete and direct operationalizations of wartime military capacity. These results are noteworthy, illustrating the development of rebel fighting capacity as a function of the broader rebel organization. In other words, having popular support and an advanced civilian infrastructure facilitates a group's military operations. Additionally, both origins variables

positively affect a group's likelihood of attracting support from transnational non-state actors. This is an important finding as it strikes a contrast with the relationship between the origins measures and rebels receiving external support from foreign *governments.* Whereas the *External Rebel Support* variable is only affected positively (and significantly) by *Mobilization,* support from foreign non-state actors is related to both origins variables. These results illustrate a complex dynamic between rebel origins and external support, revealing great potential for adding to our understanding of how and why external actors intervene in civil wars. Taken together, these robust findings indicate a strong and consistent relationship between rebel origins and capacity during war. Furthermore, the origins variable that is expected to exhibit the strongest relationship with the capacity dependent variable does so in every case. This analysis provides meaningful evidence that rebel origins are in fact "sticky," exerting a path dependent effect on the development of rebel military and political mechanisms during civil war. The consistency of the effect of the origins variables upon the measures of intra-war rebel capacity is an encouraging sign for the subsequent analyses in the next iteration of this project.

While the general picture of the quantitative analyses is that of broad support for a consistent and path dependent relationship between origins and wartime capacity, a deeper look reveals interesting nuance within the findings. There are a number of models in which origins *Militarization* and *Mobilization* jointly exhibit a positive and statistically significant effect upon the wartime capacity dependent variable in question. However, there are other model specifications where one of the variables is not only insignificant but also has a negative relationship with the wartime capacity variable. In most of these cases, the negative

relationship runs counter to theoretical expectations. It is worth noting that these counterintuitive coefficients are *all* statistically insignificant, but reveal variation in the effect of origins characteristics on wartime capacity nonetheless. For example, origins *Mobilization* has a positive and highly significant effect on rebel *Territorial Control*, while the coefficient for *Militarization* is negative and insignificant. *Territorial Control* is a wartime variable that I expect both origins variables to have a positive effect upon, particularly *Militarization.* In order to control territory, a rebel group needs to be able to acquire and hold areas initially under government control. I would argue that military capacity is, first and foremost, a requisite condition to achieve this goal. Popular support and political networks should aid in controlling territory (and the results support this notion), but I would expect military capacity to be a necessary condition for gaining and holding territory. Thus, this result is quite puzzling and warrants more in-depth analysis.

Several of the other models with mixed results for the origins variables, while more intuitive than the above case, and still warrant discussion. Model 4.5 looks at the correlates of the development of a *Rebel Political Wing. Mobilization* is positive and significant, with *Militarization* having the opposite effect and an insignificant coefficient. As I expect the development of a political wing to be a largely civilian or political process, it is unsurprising to see *Militarization* exhibit a negative effect as efforts to build a fighting force may come at the expense of investments in political aspects of an organization. Another interesting result comes from Model 4.6, with *Mobilization* and *Militarization* exhibiting positive (significant) and negative (insignificant) relationships with *External Rebel Support.* The direction of the coefficients in this model also fit with plausible conflict narratives – groups with a high degree

of popular support based on an ideological or identity-based dimension (ethnicity, religion) could appeal to cross-border benefactors. On the other hand, those groups that have significant military capacity may be less likely to draw outside support relative to weaker groups that make efforts to solicit outside support. The final noteworthy model specification is Model 4.7, which examines the likelihood of governments receiving external support. The analysis reveals that governments in conflict with groups of greater origins capacity are *less* likely to receive external support. The negative relationship holds for both origins variables, though *Militarization* has an insignificant coefficient. This may be the most curious of the origins-wartime capacity findings, as the expectation would be for governments to receive *more* external assistance when facing strong insurgencies. The aforementioned models reveal a strong, positive link between origins and group capacity with a series of puzzling nuances that provide several avenues for follow-up analysis.

Finally, the performance of several of the control variables merits discussion. *Rebel Group Age* exhibits a negative relationship with wartime capacity measures across all specifications, counter to expectations. I anticipated that older groups, with more time to build capacity, would place groups in a position to succeed relative to younger organizations. Societal divisions are also found to play a role in the development of group capacity. *Ethnic Fractionalization* has a positive influence on capacity across a majority of the models, while *Religious Fractionalization* has a mixed record of both positive and negative effects depending on specification. The variable *Terror Attacks* has an inconsistent effect across model specifications, both in terms of significance and direction. In a majority of the models however, the occurrence of terror has a negative and significant effect on rebel capacity. Finally, I include

a control for whether a conflict dyad has experienced a prior episode. This variable suppresses the development of wartime capacity across most models. This indicates that a rebel group fighting a government is *weaker* if it re-engages the regime subsequent conflict episodes. The series of explanatory variables outlined above makes clear that a series of causal factors in addition to origins *Militarization and Mobilization* play a role in conditioning the likelihood of rebel wartime capacity development.

The broader implications of the empirical analyses of this chapter merit discussion. The consistency of the findings concerning the relationship between *Militarization* and *Mobilization* and their respective counterpart variables in the Non-State Actor Data reveals the potential of not only this chapter but the two prior chapters as well. The strength and robustness of the association between origins and wartime capacity has a bearing on the Chapter 3 analysis of origins and conflict duration and intensity. The linkage between these sets of variables is of utility to Chapters 2 and 3 as it brings a great deal of explanatory power to bear on the future theoretical development of those arguments. In other words, the empirical associations identified here illustrate that measures of rebel territorial control, political wings, fighting capacity, external or non-state actor support, etc. are all relevant to the prior chapters due to their relationships with rebel origins. These findings have revealed a great deal about the conflict phenomena that rebel origins have an effect upon – this in itself is a salient contribution. Yet the influence of these findings upon the development and refinement of the prior chapters may be of even greater value.

Table 4.7. Origins and Group Wartime Capacity

	Model 4.1 Ordered Logistic	Model 4.2 Logistic	Model 4.3 Ordered Logistic	Model 4.4 Logistic	Model 4.5 Ordered Logistic	Model 4.6 Ordered Logistic
Dependent Variable	*Rel. Rebel Strength*	*Mobilization Capacity*	*Arms Procurem*	*Territorial Control*	*Rebel Polit Wing*	*Ext Rebel Support*
	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)
Militariz	0.86*** (.16)	0.30 (.19)	2.43*** (.37)	-0.01 (.20)	-0.33 (.20)	-0.02 (.18)
Mobiliz	0.18 (.17)	0.92*** (.20)	0.11 (.30)	1.46*** (.26)	1.36*** (.24)	0.57** (.19)
Rebel Group Age	-0.01** (.00)	-0.01* (.00)	-0.10*** (.02)	-0.02** (.01)	-0.01 (.00)	-0.02*** (.01)
Ethnic Fractionaliz	2.52*** (.53)	-0.44 (.60)	5.84*** (1.05)	4.50*** (.78)	-2.08** (.62)	3.48*** (.64)
Religious Fractionaliz	0.45 (.53)	-0.47 (.61)	1.20 (.95)	-1.51* (.65)	-1.49* (.62)	-2.58*** (.62)
Terror Attacks	-0.97*** (.23)	-0.69** (.25)	1.46** (.42)	-1.52*** (.29)	-0.89** (.26)	-1.61*** (.27)
Previously Active Dyad	-0.51* (.25)	-0.59* (.28)	-2.06*** (.50)	-0.03 (.31)	-0.26 (.29)	-0.34 (.27)
Constant	x	-2.30 (.80)	x	-5.64 (1.00)	x	x
Levels of significance		*** < .001 ** < .01 * < .05				
TABLE 4.7 MODEL SUMMARY	N= 388 LRChi2= 96.63 Pr>Chi2= 0.00 PseudR2= .12 LogLike= -357.6	N= 363 LRChi2= 51.28 Pr>Chi2= 0.00 PseudR2= .11 LogLike= -217.7	N= 353 LRChi2= 247.33 Pr>Chi2= 0.00 PseudR2= .54 LogLike= -107.4	N= 386 LRChi2= 108.13 Pr>Chi2= 0.00 PseudR2= .22 LogLike= -193.2	N= 386 LRChi2= 76.34 Pr>Chi2= 0.00 PseudR2= .13 LogLike= -246.1	N= 360 LRChi2= 95.98 Pr>Chi2= 0.00 PseudR2= .14 LogLike= -297.9

Table 4.8. Origins and Group Wartime Capacity

	Model 4.7 Ordered Logistic	Model 4.8 Negative Binomial	Model 4. 9 Ordered Logistic	Model 4.10 Ordered Logistic	Model 4.11 Ordered Logistic
Dependent Variable	*External Govt Support*	*Rebel Troop Count*	*Rebel Fighting Capacity*	*Rebel NSA Support*	*Rebel Troops Abroad*
	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)
Militarization	-0.29 (.17)	0.51*** (.09)	1.30*** (.23)	0.94*** (.20)	0.40* (.17)
Mobilization	-0.55** (.18)	0.81*** (.10)	0.66** (.24)	0.48* (.19)	0.15 (.18)
Rebel Group Age	-0.01 (.00)	-0.01* (.00)	-0.02** (.01)	-0.01 (.00)	-0.01 (.00)
Ethnic Fractionaliz	-0.91 (.54)	0.70* (.33)	7.69*** (.96)	-0.78 (.58)	0.72 (.52)
Religious Fractionaliz	0.19 (.57)	1.58*** (.36)	-0.79 (.68)	1.62** (.59)	1.20* (.57)
Terror Attacks	0.08 (.24)	-1.35*** (.13)	0.25 (.28)	0.89*** (.25)	-0.35 (.24)
Previously Active Dyad	-0.22 (.26)	-0.59*** (.17)	-2.02*** (.37)	-1.09*** (.29)	0.58* (.25)
Constant	x	5.49 (.43)	x	x	x
TABLE 4.8 MODEL SUMMARY	N=360 LRChi2=21.63 Pr>Chi2=0.00 PseudR2=0.04 LogLike= -254.52	N=326 LRChi2=208.22 Pr>Chi2=0.00 PseudoR2=0.03 LogLike= -3233.96 Dispersion= mean	N=364 LRChi2=191.75 Pr>Chi2=0.00 PseudR2=0.33 LogLike= -197.17	N=355 LRChi2=74.93 Pr>Chi2=0.00 PseudR2=0.10 LogLike= -321.44	N=351 LRChi2=28.01 Pr>Chi2=0.00 PseudR2=0.04 LogLike= -330.71

Levels of significance *** < .001 ** < .01 * < .05

4.10 Case Studies of Rebel Origins and Wartime Group Capacity

This section examines the process by which rebel origins influence the development of group capacity during conflict. I do so with a qualitative analysis of two cases in the Chadian civil conflict between 1999-2007. The case study analysis presented below allows for a detailed

examination of the sequence of events that occurs during conflict that influence rebel groups' ability to maintain and develop military and civilian capacity. This diverse set of intervening factors includes a range of conflict actors, battlefield events, external intervention, and government counterinsurgency efforts, among others. Looking closely at a small set of cases allows for a close analysis of the sequence of events that link rebel origins to wartime capacity, and serves as a counterpart to supplement the large-n quantitative presented above. This process also facilitates the discovery of new theoretical contributions regarding the role of rebel origins in wartime capacity development. By exploring the conflict processes of groups that do not meet theoretical predictions, new causal mechanisms can be uncovered that can expand the explanatory power of origins theory and diversify the range of cases it sufficiently account for. The case studies below are therefore an attempt to increase the generalizability of the origins theory with the ultimate goal of making the theory applicable to all rebel groups across space and time. In doing so, a theory of rebel origins would also be a theory of adaptation, which would be a substantial contribution to the understanding of rebel groups and the broad dynamics of civil war. By identifying the conditions under which the effect of rebel origins is path dependent and those where adaptation is more likely, a theory of rebel origins can be an incredibly powerful tool for explaining how and why civil wars progress as they do.

The selection of cases was based upon several criteria in an effort to design a qualitative analysis that most effectively isolates the relationship between origins and intra-war capacity while holding as many intervening factors constant as possible. First, I searched for deviant cases that did not conform to the expectations of the origins theory. The selection of deviant cases facilitates a strict "tough" test of rebel origins theory as it requires an explanation of how

and why particular rebel group cases did *not* develop military and political capacity during war as anticipated. The cases included here are considered to have deviated from theoretical expectations as one group "over-performed" while the other "underperformed" their development of military and civilian capacity during conflict versus what would be expected based on their origins. This was largely accomplished by examining the duration and intensity of the conflicts these groups took part in. Second, I attempted to maximize the degree to which the two cases were subjected to a controlled comparison.[11] In doing so, I selected two cases from the same state (Chad), the same government/regime (Presidency of Idriss Deby was constant across and between both conflict dyads), and roughly the same time period (three years between two dyads, eight years total duration from onset of first dyad to termination of second dyad).[12] While the ideal set of conditions would involve two rebel groups engaging the same regime *at the same time*, I argue that meeting the above control conditions is sufficient given the available population of cases.

[11] The rebel group cases examined in the qualitative analysis were not drawn from the population of all rebel groups across time. The groups were selected from a global subset of all rebel groups that engaged in civil conflict, as defined by UCDP, between 1992-2014. This population of cases constitutes the original dataset constructed by the author for this and related papers. This data was used for the quantitative analyses conducted as part of this paper.

[12] Given the limited population of cases from which the cases were drawn as referenced in Footnote 4, isolating a pair of deviant cases that fall into the "Low-Low" and "High-High" quadrants of the above typology and meet the aforementioned selection criteria was a significant challenge. Thus, duration and intensity data was used to serve as additional selection criteria to broaden the available pool of information. Duration and intensity thus served as a proxy of wartime capacity as they capture the size and scope of the conflict a group participates in. Thus, including this conflict-level information in the case selection process facilitates a more comprehensive selection decision than simply using Non-State Actor measures of intra-war capacity.

4.11 Background on Civil Conflict in Chad

> *"Chad suffers from all the woes of Africa…There are no more than two or three other nations on Earth so completely destitute…And like many other African states, it is wracked by hatred, between the Arab north and the Christian and animist south" (Brogan 1998: 36).*

Chad is a landlocked country in the Sahel region of Africa, the fifth largest on the continent in terms of geography. Its population, which lives mostly in southern Chad, is extremely diverse, representing "approximately 200 ethnic groups and more than 100 languages" (Cunningham 2007: 235). Chad existed as a colony of France until its independence in 1960. France officially took control over the land that makes up contemporary Chad in 1920 after several decades of military conquest in the area (UCDP 2020). As illustrated in the above quote, Chad is beset by extreme poverty and ethno-religious sectarianism with a geographic component. Much of its existence as an independent state has been plagued by intrastate conflict and political violence, beginning with its first civil conflict in 1966. The National Liberation Front (FROLINAT), a group that consisted of several factions, initiated this rebellion. This conflict between continued until 1979, when the Chadian government and the warring factions signed a peace agreement known as the Lagos Accord (Cunningham 2007). By 1980, large-scale violence had erupted again and has remained a near constant in the years since. External intervention on the part of Libya, Sudan, Egypt, France, and the United States (among others) providing support to both insurgents and Chadian regimes have only fueled conflict further over time (UCDP 2020). A critical juncture in the history of Chad was in December 1990 when the insurgent Patriotic Salvation Movement, led by Idriss Deby, ousted sitting president Hissene Habre from power (Brogan 1998; UCDP 2020). This development is of particular importance as Deby has remained in power as President of Chad to this day. The Deby regime

has survived numerous challenges from insurgent groups over its nearly thirty-year tenure, but has proven extremely resilient in both military and political realms. As described in the subsequent section, many of the insurgencies that have attempted to overthrow Deby have been stymied by factionalism and a lack of cohesion. Even the largest and best-equipped insurgent groups have proven to be vulnerable to fractionalization and, in the end, incapable of unseating Idriss Deby.

4.12 Civil Conflict in Chad during the Idriss Deby Regime

A common thread over the last several decades of insurgency in Chad has been the consistent occurrence of mergers and splits among the formally organized rebel organizations. Many of the groups that have "ceased to exist" have done so due to being absorbed into an existing or newly formed alliance. As a state that has experienced protracted civil conflict involving a substantial numbers of rebel organizations, relatively few rebel groups exited the theatre of conflict via outright defeat given the longevity of the Idriss Deby regime. In this sense, one can view the history of rebellion in Chad, particularly after the Cold War, as one characterized by broader rebel movements consisting of related rebel organizations entering and leaving, merging and splintering, active conflict. By looking deeply into the two cases below, I aim to explore the effect of origins (or lack thereof) on rebel groups' ability to maintain and/or develop military capacity and popular support for two rebel groups during the Chadian civil conflicts of 1999-2003 and 2006-2007. I explore these mechanisms by sequentially analyzing the trajectories of rebel capacity from conflict onset through termination within the

context of the MDJT and UFDD conflicts against the regime of Idriss Deby in Chad. In the following qualitative cases, I attempt to address the following questions:

- *How well does existing theory on rebel origins and organization map out onto actual empirical cases?*
- *To what degree do rebel origins exert a path dependence upon the development of group capacity during conflict?*
- *Are groups able to adapt to overcome initial deficiencies in capacity and adapt? Conversely, are there factors that cause groups to regress and "spoil" high levels of origins capacity?*
- *Are there findings that point to new theoretical directions for the origins theory presented here?*

4.13 The Case of The Movement for Democracy and Justice in Chad (MDJT)

4.13.1 The Origins of MDJT

The Movement for Democracy and Justice in Chad was founded in October 1998 in the Tibetsi region in northwestern Chad. The MDJT was engaged in conflict with the Chadian government from February 5, 1999 until 2003[13]. The group cadres largely hailed from the Toubou ethnic group, particularly the Teda-Toubou subgroup. As was the case for most (if not all) Chadian rebel groups since President Idriss Deby came to power in 1990, the principal objective of the organization was regime change. The central figure in the formation of MDJT was Youssouf Togoimi, a Teda-Toubou who held the high-ranking positions of Minister of

[13] This conflict duration is based upon the UCDP threshold for civil war of twenty-five annual battle deaths.

Defense and Minister of Interior, Security, and Decentralization in the Deby government[14] (UCDP 2019). The other figure central to the creation of MDJT was Hassan Mardigue, a former colonel in the Chadian army. While MDJT possessed strength in terms of leadership, the group was small and was operated solely out of a sparsely populated and mountainous area at the time of conflict onset. The MDJT is classified here as a group with generally "weak" origins attributes. In order for a group with this origins profile to survive and maintain a legitimate, coherent rebel force over a protracted conflict, it must exhibit an ability to adapt and outperform its origins. Given MDJT's deficiencies in military capacity and popular support at the onset of conflict with the Chadian regime, the theoretical expectation would be for it to have a poorly developed military force and weak popular support. I argue here that the MDJT did exhibit a degree of adaptation and, to an extent, outperformed its origins. The MDJT is by no means an example of an unqualified success story of rebel adaptation – it did not achieve its ultimate goals and was eventually folded into an umbrella organization of Chadian groups as part of a merger. Nonetheless, the MDJT "stayed in the fight" against a substantially stronger Deby regime for far longer than could have been expected, given its meager origins endowments. This was accomplished by broadening its civilian and political base by appealing to ethnic populations outside of its core ethnic group. A particularly important aspect of this strategy involved attracting the defections of officials from the Deby regime. Through the case study analysis below, I make the case that the MDJT exhibited a limited, but appreciable degree of adaptation in its conflict with the Chadian government.

[14] Togoimi was originally a lawyer, serving as state prosecutor during the presidency of Hissen Habre prior to working under Deby.

