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## LOCATION, LOCATION, LOCATION: GEOGRAPHIC QUALITIES OF POLITICAL INSTABILITY AND MILITARY COUPS

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Dr. Michael Zilis, Director of Graduate Studies

LOCATION, LOCATION, LOCATION:  
GEOGRAPHIC QUALITIES OF POLITICAL INSTABILITY  
AND MILITARY COUPS

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DISSERTATION

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A dissertation submitted in partial fulfillment  
of the requirements for the degree of Doctor of Philosophy in the  
College of Arts and Sciences at the University of Kentucky

By

William O'Connell

Lexington, Kentucky

Director: Dr. Clayton Thyne, Professor of Political Science

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2024

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## ABSTRACT OF DISSERTATION

### LOCATION, LOCATION, LOCATION: GEOGRAPHIC QUALITIES OF POLITICAL INSTABILITY AND MILITARY COUPS

Previous research has shown that political instability can lead to military coups, especially when it occurs close to the capital. However, other than proximity to the capital, no other geographic qualities of instability and their relationship to coups have been explored. Therefore, this dissertation serves as a detailed analysis of how the location of instability conditions its impact on coups.

To show how the locational qualities of instability influence coup likelihood, I borrow from expected utility models of coups, and explore how instability influences militaries' disposition and ability to coup differently when it occurs in different areas within a country. I argue that coups are most likely to occur in response to instability when that instability occurs in four strategic areas: economically productive areas, densely populated areas, the territory of powerful ethnic groups, and across large swaths of territory.

Ultimately, I find battles are more likely to lead to a coup in economically productive and densely populated areas, though I do not find similar support for protests. I find battles in a group's territory make that group more likely to coup. Finally, I find protests are more likely to lead to a coup when they are widespread, but not battles.

**KEYWORDS:** Military Coups, Political Instability, Battles, Protests

William O'Connell

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August 2024

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Date

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## **Chapter One - Introduction**

On December 19<sup>th</sup>, 2018, hundreds of protestors flooded the streets of Atbara, Sudan in response to rising food prices. These protests quickly spread to other cities, eventually reaching the capital city Khartoum. The protests were sustained for months and continued to swell. In response, in April of 2019 President Omar al-Bashir, who had ruled for 30 years, was removed from office by his own military.

This act by the Sudanese military stands in stark contrast to their behavior vis-à-vis Bashir for the vast majority of his rule. Brigadier General Omar al-Bashir came to power through his own coup d'état in 1989, six years into the Second Sudanese Civil War. That war continued for the next 16 years of his reign, and in 2005 a peace agreement was signed that saw South Sudan become its own, independent country six years later in 2011. In 2003, a separate conflict began in the western region of Darfur, where years of government neglect led to widespread unrest and instability. Armed rebel groups began to appear, and these groups were met with force by the military and government-sponsored militias in what some commentators have called genocide. At no point during the many years of the civil war and the secession of South Sudan nor during the bloodshed of the conflict in Darfur was Bashir's hold on power ever truly threatened.

What, then, was the difference between the social unrest of 2018-2019 and the unrest in the south and Darfur in the previous decades? Why did the Sudanese military support President Bashir through years of instability and conflict, only to overthrow him after just a few months of protests in 2019? The argument I make in this study is that the most important difference between these two spells of instability was their location within Sudan. The instability in the south and Darfur occurred in remote, rural areas that produced

little economic output and were occupied by minority ethnic groups, and the instability was limited to these areas. The instability that occurred in 2019 occurred in major economic centers and densely populated urban areas that were occupied by politically important ethnic groups, and this instability spread throughout the country. For these reasons, the Sudanese military decided to remove Bashir in 2019 when they had refrained from doing so for 30 years. In general, in this dissertation I argue that instability is more likely to persuade the military to remove the executive leader when it occurs in economically important areas, densely populated areas, within the territory of politically powerful ethnic groups, and across large swaths of a state's territory.

In the following chapters I develop and empirically test a theory which explains how the location of instability determines the impact that instability has on the domestic military's calculus for staging a coup d'état. Before that though, I now turn to discussing some of the previous literature surrounding the relevant topics.

### **Previous Literature**

This section is divided into three parts. I first discuss some of the literature explaining the occurrence of coups. Then, I discuss research on instability, focusing specifically on work that has examined the spatial aspects of instability such as the determinants of the location of instability and the effect that instability's location has on other processes. Finally, I discuss recent research that specifically investigates how instability influences coups.

### **The Determinants of Coups**

In the past decade, research on coups has burgeoned, and scholars have identified a number of factors that influence their occurrence. In all, I will discuss five categories of factors that have been examined in the literature: civil-military relations, economic

determinants, political/institutional determinants, ethnic determinants, and international determinants. I will begin by discussing civil-military relations.

### *Civil-Military Relations*

Who guards the guardians? This classic question has spawned a plethora of research about militaries, their responsibilities, and states' ability to control them. Early political science research on coups focused on civil-military relations, or the relationship between a military and the civilian government to whom the military is supposed to be subordinate. This line of research stressed two main ideas, the guardianship dilemma and coup-proofing.

The guardianship dilemma is the notion that, while a leader needs a strong military to guard against external threats, a strong military can be a double-edged sword, because increased strength compared to a civilian leader or regime increases the military's ability to depose the leader (Huntington 1957, Feaver 1996, McMahon and Slantchev 2015). Feaver (1999) describes it as the civil-military problematique, a paradox created when "[t]he very institution created to protect the polity is given sufficient power to become a threat to the polity." On the other hand, leader's fear a professional, competent military sometimes not because they are a threat to the polity, but because they may choose to simply ignore any internal threats to the regime, knowing they will likely survive the leader's removal intact (Paine 2022).

The severity of the guardianship dilemma is driven by the threat environment faced by the state's regime. Generally, a higher level of threat is associated with a more difficult dilemma. A higher level of threat increases the need for a strong military. A strong military, however, is better able to depose a leader. Therefore, an environment with a high threat level increases the dilemma that a leader faces with their military. McMahon and Slantchev (2015) qualify this statement and show that the the relationship between the threat

environment and the severity of the guardianship dilemma depends on uncertainty and disagreement over the the threat facing the state rather than simply the level of threat.

Leaders have devised ways to lessen the severity of the guardianship dilemma, undertaking measures that have come to be known in coup research as coup-proofing. Coup-proofing measures are actions that the executive takes in an attempt to prevent a coup from occurring (Quinlivan 1999). For instance, one form of coup proofing, known as structural coup-proofing, consists of creating divisions of labor within the military and creating other kinds of barriers to cohesion (Albrecht 2015; Böhmelt and Pilster 2015; De Bruin 2018; Powell 2012). Leaders engage in structural coup-proofing by counterbalancing different elements within the military, stoking different incentives so as to prevent coordinated between units (De Bruin 2020). For example, Mehrl and Choulis (2021) show that former French colonies are less likely to suffer from coups because France established paramilitaries that persisted past French rule and have been integrated into state militaries but have a different culture and structure than other military units.

Another kind of coup-proofing seeks to spoil the military with goods and pay (Leon 2014). Powell (2012) finds that both structural coup-proofing and spoiling the military reduce the likelihood of a coup occurring. However, spoiling also increases the military's organizational capacity, and therefore increases the chance of a coup succeeding if it should occur in the first place.

A third kind of coup-proofing is personalization, where leaders seek to tie military leaders' fates directly to the leader rather than the regime or specific institutions (Song 2022), through direct appointment or other personal favors. For example, leaders can give military elites direct government appointments, buying the loyalty of the individual

appointee as well as sending friendly signals to the military in general (White 2020). Alternatively, leaders can appoint their loyalists into military officer positions, injecting personalization into the military rather than drawing it out (Matthews 2022). Personalization tends to increase rapidly after failed coup attempts (Bokobza et al. 2022; Timoneda, Escribà-Folch, and Chin 2023). While personalization reduces the likelihood of coups, it is not all good news for leaders. Chin et al. (2022) show that when elites are unable to depose a leader through a coup due to military personalization, they are more likely to turn to another avenue to remove the leader: assassination.

Researchers have also investigated other, more specific aspects of militaries and how they influence civil-military relations. For example, Choulis et al. (2023) demonstrate how military mechanization impacts coup likelihood, arguing that the increased visibility that comes with mechanization makes it more difficult for potential plotters to coordinate, and the increased potential for more death and damage mechanization brings will make plotters wary of potential coups. On the other hand, Choulis (2022) shows how militaries that are composed of conscripted troops are more likely to coup, since they tend to be more loyal to society rather than the leader.

### *Economic Determinants*

Turning to economic explanations, there is a robust literature showing that economic factors influence the prevalence of coups. Londregan and Poole (1990) early on argued that a common denominator amongst most coups is poverty, finding that both income growth and level of income are negatively associated with coup risk. There were eight countries that experienced coups between 2021 and 2022, and all of them fell in the bottom 20% percent of countries in terms of GDP/capita Singh (2022). Poverty is one of the most reliable predictors of coup occurrence.



While poverty remains a robust predictor, some research has cast some doubt on the relationship between economic growth and coups (e.g. Belkin and Schofer 2003), with some studies finding that economic growth has no statistically significant impact on coups (Powell 2012; Svolik 2012). Kim (2016) argues that this discrepancy in the literature results from an under-theorizing of the relationship between growth and coups. For Kim, transitory shocks to the economy increase the likelihood of a coup, while permanent shocks do not. The logic behind this is as follows: transitory shocks to the economy increase the opportunity to coup as they create grievances towards the government amongst the populace; permanent shocks, on the other hand, increase the opportunity to coup but also decrease the disposition to coup, since the prize to be gained is now of a (permanently) lower value. Thus, the net effect of a permanent shock is nil, while the net effect of a transitory shock is to increase the probability of a coup. Similar to Kim, Djuve and Knutsen (2024) show how regime insiders can take advantage of acute economic crises to attempt leader transitions or to push for other advantageous policies.

In addition to the overall health of an economy, economic inequality has also been shown to influence coups. There is a substantial body of work showing that inequality breeds various forms of political violence, such as riots as well as coups (Alesina and Perotti 2016; Roe and Siegel 2011) but notably not civil war (Cederman, Weidmann, and Bormann 2015; Collier and Hoeffler 2004). Houle (2016) echoes the guardianship dilemma in his explanation of this phenomenon: in unequal societies, leaders build strong militaries to resist social unrest; however, having a strong military increases their ability to conduct a coup. So, in unequal societies, leaders build strong militaries to guard against unrest in

the populace, reducing the chance of a civil war occurring, but having a strong military increases the chance of a coup occurring.

Some argue that countries who are economically dependent on oil and other natural resources may be prone to political violence. There is a significant body of evidence that the presence of natural resources increases both the likelihood of civil war onset as well as the duration and severity of civil conflict (Ross 2006; Ross 2004), but the relationship between natural resources and coups is not as clear. Some have found, for instance, that the presence of oil is not significantly related to coup prevalence (Cotet and Tsui 2016; Svobik 2014).

However, Nordvik (2019) argues that this finding is due to a lack of distinction between onshore and offshore oil. Onshore oil deposits are valuable resources of loot for potential rebel groups, and in order to defend them leaders must increase the strength of their military. Stronger militaries, however, have a greater ability to successfully execute a coup. Thus, onshore oil increases the likelihood of a coup occurring. Offshore oil, on the other hand, is difficult for potential rebels to loot, and thus leaders have no need to increase the strength of the military in order to protect it. Therefore, offshore oil does not lead to coups. Nordvik argues this distinction explains the earlier null findings of oil's influence on coups.

Similarly, Langø, Bell, and Wolford (2022) argue that oil has offsetting effects on coups. On the one hand, the presence of oil makes holding power more valuable, and thus makes the military more likely to coup. On the other hand, oil provides the leader with rent resources they can use to spoil the military, making the military less likely to coup. However, *newly discovered* oil, whose rent has not yet been accumulated, cannot be used

to spoil the military but does (or will) make power more valuable. Thus, it is this oil that is the most dangerous for leaders. While the specific mechanisms are still under investigation, there is certainly some relationship between oil (and other natural resources) and the occurrence of coups d'etat.