4.13.2 Trajectory of MDJT Group Capacity during the 1999-2003 Conflict

The MDJT was very successful militarily for a group of its origin and size. The Non-State Actor Dataset (Cunningham, Gleditsch, and Salehyan 2013) indicates that the MDJT possessed "low" fighting capacity and the group's strength was "much weaker" relative to the Chadian regime forces. Further, there is no evidence that the group was associated was affiliated with a political organization of any kind prior to conflict onset. Reports indicate that the group likely consisted of around one thousand fighters at its apex at some point between 2000 and 2001 (Tubiana and Gramizzi 2017). Table 4.9 illustrates the size and scope of MDJT operations during its five years of conflict with the Deby regime. Early in the conflict in June 1999, Togoimi was quoted by Agence France Presse stating that MDJT was in control of "the small localities, oases, and military posts of Omou, Ombchi, Moussou, Goboun and all the tracks up into the Tibetsi" (IRBC 1999). These reports are indicative of the MDJT's success in establishing "full control over parts of the region," which is a meaningful feat given the group's origins (UCDP 2019). Control over a region, particularly over the extent of a conflict that lasted substantially longer than the average civil war, is a clear indicator of a group that has exhibited the ability to successfully adapt. This is even more pronounced for groups that enter into conflict with low degrees of both militarization and mobilization. MDJT is said to have been at its strongest between 2001-2002, when it maintained a force of roughly one thousand fighters, largely drawn from local Toubou ethnics in the Tibetsi region (UCDP 2019). On this note, as early as March 1999 the MDJT was receiving support from ethnic kin across the border in Niger. On March 10, Chadian forces captured a regiment of Toubou fighters from Niger that had crossed the border to join the MDJT (IRBC 1999). During this period, the MDJT also was the beneficiary of defections from

the Chadian National Army, bringing substantive military capability that had previously been lacking (UCDP 2019). In addition, defections from non-Teda ethnic government politicians to the MDJT in the first several years of the conflict (UCDP 2019) at least temporarily bolstered the group's political and administrative capacity.

Table 4.9. MDJT Civil Conflict Trends 1999-2003

Year	MDJT Troop Count	Dyadic Battle Deaths
1999	300-3000	394
2000	800	989
2001	800	226
2002	< 800	294
2003	< 800	37

Table created by author using data from UCDP Conflict Database https://ucdp.uu.se/additionalinfo/452/0

The group's ability to recruit politicians from of non-Toubou ethnicity "was attributed to Togoimi's personal popularity, and the perception that he was 'above ethnic divisions'" (UCDP 2019). This aspect of the MDJT's civilian and political infrastructure and operations cannot be understated. As a small, regional insurgent group with deep ethnic roots, possessing a mechanism for appealing to potential military and civilian defectors was undeniably a critical asset in helping the MDJT to overcome its meager roots. The fact that this appeal was largely rooted in one well-liked individual was a strength early in the conflict, but proved to be fragile and had consequences later in the conflict. In sum, the MDJT proved to be stronger and existed as an independent rebel faction longer than origins theory would have predicted. In addition to support from ethnic kin abroad, the MDJT began receiving support from the Qaddafi regime in

1999. This support came in the form of financial and logistics, and continued through 2002 (Tubiana and Gramizzi 2017). There is also evidence that the MDJT attempted, generally unsuccessfully, to establish mechanisms of rebel governance and service provision within Tibetsi (UCDP 2019). While these attempts did not produce durable service provision for civilians, the efforts are seen and experienced by civilians nonetheless. It is unclear whether this had a significant impact on building popular support within Tibetsi, but I would argue that these efforts likely had a net positive effect in that regard. In 2000, negotiations between the MDJT leader Togoimi and President Deby took place in Libya. Among issues discussed was "an amnesty for the rebels, the integration of MDJT fighters into the Chadian armed forces and transparency in the electoral process" (UCDP 2019). In January 2002, the rebels entered into an agreement with the government that did grant the MDJT fighters amnesty, which even included offers of government and military roles for MDJT cadres (Project Ploughshares 2015).

Despite achieving this unlikely degree of concessions, a bloc of extremists within the MDJT continued fighting due to opposition with the agreement (Project Ploughshares 2015). I argue that the ability of Togoimi and the MDJT to exert enough pressure via conflict operations to induce Deby to the negotiating table is a significant feat in itself. While many negotiations occurred with ensembles of rebel groups (or formal umbrella groups) and the Deby regime, a group with limited capacity such as the MDJT faced significant hurdles in bringing about peace talks on its own. Furthermore, the MDJT gained significant concessions as a result of negotiations, which only went unrealized due to the actions of factionalism within the MDJT. It is noteworthy for a group of this size and strength to take part in negotiations, particularly with issues such as rebel amnesty on the table, much less achieve unequivocal success as part of

peace talks. This is an important aspect of how the MDJT should be evaluated in terms of its ability to adapt and the success or failure of its broad objectives. The accomplishments of Togoimi at the negotiation table are overshadowed by the eventual outcome of the conflict, which involved the MDJT ceasing to exist as it merged into an umbrella organization. Had the faction within MDJT remained committed to the agreement, the performance and adaptation of this group would likely be judged in a different light. The rampant factionalism seen in Chadian insurgencies was undoubtedly a driver of the manner in which this conflict terminated and the degree of success than can be attributed to the MDJT as a conflict actor. I argue that these developments are additional examples of over performance on the part of the MDJT.

The event that undoubtedly had the most significant impact on the trajectory of the conflict for the MDJT was the death of its leader Youssouf Togoimi after being injured by a landmine explosion in September 2002 (UCDP 2019). Following his death, Togoimi was replaced by Hassan Mardigue as president of the MDJT. Compounding the loss of Togoimi was the Libyan withdrawal of external support for the group (Tubiana and Gramizzi 2017), likely attributable to the change in leadership. Eventually, the MDJT was plagued with the same affliction as so many other Chadian groups – splintering and fragmentation. The MDJT perpetuated this pattern further by merging with several other factions to form the Movement for Democracy and Justice in Chad (UFC) in 2004 (Tubiana and Gramizzi 2017; UCDP 2019). Though the MDJT met the same fate as so many other insurgent groups in the series of conflict dyads opposing the regime of Idriss Deby, this group was a limited success relative to the conflict trajectory that could have been expected at the onset of conflict. To a greater degree, the MDJT was a success relative to its rebel organization contemporaries in Chad. A significant number of Chadian

groups, particularly those with origins in mergers (including UFDD and its successor group Alliance Nationale), entered into conflict with far greater military capacity *and* political/civilian infrastructure while regressing in terms of *Militarization* and *Mobilization* capacity during war. In sum, I posit that the MDJT is, at a minimum, an origins overachiever within the context of Chadian civil wars.

4.13.3 Why the MDJT Outperformed Its Origins

A series of factors allowed the MDJT to develop military and civilian capacity to a greater extent than would be expected given its weak origins characteristics. First, the MDJT exhibited a broader popular appeal than would be expected from a group of its profile. MDJT leadership was able to make a broader appeal to individuals outside its Teda-Toubou ethnic group, which had a substantive impact on its ability to adapt and build upon its initial narrow base of support. The MDJT's successful adaptation also had a geographic component. As a group that was largely isolated in the mountains of Tibetsi during its "incubation period" and the early days of the civil war, the MDJT exhibited remarkable versatility in attracting government officials from the Deby regime based in N'Djamena.

Defections to MDJT from other rebel groups also played a minor role, while support from state and non-state actors outside of Chad was of more significance to bolstering its war effort. It can be argued that much of MDJT's successful adaptation can be accounted for by the large presence and popularity of its founder and initial leader, Youssouf Togoimi. Nonetheless, the group exhibited a remarkable ability to survive the early phases of conflict and leverage the opportunities his leadership provided. Furthermore, the MDJT exhibited a diversified

organizational approach that was conducive to incorporating a varied set of actors and sources of outside support into its repertoire. The approach employed by MDJT is a clear illustration of how a rebel group can adapt, and *over-perform*, the inherit limitations faced by rebels due to their origins characteristics. The leadership of Youssouf Togoimi was the foremost driver of the MDJT overachieving relative to its origins. The group's ability to adapt and grow beyond its initial endowments is thus an illustration of the salience of leadership in allowing rebels to diversify and adapt, and in doing so, enhance its initial capacity. The MDJT inherited characteristics that would typically inhibit a group's prospects for success by any conventional definition in civil conflict. Effective and innovative rebel leadership such as that of the MDJT's Togoimi is an example of an avenue of rebel adaptation. This analysis has therefore uncovered a meaningful theoretical contribution to theory on rebel origins that has exciting potential for future research. Future iterations of work on rebel origins can be incorporate existing research on rebel leadership (Tiernay 2015; Prorok 2018; Lutmar & Terris 2019) to produce a more expansive theory with greater generalizability to the full population of rebel groups over time.

This case and its findings should be interpreted as an illustration of successful rebel adaptation as outlined above. Many of the actions taken by Togoimi and the MDJT are illustrative of groups with more sophisticated, well-developed political infrastructure as opposed to the minimal capacity possessed by this group. Togoimi's efforts in recruiting government defectors and non-ethnic kin were generally successful investments of time and effort that paid dividends in facilitating the diversification and surprising longevity of the group. Extracting concessions from the Deby regime at the negotiating table is unequivocal evidence that the MDJT exhibited organizational shrewdness based in political knowledge and forward-

thinking leadership. The eventual result of eliciting concessions from the Chadian government was rooted in a series of strategic and intentional efforts at strengthening the MDJT organization, particularly its political apparatus that made the group more formidable in the end. I would argue that Togoimi's efforts to strengthen the group were less successful from a military perspective, which only makes his efforts at bolstering the group's mobilization capacity (and his successes) even more noteworthy. In sum, the MDJT exhibited the ability to adapt and overcome its deficiencies as a rebel group as well as the extreme disadvantage it faced relative to the Deby regime. While the MDJT did not defeat the Chadian government or accept concessions offered by the regime, what the group was able to achieve is nonetheless clear evidence of rebel group adaptation. This case thus highlights the utility of rebel group leadership as a key variable in subsequent studies of rebel group origins and conflict dynamics.

4.14 The Case of The Union Force for Democracy and Development (UFDD)

4.14.1 The Origins of the UFDD

The Union of Forces for Democracy and Development was founded on October 22, 2006 as a merger of several existing Chadian rebel groups – the Union des Forces Democratiques pour le Progres (UFDP), the United Front for Democratic Change (FUCD), and remnants of the Revolutionary Democratic Council (CDR)[15] (Tubiana 2008; UCDP 2019). The UFDD existed for only one day prior to the onset of conflict with the Chadian government, which began on October 23. The formation of UFDD was typical of the pattern of insurgent group formation in

[15] Other sources identify a series of different groups that later joined forces to form the UFDD. UCDP identifies the Armed Resistance against Anti-Democratic Forces (RAFAD), the National Rally for Democracy (RND), and the Popular Rally for Justice (RPJ) as rebel factions that joined the coalition at an unspecified later date.

Chad in the late 1990s and 2000s, as it involved union of distinct factions combining forces in an effort to oust Chadian President Idriss Deby from office. This case study can be considered a "non-example" for rebel groups with aims on growing the size and scope of its rebel organization as it proved unable to adapt to losses suffered by defections. In this sense, the experience of the UFDD can inform new theoretical pathways for origins theory going forward. While the MDJT illustrated how adept leadership can help groups to overcome initial deficits in origins capacity, the UFDD is a clear illustration of the power of factionalism and fragmentation in impeding organizational development and potentially leading to group failure. I present a case below that explains how this process unfolded for UFDD over the course of its conflict with the Chadian regime.

The key figure in the founding of UFDD was Mahamat Nouri. Prior to founding UFDD, Nouri had significant experience in both insurgent organizations and as a key political and military figure within the Chadian government. His experience consisted of fighting with two rebel groups (including the long-lived FROLINAT[16] rebellion), serving in the administration of three different Chadian presidents, and founding the UFDP rebel group in 2006 (UCDP 2019). As UFDP was the most prominent component organization in the UFDD coalition, Nouri assumed the central political leadership role upon it's founding (UCDP 2019). Acheikh Ibn Omer was a co-founder of UFDD along with Nouri who also brought an impressive background to the organization. Omer fought for FROLINAT, served as Chadian Foreign Minister, and led the CDR (Pamminger 2011). The substantial and diverse set of military and political experience possessed by the group founders is a significant component of UFDD's origins capacity. While it

[16] The Front for the National Liberation of Chad (FROLINAT) was a long-lived insurgent group that was one of the first to challenge the independent nation of Chad.

is difficult to estimate its fighting force at the onset of conflict, the size and scope of the component groups in the alliance put UFDD in a position of strength from its origin. FUCD alone is estimated to have between three and four thousand fighters during its 2005-2006 conflict with Chad (Cunningham, Gleditsch, and Salehyan 2013). Given the strength possessed by the UFDD along both the militarization and mobilization dimensions, the theoretical expectation would be for it to have developed and maintained a strong military force and broad popular support.

4.14.2 Trajectory of UFDD Group Capacity during the 2006-2007 Conflict

The story of the UFDD political and military capacity over the course of the conflict follows a familiar pattern as that of many groups in the recent history of rebellion in Chad, one in which fragmentation plays a critical role. At the peak of its strength, UFDD is estimated to have numbered between two and three thousand fighters (Prunier 2008; UCDP 2019). This figure is key as it is a starting point from which future defections of UFDD factions depleted the fighting force of the UFDD.

A critical event that shaped the course of the strength of the UFDD occurred very early in the group's existence and the conflict with Deby's regime. A significant faction within the UFDD alliance, FUCD, split from the organization around a month into its existence due to its leader engaging in negotiations with the Deby regime. This defection served to significantly weaken the UFDD, as FUCD "contributed several thousand troops" during its time in the coalition (UCDP). Clearly, FUCD was seen as a major contributor to the military efforts of UFDD upon its creation a month prior. While the support previously provided by Sudan to FUCD was

withdrawn and re-allocated to UFDD following its defection, I argue that the loss in fighting forces substantially handicapped the groups' military capacity going forward.

In May of 2007, Arab leaders Acheikh Ibn Oumar and Abdelwahid Aboud Makaye and roughly five hundred fighters broke off from the UFDD to form UFDD-Fondamentale (Prunier 2008; Tubiana 2008; Small Arms Survey 2011). Given the losses suffered by UFDD as a result of the departure of FUCD roughly six months prior, the splinter of five hundred additional fighters was a substantial loss for the group.

Despite the substantial capacity possessed by the UFDD at its origin, it existed as a combatant for only fourteen months, far short of what could be expected from a group of its pedigree. What is more striking is the extremely low intensity of its conflict with the Chadian government. The UFDD-Chad dyad accounted for only four hundred eight battle deaths over two calendar years – three hundred thirty-nine battle deaths over roughly two months in 2006 and sixty-nine during the entire twelve months of 2007.

On October 27, 2007, the Deby regime entered into a Libyan-brokered peace agreement[17] with four insurgent groups including the UFDD (also UFDD-F, RFC, DNT). As part of the agreement, rebels from the signatory groups would be amalgamated into the national army (Project Ploughshares 2015). This break in the fighting lasted for roughly a month before being broken by UFDD and RFC, who commenced large offensives that resulted in large-scale fighting with the regime (Project Ploughshares 2015; Dixon and Sarkees 2016).

Consistent with the patterns of group fragmentation and alliances, the UFDD ceased to exist as a stand-alone insurgent organization in early January 2008 as it merged with three

[17] Other sources categorize the result of negotiations as merely a "ceasefire" rather than a peace agreement (Arteaga 2008).

other factions to form a new rebel coalition. The UFDD joined forces with the Union of Forces for Change and Democracy (UFCD), the UFDD-F, and the Front for the Salvation of the Republic (FSR) to form the next Chadian rebel conglomerate, the Alliance Nationale. With this development, the UFDD leaves the theatre of conflict in Chad in the same fashion that it joined it – as a component piece of a merger.

4.14.3 Why the UFDD Underperformed Its Origins

The case of UFDD is a clear illustration of the relatively incoherent nature of insurgent organization in Chadian civil wars during the Deby regime, particularly during the 2000s. Some credit for UFDD's (and many other groups') lack of long-term development and growth is certainly due to the Deby regime's counterinsurgency efforts and battlefield record. However, I argue that the sheer number of rebel factions created a cacophony of insurgent voices and interests that was never able to consolidate into an organization that had staying power and the infrastructure to fully develop mobilization *and* militarization mechanisms during war. The UFDD and its contemporaries struggled to develop or maintain a coherent rebel force in the ever-shifting and dynamic landscape of long-standing opposition to President Idriss Deby. The force multiplier inherent in large rebel alliances such as FUCD, UFDD, and the Alliance Nationale was consistently stifled and undermined by a lack of unity and divergent voices on how and when to negotiate with the regime. This pattern played out for UFDD despite having leadership with expansive military and political knowledge and experience. Due to the steady presence of external support from the Sudanese government, co-ethnics in Darfur, state and non-state actors in Libya, a consistent flow of financing, weaponry, and safe havens has enabled a litany

of rebel groups to exist over time. However, this crowded field has made it difficult for any truly dominant factions to emerge, and in the face of the well-equipped Chadian military, rebel organizations have merged (and splintered, and re-merged) in order to consolidate power to better challenge the regime. The case of UFDD is a clear illustration of these patterns. Despite having extremely capable and experienced rebel leadership, roots in several ethnic groups, access to Sudanese support, and the resources and fighting forces of (at least) four pre-existing rebel groups to draw from, the UFDD succumbed to the same forces that felled many of its predecessors in Chad. The fickle nature of the insurgent landscape in Chad simply exerts a stronger influence on the viability of Chadian rebel groups than that of their origins. Even with highly developed militarization and mobilization mechanisms, losses inflicted by fragmentation proved too costly for the UFDD to develop and succeed to the degree expected based upon its origins.

The story of the UFDD is clearly one of fragmentation and factionalism, forces that served to undermine a group that held the potential to mount a series challenge to the tested but resilient regime of Idriss Deby. Had the UFDD been able to counteract the trend of widespread discontinuity in Chadian insurgent groups and remain unified, it would have been well positioned to achieve its objectives in line with its substantial origins capacity. Yet it was unable to do so, as vitally important factions splintered from the UFDD organization. While the history of fragmentation in Chadian civil wars may be an exceptional one in terms of its frequency and consistency over time, this phenomenon is very common among civil wars across time and space. This case illuminates the salience of fragmentation and division among rebel movements to our understanding of the role of rebel origins in civil wars. This

characteristic of civil wars has been shown here to be critical to the degree of path dependence of rebel origins seen in conflict. Though the term *adaptation* typically carries with it a positive connotation, the UFDD case illustrates how the path dependence of origins is subject to *change* given particular circumstances. The UFDD was a group that exhibited clear regression in terms of its level of wartime capacity relative to its pre-conflict origins attributes. This illustration of "negative" rebel adaptation indicates that the relationship between origins and wartime capacity cannot simply be explained by a path dependent argument. Rebel groups will exhibit both positive and negative adaptation, facilitating both unexpected development and regression. With the UFDD we see an example, much like the role of leadership with the MDJT, of a new theoretical component to be accounted for in the study of rebel origins. The notion of group fragmentation as an impediment to groups' ability to maintain pre-conflict capacity is an intuitive one. Furthermore, groups that suffer losses due to splintering are much less likely to be able to "positively" adapt and build upon existing military and political capacity. All things considered, fragmentation seems to be a natural extension to existing origins theory given its prevalence within the literature (Pearlman and Cunningham 2012; Mosinger 2018; Woldemariam 2018) and its widespread occurrence in civil conflicts. Future research on the origins of rebellion should therefore take into account the findings of the theory-building case of the UFDD above.

The case of the UFDD is an illustration of successful theory-building exercise as part of the qualitative analysis, as a new intervening variable was identified that helps to account for the link between rebel origins and wartime capacity. This case study revealed that rebel group fractionalization plays a significant role in altering the expected trajectory of rebel group

development during war. Uncovering the role of fractionalization is important as this variable was not previously included in the quantitative analyses of this chapter, but the UFDD case clearly demonstrated that this factor should be accounted for in future analyses. The MDJT on the other hand, revealed a pathway through which rebel leadership can play a prominent role in mediating the impediments placed upon rebel groups with weak origins attributes. Strong and effective leadership helped the MDJT to overcome its initial origins deficiencies to a degree, thereby allowing it to sustain conflict longer than would be expected for a group of its pedigree. Thus, the MDJT case highlighted the salience of rebel fractionalization to future studies on the effects of rebel origins.

4.15 Conclusion

This paper contributes to existing literature on rebel group organization and the nascent scholarship on rebel group formation. The findings indicate support for the theory that rebel origins characteristics exert a path dependent effect on the growth, development, and adaptation of rebel organizations. The quantitative analysis shows consistent and robust support for the "stickiness" of rebel origins. The key origins variables have a positive and statistically significant relationship with indicators of rebel capacity during war, consistent with theoretical expectations. Two case studies unpacked the causal mechanisms at work linking rebel origins and military and political capacity during conflict. The goal of the qualitative analysis was to account for counterintuitive outcomes on the dependent variable for two deviant cases, the Chadian rebel groups MDJT and UFDD. These cases illustrated that adaptation is possible and that rebels can over- or under-perform expectations (based upon

their origins) in regards to the development of intra-war capacity. The case studies identified two key theoretical contributions to origins theory – the role of group fragmentation and leadership. These factors were found to inhibit the degree of origins path dependence exerted upon group capacity development during war. Fragmentation was shown to impair origins capacity in the case of UFDD, while dynamic leadership allowed the MDJT to adapt and perform beyond its initial means. These qualitative analyses and the subsequent findings were meaningful steps toward a general theory of rebel adaptation during war. While much future research is needed to achieve this goal, this project helped to illuminate conditions under which the pull of rebel origins' path dependence is less prevalent. I've illustrated here that while origins do have a "sticky" effect on group capacity, that adaptation and change are possible for groups during war.

This study fills a gap in existing literature on the effects of rebel origins on the course of conflicts and rebel behavior in particular. The findings uncovered here can also inform policymakers, as they indicate that rebel military and political development is substantially conditioned by the characteristics rebels possess prior to conflict onset. The origins of rebel groups can thus be of utility to policymakers tasked with conflict management decision-making, as expectations regarding the course of rebel group development during conflict can be identified at the onset of hostilities.

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APPENDIX A

CHAPTER 2 SUPPLEMENTARY MATERIALS

Table A.1. *Rebel Group Origins Database (RGOD)* Codebook

Coding criteria for assignment of High/Medium/Low code for each variable

- The presence of one criterion from the **"High"** list is sufficient to code group as **"High."**
- The presence of two criteria from the **"Medium"** list is also sufficient to code group as **"High."**
- The presence of one criterion from the **"Medium"** list is necessary/sufficient to code group as **"Medium."**
- The absence of all criteria from the **"High" AND "Medium"** lists results in the group being coded as **"Low."**

Militarization Variable

High (coded as value of 3)

- Remnants of former military faction/government forces (large contingent of forces and leadership)
- Creation of/supported by foreign power OR foreign insurgent group (w/ resource commitment, trainers, advisors) OR operated alongside military
- Union of distinct insurgent factions (several of which are highly organized/trained/equipped)
- Splinter of existing insurgent group (large, legitimate organization)
- Terror group with highly developed multinational network of cells, deep roster of cadres
- Group/leadership had great deal of experience with insurgency/fought in military capacity prior to conflict onset with state

Medium (coded as 2)

- Remnants of former military faction/government forces (former military leadership or small contingent of forces)
- Creation of foreign power (limited degree of support re: training, funding)/development tied to foreign support/allowed to operate bases in

foreign state

- Union of distinct insurgent factions (One/none of which are highly organized/trained/equipped)

- Small splinter of existing insurgent group OR splinter of smaller insurgent group

- Terror group with little conventional military capacity, regional/local network of cells

- Group/leadership had some experience with insurgency/fought in military capacity prior to conflict onset with state OR access to training or collaboration w/other groups

- Group with formal military organization (professional soldiers, access to arms) with label/central control/military wing

Low (coded as 1)

- Did not identify presence of any of the criteria from the High OR Medium lists

Mobilization Variable

High (coded as value of 3)

- Group with broad, organized governance structure within/across territories

- Mass based former political party (national with deep/wide membership) that contested elections

- National union with deep/wide dues-paying membership (also large student unions)

- Group which has mobilized mass protests (thousands of participants)

- Group with high-ranking former/defected government officials in leadership

- Broad-based ethno/religious/nationalist group with deep, long-standing social ties/separatists

- Union of well-developed, distinct domestic/civilian political/activist factions

- Broad-based nationalist/separatist movement with political infrastructure

Medium (coded as 2)

- Group with organized governance structure within a single territory/region
- Group mobilized abroad/creation aided by foreign power with limited domestic
- Political party/movement specific to region or ethnic group / group receiving su

  sole ethno/religious/ideological group with narrow support
- Union with membership limited to particular region or sector
- Group which has mobilized protests on smaller scale
- Political organization/wing exists to some degree/small political party/political minimal support
- Group possessing some degree of political experience
- Political/civilian organization includes some degree of departments/wings resp propaganda/education/service provision/social issues
- Union of smaller OR less developed, distinct domestic/civilian political/activist f

Low (coded as 1)

- Did not identify presence of any of the criteria from the High OR Medium lists

Table A.2. List of Rebel Groups in *RGOD Database*
Global sample from 1992-2012

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
AQIM (Al-Qaida in the Islamic Maghreb)	Algeria	1998-1999	Medium	Medium
CNDD (National Council for the Defence of Democracy)	Burundi	1993-1994	Medium	High
CNDD-FDD (National Council for the Defence of Democracy-Forces for the Defence of Democracy)	Burundi	1998	Medium	Low

(table continues)

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
Palipehutu-FNL (Party for the Liberation of the Hutu People-Forces for the National Liberation)	Burundi	1992-1997	Medium	Medium
Military Faction (Forces of Andre Kolingba)	CAR	2001	High	High
CNR (National Council for Recovery)	Chad	1992	Medium	Low
FARF (Forces Armees pour la Republique Federale)	Chad	1994-1997	Low	Low
MDJT (Mouvement pour la democratie et la justice au Tchad)	Chad	1998-1999	Low	Low
MPA (Anjounaise Popular Movement)	Comoros	1997	Medium	High
Ninjas	Rep of Congo	1993	Medium	Medium
Cocoyes	Rep of Congo	1993-1997	Medium	Medium
Ntsiloulous	Rep of Congo	1998	Medium	Medium
AFDL (Alliance of Democratic Forces for the Liberation of Congo-Zaire)	DRC	1996	High	High
RCD (Congolese Rally for Democracy)	DRC	1998	High	Low
MLC (Movement for the Liberation of Congo)	DRC	1998	Medium	High
FRUD - AD (Front for the Restoration of Unity and Democracy - Ahmed Dini faction)	Djibouti	1994-1999	Medium	High
ARDUF (Afar Revolutionary Democratic Unity Front)	Ethiopia	1993-1996	Medium	Medium
RFDG (Rassemblement des forces democratiques Democratic de Guinee)	Guinea	2000	High	Low
Military Junta for the Consolidation of Democracy, Peace and Justice	Guinea-Bissau	1998	High	Medium
MPCI (Patriotic Movement of Ivory Coast)	Ivory Coast	2000-2002	Medium	Low
MPIGO (Ivorian Popular Movement of the Great West)	Ivory Coast	2002	Medium	Medium
Military Faction	Lesotho	1998	High	High
LURD (Liberians United for Reconciliation and Democracy)	Liberia	1999-2000	High	Medium
CRA (Coordinated Armed Resistance)	Niger	1993-1994	Medium	Medium
FDR (Democratic Front for Renewal)	Niger	1994-1995	Low	Medium

(table continues)

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
Opposition alliance	Rwanda	1994-1996	High	High
AFRC (Armed Forces Revolutionary Council)	Sierra Leone	1997	High	Low
Kamajors	Sierra Leone	1992-1997	High	High
WNBF (West Nile Bank Front)	Uganda	1995-1996	High	Medium
ADF (Allied Democratic Forces)	Uganda	1996	Medium	Medium
FDU (United Democratic Forces)	Rep of Congo	1993-1997	Medium	High
SRRC (Somalia Reconciliation and Restoration Council)	Somalia	2001	Medium	Medium
EZLN (Zapatista National Liberation Army)	Mexico	1983-1994	Low	High
MJP (Movement for Justice and Peace)	Ivory Coast	2002-2003	Medium	Low
Real IRA (Real Irish Republican Army)	United Kingdom	1998	Medium	High
MNLF - NM (Moro National Liberation Front - Nur Misauri faction)	Philippines	2001	Medium	Medium
Republic of Abkhazia	Georgia	1992	Medium	High
Faction of Francois Bozize	CAR	2001-2002	High	Low
Zviadists	Georgia	1992	High	High
Serbian irregulars	Croatia	1992	High	High
Serbian Republic of Bosnia and Herzegovina (Republika Srpska)	Bosnia & Herz	1992	High	High
Croatian Republic of Bosnia and Herzegovina (HVO)	Bosnia & Herz	1992-1993	High	High
Autonomous Province of Western Bosnia	Bosnia & Herz	1993	High	High
UCK (Ushtria Clirimtare e Kosoves/Kosovo Liberation Army)	Serbia	1996-1998	High	High
EPR (Ejercito Popular Revolucionario / Popular Revolutionary Army)	Mexico	1996	Low	Medium
Serbian irregulars	Bosnia & Herz	1992	High	High
Croatian irregulars	Bosnia & Herz	1992-1993	High	High

(table continues)

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
Serbian Republic of Krajina	Croatia	1992	High	High
Shan State Army - South (SSA-S) / Restoration Council of Shan States (RCSS)	Myanmar	1995-1996	High	High
God's Army	Myanmar	1997-2000	Low	Low
BMA (Beik Mon Army)	Myanmar	1996	Medium	Medium
Taliban	Afghanistan	1994-1995	High	High
National Liberation Army (UCK)	Macedonia	2001	Medium	High
CPN-M/UPF (Communist Party of Nepal-Maoist)	Nepal	1994-1996	Medium	High
Parliamentary forces	Russia	1993	Low	High
MODEL (Movement for Democracy in Liberia)	Liberia	2003	High	Low
UTO (United Tajik Opposition)	Tajikistan	1992	Medium	High
Husseinov Military Faction	Azerbaijan	1993	High	Low
IMU (Islamic Movement of Uzbekistan)	Uzbekistan	1998-1999	Medium	Medium
Wahhabi movement of the Buinaksk district	Russia	1998-1999	High	High
Democratic Republic of Yemen	Yemen	1994	High	High
OPON forces	Azerbaijan	1991-1995	Medium	Low
Movement for Peace in Tajikistan (Forces of Khudoberdiyev)	Tajikistan	1997	High	Low
Junbish-i Milli-yi Islami (National Islamic Movement of Afghanistan)	Afghanistan	1992-1993	High	High
UIFSA (United Islamic Front for the Salvation of Afghanistan/Northern Alliance)	Afghanistan	1992-1996	High	High
AMB (Al-Aqsa Martyrs' Brigades / Kateab al-Shaheed al Aqsa)	Israel	2000-2002	Medium	High
PNA (Palestinian National Authority)	Israel	1993-1996	High	High
UNRF II (Uganda National Rescue Front II)	Uganda	1996-1997	High	Low
SLM/A (Sudan Liberation Movement/Army)	Sudan	2003	Low	Medium
JEM (Justice and Equality Movement)	Sudan	2003	Low	Medium
FRCI (Republican Forces of Ivory Coast)/Forces Nouvelles (FN)	Ivory Coast	2002-2004	High	Low

(table continues)

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
FLRN (National Liberation and Resistance Front)	Haiti	2004	High	High
OP Lavalas (Chimeres)	Haiti	2004	Medium	High
Al-Mahdi Army (Jaysh al-Mahdi)	Iraq	2003-2004	Medium	High
Ansar al-Islam (Supporters of Islam)	Iraq	2001-2004	High	High
JIG (Jihad Islamic Group)	Uzbekistan	2003-2004	Medium	Low
Ahlul Sunnah Jamaa	Nigeria	2002-2004	Low	High
ISI/Jama'at Al-Tawhid wa'al-Jihad (The Monotheism and Jihad Group)	Iraq	1999-2004	High	Medium
CPI-Maoist (Communist Party of India-Maoist)	India	2004-2005	High	High
FUCD (Front Unique pour le Changement Democratique)	Chad	2005	Medium	Low
MKP (Maoist Komunist Partisi)	Turkey	1972-2005	Medium	High
PJAK (Parti Jiyani Azadi Kurdistan, The Free Life Party of Kurdistan)	Iran	2004-2005	High	High
NDPVF (Niger Delta People's Volunteer Force)	Nigeria	2003-2004	Low	Medium
RJF (Reform and Jihad Front)/Al-Jaysh al-Islami fil Iraq (Islamic Army of Iraq)	Iraq	2003-2005	Low	High
UFDR (Union of Democratic Forces for Unity)	CAR	2006	Medium	Medium
Popular Resistance Committees	Israel	2000-2006	Medium	Medium
NRF (National Redemption Front)	Sudan	2006	High	Medium
SLM/A - MM (Sudan Liberation Movement/Army - Minni Minawi)	Sudan	2006	High	Medium
ARS/UIC (Alliance for the Re-liberation of Somalia/Union of Islamic Courts)	Somalia	2000-2006	Medium	High
RAFD (Rassemblement des forces democratiques)	Chad	2006	High	Medium
UFDD (Union des Forces pour la Democratie et le Developpement)	Chad	2006	High	Medium
Baluch Ittehad (Baluch Unity)	Pakistan	2003-2006	Medium	High

(table continues)

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
BLA (Baluchistan Liberation Army)	Pakistan	2000-2004	Low	High
Jondullah	Iran	2003-2006	Medium	Medium
National Democratic Alliance (previously "Faction of SPLM")	Sudan	1989-1996	High	High
CNDP (National Congress for the Defence of the People)	DRC	2006	Medium	Medium
MNLF - HM (Moro National Liberation Front - Habier Malik faction)	Philippines	2007	Medium	Medium
SLM/A - Unity (Sudan Liberation Movement/Army - Unity)	Sudan	2006-2007	Medium	Medium
ATNMC (Northern Mali Tuareg Alliance for Change)	Mali	2007	High	Medium
WSB (West Side Boys)	Sierra Leone	1997-2000	Medium	Low
MNJ (Niger Justice Movement)	Niger	2007	Medium	Medium
UFRA (Union of Forces of Armed Resistance)	Niger	1996-1997	Medium	Medium
AN (Alliance National)	Chad	2008		
TTP (Tehreek-e-Taliban Pakistan / Movement of Students in Pakistan)	Pakistan	2007	High	High
Al-Shabaab	Somalia	2006-2008	High	High
PULF (People's United Liberation Front)	India	1993-2008	Low	Medium
Forces of the Caucasus Emirate	Russia	2007	High	High
BRA (Baluchistan Republican Army)	Pakistan	2006-2008	Medium	High
CPJP (Convention of Patriots for Justice and Peace)	CAR	2008-2009	Medium	Low
UFR (Union of Resistance Forces)	Chad	2009	High	Medium
AQAP (Al-Qaeda in the Arabian Peninsula)	Yemen	2009	Medium	Medium
NDFB - RD (National Democratic Front of Bodoland-Raijan Daimary)	India	2008-2009	Medium	Medium
Boko Haram	Nigeria	2002-2009	Medium	High
Hizbul-Islam	Somalia	2009	High	Medium

(table continues)

Rebel Group	Dyad State	Dyad Years	Militariz	Mobiliz
DKBA 5 (Democratic Kayin Benevolent Army/Democratic Kayin Buddhist Army - Brigade 5)	Myanmar	2010	Medium	Medium
AQIM (Al-Qaeda in the Islamic Maghreb)	Mauritania	2006-2010	High	High
PFNR (Popular Front for National Rebirth)	Chad	2001-2010	Medium	Medium
Forces of George Athor	Sudan	2010	Medium	Medium
IMU (Islamic Movement of Uzbekistan)	Tajikistan	1991-2010	High	Medium
SPLM/A-North (Sudan Peoples Liberation Movement/Army - North)	Sudan	2011	Low	Medium
SSLM/A (South Sudan Liberation Movement/Army)	Sudan	2011	Medium	Low
Republic of South Sudan	Sudan	2005-2011	High	High
SSLM/A (South Sudan Liberation Movement/Army)	South Sudan	2011	Medium	Medium
FDSI-CI (Forces de Defense et de Securite Impartiales de Cote d'Ivoire)	Ivory Coast	2011	High	Low
NTC (National Transitional Council)	Libya	2011	Low	High
Forces of Muammar Gaddafi	Libya	2011	High	Medium
FDLR (Democratic Forces for the Liberation of Rwanda)	Rwanda	2000-2001	High	High

Table A.3. Cox Proportional Hazard models with Origins interaction term included[18]

	Model A.1	Model A.2	Model A.3	Model A.4	Model A.5	Model A.6	Model A.7
Failure= Conf Onset	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)
Militarization	0.53 (.26)	0.71 (.35)	0.71 (.35)	0.81 (.39)	1.12 (.64)	0.73 (.36)	0.70 (.35)
Mobilization	0.12*** (.06)	0.15*** (.08)	0.14*** (.08)	0.20** (.10)	0.29* (.17)	0.20** (.10)	0.18** (.09)
Origins Interact	1.70* (.37)	1.62* (.35)	1.63* (.35)	1.44 (.29)	1.19 (.28)	1.47 (.31)	1.52* (.31)

Levels of significance *** < .001 ** < .01 * < .05

Table A.4. Cox Proportional Hazard models with Origins interaction term included

	Model A.8	Model A.9	Model A.10	Model A.11	Model A.12	Model A.13	Model A.14
Failure= Conf Onset	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)	Coef (Std. Err)
Militarization	0.66 (.34)	0.70 (.34)	0.71 (.34)	0.57 (.28)	0.74 (.36)	0.71 (.35)	0.53 (.26)
Mobilization	0.19** (.10)	0.14*** (.08)	0.15*** (.08)	0.22** (.11)	0.21** (.11)	0.19** (.10)	0.16** (.09)
Origins Interact	1.51 (.32)	1.63** (.35)	1.62* (.35)	1.51* (.31)	1.46 (.30)	1.50 (.31)	1.65* (.35)

Levels of significance *** < .001 ** < .01 * < .05

[18] For Tables A.3 through A.6, all variables from the original corresponding models in Chapter 2 (Tables 2.1 through 2.18) were included in each analysis. As the findings of interest were the performance of the interaction term and its effect on the constituent *Militarization* and *Mobilization* variables, only these three variables are presented in this appendix.