### *Political and Institutional Determinants*

Moving to a third vein of research on coups, institutional and political context have been shown to have an effect on coup likelihood. Several scholars have argued that democratic institutions and factors that tend to go with democracy (such as a strong civil society, regime legitimacy, and the inclusion of large swaths of the population in state institutions) reduce the risk of coups (Belkin and Schofer 2003; Bodea, Elbadawi, and Houle 2017). However, the relationship between coups and democracy is not so clear-cut. Bell (2016) argues that coups are less likely to occur in the first place in a democracy because people have more legitimate ways to air their grievances in a democratic setting, but coups that are actually undertaken in a democracy will have a higher probability of success, as democratic leaders have less ability to repress their rivals.

Others have found that an inverted-U relationship exists between institutional quality and coups (Hiroi and Omori 2013). In very democratic societies, coups should be rare because people have legal ways to air their grievances. In very authoritarian societies, coups should also be very rare, because the punishment for a failed coup will be very severe in these states. It is in the middling societies, where people have not yet gained legal grievance-airing measures, but the leader does not possess extreme repressive abilities, where the real danger of a coup occurs. As a more specific example of how middling regimes are susceptible to coups, Hollyer, Rosendorff, and Vreeland (2015) find that authoritarian regimes who try to increase transparency, specifically through the public

release of economic data, are more likely to experience instability and regime change. These findings reflect similar findings in the literature on civil war that also shows such a curvilinear relationship between levels of democracy and the breakout of war (Hegre 2001).

Democratic institutions may also affect the type of coups that occur. Chin et al (2021) make the distinction between regime-changing coups and reshuffling coups. Reshuffling coups simply result in new leaders, while leaving the major institutions of the existing regimes intact. Regime-changing coups, on the other hand, result in revolutionary changes in institutions, often resulting in a new constitution and altogether new regimes. Kim and Sudduth (2021) show that democratic institutions make reshuffling coups less likely, as the new institutions create legal avenues for replacing the leader. They find no effect on regime-changing coups.

Moving past the broad notions of democracy and authoritarianism, more specific institutions have been shown to influence coup likelihood. For instance, authoritarian regimes that have clearly specified succession rules have been shown to be less likely to experience a coup (Frantz and Stein 2017). Of course, militaries themselves are not homogenous units, and different members within the same military may have different preferences. Albrecht and Eibl (2018) show that high-ranking members of the military are more likely to support a coup in response to political liberalization in order to protect their privileged status within the current institutions, while enlisted members are more likely to support the liberalization. Also, enlisted members are less likely to support a coup when social spending is high, while social spending has no influence on the preferences of

higher-ranking members. The relationship is a complicated one, but political and institutional context is a strong determinant of coup likelihood.

Other research has explored how extraordinary institutional enactment can impact the occurrence of coups. For example, White (2020) argues that civil war peace agreements make coups more likely, as military integration and other radical changes rapidly change the military's calculus. Similarly, De Bruin (2024) shows how power sharing agreements after civil wars increase the chance of a coup, as both incumbent elites trying to prevent a loss in status and incoming rebels seeking new opportunities have the potential to make a bid for power.

#### *Ethnic Determinants*

Jackman (1978) was one of the earliest to argue for the importance of ethnic divisions in determining coups, but other work cast doubt on this proposition (Johnson, Slater, and McGowan 1984). Similarly, classic works on civil conflict argued that ethnic fractionalization played little role in conflict onset (Collier and Hoeffler 2004; Fearon and Laitin 2003). However, Cederman, Weidmann, and Bormann (2015) argue that inequality between ethnic groups, or what they dub "horizontal inequality" is a more relevant measure of ethnic division than earlier measures of ethnic fractionalization, and they show that horizontal inequality is significantly related to the onset of ethnic conflict. Houle and Bodea (2017) take this idea of horizontal inequality between ethnic groups and apply it to coups. They find that as inequality between ethnic groups increases, the likelihood of unequal groups staging a coup increases. However, this effect only occurs when inequality *within* an ethnic group is low. When within-group inequality is low and between-group inequality is high, the members of the ethnic group can express coordinated grievances.

When within-group inequality is high, though, the group is unable to express coordinated grievances and is thus unable to successfully stage a coup.

Others argue that ethnically fractionalized states face a trade-off between civil wars and coups (Roessler 2011, 2016). The argument here is that ethnic groups who may have the propensity for rebellion can be incorporated into the central government and given some legitimate authority, and this compromise by the leader can stave off armed conflict. However, inviting the group into the confines of the central power apparatus increases their ability to remove the leader through a coup, without the need for war. Thus, leaders face an unfortunate trade off: either exclude powerful groups from the government and fight them in armed conflict or invite them into the government and run the risk of a coup.

#### *International Determinants*

While most research has focused on domestic determinants of coups, a final vein of research regarding coups investigates how the actions of international actors can lead to coups. Foreign aid in the form of military training empowers the military relative to the leader, increasing the occurrence of coups (Savage and Caverley 2017). On the other hand, international conflict stretches military resources and reduces the ability to plot a coup, reducing the chance of coup attempts occurring (Piplani and Talmadge 2016). Kiyani et al. (2023) explore the relationship between international sanctions and coups, arguing that sanctions increase the military's willingness and ability to stage a coup.

International troops as well as international influence on domestic military troops can also influence coup likelihood. Mehrl and Escribà-Folch (2023) argue that the recruitment of foreign troops makes coups less likely, as the new troops have little connection to the domestic society and are only loyal to whomever pays them. Allen et al. (2023) investigate the influence of the presence of US troops specifically in a country,

finding that US troop presence lessens the likelihood of coup. Conversely, Levin et al. (2021) show that sending domestic troops abroad to participate in peacekeeping missions can increase the likelihood of a coup in authoritarian regimes, as peacekeeping brings more resources to the military and they may depose the current authoritarian regime to keep international favor and thus the new resources.

Less tangible forms of foreign intervention have also been shown to influence coups, with Thyne (2010) showing that signals of support to a leader from the United States can make coup attempts against the regime less likely, while hostile signals can increase the likelihood. The general international environment matters as well, with Yukawa et al. (2022) arguing that nonviolent protest movements have been more likely to spur a coup after the Cold War because they are seen as legitimate responses to democratic grievances against the leader. More localized international environments have also been shown to have an influence on coup occurrence, as Genna and Hiroi (2023) show that membership in regional economic organizations reduces the likelihood of coups.

Having discussed various determinants of coups, I turn now to discussing instability. I focus here on the spatial aspects of instability, looking at work that explains the location of instability as well as work explaining the effects of the location of instability.

### **The Geography of Instability**

The majority of work that deals with the location of instability has focused on a particularly severe form of instability, civil war. Perhaps the earliest work that seriously considered the importance of the geography of conflict comes from Boulding (1962). Boulding considered what he called the “loss of strength gradient,” whereby a state’s ability to project power in an area decreases proportionately with the geographic distance from the area in question to the state’s seat of power. In terms of civil conflict, this means

that peripheral regions, far away from the state capital, may be particularly prone to conflict. As expected, the majority of civil wars largely originate from rural areas (Fearon 2007).

Others have considered not only geographical distance, but the geographic makeup of a conflict. Canonical works on civil war consistently find that large portions of mountainous terrain and forested areas can increase the likelihood of conflict (Collier and Hoeffler 2004; Fearon and Laitin 2003). These studies use the measure of total land area covered by rough terrain within a state to investigate the impact on conflict, but more recent analyses using fine grained spatial data on the location of conflict within rough terrain have confirmed the importance of rough terrain on conflict (Linke et al. 2017). In addition to influencing the onset of conflict, others have shown that the occurrence of conflict within rough terrain may have an impact on the overall characteristics of a war. For example, (Lujala, Buhaug, and Gates 2009) show that when war zones are located in areas of rough terrain, the conflict is likely to last longer than wars fought in more open terrain.

Recent literature on geography and civil war can essentially be broken down into three categories: studies that examine where conflict occurs sub-nationally, studies that examine how the location of conflict influences the characteristics of the overall conflict, and studies that examine how the location of conflict affects other aspects such as the economy or trust in government institutions. Here I focus on the first two categories, as they are the most relevant to my work.

#### *Determinants of Subnational Conflict Location*

Most research on the geography of civil conflict has focused on why conflict occurs where it does. An early piece in this vein of research comes from Buhaug and Gates (2002), who investigate both the size and location of conflict. Most notable for my work, they find



that wars fought by secessionist rebels (as opposed to groups fighting to control the state) and rebels who have an ethnic or religious component are more likely to be fought far away from the capital city.

Thanks to the development of fine-grained data that records the exact location of conflict events, scholars have been able to uncover several determinants of the subnational location of conflict. For instance, subnational politics have been shown to play a significant role. While a number of studies have found that the quality of governing institutions within a state determine the prevalence of conflict, Wig and Tollefsen (2016) investigate this question sub-nationally and find that lower institutional quality at the local level increases support for political violence. Regardless of regime-type or institutional quality, varying levels of state capacity across a country can influence local levels of conflict, with most research showing that higher state capacity leads to lower conflict (De Juan and Pierskalla 2015; Koren and Sarbahi 2018), though some work has shown that increasing state capacity in local areas can lead to increased conflict in the short term (Ying 2021).

Aside from political institutions, other state characteristics have an impact on local conflict. Local economic factors such as poverty and inequality can lead to conflict (Buhaug et al. 2011). Local levels of gender inequality have also been shown to play a role in local conflict levels (Forsberg and Olsson 2021). Hegre, Østby, and Raleigh (2009) find that population density matters for determining where conflict occurs. They find that conflict is most likely where populations are dense, and this effect strengthens as the distance from the capital increases. Similarly, Nedal, Stewart, and Weintraub (2020) show that higher levels of urbanization lead to higher levels of conflict.

The impact of Covid-19 was unimaginably far-reaching, and researchers have investigated how the pandemic impacted conflict. In an early study, Polo (2020) argued that Covid lead to increased levels of violence in areas with a high level of cases. However, Pape and Price (2024) show that Covid lead to decreases in violence, arguing that violence decreased because Covid forced militant groups to reassess their strategic outlook. Similarly, Bloem and Salemi (2021) found that Covid reduced protest events in areas with higher levels of cases.

While most research on this area has focused on state characteristics, some work has explored how rebel group characteristics can influence conflict. Carter, Kaplan, and Schultz (2022) argue that groups that are concerned with obtaining policy changes from the central government are more likely to attack closer to the capital and other cities, while groups that wish to control local territory tend to abstain from such attacks and stay in the peripheries. Uzonyi and Reeder (2024) argue that as the number of rebels active in a state increases, rebels become more likely to attack major cities.

Aside from domestic determinants, international actors also play a role in determining local levels of conflict. United Nations Peacekeepers, for example, have been shown to both reduce conflict in areas where they are located (Ruggeri, Dorussen, and Gizelis 2017) as well as reduce violence against civilians in those areas (Phayal and Prins 2020; Fjelde, Hultman, and Nilsson 2019). However, international actions can lead to negative consequences as well. While humanitarian aid during a conflict is necessary for relieving immediate suffering of the population, scholars have shown that it can lead to negative conflict dynamics in the areas that receive aid (Wood and Sullivan 2015),

especially when aid is heavily concentrated in certain areas rather than spread throughout various locations in a country (Strandow, 2014).