Table A.5. Cox Proportional Hazard models with Origins interaction term included

	Model A.15	Model A.16	Model A.17	Model A.18
Failure = Conf Onset	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)
Militarization	0.62 (.29)	0.60 (.29)	0.53 (.26)	0.79 (.39)
Mobilization	0.14*** (.07)	0.17** (.09)	0.17** (.09)	0.25* (.15)
Origins Interact	1.63* (.34)	1.57* (.33)	1.61* (.36)	1.28 (.29)

Levels of significance *** < .001 ** < .01 * < .05

Table A.6. Logistic regression models with Origins interaction term included

	Model A.19	Model A.20	Model A.21
DV = Conflict Onset	Coeff (Std Err)	Coeff (Std Err)	Coeff (Std Err)
Militarization	0.65 (.56)	0.75 (.73)	0.60 (.72)
Mobilization	-0.07 (.53)	-0.46 (.72)	-0.61 (.70)
Origins Interact	-0.13 (.23)	-0.12 (.31)	-0.04 (.30)

Levels of significance *** < .001 ** < .01 * < .05

APPENDIX B

CHAPTER 3 SUPPLEMENTARY MATERIALS

Table B.1. Rebel Groups in Dataset by *Militarization* & *Mobilization* Typology Categories

Militarization = 1 & Mobilization = 1 (3 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per episode-year)	Total Battle Deaths (per dyad)
God's Army	Myanmar	2000	0.03	46	46
Forces Armees pour la Republique Federale (FARF)	Chad	1997-1998	6.2	46	92
Mouvement pour la Democratie et la Justice au Tchad (MDJT)	Chad	1999-2003	58.3	388	1940

Militarization = 1 & Mobilization = 2 (7 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (in months)	Mean Battle Deaths (per episode-year)	Total Battle Deaths (per dyad)
Justice and Equality Movement (JEM)	Sudan	2003-2004; 2007-2011	14.6; 52.7	468.5; 327.4	2574
Sudan Liberation Movement/Army (SLM/A)	Sudan	2003-2006; 2008-2011	44.7; 39	1065.5; 129.8	4781
Ejercito Popular Revolucionario (EPR)	Mexico	1996	3.5	37	37
Democratic Front for Renewal (FDR)	Niger	1995	0.03	34	34
Niger Delta People's Volunteer Force (NDPVF)	Nigeria	2004	3.5	67	67
People's United Liberation Front (PULF)	India	2008	0.03	25	25
Sudan People's Liberation Movement/Army-North (SPLM/A-N)	Sudan	2011	0.7	190	190

Militarization = 1 & Mobilization = 3 (6 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (in months)	Mean Battle Deaths (per episode-year)	Total Battle Deaths (per dyad)
Reform and Jihad Front/Islamic Army of Iraq (RJF)	Iraq	2005-2007	34.7	68	204
Baluchistan Liberation Army (BLA)	Pakistan	2004; 2006-2009; 2011-2014	4.8; 41.3; 38.3	43; 53; 41	419
Parliamentary Forces	Russia	1993	0.03	145	145
Zapatista National Liberation Army (EZLN)	Mexico	1994	0.4	145	145
Ahlul Sunnah Jamaa	Nigeria	2004	0.5	61	61
National Transitional Council (NTC)	Libya	2011	5.6	1602	1602

Militarization = 2 & Mobilization = 1 (10 cases)

Rebel Group	**State**	Dyad Years (by episode)	Conflict Duration (in months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
National Council for the Defence of Democracy-Forces for the Defence of Democracy (CNDD-FDD)	Burundi	1998-2003	59.8	405.2	2431
National Council for Recovery (CNR)	Chad	1992-1994	30.3	55	165
Front Unique pour le Changement Democratique (FUCD)	Chad	2005-2006	12.2	489.5	979
West Side Boys (WSB)	Sierra Leone	2000	0.03	27	27
OPON Forces	Azerbaijan	1995	0.03	44	44
Jihad Islamic Group (JIG)	Uzbekistan	2004	4	37	37

(table continues)

Rebel Group	**State**	Dyad Years (by episode)	Conflict Duration (in months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Convention of Patriots for Justice and Peace (CPJP)	Central African Republic	2009-2011	18.2	32	96
Patriotic Movement of Ivory Coast (MPCI)	Ivory Coast	2002	3.4	543	543
Movement for Justice and Peace (MJP)	Ivory Coast	2003	2	44	44
South Sudan Liberation Movement/Army (SSLM/A)	Sudan	2011	2.7	320	320

Militarization = 2 & Mobilization = 2 (27 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (dyad-year)	Total Battle Deaths (dyad)
Democratic Kayin Buddhist Army – Brigade 5 (DKBA 5)	Myanmar	2010-2011; 2013	11.2; 0.03	86.5; 41	214
Beik Mon Army (BMA)	Myanmar	1996	0.03	80	80
Al-Qaeda in the Arabian Peninsula (AQAP)	Yemen	2009-2014	60.5	892.5	5355
Popular Resistance Committees	Israel	2006	6.7	45	45
National Congress for the Defence of the People (CNDP)	Dem. Rep. of Congo	2006-2008	23	394.7	1184
Party for the Liberation of the Hutu People – Forces for the National Liberation (Palipehutu-FNL)	Burundi	1997-2006; 2008	114.4; 5.7	398.3; 201	4184
Popular Front for National Rebirth (PFNR)	Chad	2010	0.03	42	42
Moro National Liberation Front – Nur Misauri Faction (MNLF-NM)	Philippines	2001; 2005; 2013	1.4; 10.5; 0.6	196; 32; 239	467
Moro National Liberation Front – Habier Malik Faction (MNLF-HM)	Philippines	2007	7.8	25	25

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (dyad-year)	Total Battle Deaths (dyad)
Sudan Liberation Movement/Army – Unity (SLM/A-Unity)	Sudan	2007-2008	17	61	122
Forces of George Athor	Sudan	2010-2011	13.9	291	582
Allied Democratic Forces (ADF)	Uganda	1996-2002; 2007; 2010-2011; 2013-2014	72.5; 9.1; 15.6; 18	250.3; 91; 70.5; 444	2872
Somalia Reconciliation and Restoration Council (SRRC)	Somalia	2001-2002	17.5	171	342
Jondullah	Iran	2006-2010	56.8	54	270
Afar Revolutionary Democratic Unity Front (ARDUF)	Ethiopia	1996	0.03	25	25
Coordinated Armed Resistance (CRA)	Niger	1994	4.3	50	50
al-Qaida in the Islamic Maghreb (AQIM)	Algeria	1999-2014	188.9	365.7	5851
Ninjas	Republic of Congo	1993; 1998-1999	1.5; 13.5	53; 63	179
Cocoyes	Republic of Congo	1997-1999	26.4	101.7	305
Ntsiloulous	Republic of Congo	1998-1999; 2002	12.3; 8.7	1762.5; 167	3692
Islamic Movement of Uzbekistan (IMU)	Uzbekistan	1999-2000	18	269	538
Union of Democratic Forces for Unity (UFDR)	Central African Republic	2006	0.1	46	46

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (dyad-year)	Total Battle Deaths (dyad)
Ivorian Popular Movement of the Great West (MPIGO)	Ivory Coast	2002-2003	3.3	88	176
National Democratic Front of Bodoland – Raijan Daimary (NDFB-RD)	India	2009-2010	16.9	65	130
Union of Forces of Armed Resistance (UFRA)	Niger	1997	1.3	62	62
Niger Justice Movement (MNJ)	Niger	2007-2008	18.5	64	128
South Sudan Liberation Movement/Army (SSLM/A)	South Sudan	2011-2012	14.1	124	248

Militarization = 2 & Mobilization = 3 (18 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
al-Aqsa Martyrs' Brigades/Kateab al-Shaheed al Aqsa (AMB)	Israel	2002-2004	33.9	91.3	274
Communist Party of Nepal-Maoist (CPN-M/UPF)	Nepal	1996-2006	120.9	901.5	9916
Movement for the Liberation of Congo (MLC)	Dem. Rep. of Congo	1998-2000	26	856.7	2570
National Council for the Defence of Democracy (CNDD)	Burundi	1994-1998	50.4	302	1510
Boko Haram	Nigeria	2009; 2011-2014	0.1; 46	405; 1886	7949
Real Irish Republican Army (Real IRA)	United Kingdom	1998	0.03	29	29
Baluch Ittehad	Pakistan	2006	5.9	157	157
Baluchistan Republican Army (BRA)	Pakistan	2008-2009; 2012; 2014	15; 10; 6.9	96; 62; 44	298

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Alliance for the Re-liberation of Somalia/Union of Islamic Courts (ARS/UIC)	Somalia	2006-2008	26.2	766.7	2300
Front for the Restoration of Unity and Democracy-Ahmed Dini Faction (FRUD-AD)	Djibouti	1999	1.2	25	25
OP Lavalas (Chimeres)	Haiti	2004	2.9	61	61
Maoist Komunist Partisi (MKP)	Turkey	2005	4	29	29
Republic of Abkhazia	Georgia	1992-1993	15.4	1088.5	2177
United Tajik Opposition (UTO)	Tajikistan	1992-1996; 1998	55.4; 7.7	1573.2; 83	7949
Anjounaise Popular Movement (MPA)	Comoros	1997	0.03	56	56
United Democratic Forces (FDU)	Rep. of Congo	1997	4.3	10000	10000
National Liberation Army (UCK)	Macedonia	2001	2.4	72	72
Al-Mahdi Army (Jaysh al-Mahdi)	Iraq	2004; 2007-2008	5.6; 16.8	1258; 618.5	2495

Militarization = 3 & Mobilization = 1 (10 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Congolese Rally for Democracy (RCD)	Dem. Republic of Congo	1998-2001	37.9	1349.8	5399
Rassemblement des forces democratiques Democratic de Guinee (RFDG)	Guinea	2000-2001	10.1	324.5	649
Uganda National Rescue Front II (UNRF II)	Uganda	1997	4.9	35	35

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Movement for Democracy in Liberia (MODEL)	Liberia	2003	0.6	76	76
Armed Forces Revolutionary Council (AFRC)	Sierra Leone	1997-1999	31.2	1611	4833
Forces of Khudoberdiyev	Tajikistan	1997-1998	14.5	302	604
Husseinov Military Faction	Azerbaijan	1993	0.4	63	63
Faction of Francois Bozize	Central African Republic	2002	1.6	131	131
Republican Forces of Ivory Coast/Forces Nouvelles (FRCI/FN)	Ivory Coast	2004	0.1	47	47
Forces de Defense et de Securite Impartiales de Cote d'Ivoire (FDSI-CI)	Ivory Coast	2011	1.4	35	35

Militarization = 3 & Mobilization = 2 (14 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
ISI/Jama'at Al-Tawhid wa'al-Jihad	Iraq	2004-2014	126.4	2738.7	30126
Rassemblement des forces democratiques (RAFD)	Chad	2006	1	32	32
Union des Forces pour la Democratie et le Developpement (UFDD)	Chad	2006-2007	14.3	204	408
Alliance National (AN)	Chad	2008	10.9	991	991
Union of Resistance Forces (UFR)	Chad	2009	7.8	131	131
National Redemption Front (NRF)	Sudan	2006	5.1	810	810
Sudan Liberation Movement/Army – Minni Minawi (SLM/A-MM)	Sudan	2006	2.7	134	134
West Nile Bank Front (WNBF)	Uganda	1996	8.2	198	198

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Hizbul-Islam	Somalia	2009-2010	19.3	75	150
Liberians United for Reconciliation and Democracy (LURD)	Liberia	2000-2003	41.7	650.3	2601
Northern Mali Tuareg Alliance for Change (ATNMC)	Mali	2007-2009	16.7	63.3	190
Military Junta for the Consolidation of Democracy, Peace, and Justice	Guinea-Bissau	1998-1999	11	352	704
Islamic Movement of Uzbekistan (IMU)	Tajikistan	2010-2011	10.5	47	94
Forces of Muammar Gaddafi	Libya	2011	1.8	328	328

Militarization = 3 & Mobilization = 3 (32 cases)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Communist Party of India-Maoist (CPI-M)	India	2005-2014	119	353.4	3534
Palestinian National Authority (PNA)	Israel	1996; 2000-2002	3.2; 24	66; 79.3	304
Ansar al-Islam (Supporters of Islam)	Iraq	2004-2007; 2011	47.4; 2.6	225.3; 27	928
Shan State Army-South (SSA-S) / Restoration Council of Shan States (RCSS)	Myanmar	1996-2002; 2005-2011; 2013	68.8; 68.5; 4.3	85.3; 36; 32	881
Alliance of Democratic Forces for the Liberation of Congo-Zaire (AFDL)	Dem. Republic of Congo	1996-1997	6.9	2880.5	5761
National Democratic Alliance	Sudan	1996-2001	68.4	481.8	2891

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Junbish-i Milli-yi Islami (National Islamic Movement of Afghanistan)	Afghanistan	1993-1995	27.2	3011	9033
Taliban	Afghanistan	1995-1996; 2003-2014	18.5; 142.6	3096; 5731.9	74975
United Islamic Front for the Salvation of Afghanistan (UIFSA) / Northern Alliance	Afghanistan	1996-2001	61.8	4297.5	25785
Al-Shabaab	Somalia	2008-2014	83.5	1633	11431
Parti Jiyani Azadi Kurdistan (PJAK)	Iran	2005-2009; 2011	52.8; 5.1	43; 228	443
Opposition alliance	Rwanda	1996-2000	50.6	458.4	2292
Zviadists	Georgia	1992-1993	21.5	111.5	223
National Liberation and Resistance Front (FLRN)	Haiti	2004	0.7	146	146
Kamajors	Sierra Leone	1997-1998	9.4	526	1052
Serbian irregulars	Bosnia and Herzegovina	1992-1995	43	25	100
Serbian Republic of Bosnia and Herzegovina (Republika Srpska)	Bosnia and Herzegovina	1992-1995	42.7	2432.3	9729
Serbian irregulars	Croatia	1992	5	25	25
Serbian Republic of Krajina	Croatia	1992-1993; 1995	19.2; 0.03	223; 858	1304
Autonomous Province of Western Bosnia	Bosnia and Herzegovina	1993-1995	22.1	323.7	971
Croatian irregulars	Bosnia and Herzegovina	1993-1994	19	25	50
Croatian Republic of Bosnia and Herzegovina (HVO)	Bosnia and Herzegovina	1993-1994	13.5	1302	2604

(table continues)

Rebel Group	State	Dyad Years (by episode)	Conflict Duration (months)	Mean Battle Deaths (per year)	Total Battle Deaths (per dyad)
Democratic Republic of Yemen	Yemen	1994	2.2	1489	1489
Tehreek-e-Taliban Pakistan / Movement of Students in Pakistan (TTP)	Pakistan	2007-2014	89.5	3025.8	24206
Military Faction	Lesotho	1998	0.2	68	68
Kosovo Liberation Army (UCK)	Serbia	1998-1999	15.8	1319.5	2639
Wahhabi Movement of the Buinaksk District	Russia	1999	0.7	85	85
Military Faction (Forces of Andre Kolingba)	Central African Republic	2001	0.2	234	234
Forces of the Caucasus Emirate	Russia	2007-2014	85.1	363.9	2911
Al-Qaeda in the Islamic Maghreb (AQIM)	Mauritania	2010-2011	13.1	27.5	55
Republic of South Sudan	Sudan	2011	0.9	145	145
Democratic Forces for the Liberation of Rwanda (FDLR)	Rwanda	2001-2002; 2009-2012	9.4; 45.5	1051.5; 557.8	4334

Table B.2. Factor Analysis for creation of *Origins Capacity* variable

Step 1 – "Factor"

Factor analysis/correlation — Number of obs = 311
Method: principal factors — Retained factors = 6
Rotation: (unrotated) — Number of params = 45

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	1.84	0.97	0.68	0.68
Factor 2	0.87	0.41	0.32	0.99
Factor 3	0.46	0.11	0.17	1.16
Factor 4	0.35	0.21	0.13	1.29
Factor 5	0.14	0.14	0.05	1.34
Factor 6	0.00	0.14	0.00	1.34

(table continues)

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 7	-0.14	0.06	-0.05	1.29
Factor 8	-0.20	0.07	-0.07	1.22
Factor 9	-0.27	0.06	-0.10	1.12
Factor 10	-0.33	.	-0.12	1.00

LR test: independent vs. saturated: chi2(45) = 552.81 Prob>chi2 = 0.00

Factor loadings (pattern matrix) and unique variance

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Militarization	0.39	-0.36	0.01	0.16	-0.14	0.02
Mobilization	0.02	-0.51	-0.10	0.18	0.01	-0.00
Ethnic Fractionalization	0.41	0.32	-0.27	-0.04	0.15	0.01
Religious Fractionalization	0.25	0.37	0.10	-0.10	-0.08	0.03
Government Ext. Support	-0.06	0.22	0.46	0.19	0.06	-0.01
Rebel Ext. Support	0.25	0.17	-0.29	0.32	0.08	-0.01
Relative Rebel Strength	0.74	0.02	0.14	0.04	-0.04	-0.02
Rebel Central Control	-0.34	0.32	-0.02	0.37	-0.10	0.01
Rebel Arms Procurement	0.77	0.08	-0.01	-0.03	-0.13	-0.01
Battle Deaths	0.36	-0.20	0.22	0.07	0.24	0.02

Variable	Uniqueness
Militarization	0.67
Mobilization	0.69
Ethnic Fractionalization	0.63
Religious Fractionalization	0.77
Government External Support	0.69
Rebel External Support	0.72
Relative Rebel Strength	0.43
Rebel Central Control	0.63
Rebel Arms Procurement	0.38
Battle Deaths	0.72

Step 2 – "Rotate"

Factor analysis/correlation — Number of obs = 311
Method: principal factors — Retained factors = 6
Rotation: orthogonal varimax (Kaiser off) — Number of params = 45

Factor	Variance	Difference	Proportion	Cumulative
Factor 1	1.72	0.99	0.63	0.63
Factor 2	0.72	0.31	0.27	0.90
Factor 3	0.41	0.01	0.15	1.05
Factor 4	0.41	0.00	0.15	1.20
Factor 5	0.40	0.40	0.15	1.34
Factor 6	0.00	.	0.00	1.34

LR test: independent vs. saturated: chi2(45) = 552.81 Prob>chi2 = 0.0000

Rotated factor loadings (pattern matrix) and unique variances

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Militarization	0.39	0.41	-0.07	-0.03	-0.04	0.03
Mobilization	-0.03	0.54	-0.03	-0.08	-0.09	-0.01
Ethnic Fractionalization	0.35	-0.23	0.42	-0.03	-0.12	0.01
Religious Fractionalization	0.30	-0.36	0.03	0.07	0.06	0.03
Government Ext Support	0.01	-0.13	-0.10	0.13	0.51	-0.00
Rebel Ext Support	0.20	0.07	0.43	0.22	-0.04	-0.01
Relative Rebel Strength	0.74	0.04	0.06	-0.09	0.10	-0.01
Rebel Central Control	-0.28	-0.10	0.10	0.49	0.16	0.00
Rebel Arms Procurement	0.78	-0.03	0.09	-0.04	-0.07	0.01
Battle Deaths	0.30	0.21	0.06	-0.27	0.26	0.02

Variable	Uniqueness
Militarization	0.67
Mobilization	0.69
Ethnic Fractionalization	0.63
Religious Fractionalization	0.77
Government External Support	0.69
Rebel External Support	0.72
Relative Rebel Strength	0.43
Rebel Central Control	0.63
Rebel Arms Procurement	0.38
Battle Deaths	0.72

Factor rotation matrix

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Factor1	0.96	0.07	0.20	-0.18	-0.02	0.02
Factor2	0.07	-0.84	0.31	0.40	0.17	0.00
Factor3	0.12	-0.10	-0.57	-0.12	0.80	0.01
Factor4	0.02	0.52	0.35	0.65	0.42	-0.00
Factor5	-0.24	0.01	0.64	-0.61	0.41	-0.02
Factor6	-0.02	0.00	0.02	-0.01	-0.00	1.00

Step 3 – "Predict Factor2"

Scoring coefficients (method = regression; based on varimax rotated factors)

Variable	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Militarization	0.13	0.29	-0.09	0.06	-0.03	0.04
Mobilization	-0.02	0.34	0.02	-0.02	-0.05	-0.01
Ethnic Fractionalization	0.07	-0.15	0.34	-0.05	-0.09	0.01
Religious Fractionalization	0.10	-0.22	-0.04	0.05	0.03	0.04
Government Ext. Support	0.01	-0.06	-0.07	0.08	0.40	-0.00
Rebel Ext. Support	0.03	0.09	0.32	0.17	-0.02	-0.01
Relative Rebel Strength	0.36	0.03	-0.02	-0.02	0.16	-0.04
Rebel Central Control	-0.05	-0.00	0.09	0.41	0.13	0.01
Rebel Arms Procurement	0.42	-0.06	-0.03	0.07	-0.13	0.01
Battle Deaths	0.07	0.13	0.08	-0.20	0.24	0.02

Table B.3. Intensity of Civil Conflict (in Average Annual Battle Deaths)

OLS regression (cross-sectional dataset)

	Coefficient	Std. Error	t	P>|t|
Militarization	90.84	128.28	0.71	0.480
Mobilization	356.08**	132.53	2.69	0.008
Conflict Duration	5.65	2.94	1.92	0.057
Ethnic Fractionaliz	541.03	419.72	1.29	0.200
Religious Fractionaliz	616.27	444.58	1.39	0.168

(table continues)

	Coefficient	Std. Error	t	P>|t|
Rebel Ext. Support	232.91*	103.70	2.25	0.026
Group Age	0.89	1.93	0.46	0.645
Dyad Previous Active	-113.67	199.66	-0.57	0.570
Incompatibility	236.07	212.29	1.11	0.268
Constant	-1823.95	629.77	-2.90	0.004

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.3 MODEL SUMMARY
Number of obs = 141
F(9, 131) = 3.31
Prob > F = 0.0011
R-squared = 0.1853
Adj R-squared = 0.1293
Root MSE = 997.15

Table B.4. Intensity of Civil Conflict (in Average Annual Battle Deaths)

OLS regression (cross-sectional dataset)

	Coefficient	Std. Error	t	P>|t|
Origins Capacity	219.71*	85.13	2.58	0.011
Conflict Duration	5.98*	2.94	2.03	0.044
Ethnic Fractionalization	483.04	418.74	1.15	0.251
Religious Fractionalization	529.92	441.21	1.20	0.232
Rebel Ext. Support	231.32*	104.00	2.22	0.028
Group Age	1.26	1.92	0.66	0.512
Dyad Previous Active	-188.26	192.32	-0.98	0.329

(table continues)

	Coefficient	Std. Error	t	P>|t|
Incompatibility	158.30	204.82	0.77	0.441
Constant	-1587.29	606.30	-2.62	0.010

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.4 MODEL SUMMARY
Number of obs = 141
F(8, 132) = 3.48
Prob > F = 0.0011
R-squared = 0.1741
Adj R-squared = 0.1241
Root MSE = 1000.1

Table B.5. Intensity of Civil Conflict (in Annual Battle Deaths)

OLS regression (time-series dataset)