Various environmental factors have been shown to correlate with conflict at the local level. On one hand, areas that suffer more from drought than other surrounding areas have been shown to have higher levels of conflict (Detges 2017; Eastin 2018; Fjelde and von Uexkull 2012), while on the other hand areas effected by severe flooding are more likely to experience conflict (Ghimire, Ferreira, and Dorfman 2015,; Ide, Kristensen, and Bartusevičius 2021). In general, fluctuations in climate and temperature can lead to local conflict (Bollfrass and Shaver 2015; van Weezel 2020)

A myriad of other factors have been found. For instance, fluctuations in the spread of technological change can drive local conflict. FM radio has been used extensively by states to broadcast messages encouraging defections and other anti-insurgency messages (Armand, Atwell, and Gomes 2020). Changing levels of internet access have been associated with local conflict onset (Weidmann and Geelmuyden 2019), and several studies have shown that changing levels of cell phone coverage can influence conflict (Pierskalla and Hollenbach 2013; Shapiro and Weidmann 2015; Ackermann, Churchill, and Smyth 2021). There are certainly many other factors, but for now I will now move on to discuss the other side of the coin, how conflict location influences overall conflict dynamics.

#### *The Effects of Subnational Conflict Location*

Another, less studied, area of research has investigated the effects of conflict location. One branch of this research explores how the geography of a conflict influences the overall characteristics of the conflict. Returning to the importance of terrain, Lujala, Buhaug, and Gates (2009) find that wars that are fought in areas of rough terrain are likely to last longer than wars fought in open terrain. Recent work has found that the location of

battles and the way in which battles are dispersed across a country impact the duration and outcome of conflict (Greig, Mason, and Hamner 2018; Ito and Hinkkainen Elliott 2020).

Researchers have also explored the impacts of local conflict, which obviously has drastic effects on individuals living nearby. First and foremost, conflict increases not only mortality risk for those involved in the conflict but also women and children in the nearby areas (Bendavid et al. 2021) Conflict has been shown to increase levels of food insecurity in local areas (Anderson et al. 2020; George, Adelaja, and Weatherspoon 2020), and has been correlated with lower birthweights in local areas (Le and Nguyen 2020). It is not only the human population that suffers the effects of conflict, as Murillo-Sandoval et al. (2021) find that areas near conflict events suffer higher levels of forest coverage loss than other similar areas.

However, this second area of research that seeks to explain the effects of conflict location has been much less studied than the first question of why conflict occurs where it does. I hope to partially remedy this shortcoming in the literature with this dissertation. Having discussed the geography of civil war, I now move on to discussing a less severe form of instability: protests.

### *The Spatial Factors of Protests*

While perhaps not as large as the body of work that has researched armed civil conflict, there is also a substantial history of work that studies protests, non-violent resistance, and other forms of dissent, as well as state responses to these activities (while by no means an exhaustive list, for a small sampling of the protest and repression literature, see Brancati 2014; Chenoweth and Cunningham 2013; Davenport 1995; Lichbach 1987; Machado, Scartascini, and Tommasi 2011; Moore 1998; Murdie and Bhasin 2011; Ritter 2014; Ritter and Conrad 2016; Shaykhutdinov 2010; Stephan and Chenoweth 2008). There

is also a smaller, yet significant and growing body of work dealing with the spatial aspects of protests. Looking first at the determinants of protest location, Boulding (2010) finds that the presence of NGOs in an area increases the political participation of people in the surrounding area, and that this can result in protests in areas in which voting is seen as ineffective. Others have shown that varying levels of subnational political competition leads to varying levels of subnational protest activity (Arce and Mangonnet 2013). One study investigates the association between civil conflict and protests, finding that areas which have experienced battles are more likely to experience protests (Vüllers and Krtsch 2020). Finally, environmental factors such as flooding have been shown to lead to more protests (Petrova 2021).

On the other side of the issue, some researchers have investigated the effects of protest location. Several studies have investigated the effect of protests in the United States. These studies have shown, for example, that white people in US counties who experienced civil rights protests during the Civil Rights Movement are more likely to identify as Democrats, support affirmative action policies, and harbor less racial resentment decades later (Mazumder 2018); others have found, however, that these effects are conditional on the use of violence in civil rights protests (Wasow 2020).

Scholars have found similar results outside of the United States as well, with protests influencing political attitudes at the local level. In Latin America, proximity to protests has been shown to influence feelings of political efficacy (Wallace, Zepeda-Millán, and Jones-Correa 2014), while another study found that Egyptians whose local districts experienced protests during the Mubarak government's ouster were more likely to hold unfavorable views of democracy (Ketchley and El-Rayyes 2020). Aside from public

attitudes, protests can also influence elite decision-making, with Klein and Regan (2018) showing that protests near important cities are more likely to win policy concessions from the state.

### **Instability and Coups**

In this final section of the survey of existing literature, I discuss a topic that is directly relevant to this dissertation: how political instability influences the likelihood of coups. Bove et al (2020) demonstrate how militaries often gain more power after terrorist attacks, as society and leaders call for increased defense expertise in government decision making. Bell and Sudduth (2017) find a number of characteristics about coups during wars. First, they find war increases the chance of a coup occurring, although coups that occur during a war are less likely to succeed than coups that occur during peaceful times. Furthermore, they find that coups are likely to happen during a war under two circumstances. First, coups are likely to occur when rebels have high fighting capacity relative to government forces. Second, and more importantly for this article, they find that coups are more likely when war occurs close to the capital city.

Sudduth (2021) further shows how leader culpability influences the ways in which war affects coup likelihood. Leaders who are responsible for the war are likely to be reluctant to negotiate an end to the war, making it more likely they might face coup attempts from outside of their ruling coalition. Nonculpable leaders, on the other hand, who bear no responsibility for the war, are more likely to accept a negotiated settlement. While this decreases the leader's likelihood of external coups, it increases the chances of coups from within the ruling coalition who may fear a decrease in status under the new settlement.

Others have shown that less severe forms of instability than terrorism and war increase the likelihood of coups. Johnson and Thyne (2018) show that protests can increase

the chance of a coup. Further, they show that peaceful protests are more effective than violent protests. They also show, similar to Bell and Sudduth, that protests near the capital are more effective than protests far from the capital. However, Koehler and Albrecht (2021) argue that coups in response to mass mobilization are most often conservative reactions aimed at maintaining the main institutions of the existing regime, though there is some research showing how coups can lead to democratization (Thyne and Hitch 2020; Albrecht, Koehler, and Schutz 2021).

Further, research has increasingly demonstrated the importance of public opinion on coups d'état. Yukawa et al (2020) argue that since coups are by definition illegal acts, militaries must justify their actions in some way. Since the end of the Cold War this justification has increasingly turned to claims of democratization. Research has also shown that the public and international observers are more likely to support a coup when it is labeled something other than a coup (Grewal and Kinney 2022). Regardless of what they are labelled, coup attempts have been shown to have a higher success rate when incumbent leaders are viewed as corrupt and are unpopular with large segments of society (Hunter et al 2020).

So, domestic political instability has been shown to be associated with coups. Moreover, works like Johnson and Thyne (2018) and Bell and Sudduth (2017) show that instability is more likely to lead to a coup when it occurs close to the capital. However, no existing research examines the relationship between the location of instability and coups outside of the dichotomous lens of near/far from the capital. Further, while the studies discussed above theorize about mechanisms that make the capital city important, they do not test these mechanisms. In other words, perhaps the capital city is an important location

because it is an economically prosperous area, a densely populated area, etc. With this dissertation, I hope to expand the growing body of research investigating the influence of instability on coups. Specifically, I expand on the types of locations that may increase instability's influence on coups and test the underlying reasons for the importance of certain areas.

### **Layout of Remaining Chapters**

The remainder of this dissertation proceeds as follows. First, Chapter Two develops a theory explaining how the location of instability influences the effect that instability has on the likelihood of a military coup d'état. Building on expected utility models of coups (Powell 2012; Thyne 2010), I argue that instability influences the military's calculus when deciding to coup differently when it occurs in different locations. I argue that four types of locations are important. First, I argue that when instability is located in economically prosperous areas, a coup becomes more likely as opposed to when it occurs in more economically stagnant areas. Second, when instability is located in densely populated areas, a coup is more likely. Third, when instability is located within the territory of dominant ethnic groups, a coup becomes more likely. Finally, coups become more likely when instability occurs across wide swaths of a state's territory as opposed to when it occurs in a more geographically concentrated area.

In order to test these arguments, I utilize a number of different subnational datasets measuring both acts of instability as well as local characteristics. To gauge instability, I utilize two datasets. First, I use UCDP's Georeferenced Event Dataset (GED) (Pettersson and Öberg 2020; Sundberg and Melander 2013). This data records instances of armed conflict between organized actors. Second, I use the Social Conflict Analysis Database



(SCAD) (Salehyan et al. 2012) which records instances of instability “not systemically tracked in other conflict datasets,” such as protests and riots.

I couple these instability data with information on various subnational characteristics. In Chapter Three, I use nighttime light data from the National Oceanic and Atmospheric Administration (NOAA) in order to test whether instability is more likely to lead to a coup when it occurs in economically productive areas as opposed to less productive or economically stagnant areas. In Chapter Four, I use the Gridded Population of the World Data (Balk and Yetman 2004) to test whether instability is more likely to lead to a coup when it occurs in areas that have a particularly high population density. Chapter Five tests whether instability is more likely to lead to a coup when it occurs on the territory of politically powerful ethnic groups as opposed to instability that occurs on the territory of weaker groups. To test these arguments, I utilize the GeoEPR data of the Ethnic Power Relations data family (Vogt et al. 2015), which records the settlement territory of politically relevant ethnic groups around the globe. Finally, Chapter Six uses various measures of event dispersion to test whether coups become more likely when instability is widespread or more geographically concentrated.

## **Chapter Two – How the Location of Instability Influences the Probability of Military Coups**

### **Definitions and Theoretical Scope**

In this chapter, I develop a theory that explains how political instability influences the likelihood of a military coup differently when it occurs in different geographical locations within a country. To operationalize political instability, I consider two types of events: battles and protests. Battles are instances of armed conflict between two organized, militarized groups, either between forces representing two states or the forces of a state against the forces of a rebel group internal to the state. More specifically, UCDP's GED codebook records "incident(s) where armed force was used by an organized actor against another organized actor, or against civilians, resulting in at least 1 direct death at a specific location and a specific date" (GED Codebook, p. 2). The main analyses regarding my hypotheses on the location of battles will use this operationalization, dropping instances that were aimed against civilians in order to focus on armed conflict.

Protests, on the other hand, are instances of civilian action taken against the government of a state or some other group within the state. I draw the data I use to operationalize "protests" from SCAD, whose codebook offers this definition for one category of protests, organized demonstrations: "Distinct, continuous, and largely peaceful action directed toward members of a distinct 'other' group or government authorities" (SCAD Codebook, p. 4). However, protests can also be violent, as in the case of riots. The main distinction between battles and protests is that battles take place between two militarized groups, while protests come from either organized or spontaneous groups of *civilians*.

Below, I develop a theory explaining how the location of battles and protests influences the likelihood of a coup. While I use battles and protests to proxy for the broader concept of political instability, the theoretical mechanisms developed below may also apply to other kinds of political instability such as terrorism or even non-political instability such as natural disasters. However, while it may apply to these events, the theory below was developed with protests and battles in mind, so caution should be used when applying it to other events.

Further, while I examine both battles and protests, my theory is not a comparison of the two kinds of instability. I am not attempting to explain whether armed rebellion or peaceful resistance is better for affecting regime change or policy change, or in this case for bringing about a coup. My theory explains how battles are more likely to lead to a military coup when they occur in strategically important and politically relevant areas than when they occur in less relevant areas. Similarly, it explains how protests are more likely to lead to a coup when they occur in important areas. While some work has shown that nonviolent social movements and protests are more effective at creating change than violent ones (Johnson and Thyne 2018; Stephan and Chenoweth 2008), the question of whether armed battle or peaceful protest is more likely to lead to a coup is beyond the scope of this work. I am interested only in how the location of instability influences the effect it has on the likelihood of a military coup.

I often use the terms “political instability”, “instability”, as well as “dissent” to signify both battles and protests. While battles and protests sometimes influence coups through different causal mechanisms, and I highlight these differences when needed, the end result is mostly the same: battles have a stronger influence on coup likelihood when they occur

in certain areas, as do protests. Thus, I specify differences when needed, but otherwise use the term “instability” to signify both battles and protests.