	Coefficient	Std. Error	t	P>|t|
Militarization	355.98**	106.18	3.35	0.001
Mobilization	319.01**	112.49	2.84	0.005
Conflict Duration	7.71**	2.38	3.24	0.001
Ethnic Fractionalization	700.11*	353.22	1.98	0.048
Religious Fractionalization	538.23	362.44	1.49	0.138
Rebel Ext. Support	118.20	80.47	1.47	0.143
Group Age	2.15	1.97	1.10	0.274
Dyad Previous Active	-236.20	161.52	-1.46	0.145
Incompatibility	430.09*	181.98	2.36	0.019
Constant	-2593.05	560.31	-4.63	0.000

Levels of significance *** < .001 ** < .01 * < .05

(table continues)

TABLE B.5 MODEL SUMMARY
Number of obs = 360
F(9, 350) = 6.06
Prob > F = 0.0000
R-squared = 0.1348
Adj R-squared = 0.1126
Root MSE = 1297.4

Table B.6. Intensity of Civil Conflict (in Annual Battle Deaths)

OLS regression (time-series dataset)

	Coefficient	Std. Error	t	P>|t|
Origins Capacity	338.34***	66.04	5.12	0.000
Conflict Duration	7.69**	2.37	3.24	0.001
Ethnic Fractionalization	703.96*	352.27	2.00	0.046
Religious Fractionalization	553.06	355.17	1.56	0.120
Rebel Ext. Support	118.14	80.36	1.47	0.142
Group Age	2.11	1.95	1.08	0.281
Dyad Previous Active	-228.65	157.34	-1.45	0.147
Incompatibility	438.76*	177.10	2.48	0.014
Constant	-2622.81	541.77	-4.84	0.000

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.6 MODEL SUMMARY
Number of obs = 360
F(8, 351) = 6.83
Prob > F = 0.0000
R-squared = 0.1347
Adj R-squared = 0.1150
Root MSE = 1295.7

Table B.7. Intensity of Civil Conflict (in annual Battle Deaths)

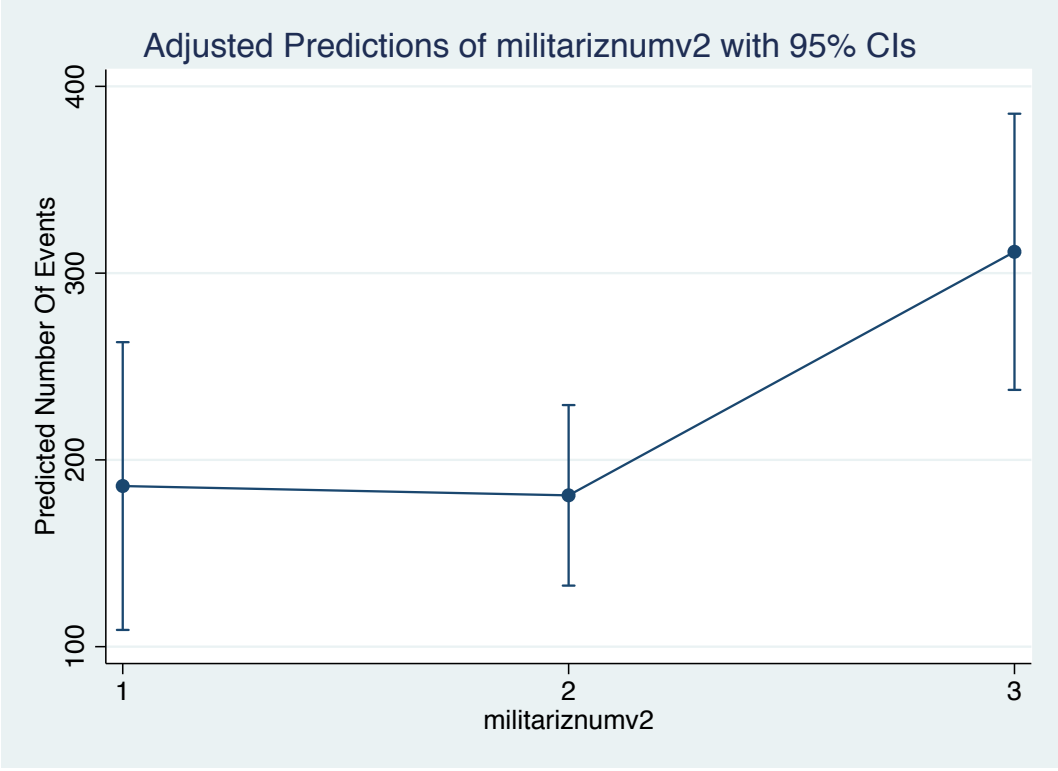
Negative binomial regression (time-series dataset – Government favorable cases only)

	Coefficient	Std. Error	z	P>|z|
Militarization	-	-	-	-
Value = 2	-0.03	0.27	-0.10	0.919
Value = 3	0.52*	0.25	2.03	0.042
Mobilization	0.25	0.14	1.84	0.065
Conflict Duration	-0.01	0.01	-1.35	0.178
Ethnic Fractionalization	0.57	0.45	1.27	0.204
Religious Fractionalization	0.62	0.57	1.09	0.277
Rebel Ext. Support	0.17	0.12	1.38	0.167
Group Age	-0.01**	0.00	-2.60	0.009
Dyad Previous Active	-0.06	0.21	-0.27	0.784
Incompatibility	1.31***	0.21	6.38	0.000
Constant	1.94	0.62	3.10	0.002

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.7 MODEL SUMMARY
Number of obs = 191
LR chi2(10) = 75.16
Prob > chi2 = 0.0000
Pseudo R2 = 0.0296
Dispersion = mean
Log likelihood = -1230.7622

Figure B.1. Marginal effects of *Militarization* on Conflict Intensity



Corresponds with Table B.7

Table B.8. Intensity of Conflict (in Annual Battle Deaths)

Negative binomial regression (Time series – Rebel favorable cases only)

	Coefficient	Std. Error	z	P>|z|
Mobilization	-	-	-	-
Value = 2	0.91*	0.36	2.51	0.012
Value = 3	2.06***	0.42	4.91	0.000
Militarization	0.07	0.28	0.24	0.810
Conflict Duration	0.01**	0.01	2.68	0.007
Ethnic Fractionalization	-0.76	0.74	-1.03	0.301
Religious Fractionalization	2.20*	0.86	2.58	0.010

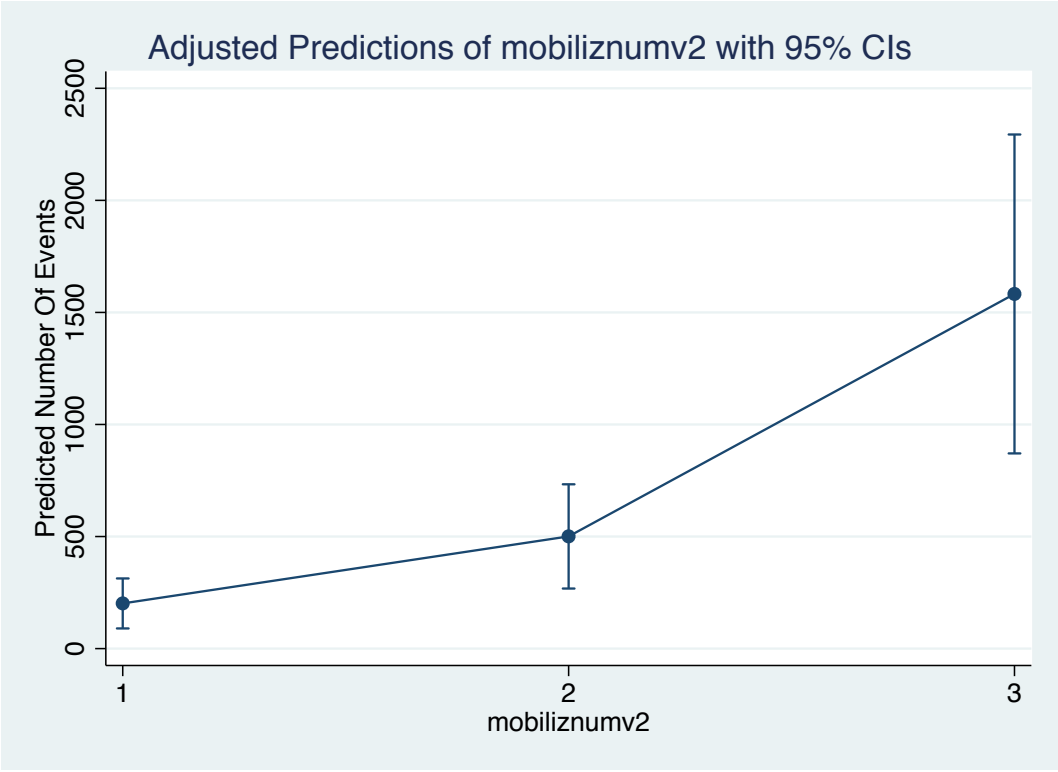
(table continues)

	Coefficient	Std. Error	z	P>|z|
Rebel Ext. Support	0.64***	0.17	3.67	0.000
Group Age	0.00	0.01	0.36	0.722
Dyad Previous Active	-0.90*	0.45	-1.97	0.048
Incompatibility	0.93*	0.43	2.13	0.033
Constant	2.07	1.32	1.57	0.117

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.8 MODEL SUMMARY
Number of obs = 98
LR chi2(10) = 68.46
Prob > chi2 = 0.0000
Pseudo R2 = 0.0445
Dispersion = mean
Log likelihood = -734.66376

Figure B.2. Marginal effects of *Mobilization* on Conflict Intensity



Corresponds with Table B.8

Table B.9. Intensity of Conflict (in Annual Battle Deaths)

Negative binomial regression (time-series dataset – rebel favorable cases only)

	Coefficient	Std. Error	z	P>|z|
Militarization	-	-	-	-
Value = 2	0.20	0.61	0.33	0.739
Value = 3	0.19	0.64	0.29	0.769
Mobilization	1.01***	0.21	4.74	0.000
Conflict Duration	0.01**	0.01	2.60	0.009
Ethnic Fractionalization	-0.74	0.78	-0.96	0.339
Religious Fractionalization	2.04*	0.91	2.23	0.025
Rebel Ext. Support	0.69***	0.15	4.64	0.000
Group Age	0.00	0.01	0.36	0.722
Dyad Previous Active	-0.94*	0.43	-2.22	0.026
Incompatibility	0.87	0.46	1.91	0.056
Constant	1.15	1.39	0.82	0.410

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.9 MODEL SUMMARY
Number of obs = 98
LR chi2(10) = 68.40
Prob > chi2 = 0.0000
Pseudo R2 = 0.0445
Dispersion = mean
Log likelihood = -734.69526

Table B.10. Intensity of Conflict (in Annual Battle Deaths)

OLS regression (time-series dataset – Rebel favorable cases only)

	Coefficient	Std. Error	t	P>|t|
Militarization	-23.97	319.68	-0.07	0.940
Mobilization	884.50***	244.39	3.62	0.000
Conflict Duration	2.03	5.41	0.37	0.709
Ethnic Fractionalization	-291.12	780.49	-0.37	0.710
Religious Fractionalization	1385.59	880.83	1.57	0.119
Rebel Ext. Support	819.28***	185.26	4.42	0.000
Group Age	25.70**	7.74	3.32	0.001
Dyad Previous Active	-956.47*	458.21	-2.09	0.040
Incompatibility	485.60	518.60	0.94	0.352
Constant	-3415.74	1618.90	-2.11	0.038

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.10 MODEL SUMMARY
Number of obs = 98
F(9, 88) = 6.68
Prob > F = 0.0000
R-squared = 0.4059
Adj R-squared = 0.3451
Root MSE = 1329.5

Table B.11. Intensity of Conflict (in Annual Battle Deaths)

OLS regression (time-series dataset – Rebel favorable cases only)

	Coefficient	Std. Error	t	P>|t|
Origins Capacity	545.29**	194.80	2.80	0.006
Conflict Duration	1.97	5.52	0.36	0.723
Ethnic Fractionalization	-146.02	794.69	-0.18	0.855
Religious Fractionalization	596.41	823.36	0.72	0.471
Rebel Ext. Support	629.48***	167.90	3.75	0.000
Group Age	24.63**	7.89	3.12	0.002
Dyad Previous Active	-944.39	468.16	-2.02	0.047
Incompatibility	348.07	526.10	0.66	0.510
Constant	-3205.87	1651.35	-1.94	0.055

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.11 MODEL SUMMARY
Number of obs = 98
F(8, 89) = 6.61
Prob > F = 0.0000
R-squared = 0.3727
Adj R-squared = 0.3163
Root MSE = 1358.5

Table B.12. Intensity of Conflict (in Average Annual Battle Deaths)

Negative binomial regression (cross-sectional dataset – Government favorable cases only)

	Coefficient	Std. Error	z	P>|z|
Origins Capacity	0.29**	0.09	3.21	0.001
Conflict Duration	0.01	0.01	1.19	0.233

(table continues)

	Coefficient	Std. Error	z	P>|z|
Ethnic Fractionalization	0.16	0.51	0.32	0.753
Religious Fractionalization	0.15	0.60	0.24	0.808
Rebel Ext. Support	0.20	0.13	1.54	0.124
Group Age	-0.01**	0.00	-2.95	0.003
Dyad Previous Active	-0.12	0.24	-0.52	0.606
Incompatibility	1.02***	0.24	4.22	0.000
Constant	2.04	0.63	3.27	0.001

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.12 MODEL SUMMARY
Number of obs = 92
LR chi2(8) = 48.69
Prob > chi2 = 0.0000
Pseudo R2 = 0.0406
Dispersion = mean
Log likelihood = -574.83344

Table B.13. Duration of Civil Conflict

Cox proportional hazard regression – Breslow method for ties

	Hazard Ratio	Std. Error	z	P>|z|
Militarization	0.99	0.13	-0.09	0.926
Mobilization	0.73*	0.11	-2.12	0.034
Ethnic Fractionalization	0.97	0.46	-0.07	0.947
Religious Fractionalization	2.21	1.14	1.54	0.123
Rebel Ext. Support	0.94	0.10	-0.54	0.586
Group Age	1.00	0.00	1.31	0.192

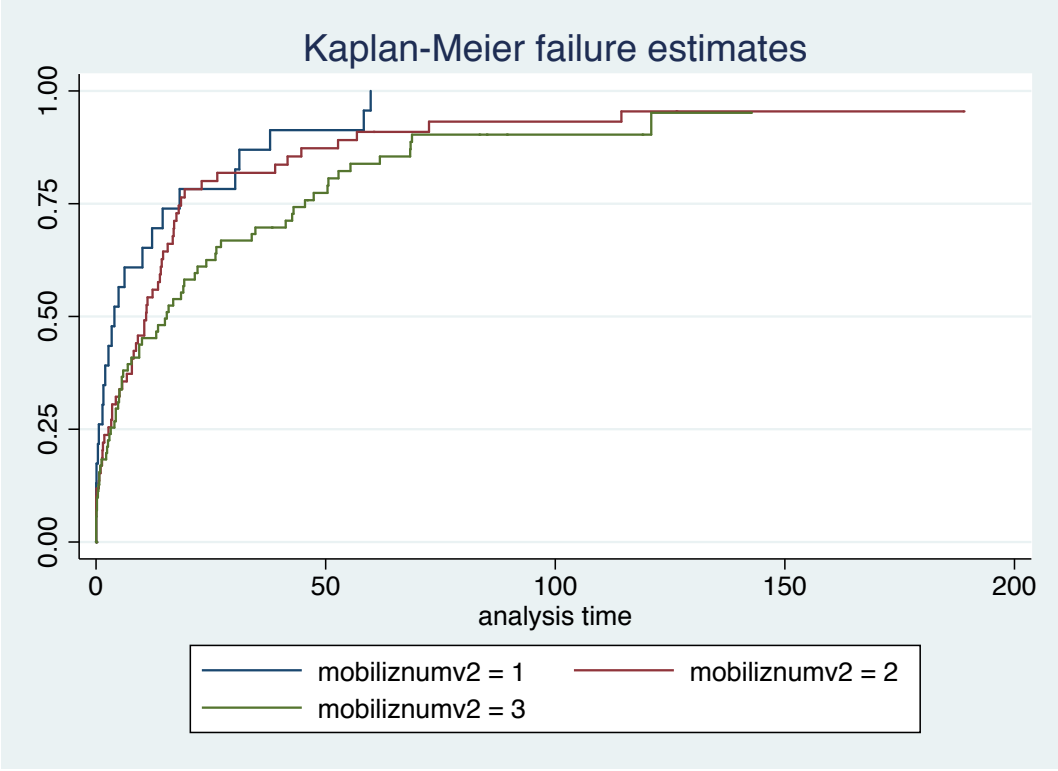
(table continues)

	Hazard Ratio	Std. Error	z	P>|z|
Dyad Previous Active	0.84	0.19	-0.78	0.438
Incompatibility	0.63*	0.14	-2.04	0.042
Battle Deaths	1.00*	0.00	-2.31	0.021

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.13 MODEL SUMMARY
Time = length of conflict in months
No. of subjects = 141
No. of failures = 131
Number of obs = 360
Time at risk = 3077.160008
LR chi2(9) = 25.24
Prob > chi2 = 0.0027
Log likelihood = -525.55784

Figure B.3. Probability of Conflict Termination by value of *Mobilization*



Corresponds with Table B.13

Table B.14. Duration of Civil Conflict

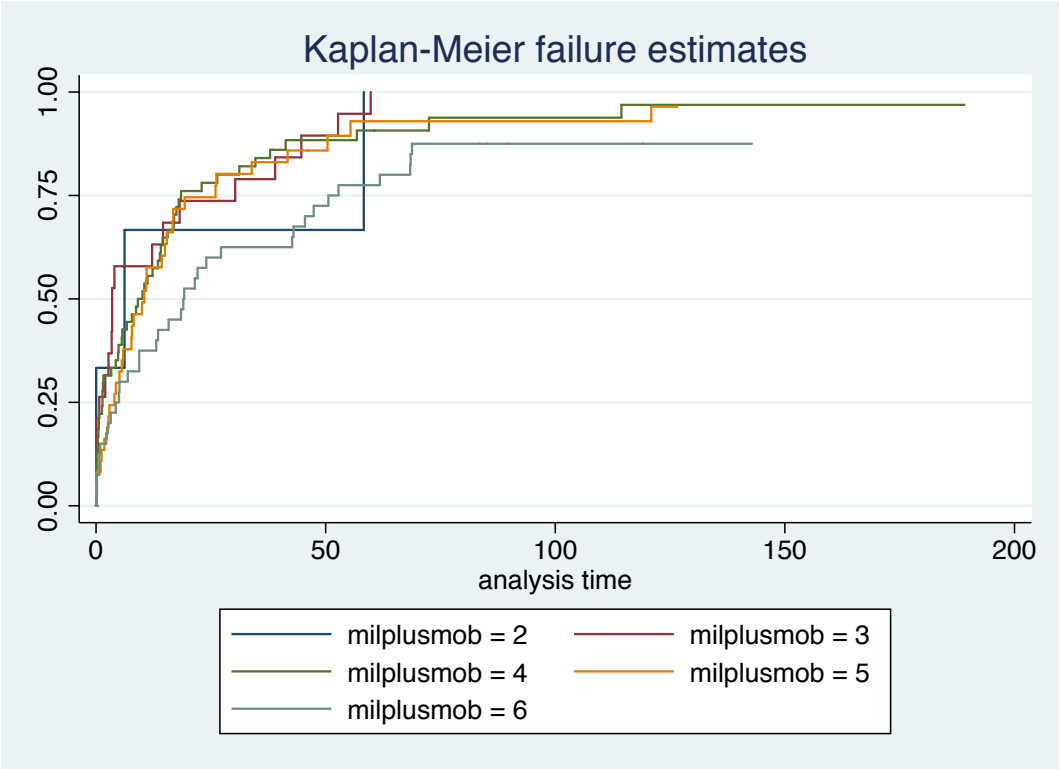
Cox proportional hazard regression – Breslow method for ties

	Hazard Ratio	Std. Error	z	P>|z|
Origins Capacity	0.86	0.08	-1.67	0.095
Ethnic Fractionalization	1.01	0.48	0.02	0.987
Religious Fractionalization	2.46	1.26	1.76	0.078
Rebel Ext. Support	0.94	0.10	-0.58	0.561
Group Age	1.00	0.00	1.09	0.276
Dyad Previous Active	0.902	0.192	-0.49	0.628
Incompatibility	0.69	0.15	-1.72	0.085
Battle Deaths	1.00*	0.00	-2.27	0.023

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.14 MODEL SUMMARY
Time = length of conflict in months
No. of subjects = 141
No. of failures = 131
Number of obs = 360
Time at risk = 3077.160008
LR chi2(8) = 23.36
Prob > chi2 = 0.0029
Log likelihood = -526.50044

Figure B.4. Probability of Conflict Termination by value of *Origins Capacity*



Corresponds with Table B.14

Table B.15. Duration of Civil Conflict[19]

Cox Proportional Hazard models (with origins interaction term included)

Failure = Conflict Termination	Model B.1	Model B.2	Model B.3	Model B.4	Model B.5
	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)
Origins Interaction	1.26 (.34)	1.20 (.33)	1.23 (.34)	0.94 (.19)	1.07 (.31)
Militarization	0.44 (.30)	0.45 (.32)	0.49 (.35)	0.90 (.47)	0.64 (.47)
Mobilization	0.38 (.26)	0.45 (.31)	0.42 (.29)	0.93 (.45)	0.62 (.47)

[19] For Tables B.15 through B.18, all variables from the original corresponding models in Chapter 3 (Tables 3.2 through 3.5) were included in each analysis. As the findings of interest were the performance of the interaction term (replacing the additive origins variable) and its effect on the constituent *Militarization* and *Mobilization* variables, only these three variables are presented in this appendix.