### **The Model and Actors**

There are four actors in the model: the leader, the leader’s supporters, the dissidents, and the military. I begin with the assumption that the leader maintains power with the acquiescence of some necessary group of supporters (Bueno de Mesquita, et al., 2003; Svolik 2009; Bueno de Mesquita and Smith 2017, 2022). Losing the confidence of any supporters increases the likelihood of the leader being removed, while gaining supporters makes the leader more secure.

The leader’s supporters can be drawn from three sources: the general domestic population, domestic elites, and the international audience. The domestic population consists of ordinary inhabitants of the country. Several studies have shown how support or opposition from ordinary citizens can influence the fate of leaders (Casper and Tyson 2014; Johnson and Thyne 2018; Stephan and Chenoweth 2008). Popular uprisings were responsible for the ouster of leaders in Egypt and Tunisia during the Arab Spring in 2012, Sudan in 2019, and many other countries.

The next group the leader can draw support from are domestic elites. This group consists of economic, political, spiritual, military, and other elites within the country. This group contains anyone in the country who holds some form of power, whether they have monetary wealth, cultural influence, or some prestige or clout for whatever reason. They may or may not be official members of the state apparatus, but they all carry some high level of power and prestige. Svolik (2009) depicts regime stability as a strategic game between a leader and an elite ruling coalition. If the leader fails to maintain the support of the nation’s elites, they can lose their grip on power.

The final group that a leader can draw support from is the international audience. This group consists of other states, international businesses, non-governmental organizations, as well as international institutions such as the United Nations. These actors support leaders for their own interest, whether those interests are economic, strategic, or altruistic. Supportive/hostile signals from international actors can influence the likelihood of a coup (Aslan 2020; Thyne 2010; Yukawa, Hidaka, Kushima, et al. 2022) and whenever the interests of international actors are threatened, they may pull their support from the leader, increasing the leader's chance of being removed.

The leader's supporters maintain their support for the leader as long as they prefer the status quo. If the status quo should become unfavorable or if they begin to doubt the leader's ability to maintain the status quo, they will revoke their support from the leader. The leader can draw support from any or all sources, and the more support they have, the more difficult they are to depose. As they begin to lose supporters, they become easier to depose. This is because supporters who no longer support the leader will offer little resistance in the event of the removal of the leader. As more supporters turn away from the leader, the path to power becomes more and more open for potential rivals.

The third set of actors are the dissidents. Whether they are peacefully protesting or engaging in open armed rebellion, I assume they are acting because they wish to see some change in the status quo. The changes they wish to see could be any number of things, from democratization, wealth redistribution, change in government policy, change in leadership, etc. Regardless of the exact cause of the dissent, people protest and rebel because they would like to see a change in the status quo arrangements.

Now we come to the final actor, the military. While high ranking officers may be considered part of the elite group of supporters, the military is its own, distinct actor. Furthermore, they are the actor that will be responsible for carrying out the coup. Members of the elite class might help to facilitate or even lead a coup, but at some point, it must be the military who either acquiesces to or physically carries out the coup (Powell and Thyne 2011). Thus, it is this actor that decides whether a coup will occur. Therefore, I turn now to discussing the military's calculus when deciding whether to attempt a coup d'état.

### **The Decision to Coup**

The military decides whether to stage a coup based on their expected utility of a coup (Choulis et al. 2023; Gassebner, Gutmann, and Voigt 2016; Powell 2012; Schiel 2019; Thyne 2010). The expected utility approach argues that coups have a greater chance of occurring when the expected utility of a coup reaches a high enough point for potential plotters. The expected utility of a coup is determined by two factors, the military's disposition towards attempting a coup and their perceived ability to successfully coup (Feaver 1999).

First, when coup plotters expect to gain a high level of benefits from a successful coup, their *disposition* towards attempting one will increase. For example, if members of the military believe they could receive higher pay under a different leader, they might support overthrowing the current leader. Second, the expected utility of an attempted coup increases when plotters' *ability* to be successful increases. If a leader is particularly weak and lacks core support, for example, the military will believe they have a greater chance of success in the event of a coup, making them more likely to attempt one. These two factors, disposition and ability, combine to form potential plotters' expected utility of a coup. But

how does political instability influence the military's disposition and ability to execute a coup d'état?

### **Political Instability and the Decision to Coup**

#### Disposition

Considering first the military's disposition, I argue the military will be more disposed towards a coup when their satisfaction with the status quo decreases. Political instability influences the military's satisfaction with the status quo in several ways. Extreme forms of instability such as armed conflict put military lives in direct physical danger. The increased immediate risk will decrease the military's satisfaction with the status quo and increase their willingness to stage a coup. Less severe forms of instability such as protests, while not putting soldiers' lives in such extreme danger, can still be physically dangerous. Protests can turn into riots, and if soldiers are required to suppress these protests their bodies can be put in the way of physical harm.

Aside from the direct physical dangers, suppressing instability can also harm the military's reputation (Pion-Berlin and Trinkunas 2010). If they are required to use force to put down out of control protests, the populace will observe these actions and public opinion could begin to turn against the military and dampen their reputation as a politically neutral protector of the realm. The requirement to use force to suppress protests could also harm soldiers' psyches, as they may personally agree or identify with the protestors (Grewal 2019). The potential damage to the military's reputation and conscience should decrease their satisfaction with the status quo and increase their disposition towards a coup.

In addition to concerns over self-preservation and morality, greed can also play a role. Instability disrupts economic processes and hampers growth, and resources may be moved around as budgets are shifted in reaction to the instability. All of this may harm the

leader's ability to pay soldiers on time. Payroll insecurity could decrease military satisfaction with the status quo to the point where they are willing to stage a coup to return normalcy to the pay schedule (Leon 2014; Powell 2012).

Another important factor to consider is the cost of repression. When faced with instability, the military may coup, but they may also side with the leader and attempt to put down the instability. Which decision they make will largely be determined by the cost of repression. Several things can influence the cost of repression. If large numbers of civilians might be killed repressing instability, then the cost of repression will increase. If members of the military identify with those causing the instability, the cost of repression will increase. Several other things can influence the cost of repression, but as these costs increase, the military will become more reluctant to repress instability.

The costs of repression, then, factor into the military's disposition. If the costs of repressing instability are low enough, then the military will be unwilling to coup and will simply repress any instability. However, as the costs of repression begin to increase, the military will become increasingly reluctant to repress any instability. In terms of my theoretical framework, as the military is tasked with repressing instability in the face of an increasing cost of repression, they will become increasingly dissatisfied with the status quo and thus more disposed towards staging a coup.

In general, instability decreases the military's satisfaction with the status quo by increasing uncertainty about the future (Bell and Sudduth 2017). Any instability disrupts the current order of things, and produces the possibility of revolution, including the possibility of new leadership, new institutions, or a change in the rules of the game. The military has an incentive to both protect their current position and to push for additional



advantages. Political instability could present a scenario where the military feels the need to protect their status quo position or sees an opportunity to lobby for a more advantageous position for themselves. The uncertainty over the future that is a byproduct of instability will decrease the military's satisfaction with the status quo and increase their disposition towards a coup.

### Ability

In addition to decreasing their satisfaction with the status quo and thus increasing their disposition, instability also influences the likelihood of a coup by changing the military's ability to successfully execute one. It does this by decreasing the leader's supporters' satisfaction with the status quo. As discussed above, any loss of support by the leader makes the leader easier to remove because potential rivals need not worry about potential backlash for replacing the leader from those who no longer support the leader.

Dissent is often depicted as sending information-revealing signals that inform the military that the leader has lost legitimacy (Casper and Tyson 2014; Johnson and Thyne 2018). I will refer to these kinds of signals as "direct" signals, as they send a signal directly from the dissidents to the military that the leader has lost legitimacy. However, it is not only the dissidents themselves that the leader needs to fear. If other people who are not dissenting (such as the leader's supporters) observe the instability, they may also begin to believe that the leader has lost legitimacy. Instability disrupts daily life, it may disrupt economic processes, and it is just a general nuisance for those not participating in it. People who live under threatening environments are less likely to support current institutions (Deglow and Sundberg 2021; Merolla and Zechmeister 2009). If the leader fails to control the instability and return the country to normalcy, people other than the original dissidents will begin to withdraw their support from the leader. Thus, in addition to the direct signals

that instability sends to the military, it also sends “indirect” signals, which go from dissidents to the leader’s supporters who, if the signals from the dissidents are strong enough to cause them to become dissatisfied with the status quo, will signal to the military that they have revoked their support of the leader.

Again, the fewer parties a rival need worry about after removing the current leader, the easier it is to successfully remove the leader. When the leader’s supporters become dissatisfied with the status quo, they remove their support from the leader. If instability begins to affect non-participants in the instability, they will withdraw their support from the leader. This improves the military’s ability to successfully stage a coup, and thus increases their likelihood of attempting one.

Instability decreases supporters’ satisfaction with the status quo in several ways. First and foremost, instability can threaten the lives and physical health of the inhabitants of a country. Active armed conflict being fought near cities and towns puts citizens’ lives at direct risk. Having active rebel groups in the country can make traveling dangerous. Rebel groups have multiple ways, including violence but also other types of incentives, to gain the support of a population (Arves, Cunningham, and McCulloch 2019; Heger 2015; Jones and Mattiacci 2019; Stewart 2015; Wood 2010). If an armed group is capable of sufficiently threatening people, the people may revoke their support from the leader and give it to the armed group simply to protect themselves. Less extreme forms of instability such as protests, while not as severe, can also result in physical danger. If the leader fails to assure his supporters that he can protect their physical security, he will lose their support.

Instability can also disrupt the economy. Physical property can be destroyed, workers may fear going to work, customers may fear going out to shop. This economic

disruption will begin to be felt by the inhabitants of the country, and if the instability disrupts the economy to an unacceptable level, people will revoke their support from the leader.

Authoritarian leaders often enact certain arrangements and institutions to effectively buy off potential challengers (Gandhi and Przeworski 2007, Gandhi 2008). Gandhi and Przeworski (2006) argue that leaders use private goods to co-opt elite-level challengers, while they enact more broad-based institutions such as elections and legislatures for challenges from outside the state apparatus. Bove and Rivera (2015) show that legislative institutions within authoritarian regimes make coups less likely. However, others have shown that when leaders become unable to credibly commit to these arrangements and institutions, the regime can break down (Boix and Svobik 2013; Magaloni 2008). If political instability becomes severe, supporters may begin to doubt the leader's ability to credibly commit to the current status quo and revoke their support.

In general, the leader's supporters will become dissatisfied with the status quo as uncertainty over the future increases. For instance, in an armed conflict, if people begin to think that a rebel group may overthrow the government, there is little doubt that the leader can commit to status quo arrangements. Thus, supporters would have an incentive to shift their support from the leader to the rebel group or other alternative leader, or at the very least to remain neutral and wait to see which side will become the victor. In the event of peaceful protests, economic elites and international actors who have arrangements with the leader may begin to doubt the leader's ability to fully commit to these arrangements, and these actors would thus have the incentive to shift their support to a rival who may be better positioned to secure or potentially improve these arrangements. Uncertainty over the future

incentivizes people who are satisfied with the current status quo to begin looking for ways to secure a similarly agreeable status quo in the future.

To sum up this section, the likelihood of a military engaging in a coup increases when their willingness and/or their ability to successfully coup increase. Their willingness to coup increases when they become dissatisfied with the status quo. Instability makes them dissatisfied with the status quo by putting them in harm's way, threatening their reputation, hampering the leader's ability to pay them, harming their sense of morality, and increasing uncertainty over the future. The military's ability to successfully coup increases when the leader's supporters become dissatisfied with the status quo. Instability causes supporters to become dissatisfied with the status quo by threatening their physical well-being, disrupting economic processes, and creating uncertainty over the future. So, instability decreases both the military's satisfaction with the status quo and the leader's supporters' satisfaction with the status quo. Thus, instability in general increases both the military's willingness and ability to coup, and on average should lead to a greater likelihood of a coup.