Table B.16. Duration of Civil Conflict

Cox Proportional Hazard models (with origins interaction term included)

Failure = Conflict Termination	Model B.6	Model B.7	Model B.8	Model B.9
	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)	Hazard Ratio (Std. Err.)
Origins Interaction	0.84 (.18)	0.86 (.18)	1.34 (.36)	0.82 (.18)
Militarization	1.06 (.57)	0.94 (.49)	0.33 (.22)	1.12 (.59)
Mobilization	1.29 (.67)	1.18 (.60)	0.33 (.22)	1.37 (.72)

Table B.17. Intensity of Civil Conflict

Negative binomial models (with origins interaction term included)

DV=Conflict Intensity	Model B.10	Model B.11	Model B.12	Model B.13
	Coeff (Std. Err.)	Coeff (Std. Err.)	Coeff (Std. Err.)	Coeff (Std. Err.)
Origins Interaction	-0.34* (.16)	-0.29 (.22)	-0.21 (.16)	0.02 (.24)
Militarization	1.04** (.39)	0.88 (.55)	0.82* (.39)	0.22 (.58)
Mobilization	1.20** (.37)	1.01 (.55)	0.62 (.39)	0.00 (.62)

Table B.18. Intensity of Civil Conflict

Negative binomial models (with origins interaction term included)

DV=Conflict Intensity	Model B.14 (OLS)	Model B.15	Model B.16	Model B.17
	Coeff (Std. Err.)	Coeff (Std. Err.)	Coeff (Std. Err.)	Coeff (Std. Err.)
Origins Interaction	-104.14 (157.44)	-0.34* (.16)	-0.29 (.22)	-0.21 (.16)
Militarization	449.41 (393.57)	1.04** (.39)	0.88 (.55)	0.82* (.39)
Mobilization	541.45 (382.10)	1.20** (.37)	1.01 (.55)	0.62 (.39)

Table B.19. Intensity of Civil Conflict (in Annual Battle Deaths)

Negative binomial regression (cross-sectional dataset)

	Coef.	Std. Err.	z	P > |z|
Mobilization				
Value = 2	0.33	0.26	1.27	0.203
Value = 3	1.14***	0.27	4.29	0.000
Militarization	0.25	0.14	1.77	0.077
Duration	0.01***	0.00	4.34	0.000
Ethnic Fractionalization	0.66	0.49	1.36	0.175
Religious Fractionalization	1.17*	0.46	2.54	0.011
Rebel External Support	0.34**	0.11	3.19	0.001
Rebel Group Age	-0.01*	0.00	-2.39	0.017
Dyad Recurrence	-0.32	0.22	-1.45	0.146
Incompatibility	0.69**	0.23	2.95	0.003
Constant	2.07	0.58	3.60	0.000

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.19 MODEL SUMMARY
N=141
LR Chi-square=100.15
Prob>Chi-sq=0.00
Pseudo R-sq=.05
Log-likelihood=-948.8
Dispersion=mean

Table B.20. Intensity of Civil Conflict (in Annual Battle Deaths)

Negative binomial regression (cross-sectional dataset)

	Coef.	Std. Err.	z	P > |z|
Origins Capacity	---	---	---	---
Value = 3	-0.08	0.67	-0.12	0.903
Value = 4	0.57	0.63	0.91	0.360
Value = 5	1.24	0.64	1.93	0.054
Value = 6	1.33*	0.65	2.06	0.040
Duration	0.01***	0.00	4.05	0.000
Ethnic Fractionalization	0.51	0.49	1.04	0.298
Religious Fractionalization	1.08*	0.47	2.27	0.023
Rebel External Support	0.41***	0.11	3.69	0.000
Rebel Group Age	-0.01*	0.00	-2.23	0.026
Dyad Recurrence	-0.43	0.22	-1.94	0.053
Incompatibility	0.66**	0.23	2.90	0.004
Constant	2.63	0.75	3.53	0.000

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.20 MODEL SUMMARY
N=141
LR Chi-square=99.17
Prob>Chi-sq=0.00
Pseudo R-sq=.05
Log-likelihood=-949.2
Dispersion=mean

Table B.21. Intensity of Civil Conflict (in Annual Battle Deaths)

Negative binomial regression (time-series dataset)

	Coef.	Std. Err.	z	P > |z|
Militarization	---	---	---	---
Value = 2	0.53*	0.22	2.40	0.016
Value = 3	1.13***	0.21	5.29	0.000
Mobilization	0.57***	0.10	5.82	0.000
Duration	0.01***	0.00	4.46	0.000
Ethnic Fractionalization	0.21	0.35	0.59	0.554
Religious Fractionalization	1.18***	0.33	3.61	0.000
Rebel External Support	0.18*	0.08	2.41	0.016
Rebel Group Age	-0.00*	0.00	-2.10	0.035
Dyad Recurrence	-0.44**	0.15	-2.90	0.004
Incompatibility	1.31***	0.17	7.59	0.000
Constant	0.97	0.46	2.08	0.037

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.21 MODEL SUMMARY
N=360
LR Chi-square=161.29
Prob>Chi-sq=0.00
Pseudo R-sq=.03
Log-likelihood=-2575.9
Dispersion=mean

Table B.22. Intensity of Civil Conflict (in Annual Battle Deaths)

Negative binomial regression (time-series dataset)

	Coef.	Std. Err.	z	P > |z|
Mobilization				
Value = 2	0.53*	0.21	2.47	0.014
Value = 3	1.12***	0.21	5.35	0.000
Militarization	0.58***	0.10	5.98	0.000
Duration	0.01***	0.00	4.48	0.000
Ethnic Fractionalization	0.20	0.36	0.57	0.570
Religious Fractionalization	1.17***	0.33	3.56	0.000
Rebel External Support	0.18*	0.07	2.51	0.012
Rebel Group Age	-0.00*	0.00	-2.07	0.039
Dyad Recurrence	-0.45**	0.15	-2.97	0.003
Incompatibility	1.31***	0.17	7.61	0.000
Constant	0.97	0.46	2.09	0.036

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.22 MODEL SUMMARY
N=360
LR Chi-square=161.27
Prob>Chi-sq=0.00
Pseudo R-sq=.03
Log-likelihood=-2575.9
Dispersion=mean

Table B.23. Intensity of Civil Conflict (in Annual Battle Deaths)

Negative binomial regression (Time-series dataset)

	Coef.	Std. Err.	z	P > |z|
Origins Capacity	---	---	---	---
Value = 3	0.23	0.45	0.51	0.610
Value = 4	0.68	0.43	1.59	0.111
Value = 5	1.62***	0.44	3.67	0.000
Value = 6	1.91***	0.42	4.51	0.000
Duration	0.01***	0.00	4.26	0.000
Ethnic Fractionalization	0.28	0.36	0.78	0.436
Religious Fractionalization	1.12***	0.32	3.50	0.000
Rebel External Support	0.19*	0.08	2.32	0.020
Rebel Group Age	-0.01**	0.00	-2.63	0.008
Dyad Recurrence	-0.34*	0.16	-2.05	0.040
Incompatibility	1.29***	0.17	7.54	0.000
Constant	1.83	0.55	3.31	0.001

Levels of significance *** < .001 ** < .01 * < .05

TABLE B.23 MODEL SUMMARY
N=360
LR Chi-square=166.14
Prob>Chi-sq=0.00
Pseudo R-sq=.03
Log-likelihood=-2573.5
Dispersion=mean

Table B.24. Intensity of Civil Conflict

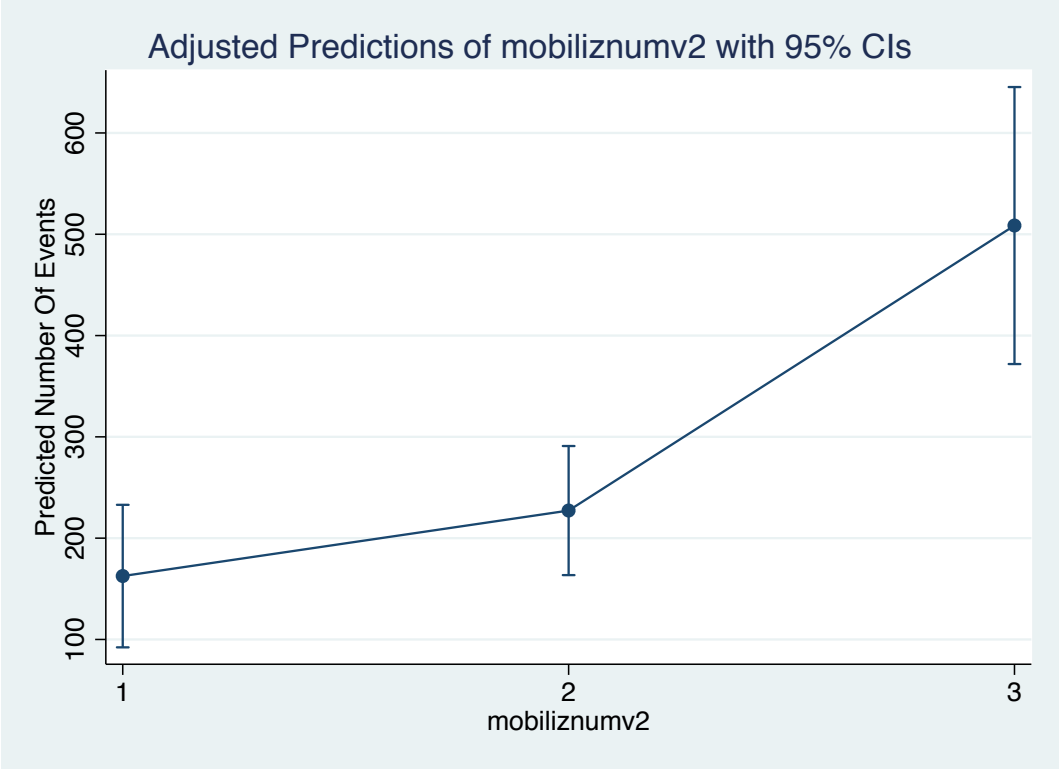
Negative binomial regression (cross-sectional dataset)

DV – Annual Battle Deaths	Coef.	Std. Err.	z	P > |z|
Militarization	---	---	---	---
Value = 2	0.59*	0.28	2.08	0.037
Value = 3	0.69*	0.29	2.43	0.015
Mobilization	0.59***	0.12	4.75	0.000
Duration	0.01***	0.00	4.35	0.000
Ethnic Fractionalization	0.70	0.48	1.44	0.149
Religious Fractionalization	1.03*	0.48	2.15	0.032*
Rebel External Support	0.38***	0.11	3.52	0.000
Rebel Group Age	-0.00*	0.00	-2.33	0.020
Dyad Recurrence	-0.41	0.21	-1.92	0.055
Incompatibility	0.69**	0.23	3.04	0.002
Constant	1.41	0.57	2.50	0.013

Levels of significance *** < .001 ** < .01 * < .05

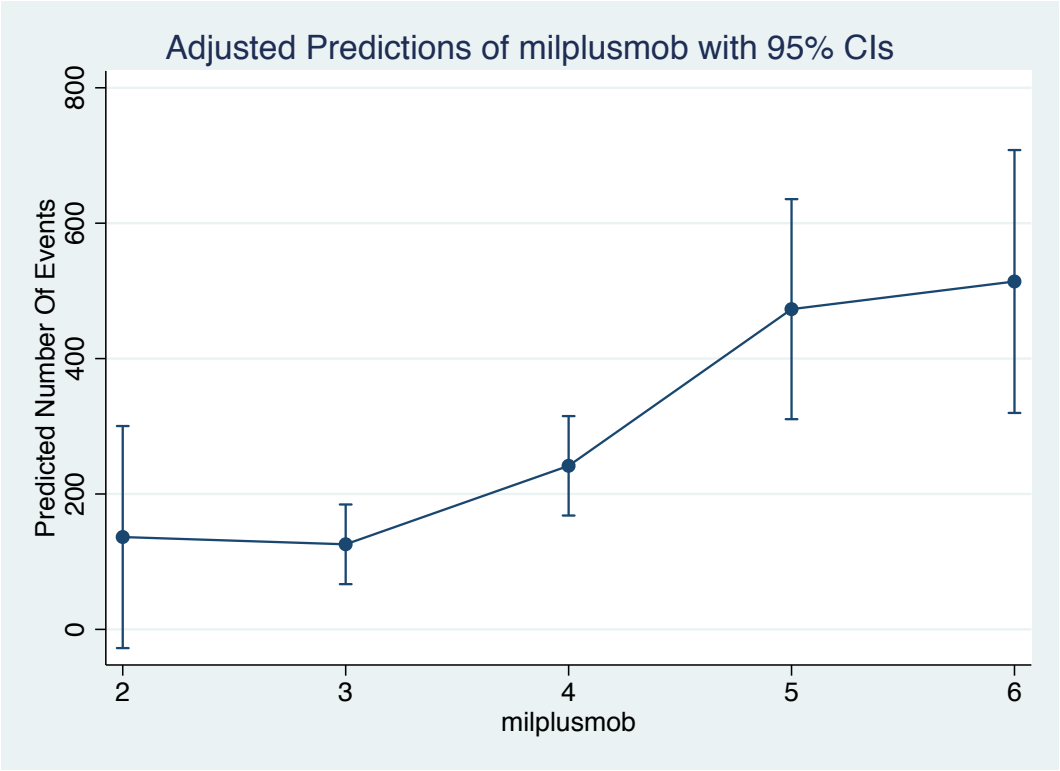
TABLE B.24 MODEL SUMMARY
N=141
LR Chi-square=100.19
Prob>Chi-sq=0.00
Pseudo R-sq=.05
Log-likelihood=-948.7
Dispersion=mean

Figure B.5. Marginal effects of *Mobilization* on average annual Conflict Intensity



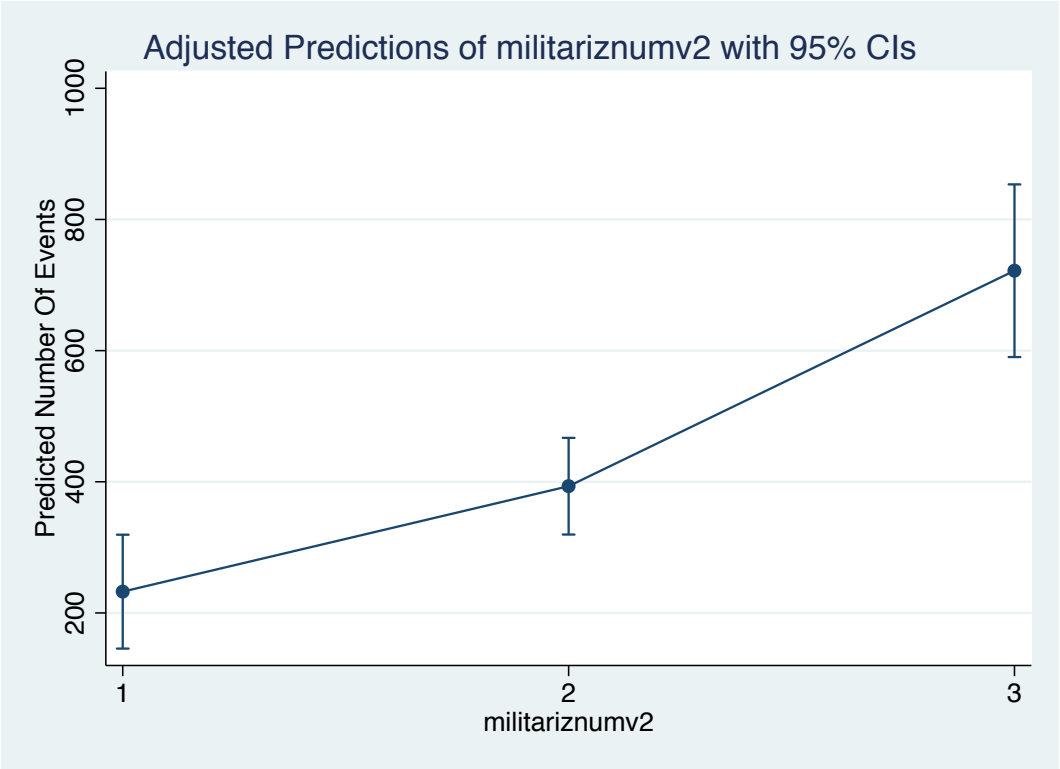
Corresponds with Table B.19

Figure B.6. Marginal effects of *Origins Capacity* on average annual Conflict Intensity



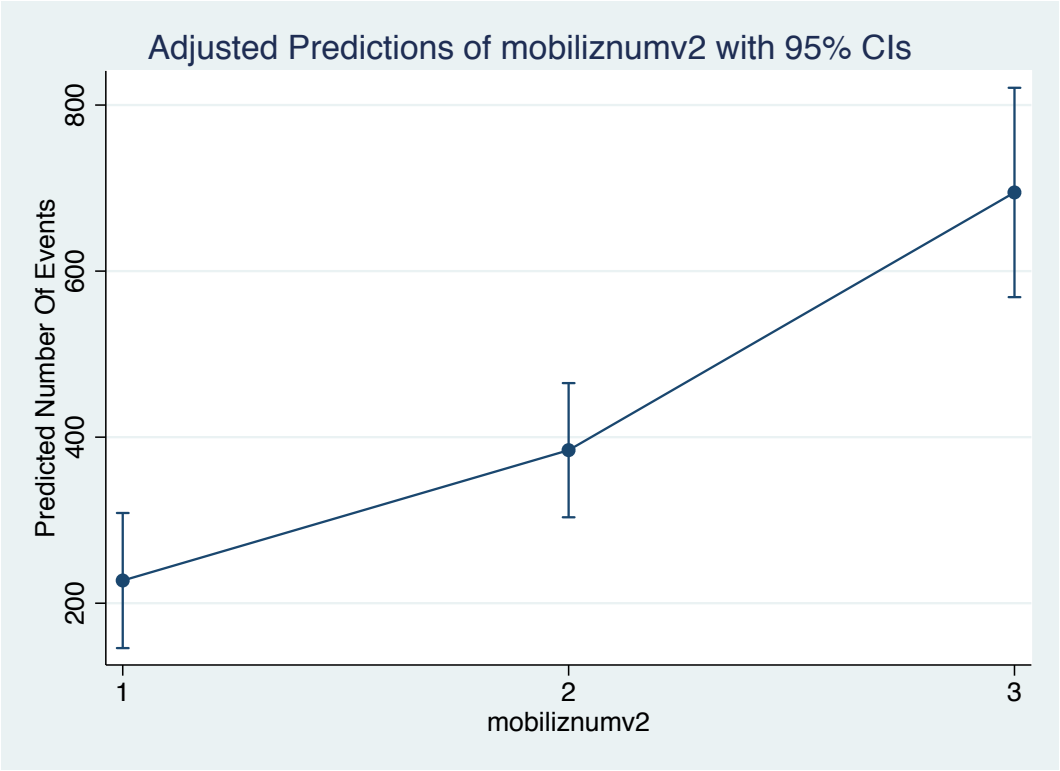
Corresponds with Table B.20

Figure B.7. Marginal effects of *Militarization* on Conflict Intensity



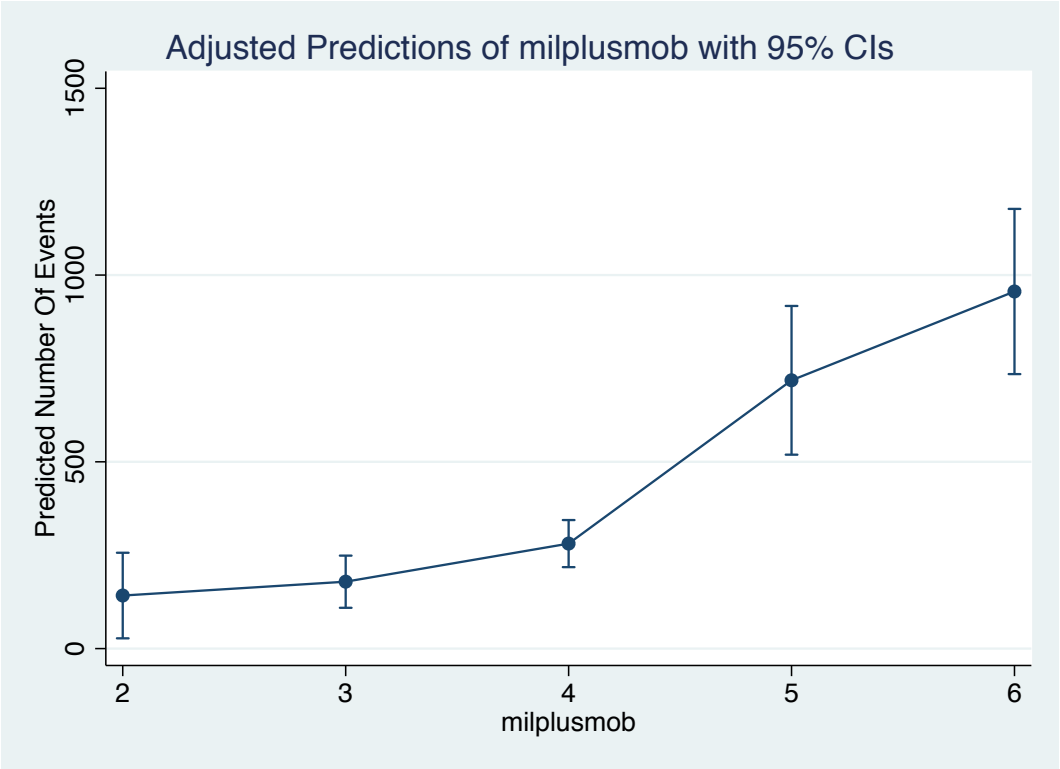
Corresponds with Table B.21

Figure B.8. Marginal effects of *Mobilization* on Conflict Intensity



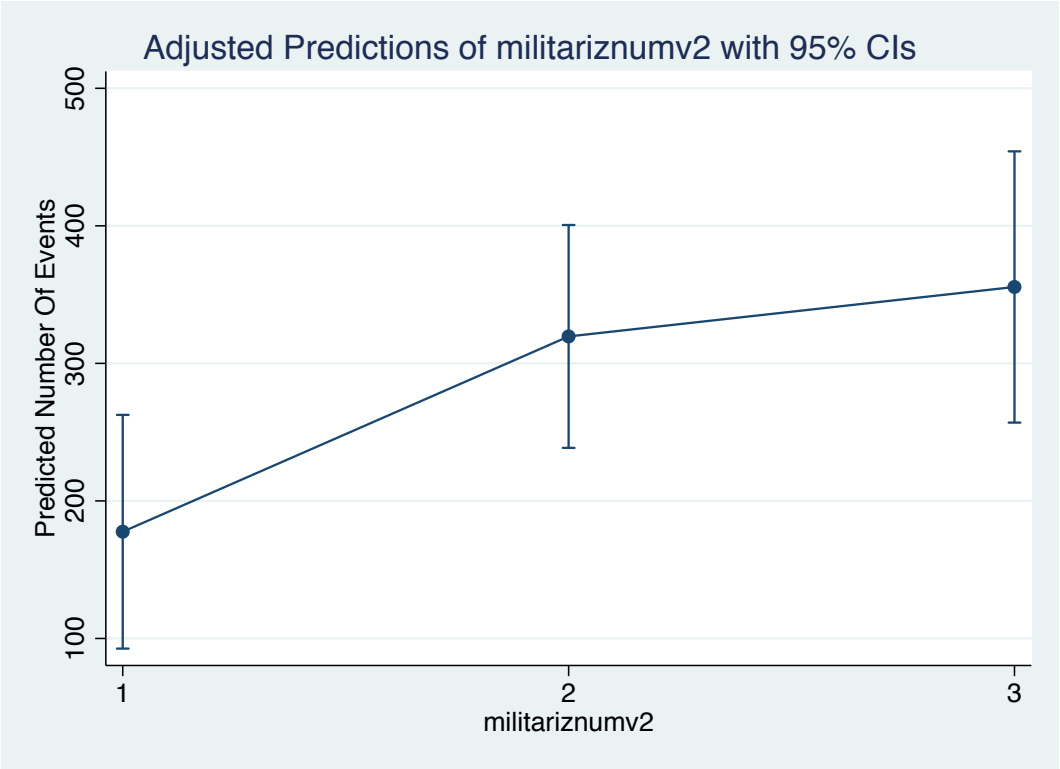
Corresponds with Table B.22

Figure B.9. Marginal effects of *Origins Capacity* on Conflict Intensity



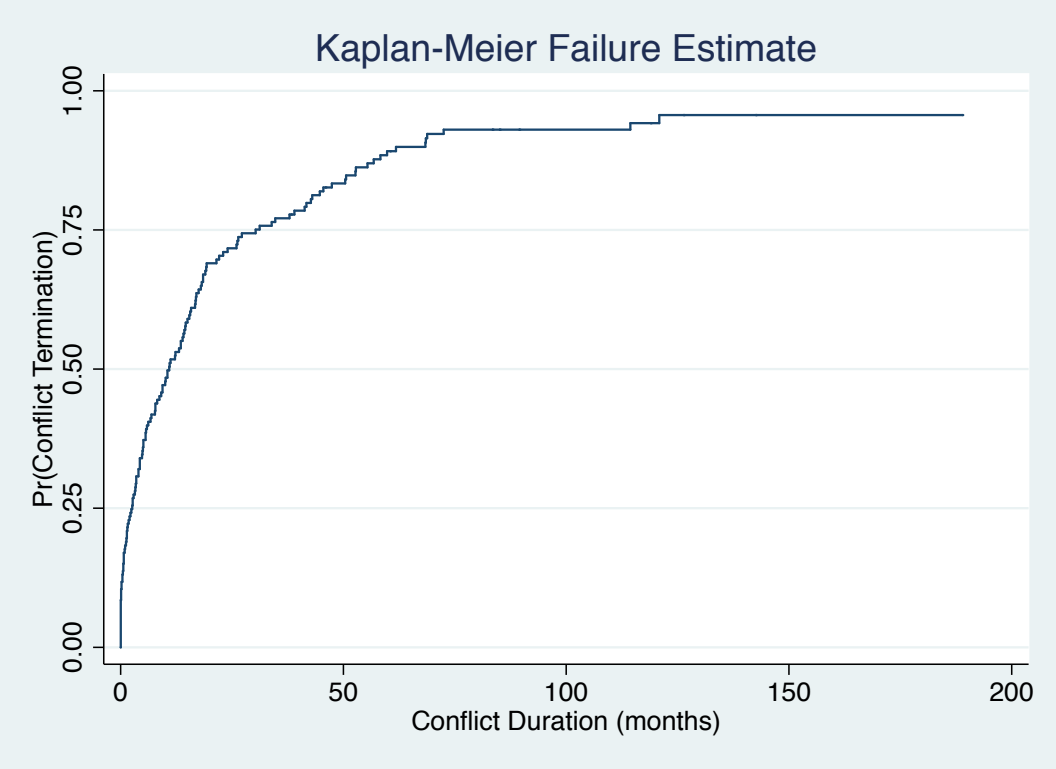
Corresponds with Table B.23

Figure B.10. Marginal Effects of *Militarization* on Average Annual Conflict Intensity



Corresponds with findings in Table B.24

Figure B.11 Probability of Conflict Termination



Corresponds with findings in Table 3.3 – Model 3.7

APPENDIX C

CHAPTER 4 SUPPLEMENTARY MATERIAL

Table C.1. Cross-Tabulation of Origins *Militarization* & Wartime *Arms Procurement* Variables

	Wartime *Arms Procurement*			
Militarization	Low	Moderate	High	Total
Low	**39** *10.77%*	**2** *0.55%*	**0** *0%*	**41** *11.33%*
Medium	**121** *33.43%*	**29** *8.01%*	**0** *0%*	**150** *41.44%*
High	**91** *25.14%*	**77** *21.27%*	**3** *0.83%*	**171** *47.24%*
Total	**251** *69.34%*	**108** *29.83%*	**3** *0.83%*	**362** *100%*

Table C.2. Cross-Tabulation of Origins *Militarization* & Wartime *Territorial Control* Variables

	Wartime *Territorial Control*		
Militarization	No	Yes	Total
Low	**26** *6.58%*	**17** *4.30%*	**43** *10.89%*
Medium	**129** *32.66%*	**35** *8.86%*	**164** *41.52%*
High	**106** *26.84%*	**82** *20.76%*	**188** *47.59%*
Total	**261** *66.08%*	**134** *33.92%*	**395** *100%*

Table C.3. Cross-Tabulation of Origins *Mobilization* & Wartime *Territorial Control* Variables

	Wartime *Territorial Control*		
Militarization	No	Yes	Total
Low	**35** *8.86%*	**10** *2.53%*	**45** *11.39%*
Medium	**115** *29.11%*	**29** *7.34%*	**144** *36.46%*
High	**111** *28.10%*	**95** *24.05%*	**206** *52.15%*
Total	**261** *66.08%*	**134** *33.92%*	**395** *100%*

Table C.4. Cross-Tabulation of Origins *Militarization* & Wartime External Rebel Support

	Wartime *Rebel External Support*			
Militarization	0	1	2	Total
Low	**12** *3.25%*	**10** *2.71%*	**22** *5.96%*	**44** *11.92%*
Medium	**114** *30.89%*	**24** *6.50%*	**26** *7.05%*	**164** *44.44%*
High	**75** *20.33%*	**12** *3.25%*	**74** *20.05%*	**161** *43.63%*
Total	**201** *54.47%*	**46** *12.47%*	**122** *33.06%*	**369** *100%*

Table C.5. Cross-Tabulation of Origins *Mobilization* & Wartime External Rebel Support

	Wartime *Rebel External Support*			
Mobilization	0	1	2	Total
Low	**21** *5.69%*	**4** *1.08%*	**20** *5.42%*	**45** *12.20%*
Medium	**94** *25.47%*	**15** *4.07%*	**35** *9.49%*	**144** *39.02%*
High	**86** *23.31%*	**27** *7.32%*	**67** *18.16%*	**180** *48.78%*
Total	**201** *54.47%*	**46** *12.47%*	**122** *33.06%*	**369** *100%*

Table C.6. Cross-Tabulation of Origins *Militarization* & Wartime Rebel Non-State Actor Support

	Wartime *Rebel Non-State Actor Support*				
Militarization	No	Alleged	Minor	Major	Total
Low	**41** *11.26%*	**1** *0.27%*	**1** *0.27%*	**0** *0%*	**43** *11.81%*
Medium	**100** *27.47%*	**19** *5.22%*	**23** *6.32%*	**22** *6.04%*	**164** *45.05%*
High	**92** *25.27%*	**1** *0.27%*	**30** *8.24%*	**34** *9.34%*	**157** *43.13%*
Total	**233** *64.01%*	**21** *5.77%*	**54** *14.84%*	**56** *15.38%*	**364** *100%*

Table C.7. Cross-Tabulation of Origins *Militarization* & Wartime Rebel Troops Abroad

	Wartime *Rebel Troops Abroad*			
Militarization	No	Some	Extensive	Total
Low	**35** *9.72%*	**8** *2.22%*	**0** *0%*	**43** *11.94%*
Medium	**91** *25.28%*	**22** *6.11%*	**49** *13.61%*	**162** *45.00%*
High	**79** *21.94%*	**35** *9.72%*	**41** *11.39%*	**155** *43.06%*
Total	**205** *56.94%*	**65** *18.06%*	**90** *25.00%*	**360** *100%*

Table C.8. Cross-Tabulation of Origins *Militarization* & Wartime *Relative Rebel Strength* Variables

	Wartime *Relative Rebel Strength*				
Militarization	Much weaker	Weaker	Parity	Stronger	Total
Low	**22** *5.54%*	**22** *5.54%*	**0** *0%*	**0** *0%*	**44** *11.08%*
Medium	**57** *14.36%*	**103** *25.94%*	**4** *1.01%*	**1** *0.25%*	**165** *41.56%*
High	**58** *14.61%*	**74** *18.64%*	**53** *13.35%*	**3** *0.76%*	**188** *47.36%*
Total	**137** *34.51%*	**199** *50.13%*	**57** *14.36%*	**4** *1.01%*	**397** *100%*

Table C.9. Cross-Tabulation of Origins *Mobilization* & Wartime *Rebel Political Wing* Variables

	Wartime *Rebel Political Wing*			
Mobilization	No Link	Alleged/ Acknowledg Link	Explicit Link	Total
Low	**38** *9.77%*	**0** *0%*	**7** *1.80%*	**45** *11.57%*
Medium	**117** *30.08%*	**4** *1.03%*	**16** *4.11%*	**137** *35.22%*
High	**106** *27.25%*	**8** *2.06%*	**93** *23.91%*	**207** *53.21%*
Total	**261** *67.10%*	**12** *3.08%*	**116** *29.82%*	**389** *100%*

Table C.10. *Mobilization* cases by 2x2 typology quadrants

Origins Mobilization = LOW & *NSA Mobilization Capacity* = LOW ("Theory-confirming" cases)

Rebel Group	State	Dyad Years
God's Army	Myanmar	2000
Congolese Rally for Democracy (RCD)	DRC	1998-2001
National Council for Recovery (CNR)	Chad	1992-1994
Armed Forces for the Federal Republic (FARF)	Chad	1997-1998
Movement for Democracy and Justice in Chad (MDJT)	Chad	1999-2003
United Front for Democratic Change (FUCD)	Chad	2005-2006
Rally of Democratic Forces of Guinea (RFDG)	Guinea	2000-2001
Uganda National Rescue Front II (UNRF II)	Uganda	1997
Movement for Democracy in Liberia (MODEL)	Liberia	2003
West Side Boys (WSB)	Sierra Leone	2000
Forces of Khudoberdiyev	Tajikistan	1997-1998
Husseinov Military Faction	Azerbaijan	1993
OPON Forces	Azerbaijan	1995
Jihad Islamic Group (JIG)	Uzbekistan	2004
Movement for Justice and Peace (MJP)	Cote d'Ivoire	2003
Impartial Defense and Security Forces – Ivory Coast (FDSI-CI)	Ivory Coast	2011

Origins Mobilization = LOW & *NSA Mobilization Capacity* = MEDIUM/HIGH ("Deviant" cases)

Rebel Group	State	Dyad Years
National Council for the Defence of Democracy – Forces for the Defence of Democracy (CNDD-FDD)	Burundi	1998-2003
Armed Forces Revolutionary Council (AFRC)	Sierra Leone	1997-1999
Faction of Francois Bozize	CAR	2002
Patriotic Movement of Ivory Coast (MPCI)	Cote d'Ivoire	2002
Forces Nouvelles	Cote d'Ivoire	2004
South Sudan Liberation Movement/Army (SSLM/A)	Sudan	2011

Convention of Patriots for Justice and Peace (CPJP) has Medium/High value on Origins *Mobilization* but has a missing value for NSA *Mobilization Capacity*

Origins Mobilization = MEDIUM/HIGH & *NSA Mobilization Capacity* = LOW ("Deviant" cases)

Rebel Group	State	Dyad Years
Democratic Kayin Benevolent Army – Brigade 5	Myanmar	2010-2011; 2013
Beik Mon Army (BMA)	Myanmar	1996
Communist Party of India-Maoist (CPI-M)	India	2005-2014
Al-Qaeda in the Arabian Peninsula (AQAP)	Yemen	2009-2014
Palestinian National Authority (PNA)	Israel	1996; 2000-2002
Al-Aqsa Martyrs' Brigades (AMB)	Israel	2002-2004
Popular Resistance Committees	Israel	2006
Ansar al-Islam	Iraq	2004-2007; 2011
The Monotheism and Jihad Group/ISI	Iraq	2004-2014
Reform and Jihad Front (RJF) / Islamic Army of Iraq	Iraq	2005-2007
Shan State Army-South (SSA-S)/Restoration Council of Shan States (RCSS)	Myanmar	1996-2002; 2005-2011; 2013
National Congress for the Defence of the People (CNDP)	DRC	2006-2008
Rally of Democratic Forces (RAFD)	Chad	2006
Union of Forces for Democracy and Development (UFDD)	Chad	2006-2007
Alliance National (AN)	Chad	2008
Union of Resistance Forces (UFR)	Chad	2009
Popular Front for National Rebirth (PFNR)	Chad	2010
Moro National Liberation Front – Nur Misauri Faction (MNLF – NM)	Philippines	2001; 2005; 2013

(table continues)

Rebel Group	State	Dyad Years
Moro National Liberation Front – Habier Malik Faction (MNLF – HM)	Philippines	2007
National Democratic Alliance	Sudan	1996-2001
Justice and Equality Movement (JEM)	Sudan	2003-2004; 2007-2011
Sudan Liberation Movement/Army (SLM/A)	Sudan	2003-2006; 2008-2011
National Redemption Front (NRF)	Sudan	2006
Sudan Liberation Movement/Army – Minni Minawi (SLM/A – MM)	Sudan	2006
Sudan Liberation Movement/Army– Unity (SLM/A– Unity)	Sudan	2007-2008
Forces of George Athor	Sudan	2010-2011
Allied Democratic Forces (ADF)	Uganda	1996-2002; 2007; 2010-2011; 2013-2014
West Nile Bank Front (WNBF)	Uganda	1996
Real Irish Republican Army (Real IRA)	United Kingdom	1998
Baluchistan Liberation Army (BLA)	Pakistan	2004; 2006-2009; 2011-2014
Baluch Ittehad	Pakistan	2006
Baluchistan Republican Army (BRA)	Pakistan	2008-2009; 2012; 2014

(table continues)

Rebel Group	State	Dyad Years
The Free Life Party of Kurdistan (PJAK)	Iran	2005-2009; 2011
Jondullah	Iran	2006-2010
Liberians United for Reconciliation and Democracy (LURD)	Liberia	2000-2003
Afar Revolutionary Democratic Unity Front (ARDUF)	Ethiopia	1996
Coordinated Armed Resistance (CRA)	Niger	1994
Zviadists	Georgia	1992-1993
OP Lavalas	Haiti	2004
Kamajors	Sierra Leone	1997-1998
Maoist Komunist Partisi (MKP)	Turkey	2005
al-Qaida in the Islamic Maghreb (AQIM)	Algeria	1999-2014
Serbian irregulars	Croatia	1992
Autonomous Province of Western Bosnia	Bosnia & Herzegovina	1993-1995
Croatian irregulars	Bosnia & Herzegovina	1993-1994
Popular Revolutionary Army (EPR)	Mexico	1996
Ninjas	Republic of Congo	1993; 1998-1999
Cocoyes	Republic of Congo	1997-1999
Ntsiloulous	Republic of Congo	1998-1999; 2002
Wahhabi Movement of the Buinaksk District	Russia	1999
National Liberation Army (UCK)	Macedonia	2001
Ivorian Popular Movement of the Great West (MPIGO)	Cote d'Ivoire	2002-2003
National Democratic Front of Bodoland-Raijan Daimary (NDFB-RD)	India	2009-2010
People's United Liberation Front (PULF)	India	2008

(table continues)

Rebel Group	State	Dyad Years
Islamic Movement of Uzbekistan (IMU)	Tajikistan	2010-2011
al-Qaida in the Islamic Maghreb (AQIM)	Mauritania	2010-2011

Origins Mobilization = MEDIUM/HIGH & *NSA Mobilization Capacity* = MEDIUM/HIGH ("Theory-confirming" cases