However, not all instability is the same. The main argument of this study is that the location of instability will determine how much it influences satisfaction with the status quo for the military and the leader's supporters, and thus how it influences the military's expected utility of a coup attempt. Using the general theoretical framework laid out above, in the following sections I discuss how instability affects the likelihood of a coup differently when it occurs in different areas within a country.

### **Instability in Economically Productive Areas**

In this section, I argue that when instability occurs in economically productive areas within a nation, the chance of a coup will increase more so than when instability occurs in

less productive or economically stagnant areas. By economically productive, I mean areas in which a higher-than-average level of economic activity occurs compared to other areas in the nation. These are the areas that contribute the most to a nation's gross domestic product. This mainly consists of urban areas where a high level of manufacturing and commercial services takes place but can also include agricultural and mining areas as well. Economic elites may or may not live in/near these areas, but their property and investments exist in these regions.

There are several mechanisms which explain why instability increases the probability of a coup more when it occurs in productive areas. First, as mentioned above, instability disrupts the economic process. There is a consensus in the literature that civil war reduces the economic growth of war-torn states (Collier, 2007; Hoeffler and Reynal-Querol 2003; Fang et al. 2020; Fjelde 2015). Wars destroy physical capital (Bruck 2001; Bundervoet and Verwimp 2005), kill employees and reduce the workforce, pull young children out of school where they learn valuable work skills (Blattman and Annan 2010; Lai and Thyne 2007; Shemyakina 2011), and produce several other results that harm an economy. This reduction in economic health may harm the leader's ability to fully pay their military or promise future pay. The leader's diminished ability to pay the military will decrease the military's satisfaction with the status quo and increase their willingness to coup (Powell 2012).

Furthermore, as war further and further harms an economy, social unrest may increase as unemployment increases, wages stagnate or begin to decrease, and people start to become disgruntled. A poor economic situation can lead to support for a change in leadership (Cordero and Simón 2016; Crisis 2016; Pennings 2017; Rose and Mishler 2002),

and if the leader fails to return the country to normalcy in expedient fashion they run the risk of losing the support of the populace.

Less drastic forms of instability should have similar effects. Protests, while not as drastic as armed rebellion, can still interrupt economic processes (Matta, Appleton, and Bleaney 2017; Shonchoy and Tsubota 2016). Protesters may crowd streets and other infrastructure, threaten business owners and potential customers, and generally disrupt everyday economic business. Protests can turn into riots and can lead to widespread looting, significantly impacting the local economy.

Importantly, though, these effects will be most pronounced when instability occurs in economically productive areas. When instability disrupts economic processes in the most productive areas of a country, the overall national economy will be drastically impacted. Conversely, when instability occurs in stagnant, unproductive areas, economic processes in those areas will still be interrupted but the impact on the overall health of the national economy will be minimal. Thus, it is when instability takes place on economically productive territory that leaders must truly worry about their fate.

Aside from tangibly interfering with economic processes, however, there is a second mechanism through which instability in economically critical areas should increase the likelihood of coups. While civil strife may take some time to work its way through the system and impact macroeconomic indicators like GDP growth and unemployment, instability that occurs in highly productive areas should immediately send signals to economic elites within the country that the leader may be ineffective at protecting their property and investments. This increases elite's uncertainty about the future and thus their satisfaction with the status quo, which will indirectly signal the military that the leader is

losing legitimacy. If rebels are able to maintain control of territory near their property and put constant pressure on their investments, elites will have the incentive to negotiate with and lend their support to rebel groups, or to look for other rival leaders that can better protect their property, clearing the way for the military to coup.

Protests and riots can also increase elite uncertainty over the future. If protests begin to seriously threaten the status quo, they can cast doubt on the leader's ability to maintain current economic arrangements. This will cause elites to begin looking for other rival leaders who are more capable of protecting their current position. Militaries have been shown to intervene on behalf of economic elites in the face of mass protests in order to preserve status quo property rights (Tusalem 2010). Thus, protests and riots, especially those whose root cause is economic redistribution and that directly target economic elites, will increase the likelihood of a coup. This effect will be magnified when protests occur near economic centers, with mobs encroaching on valuable property.

The leader's third group of supporters, the international audience, may also grow perturbed by instability occurring in economically prosperous areas. Many international actors will also have a vested interest in these areas. If instability in these areas begins to disrupt international trading patterns, international actors may become dissatisfied with the status quo and withdraw their support from the leader. This withdrawal of international support should increase both the military's willingness and ability to coup. It affects their ability because they will not face international backlash if they coup. It affects their willingness because the withdrawal of international support may mean the withdrawal of international financing, thus reducing the leader's ability to keep the military satisfied.

Further, instability in economically prosperous areas comes with a high cost of repression. Engaging in full armed conflict with a rebel group in these areas could harm valuable economic property. Even less drastic acts of repression, such as putting down a peaceful protest, can lead to the damage of valuable property. Simply engaging with a peaceful protest could potentially spark a riot, increasing the risk of property damage. So, instability in economically important areas comes with increased costs of repression, and therefore increases the military's willingness to coup rather than repressing the instability.

In areas within a country that already produce little economic output, on the other hand, instability will have far less drastic effects. When these destabilizing events occur in poor areas, there is little reduction in national growth and hence little public outcry, economic elites need not be concerned about their investments, and international actors do not need to worry about disruptions in international trade. Further, the costs of repression are low as the military need not worry about damaging valuable property and are free to use whatever tactics they see fit. It is only when instability occurs in the areas that produce high levels of economic output that overall national income should begin to be seriously harmed, trading patterns threatened, and the military should grow reluctant to repress the instability. So, as instability begins to concentrate in economically prosperous areas, the risk of a coup should increase, as opposed to when instability occurs in less productive areas of a country.

**Hypothesis 1: Events of instability should have a greater influence on the likelihood of a coup when they occur in economically prosperous areas as compared to when they occur in less prosperous areas.**



### **Instability in Densely Populated Areas**

In this section, I argue that events of instability which occur in densely populated areas will increase the probability of a coup more so than events which occur in less populated areas. When these events happen, whether they be armed skirmishes or nonviolent protests, they disrupt daily life for the people living in surrounding areas. This disruption may cause the general public in those areas to become dissatisfied with the status quo and withdraw their support from the leader, as the leader has shown an inability to maintain peace and stability. As discontent among the populace starts to grow, the military's ability to stage a coup should increase, as they should face less backlash for doing so in the face of widespread discontent.

However, these events will have a much more significant impact when they happen in densely populated areas. In these areas, there are large amounts of people whose lives are being disrupted and who may withdraw their support. When destabilizing events happen in less densely populated areas, there simply are not enough people whose lives are being disrupted and who can withdraw their support to matter. The people in those areas may very well revoke their support for the leader, but there are not enough people for it to have much effect on the leader's overall support and thus the military's ability to coup.

Aside from the sheer number of people affected, a second way in which the density of the population facing instability can influence the likelihood of a coup deals with how much attention the instability garners. When events occur in densely populated areas, there should be more media coverage of the events than when they occur in less populated areas. This is so for two reasons. First, when the population is heavier there are more people in the area to observe, report on, share on social media, and just generally discuss the events. The importance of social media during the Arab Spring that toppled leaders in Egypt and

Tunisia, for example, has been highlighted by several commentators (Davison 2015; Wolfsfeld, Segev, and Sheaffer 2013). Second, when there are more people around the instability, it is a more dangerous situation. When these events occur in densely populated areas, there are more people to be injured or possibly killed. When situations are dangerous and more likely to see severe violence, they are more likely to receive media coverage (Jakobsen 2000). The fact that there are more people around to report the situation, coupled with the fact that the situations are more dangerous, means that events that occur in densely populated areas will garner more media attention than events that occur in less populated areas.

This increased media attention provides stronger direct signals from the dissidents to the military. Casper and Tyson (2014) emphasize the importance of media coverage in the link between protests and coups. In their view, protests serve as signals to regime insiders that the leader has lost legitimacy with the mass public. This signal of lost legitimacy allows insiders and the military to overcome coordination barriers and stage successful coups. However, the accuracy and therefore the strength of these signals is conditioned by the level of media coverage regarding the protests. If the media does not accurately convey the information provided by the protests, the regime elites are not able to overcome the coordination obstacles. In the language of my theoretical framework, acts of political instability directly signal the military that the dissidents have become dissatisfied with the status quo and the leader has lost legitimacy in their eyes. This increases the military's perceived (and actual) ability to successfully coup as they know that they will not face resistance from the dissenters.

In addition to providing stronger direct signals, increased media attention also provides stronger indirect signals to the military. The broader domestic population and elites also receive the signal of lost legitimacy from the dissidents, which may cause them to question their support for the leader or make them more comfortable in publicly expressing already-held dissatisfaction with the leader. More likely, though, it will cause them to question the leader's ability to remain committed to the status quo arrangements. This would incentivize them to begin looking for a more competent leader that would be better able to preserve the current order of things or one who may be able to secure more advantageous arrangements for them. Either way, it may result in supporters withdrawing their support from the leader, which then signals to the military that the leader has become easier to depose.

Increased media attention also means that these events will be more likely to reach an international audience. Some have argued that international media coverage of humanitarian crises can influence third parties to intervene. While this idea, commonly referred to as the "CNN effect" (Livingston 1997, Robinson 2002), has been heavily debated, there is strong empirical evidence that increased media coverage is positively correlated with third party intervention in civil wars (Bell, Frank, and Macharia 2013; Burgoon et al. 2015). Further, there is evidence that the level of human suffering influences the likelihood of third-party intervention in a conflict regardless of the influence of the media (Binder 2015). Militaries are more likely to undergo a coup when the leader lacks international support (Aslan 2020; Thyne 2010; Yukawa, Hidaka, Kushima, et al. 2022), so increased media coverage of severe violence and the potential of a looming international intervention should increase the probability of a coup attempt.

When instability occurs in sparsely populated areas, there are not many people to report it and there is little danger of large numbers of people being harmed. When it occurs in densely populated areas, however, the international community will hear about it and perhaps have humanitarian concerns that many people will suffer. The prospect of large numbers of civilians being caught up in a violent protest or worse, caught in the crossfire of an armed skirmish, could appeal to the conscience of the international community. People do not enjoy seeing innocent civilians, particularly children, going through such drastic situations on the evening news. These humanitarian concerns might lead to the international community withdrawing their support from the leader and shifting their support to a more competent leader who is better able to protect their population and ensure their country is stable, increasing the military's ability to coup.

In other words, instability in densely populated areas comes with a high cost of repression. This is because, due to the density of the population, the chance of large numbers of people being harmed if the military makes the decision to repress the instability is increased. The increased chance of large numbers of people being harmed costs the military both in reputational terms and moral terms. Coupled with the increased media attention discussed above, the reputational concerns could be significant. Instability in less densely populated areas comes with a smaller chance of a high number of casualties as well decreased media attention, and thus with lower costs of repression overall.