Rebel Group	State	Dyad Years
Forces of Muammar Gaddafi	Libya	2011
Communist Party of Nepal – Maoist (CPN-M/UPF)	Nepal	1996-2006
Alliance of Democratic Forces for the Liberation of Congo-Zaire (AFDL)	DRC	1996-1997
Movement for the Liberation of Congo (MLC)	DRC	1998-2000
National Council for the Defence of Democracy (CNDD)	Burundi	1994-1998
Party for the Liberation of the Hutu People – Forces for the National Liberation (Palipehutu – FNL)	Burundi	1997-2006; 2008
National Islamic Movement of Afghanistan (Junbish-I Milli-yi Islami	Afghanistan	1993-1995
Taliban	Afghanistan	1995-1996; 2003-2014
United Islamic Front for the Salvation of Afghanistan / Northern Alliance (UIFSA)	Afghanistan	1996-2001
Somalia Reconciliation and Restoration Council (SRRC)	Somalia	2001-2002
Alliance for the Re-liberation of Somalia / Union of Islamic Courts (ARS / UIC)	Somalia	2006-2008
Al-Shabaab	Somalia	2008-2014
Hizbul-Islam	Somalia	2009-2010
Opposition alliance	Rwanda	1996-2000

(table continues)

Rebel Group	State	Dyad Years
National Liberation and Resistance Front (FLRN)	Haiti	2004
Serbian irregulars	Bosnia & Herzegovina	1992-1995
Serbian Republic of Bosnia and Herzegovina (Republika Srpska)	Bosnia & Herzegovina	1992-1995
Serbian Republic of Krajina	Croatia	1992-1993; 1995
Republic of Abkhazia	Georgia	1992-1993
United Tajik Opposition (UTO)	Tajikistan	1992-1996; 1998
Croatian Republic of Bosnia and Herzegovina (HVO)	Bosnia & Herzegovina	1993-1994
Parliamentary Forces	Russia	1993
Zapatista National Liberation Army (EZLN)	Mexico	1994
Democratic Republic of Yemen	Yemen	1994
Movement of Students in Pakistan (TTP)	Pakistan	2007-2014
Democratic Front for Renewal (FDR)	Niger	1995
United Democratic Forces (FDU)	Republic of Congo	1997
Military Junta for the Consolidation of Democracy, Peace and Justice	Guinea-Bissau	1998-1999
Military Faction	Lesotho	1998
Kosovo Liberation Army (UCK)	Serbia	1998-1999
Islamic Movement of Uzbekistan (IMU)	Uzbekistan	1999-2000
Union of Forces of Armed Resistance (UFRA)	Niger	1997
Niger Justice Movement (MNJ)	Niger	2007-2008
Sudan Peoples Liberation Movement/Army – North (SPLM/A – North)	Sudan	2011
Republic of South Sudan	Sudan	2011
South Sudan Liberation Movement/Army (SSLM/A)	South Sudan	2011-2012
National Transitional Council (NTC)	Libya	2011

(table continues)

Rebel Group	State	Dyad Years
Democratic Forces for the Liberation of Rwanda (FDLR)	Rwanda	2001-2002; 2009-2012
Al-Mahdi Army	Iraq	2004; 2007-2008
Boko Haram	Nigeria	2009; 2011-2014
Northern Mali Tuareg Alliance for Change (ATNMC)	Mali	2007-2009
Front for the Restoration of Unity and Democracy – Ahmed Dini Faction (FRUD – AD)	Djibouti	1999
Anjounaise Popular Movement (MPA)	Comoros	1997
Military Faction (Forces of Andre Kolingba)	CAR	2001
Union of Democratic Forces for Unity (UFDR)	CAR	2006
Ahlul Sunnah Jamaa	Nigeria	2004
Niger Delta People's Volunteer Force (NDPVF)	Nigeria	2004
Forces of the Caucasus Emirate	Russia	2007-2014

Table C.11. *Militarization* cases by 2x2 typology quadrants

Origins Militarization = LOW & *NSA Rebel Fighting Capacity* = LOW ("Theory-confirming" cases)

Rebel Group	State	Dyad Years
God's Army	Myanmar	2000
Reform and Jihad Front (RJF)/Islamic Army of Iraq	Iraq	2005-2007
Armed Forces for the Federal Republic (FARF)	Chad	1997-1998
Movement for Democracy and Justice in Chad (MDJT)	Chad	1999-2003
Justice and Equality Movement (JEM)	Sudan	2003-2004; 2007-2011

(table continues)

Rebel Group	State	Dyad Years
Sudan Liberation Movement/Army (SLM/A)	Sudan	2003-2006; 2008-2011
Baluchistan Liberation Army (BLA)	Pakistan	2004; 2006-2009; 2011-2014
Parliamentary Forces	Russia	1993
Popular Revolutionary Army (EPR)	Mexico	1996
People's United Liberation Front (PULF)	India	2008

Origins Militarization = LOW & *NSA Rebel Fighting Capacity* = MEDIUM/HIGH ("Deviant" cases)

Rebel Group	State	Dyad Years
Zapatista National Liberation Army (EZLN)	Mexico	1994
Democratic Front for Renewal (FDR)	Niger	1995
Sudan Peoples Liberation Movement/Army – North (SPLM/A – North)	Sudan	2011
National Transitional Council (NTC)	Libya	2011

* Ahlul Sunnah Jamaa & Niger Delta People's Volunteer Force (NDPVF) have Low value on Origins *Militarization* but have a missing value for NSA *Fighting Capacity*

Origins Militarization = MEDIUM/HIGH & *NSA Rebel Fighting Capacity* = LOW ("Deviant" cases)

Rebel Group	State	Dyad Years
Democratic Kayin Benevolent Army – Brigade 5 (DKBA 5)	Myanmar	2010-2011; 2013
Beik Mon Army (BMA)	Myanmar	1996
Communist Party of India – Maoist (CPI – M)	India	2005-2014
Al-Qaeda in the Arabian Peninsula (AQAP)	Yemen	2009-2014
Palestinian National Authority (PNA)	Israel	1996; 2000-2002
Al-Aqsa Martyrs' Brigades (AMB)	Israel	2002-2004

(table continues)

Rebel Group	State	Dyad Years
Popular Resistance Committees	Israel	2006
Ansar al-Islam	Iraq	2004-2007; 2011
The Monotheism and Jihad Group / ISI	Iraq	2004-2014
Shan State Army – South (SSA-S) / Restoration Council of Shan States (RCSS)	Myanmar	1996-2002; 2005-2011; 2013
National Congress for the Defence of the People (CNDP)	DRC	2006-2008
National Council for the Defence of Democracy (CNDD)	Burundi	1994-1998
Party for the Liberation of the Hutu People – Forces for the National Liberation (Palipehutu – FNL)	Burundi	1997-2006; 2008
National Council for the Defence of Democracy – Forces for the Defence of Democracy (CNDD – FDD)	Burundi	1998-2003
National Council for Recovery (CNR)	Chad	1992-1994
Rally of Democratic Forces (RAFD)	Chad	2006
Popular Front for National Rebirth (PFNR)	Chad	2010
Rally of Democratic Forces of Guinea (RFDG)	Guinea	2000-2001
Moro National Liberation Front – Nur Misauri Faction (MNLF – NM)	Philippines	2001; 2005; 2013
Moro National Liberation Front – Habier Malik Faction (MNLF – HM)	Philippines	2007
National Democratic Alliance	Sudan	1996-2001
National Redemption Front (NRF)	Sudan	2006
Sudan Liberation Movement / Army – Minni Minawi (SLM/A – MM)	Sudan	2006
Sudan Liberation Movement / Army – Unity (SLM/A – Unity)	Sudan	2007-2008

(table continues)

Rebel Group	State	Dyad Years
Forces of George Athor	Sudan	2010-2011
West Nile Bank Front (WNBF)	Uganda	1996
Uganda National Rescue Front II (UNRF II)	Uganda	1997
Real Irish Republican Army (Real IRA)	United Kingdom	1998
Baluch Ittehad	Pakistan	2006
Baluchistan Republican Army (BRA)	Pakistan	2008-2009; 2012; 2014
United Islamic Front for the Salvation of Afghanistan (UIFSA) / Northern Alliance	Afghanistan	1996-2001
The Free Life Party of Kurdistan (PJAK)	Iran	2005-2009; 2011
Jondullah	Iran	2006-2010
Movement for Democracy in Liberia (MODEL)	Liberia	2003
Afar Revolutionary Democratic Unity Front (ARDUF)	Ethiopia	1996
Coordinated Armed Resistance (CRA)	Niger	1994
Opposition Alliance	Rwanda	1996-2000
Zviadists	Georgia	1992-1993
OP Lavalas	Haiti	2004
West Side Boys (WSB)	Sierra Leone	2000
al-Qaida Organization in the Islamic Maghreb (AQIM)	Algeria	1999-2014
United Tajik Opposition (UTO)	Tajikistan	1992-1996; 1998
Forces of Khudoberdiyev	Tajikistan	1997-1998
Autonomous Province of Western Bosnia	Bosnia & Herzegovina	1993-1995
Kosovo Liberation Army (UCK)	Serbia	1998-1999
Wahhabi Movement of the Buinaksk District	Russia	1999

(table continues)

Rebel Group	State	Dyad Years
Islamic Movement of Uzbekistan (IMU)	Uzbekistan	1999-2000
Jihad Islamic Group (JIG)	Uzbekistan	2004
Military Faction (Forces of Andre Kolingba)	CAR	2001
National Liberation Army (UCK)	Macedonia	2001
National Democratic Front of Bodoland – Raijan Daimary (NDFB – RD)	India	2009-2010
Union of Forces of Armed Resistance (UFRA)	Niger	1997
Niger Justice Movement (MNJ)	Niger	2007-2008
Islamic Movement of Uzbekistan (IMU)	Tajikistan	2010-2011
Al-Qaeda in the Islamic Maghreb (AQIM)	Mauritania	2010-2011
Democratic Forces for the Liberation of Rwanda (FDLR)	Rwanda	2001-2002; 2009-2012
Al-Mahdi Army	Iraq	2004; 2007-2008

Origins Militarization = MEDIUM/HIGH & *NSA Rebel Fighting Capacity* = MEDIUM/HIGH ("Theory-confirming" cases)

Rebel Group	State	Dyad Years
Communist Party of Nepal – Maoist (CPN – M/UPF)	Nepal	1996-2006
Alliance of Democratic Forces for the Liberation of Congo-Zaire (AFDL)	DRC	1996-1997
Movement for the Liberation of Congo (MLC)	DRC	1998-2000
Congolese Rally for Democracy (RCD)	DRC	1998-2001
United Front for Democratic Change (FUCD)	Chad	2005-2006
Union of Forces for Democracy and Development (UFDD)	Chad	2006-2007
Alliance National (AN)	Chad	2008

(table continues)

Rebel Group	State	Dyad Years
Union of Resistance Forces (UFR)	Chad	2009
Allied Democratic Forces (ADF)	Uganda	1996-2002; 2007; 2010-2011; 2013-2014
National Islamic Movement of Afghanistan	Afghanistan	1993-1995
Taliban	Afghanistan	1995-1996; 2003-2014
Somalia Reconciliation and Restoration Council (SRRC)	Somalia	2001-2002
Alliance for the Re-Liberation of Somalia/Union of Islamic Courts (ARS/UIC)	Somalia	2006-2008
Al-Shabaab	Somalia	2008-2014
Hizbul-Islam	Somalia	2009-2010
Liberians United for Reconciliation and Democracy (LURD)	Liberia	2000-2003
National Liberation and Resistance Front (FLRN)	Haiti	2004
Armed Forces Revolutionary Council (AFRC)	Sierra Leone	1997-1999
Kamajors	Sierra Leone	1997-1998
Maoist Komunist Partisi (MKP)	Turkey	2005
Serbian Irregulars	Bosnia & Herzegovina	1992-1995
Serbian Republic of Bosnia and Herzegovina (Republika Srpska)	Bosnia & Herzegovina	1992-1995
Serbian Irregulars	Croatia	1992
Serbian Republic of Krajina	Croatia	1992-1993; 1995

(table continues)

Rebel Group	State	Dyad Years
Republic of Abkhazia	Georgia	1992-1993
Husseinov Military Faction	Azerbaijan	1993
OPON Forces	Azerbaijan	1995
Croatian Irregulars	Bosnia & Herzegovina	1993-1994
Croatian Republic of Bosnia and Herzegovina (HVO)	Bosnia & Herzegovina	1993-1994
Democratic Republic of Yemen	Yemen	1994
Movement of Students in Pakistan (TTP)	Pakistan	2007-2014
Ninjas	Republic of Congo	1993; 1998-1999
United Democratic Forces (FDU)	Republic of Congo	1997
Cocoyes	Republic of Congo	1997-1999
Ntsiloulous	Republic of Congo	1998-1999; 2002
Military Junta for the Consolidation of Democracy, Peace and Justice	Guinea-Bissau	1998-1999
Military Faction	Lesotho	1998
Faction of Francois Bozize	CAR	2002
Patriotic Movement of Ivory Coast (MPCI)	Ivory Coast	2002
Ivorian Popular Movement of the Great West (MPIGO)	Ivory Coast	2002-2003
Movement for Justice and Peace (MJP)	Ivory Coast	2003
Forces Nouvelles	Ivory Coast	2004
Impartial Defense and Security Forces – Ivory Coast (FDSI-CI)	Ivory Coast	2011
Forces of Muammar Gaddafi	Libya	2011
South Sudan Liberation Movement/Army (SSLM/A)	Sudan	2011
Republic of South Sudan	Sudan	2011
South Sudan Liberation Movement/Army (SSLM/A)	South Sudan	2011-2012
Boko Haram	Nigeria	2009; 2011-2014

(table continues)

Rebel Group	State	Dyad Years
Northern Mali Tuareg Alliance for Change (ATNMC)	Mali	2007-2009
Front for the Restoration of Unity and Democracy – Ahmed Dini Faction (FRUD – AD)	Djibouti	1999
Anjounaise Popular Movement (MPA)	Comoros	1997
Union of Democratic Forces for Unity (UFDR)	CAR	2006
Convention of Patriots for Justice and Peace (CPJP)	CAR	2009-2011
Forces of the Caucasus Emirate	Russia	2007-2014

Table C.12. Effect of Origins Variables on Wartime Capacity DVs (with origins interaction term included)[20]

	Model C.1 Ordered Logistic	Model C.2 Logistic	Model C.3 Ordered Logistic	Model C.4 Logistic	Model C.5 Ordered Logistic	Model C.6 Ordered Logistic
Dependent Variable	*Rel. Rebel Strength*	*Mobiliz Capacity*	*Arms Procurem*	*Territorial Control*	*Rebel Polit Wing*	*Ext Rebel Support*
	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)
Origins Interaction	-0.20 (.23)	-0.28 (.30)	-0.06 (.44)	0.31 (.29)	-0.62 (.36)	0.37 (.25)
Militarization	1.33* (.56)	0.99 (.74)	2.56* (1.03)	-0.74 (.72)	1.27 (.95)	-0.87 (.59)
Mobilization	0.66 (.58)	1.61* (.76)	0.27 (1.18)	0.73 (.74)	2.79** (.89)	-0.30 (.61)

Levels of significance *** < .001 ** < .01 * < .05

[20] For Tables C.12 and C.13, all variables from the original corresponding models in Chapter 4 (Tables 4.7 and 4.8) were included in each analysis. As the findings of interest were the performance of the interaction term and its effect on the constituent *Militarization* and *Mobilization* variables, only these three variables are presented in this appendix.

Table C.13. Effect of Origins Variables on Wartime Capacity DVs (with origins interaction term included)

	Model C.7 Ordered Logistic	Model C.8 Negative Binomial	Model C.9 Ordered Logistic	Model C.10 Ordered Logistic	Model C.11 Ordered Logistic
Dependent Variable	*External Govt Support*	*Rebel Troop Count*	*Rebel Fighting Capacity*	*Rebel NSA Support*	*Rebel Troops Abroad*
	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)
Origins Interaction	0.63* (.28)	0.09 (.14)	-0.35 (.31)	-0.48 (.31)	0.06 (.22)
Militarization	-1.80* (.70)	0.30 (.37)	2.13** (.77)	2.13** (.80)	0.28 (.53)
Mobilization	-2.08** (.71)	0.60 (.38)	1.56 (.83)	1.68* (.80)	0.02 (.56)

Levels of significance *** < .001 ** < .01 * < .05

Table C.14. Likelihood of Government receiving Non-State Actor Support

Ordered logistic regression

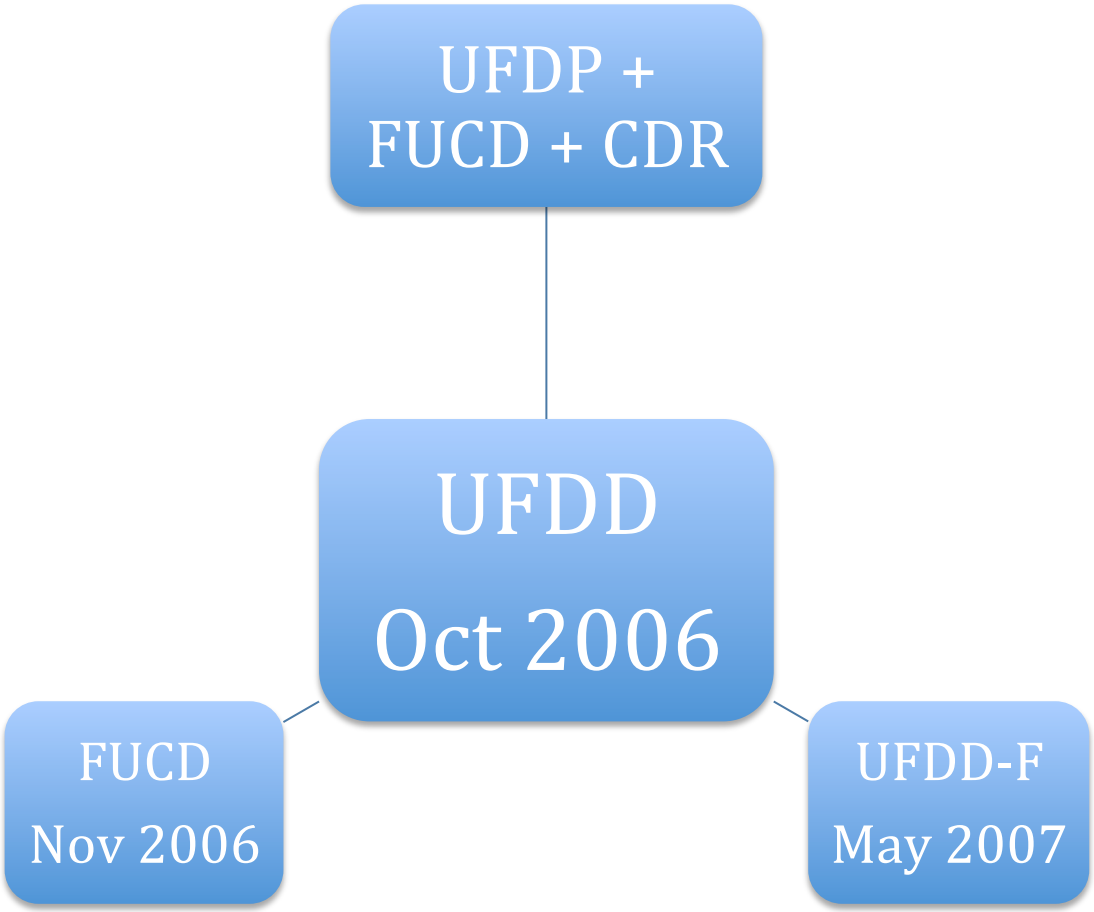
	Coefficient	Std. Error	z	P>|z|
Militarization	-0.27	0.25	-1.10	0.271
Mobilization	-0.09	0.25	-0.37	0.710
Group Age	0.01	0.00	1.21	0.225
Ethnic Fractionalization	-1.48*	0.75	-1.98	0.048
Religious Fractionalization	5.04***	1.17	4.31	0.000
Terror Attacks	0.56	0.40	1.41	0.160
Previous Active Dyad	0.63	0.38	1.67	0.096

Levels of significance *** < .001 ** < .01 * < .05

(table continues)

TABLE C.14 MODEL SUMMARY
N = 352
LR chi2(7) = 29.68
Prob > chi2 = 0.00
Pseudo R2 = 0.09
Log likelihood = -156.51

Figure C.1. Formation & Fragmentation of UFDD



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