In summation, when instability occurs in densely populated areas, many people withdraw their support from the leader. Further, when instability occurs in densely populated areas both direct signals and indirect signals that the leader no longer has legitimacy or the ability to provide stability are amplified and sent to the military. When

these events occur in sparsely populated areas, there are very few people around to be affected and to withdraw their support. Further, little media attention is garnered, and many of the leader's supporters may not be concerned or even aware of the situation. A denser population and increased media attention increase the costs of repression. The combination of domestic and international pressure that comes when instability occurs in densely populated areas leads to the conclusion that instability in densely populated areas should be more likely to cause a coup than instability that occurs in more sparsely populated areas:

**Hypothesis 2: Events of instability that occur in densely populated areas within a country should have a greater effect on the likelihood of a coup than events that occur in less populated areas.**

#### **Instability in the Territory of Dominant Ethnic Groups**

In this section, I examine how political instability influences the likelihood of a coup when it occurs within the territory of different ethnic groups. Canonical works on civil conflict found that ethnic fractionalization and inequality played little role in the onset of conflict (Collier and Hoeffler 2004; Fearon and Laitin 2003). More recent work, however, has found that economic and political inequality between ethnic groups can exacerbate tensions between these groups and lead to conflict (Cederman et al. 2011; Cederman, Weidmann, and Bormann 2015). This argument about inequality between ethnic groups has also been applied to coups: Bodea and Houle (2021, 2017) argue that when economic inequality between ethnic groups is high, the chance of an unequal group launching a coup increases. This effect increases when inequality within the group is low. When low within-group inequality is coupled with high between-group inequality, the ethnic group can band together and signal coordinated grievances. These coordinated group grievances give their

co-ethnics in the military an opportunity to stage a coup, as they know they will have a solid base of support after the coup.

One way to signal grievances is by participating in political instability and dissent. When members of a particular ethnic group decide to engage in dissent, whether peaceful protests or armed rebellion, it sends a direct signal to the military that the group has become dissatisfied with the status quo and withdrawn their support from the leader. This increases the military's ability to successfully coup, therefore increasing the chance they attempt one.

However, some groups are more powerful than others. Some groups may be well-represented in the national government and the military, while other groups may be under-represented or not represented at all. When well-represented groups signal a dissatisfaction with the status quo, the leader's chance of survival will be badly damaged. When a powerful ethnic group becomes dissatisfied with the status quo, the military's ability to successfully stage a coup greatly increases. On the other hand, some groups have little or no representation in the national government. They are, almost by definition, not members of the leader's group of supporters. When these groups dissent, it will do little to influence the military's ability to successfully coup, at least directly.

However, instability originating from some under-represented groups could still greatly harm the leader in an indirect way. When under-represented groups live among or near more powerful ethnic groups, their dissent can send indirect signals of the leader's lost legitimacy to the military. This is because, again, instability disrupts daily life. If the instability coming from weak, under-represented groups becomes too severe, members of the powerful groups in nearby areas will observe this, and they too will begin to become dissatisfied with the status quo. They may either grow tired of the daily disruptions and

wish to see things return to normal, or they may begin to doubt the leader's ability to commit to the arrangements that have afforded them a well-represented position in the first place. Either way, they will revoke their support from the current leader in order to support someone better able to quell the unrest and ensure their privileged position.

Thus, when instability occurs within the territory of politically powerful ethnic groups, whether it be from the powerful groups themselves or less powerful groups living amongst them, the chance of a coup occurring should greatly increase. On the other hand, when instability occurs on territory where *only* weak groups or groups with no political relevance live, the chance of a coup occurring will increase by only a small amount, if at all.

**Hypothesis 3a: Events of instability that occur within the territory of dominant ethnic groups should have a greater effect on the chance of a coup than events that occur in territory occupied only by repressed groups or politically irrelevant groups.**

Up until this point the military has been considered a unitary actor. However, militaries are not homogenous groups and are themselves often composed of various ethnic groups. Work from Roessler (2011, 2017) shows that it is often specific ethnic groups within the military that coup on behalf of their ethnic brethren. When instability occurs on the land of a particular ethnic group, their co-ethnics in the military may become dissatisfied with the status quo and thus more willing to stage a coup. This is because co-ethnics in the military should identify with the plight of their ethnic brethren and have a desire to end the chaos. Furthermore, while other ethnic groups in the military may be willing to repress the instability, co-ethnics may be hesitant or unwilling to do the same. This portion of the military, since they might identify with the participants of the instability

on an ethnic basis, will face a higher cost of repression. This higher cost of repression will make them reluctant to put down the instability, and thus increase their willingness to attempt a coup.

**Hypothesis 3b: As the number of destabilizing events that occur within the territory of an ethnic group increases, the odds of a coup occurring from that ethnic group increase.**

As the amount of instability an ethnic group sees increases, their disposition for staging a coup may increase. However, as discussed above, both the military's disposition for staging a coup *and* their perceived ability for success matter in their calculation as to attempt one or not. Therefore, when an ethnic group starts to pay the costs of instability, they may push their co-ethnics in the military to coup, increasing these co-ethnics disposition; if they have a low perceived probability of success however, the chance of them attempting one may be low. If a group has some representation in the government, but there are other groups with more or equal power, these other groups may block the slighted group from carrying out a coup. However, the stronger and more represented a group is in the national government, the fewer potential spoilers there are. If ethnic elites from a group with some but not too much power pull their support from the leader, the leader will have a slight increase in their probability of being removed. However, when a more powerful group pulls their support, the leader's overall level of support will be greatly reduced, and therefore the military's ability to stage a coup should be increased. Therefore, if instability occurs mainly on an ethnic group's territory, there should be an increased chance of that ethnic group carrying out a coup, and this effect should increase with the group's overall power in the national government.



**Hypothesis 3c: As the number of destabilizing events that occur within the territory of an ethnic group increases, the odds of a coup occurring from that particular ethnic group increases, and this effect is conditional on the power of the group within the national government.**

### **Widespread Instability across the Country**

There is one final location where instability should greatly increase the likelihood of a coup, or rather multiple locations. What I mean by this is that instability should be more likely to result in a military coup when it occurs in multiple locations, across wide swaths of territory, as opposed to when it occurs in a single, geographically concentrated area. Large protests are generally more effective than smaller ones (Casper and Tyson 2014), but in addition to the number of people who participate in instability, the number of different areas the instability occurs in and the greater amount of territory that is covered by instability should also play a role. In other words, instability is most likely to lead to a coup when it is happening all over the country.

Greig, Mason, and Hamner (2018) (also see Ito and Hinkkainen Elliott (2020)) apply a similar argument to civil war outcomes. They argue that when rebel groups have the ability to fight over large swaths of territory and battles in a conflict are dispersed, they send a signal of strong capability. This signal makes the government more likely to come to the bargaining table and end the war through a negotiated settlement. The notion of the dispersion of instability across a country has yet to be applied to instability's effects on coups, however.

Widespread instability should be more likely to result in a coup d'état for several reasons. First, the more widespread the instability, the stronger the direct signal that the

leader has lost legitimacy. If all corners of society are protesting or rising in armed rebellion, it is obvious that the leader has lost many supporters. Furthermore, it also sends strong indirect signals to the leader's remaining supporters that large segments of the population are dissatisfied, and the leader may be unable to maintain the current status quo arrangements. If the entire country is experiencing instability, supporters may see the writing on the wall and revoke their support. Both the direct and the indirect signals will increase the military's ability to successfully coup, and thus increases the chance they attempt one in the first place.

In addition to increasing the military's ability to coup, widespread instability should also increase military disposition towards a coup. There are two reasons for this. First, the costs of repressing widespread instability are greater than repressing localized instability. In the case of armed conflict, battles occurring all over the country would require stretching resources across the various locations, increasing costs of troop mobilization, communications, etc. Personnel would also need to be spread out, decreasing troop density at any given event, making the situation more dangerous for individual soldiers. Widespread protests would require a similar stretching of resources, increasing the costs of repression compared to more localized protests.

The second reason widespread instability will increase military disposition more than localized instability is because the military (or various segments of the military) will be more likely to identify with the dissenters. When the instability is widespread and dissenters are coming from several segments of society, it increases the chance that members of the military will identify with one or multiple segments, making a coup preferable to repression. When multiple ethnic or religious groups are protesting, or people

from different administrative regions or both rural and urban areas are revolting, it will make it more difficult for the military to justify repression. The above arguments lead to the following hypothesis:

**H4: Widespread instability should be more likely to lead to a coup than localized instability.**

## **Chapter Three – Testing the Impact of Political Instability in Economically Productive Areas**

### **Counting Battles and Protests in Economically Productive Areas**

In this chapter, I test Hypothesis 1. As a reminder, Hypothesis 1 states that battles and protests should be more likely to lead to a coup when they occur in economically productive areas compared to battles and protests that occur in less productive areas. To test this, I utilize two different datasets to measure battles and protests. To measure battles, I utilize UCDP's Georeferenced Event Dataset (GED) (Sundberg and Melander 2013; Pettersson and Oberg 2020). The GED records instances "where armed force was used by an organized actor against another organized actor, or against civilians, resulting in at least 1 direct death at a specific location and a specific date" (GED Codebook, p.4). It has a global geographic scope and ranges from 1989 to 2019. I drop instances of one-sided violence and non-state violence, keeping only state-based conflict events to focus on more conventional battles. To measure protests, I use the Social Conflict Analysis Database (SCAD). This data records events from all African countries from 1990-2015.

To determine which events occur in economically productive areas, I situate the events found in the GED and SCAD datasets within the PRIO-Grid framework (Tollefsen, et al. 2012). PRIO Grid breaks the globe down into 0.5-degree latitude x 0.5-degree longitude square cells (about 1,200 square miles at the equator). I use nighttime light data to proxy for economic productivity, which is widely used to measure economic activity at various subnational levels (Alesina and Perotti 2016; Besley and Reynal-Querol 2014; Hodler and Raschky 2014a, 2014b; Michalopoulos and Papaioannou 2014). Using nightlight data from the National Ocean and Atmospheric Administration (NOAA), I find the average level of nighttime lights in each 0.5 x 0.5 degree cell in a given year. I then

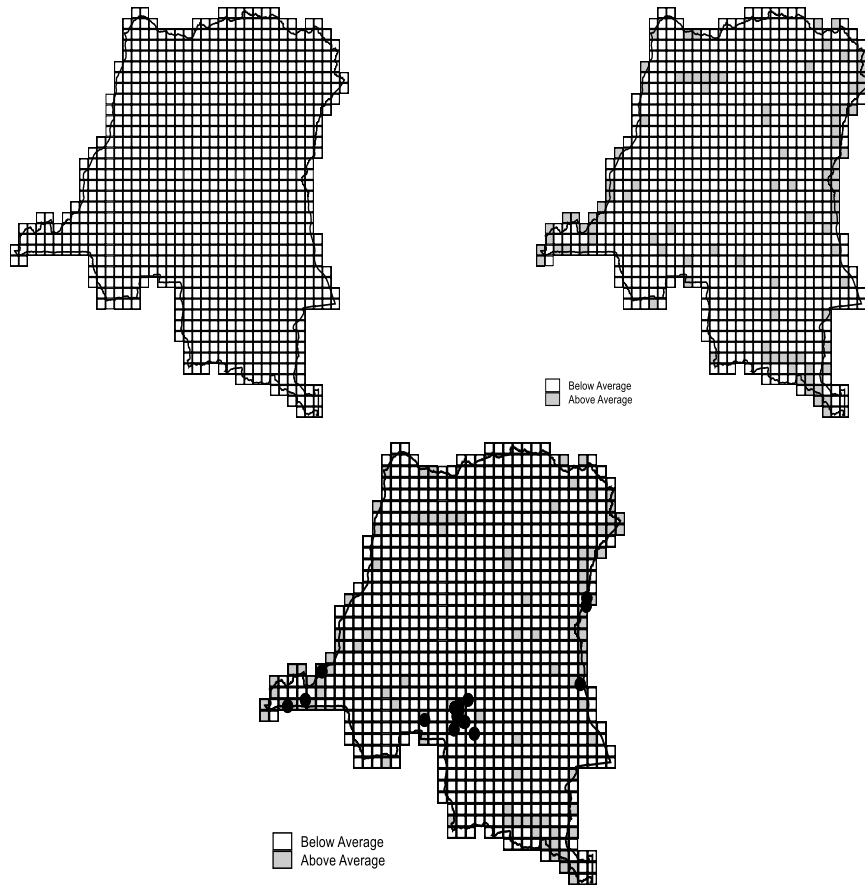
take the average level of nighttime lights for all cells in a given country each year. I compare the country-average number to the level of nighttime lights in the cells in which GED and SCAD events take place. If an event takes place in a cell with a level of nighttime light that is higher than or equal to the average level of nighttime lights in all cells in a country, I code it as an event which occurred in an economically productive area. Otherwise, the event is coded as occurring in a less productive area. This process is depicted in Figure 3.1.

I then repeat the process with the median level of all cells within a country, so that in total I end up with eight different numbers: a count of the number of battles that occurred in cells with a higher than country-average level of nighttime lights, battles in below-average nighttime light cells, battles in cells above the median level of nighttime lights, battles in below-median nighttime light cells, and the same four variables with protests instead of battles. These numbers are then collapsed to a state-month level, so that my final independent variables are the counts of battles and protests that occurred in productive and unproductive areas within a country in each month. All models include all countries covered by the range of the GED and SPEED datasets, minus cases with missing covariates.

### **Dependent Variable**

The dependent variable in all models is whether there was a coup attempt in a state-month. For this variable, I use data from Powell and Thyne (2011). Powell and Thyne define coups as “illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive.”

Figure 3.1 – The Distribution of Battles in Democratic Republic of Congo, January 2017



These maps depict the distribution of battles across the Democratic Republic of Congo during the month of January 2017. In the top left corner, the country is broken down into 0.5 x 0.5-degree cells. In the top right corner, the level of nighttime lights is taken for each cell, and then each cell is designated as above the country average or below the country average. Finally, in the bottom map, individual battles (represented by the black dots) are located within the cells. To derive my final independent variables of interest, I count the number of battles occurring in above average cells and the number of battles occurring in below average cells. This process is repeated for every state-month in the data.

### Control Variables

As discussed in Chapter 1, scholars have found an astonishing number of factors that are correlated with coups. One of the largest categories of factors that have been found to be correlated with coups is civil-military relations, or the strength and position of the military vis-à-vis the government (Powell 2012). Thus, I include two military-level

variables. First, I control for a state's military expenditure as a percentage of the state's GDP. Second, I control for the logged number of armed personnel employed by the state.

Next, I control for a variety of country-level factors. Poverty and other economic indicators have been shown to lead to coups (Londregan and Poole 1990; Kim 2016), so I include a logged indicator of a state's GDP/capita. Coup theorists have argued for several possible effects of political institutions on coups (Bell 2016), so I account for regime type. Using the Polity V data, I code a state as a "democracy" if it has a polity score of 5 or above in a given year. Similarly, states with a polity score of -5 or less are coded as "authoritarian." I leave mid-level regimes as the excluded category. Several studies have also found a relationship between population size and coups (Roessler 2011), so I include a logged indicator of state population size. I also include a variable that indicates what region a state is in.

Finally, to account for temporal dependency between cases, all models include the number of months since the state last experienced a coup, as well months since last coup squared and months since last coup cubed (Carter and Signorino, 2011). All monthly event variables are lagged by one month and all yearly control variables are lagged by one year. Standard errors for all models are clustered by country. I turn now to discussing model results, first discussing the battle models then turning to the protest models.

### **Modeling the Effects of Battles on Coups**

Table 3.1 presents logit models predicting the probability of a coup d'état in each state-month with battle counts as the main independent variables. Model 3.1a tests the effects of battles that occur in areas that are above the country average level of economic

Table 3.1 - Logit Models Predicting Effect of Battles  
in Economically Productive Areas on Coup Attempts

	(a)	(b)
Battles in Productive Areas	0.0679** (3.14)	
Battles in Less Productive Areas	-0.0505* (-2.22)	
Battles in Productive Areas (median)		0.0468** (3.08)
Battles in Less Productive Areas (median)		-0.0805* (-2.20)
Military Expenditure (%GDP)	-0.142 (-1.90)	-0.143 (-1.90)
Armed Personnel (logged)	0.226 (1.63)	0.223 (1.61)
Population (logged)	-0.271* (-2.13)	-0.266* (-2.09)
GDP/Capita (logged)	-0.633** (-3.14)	-0.632** (-3.16)
Democracy	-0.386 (-1.25)	-0.382 (-1.23)
Authoritarian	-0.426 (-1.07)	-0.427 (-1.07)
Middle East	0.630 (0.73)	0.648 (0.72)
Africa	1.264 (1.26)	1.215 (1.22)
Asia	0.596 (0.61)	0.532 (0.55)
Americas	1.206 (1.46)	1.140 (1.39)
Months with no coup	-0.0317** (-2.85)	-0.0319** (-2.84)
(Months with no coup) <sup>2</sup>	0.000135 (1.47)	0.000134 (1.45)
(Month with no coup) <sup>3</sup>	-0.000000173 (-0.87)	-0.000000170 (-0.85)
Constant	0.188 (0.07)	0.235 (0.09)
<i>N</i>	43200	43200

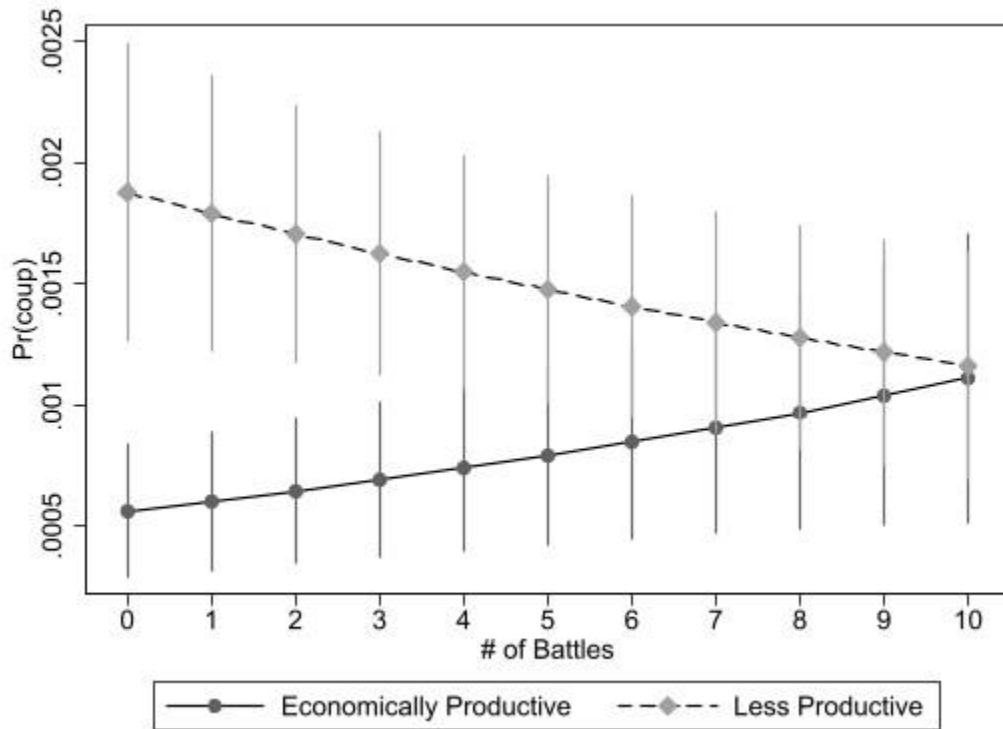
*t* statistics in parentheses; \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



productivity and battles that occur in less productive areas. Looking at the results from Model 3.1a, the coefficient on Battles in Productive Areas is positive and statistically significant ( $p < 0.01$ ), indicating that these events are associated with an increased probability of coup attempts. The coefficient for Battles in Less Productive Areas, on the other hand, is also significant ( $p < 0.05$ ) but is negative in direction. This suggests that these events make coups less likely when they occur. The difference in these two coefficients is significant at the  $p < 0.01$  level. Model 1 thus provides evidence for the hypothesis that instability in economically productive areas is more likely to lead to a coup than instability in less productive areas.

Figure 3.2 presents predicted probabilities from Model 3.1a. Holding all other variables at their means, the predicted probability of a coup attempt in a state-month where there are 0 battles in economically productive areas is about .0006. In state-months where there are 10 battles in economically productive areas, the probability of a coup attempt increases to .0011. In other words, moving from 0 battles in economically productive areas to 10 battles increases the risk of a coup attempt by 83%. Turning to battles in less productive areas, the probability of a coup attempt when there are 0 battles in less productive areas is .0018, compared to .0012 for state-months with 10 battles in less productive areas. In other words, moving from 0 battles in less productive areas to 10 decreases the probability of a coup attempt by 33%.

Figure 3.2 – The Probability of a Coup per Number of Battles in Economically Productive Areas vs Less Productive Areas (Mean Productivity)

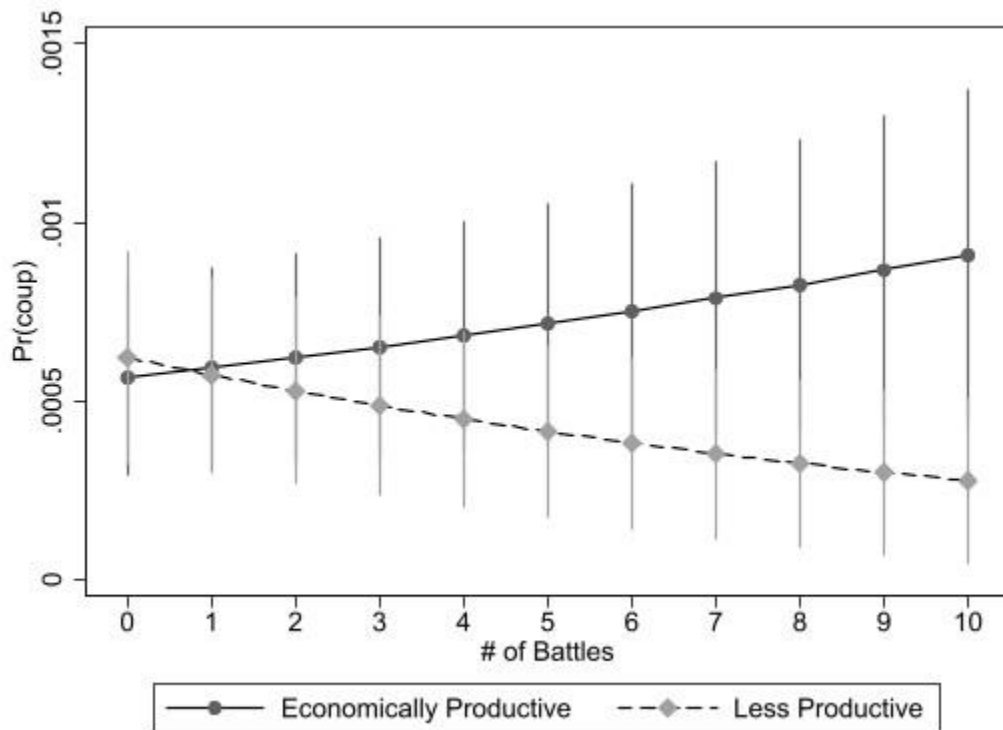


Briefly turning to control variables, they mostly behave as expected. Looking first at the military variables, the coefficient on military expenditure as a percentage of GDP is negative, indicating that a larger military budget reduces the likelihood of a coup, and the coefficient on military personnel is positive, indicating that a larger military is more likely to attempt a coup. However, these coefficients only reach marginal statistical significance ( $p=0.057$  and  $p=0.104$ , respectively). Turning to the country-level variables, larger populations are associated with a decreased risk of coups ( $p<0.05$ ) as is a larger GDP/capita ( $p<0.01$ ). The coefficients indicate that both democratic and authoritarian regimes are less likely to experience coups compared to mid-level regimes, but neither regime-type reaches statistical significance. Finally, no region reaches statistical significance.

Model 3.1b tests the effects of battles in areas that are above the median level of economic productivity and battles in areas that are below the median level of economic productivity. The results of Model 3.1b are nearly identical to Model 3.1a. Again, the coefficient on Battles in Productive Areas (median) is positive and significant, while the coefficient on Battles in Less Productive Areas is negative and statistically significant. Furthermore, the difference between these two coefficients is significant at the  $p < 0.01$  level. Model 3.1b provides further support for Hypothesis 1.

Figure 3.3 presents predicted probabilities from Model 3.1b. Holding all other variables at their mean, state-months with 0 battles in areas above the economic median have 0.0005 probability of a coup attempt. State-months with 10 battles in areas above the economic median, on the other hand, have a .0009 chance of a coup. In other words, moving from 0 battles to 10 battles in areas above the economic median increases the chance of a coup by 80%. Turning to battles in areas below the economic median, state-months with 0 battles have a coup attempt probability of .0006, holding all other variables at their mean. State-months with 10 battles in areas below the economic median have a coup probability of 0.0003. In other words, moving from 0 to 10 protests in areas above the economic median decreases the chance of a coup attempt by 50%.

Figure 3.3 - The Probability of a Coup per Number of Battles in Economically Productive Areas vs Less Productive Areas (Median Productivity)



### Modeling the Effects of Protests on Coups

Table 3.2 presents logit models predicting the probability of a coup d'état attempt in each state-month with protest counts as the main independent variables. Model 3.2a tests the effects of protests that occur in areas that are above the country average level of economic productivity and battles that occur in less productive areas. Looking at the results from Model 3.2a, the coefficient on Protests in Productive Areas is positive, indicating that these events are associated with an increased probability of coup attempts, but this coefficient does not reach statistical significance. Turning to Protests in Less Productive Areas, this coefficient is also positive, and is larger than the coefficient on Protests in Productive Areas. This result seems to contradict Hypothesis 2. However, the coefficient

Table 3.2 – Logit Models Predicting the Effect of  
Protests in Economically Productive Areas

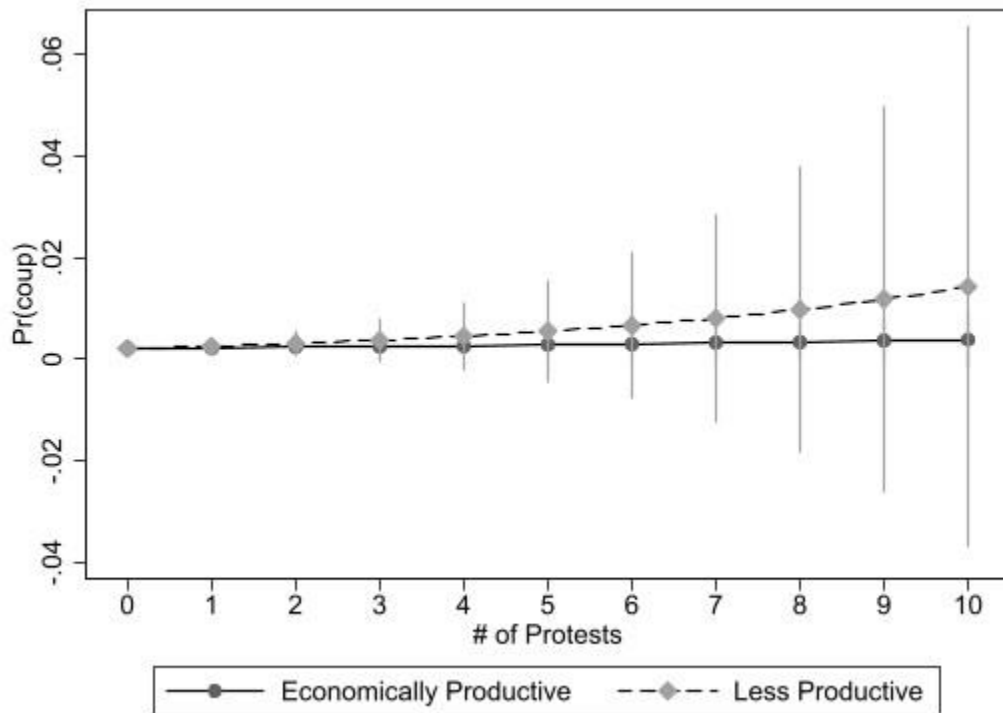
	(a)	(b)
Protests in Productive Areas	0.0616 (0.84)	
Protests in Less Productive Areas	0.192 (1.03)	
Protests in Productive Areas (median)		0.0856 (1.39)
Protests in Less Productive Areas (median)		-0.00774 (-0.02)
Military Expenditure (%GDP)	-0.180** (-2.04)	-0.180** (-2.01)
Armed Personnel (logged)	0.237 (1.59)	0.237 (1.60)
Population (logged)	-0.571*** (-2.99)	-0.567*** (-2.93)
GDP/Capita (logged)	-0.763*** (-3.06)	-0.765*** (-3.03)
Democracy	-0.296 (-0.87)	-0.285 (-0.84)
Authoritarian	0.0643 (0.15)	0.0653 (0.15)
Africa	-0.0937 (-0.11)	-0.0663 (-0.08)
Months with no coup	-0.0369** (-2.57)	-0.0369*** (-2.58)
(Months with no coup) <sup>2</sup>	0.000183 (1.54)	0.000182 (1.53)
(Months with no coup) <sup>3</sup>	-0.000000252 (-0.99)	-0.000000249 (-0.97)
Constant	4.895 (1.54)	4.854 (1.49)
<i>N</i>	12289	12289

*t* statistics in parentheses; +  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

on Protests in Less Productive Areas also fails to reach statistical significance. Either way, Model 3.2a fails to provide evidence for Hypothesis 2.

Figure 3.4 presents predicted probabilities from Model 3.2a. Moving from 0 protests in areas above the economic mean to 10 increases the probability of a coup attempt in a given state-month from 0.0038 to 0.007, or 84%. Moving from 0 to 10 protests in areas below the economic mean, on the other hand, increases the probability of a coup attempt from 0.0021 to 0.0143, or 580%. Again, though, these results do not reach statistical significance.

Figure 3.4 - The Probability of a Coup per Number of Protests in Economically Productive Areas vs Less Productive Areas (Mean Productivity)



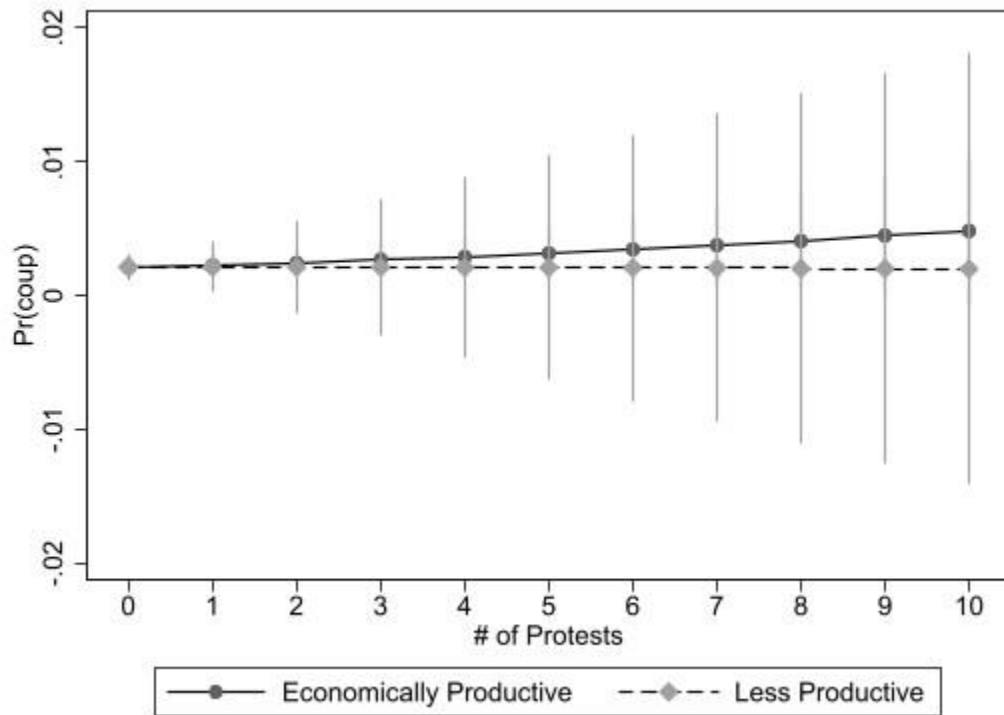
Turning to control variables, they mostly behave as expected. Looking first at the military variables, the coefficient on military expenditure as a percentage of GDP is

negative and statistically significant, while the coefficient on military personnel is positive but does not reach statistical significance. Turning to the country-level variables, larger populations are associated with a decreased risk of coups as is a larger GDP/capita. The coefficients indicate that democratic regimes are less likely to experience a coup and authoritarian regimes are more likely to experience coups compared to mid-level regimes, but neither regime-type reaches statistical significance. Finally, African countries are not statistically more or less likely than Middle Eastern countries to experience coup attempts.

Model 3.2b tests the effects of protests in areas that are above the median level of economic productivity and protests in areas that are below the median level of economic productivity. In this model, the coefficient on Protests in Productive Areas is positive while the coefficient on Protests in Less Productive Areas is negative. This result hints at support for Hypothesis 2, but since neither coefficient is statistically significant, this conclusion cannot be drawn. The coefficients on the control variables for Model 3.2b look nearly identical to those of Model 3.2a.

Figure 3.5 presents predicted probabilities from Model 3.2b. Holding all other variables at their mean, state-months with 0 protests in areas above the economic median have a coup attempt probability of 0.0021, while state-months with 10 protests in these areas have a coup attempt probability of 0.0049. This represents an increase of 133%. State-months with 0 protests in areas below the economic median have a coup probability of 0.00022, while state-months with 10 protests in these areas have a coup probability of 0.0021, a decrease of 5%. Again, however, these results are statistically insignificant.

Figure 3.5 - The Probability of a Coup per Number of Protests in Economically Productive Areas vs Less Productive Areas (Median Productivity)



**Illustrative Example - Thaksin Shinawatra and the Unfinished Coup**

On May 17, 1992 the Thai military opened fire on protesters who were gathered around the Government House in Bangkok to demonstrate against the appointment of General Suchinda Kraprayoon as Prime Minister (Selby 2018, 2023). This sparked three days of violence between protesters and the military, resulting in at least 50 dead. After intervention from the monarchy, Suchinda resigned as Prime Minister. These events, which came to be known as “Bloody May,” led to two things: a reduction in the military’s role and influence in Thai politics, and the crafting of the 1997 People’s Constitution (Pathmanand 2008).

The People’s Constitution established the 2001 general election, which resulted in a landslide victory for the Thai Rak Thai Party and its leader Thaksin Shinawatra.



Thaksin became the first elected prime minister in Thai history to complete a full term and was reelected in 2005. However, he faced accusations of corruption and human rights abuses, and more damningly was also accused of disrespecting the monarchy (Hewison 2010). These accusations led to protest movements, which eventually became tremendously large. Instead of a massacre, this protest movement resulted in the military removing Thaksin from power on September 19th, 2006.

The September 2006 coup resulted in the 2007 constitution. Despite the military's attempt to get rid of Thaksin and his influence, however, the Thaksin-allied People's Power Party (PPP) won in another landslide victory. This victory spawned an anti-Thaksin protest movement named the "Yellow Shirts" (formally known as the People's Democratic Reform Committee). Yellow Shirt protest activity decreased after the PPP was dissolved in 2008 by the Constitutional Court over election fraud convictions, allowing opposition parties to form a government (McCargo 2014). The dissolution of the PPP, however, resulted in a pro-Thaksin movement known as the "Red Shirts."

The Red Shirts were able to successfully protest for new elections, and in 2011 Thaksin's sister Yingluck Shinawatra became Prime Minister after her Pheu Thai party won yet another landslide victory. In December of 2013, Yingluck was implicated in a corruption scandal and dissolved parliament, calling for snap elections in 2014. This act led to outrage from the Yellow Shirt movement, who stepped up their protest efforts. The Red Shirts responded and clashes ensued. While the Pheu Thai party won the election, the result was later annulled by the Constitutional Court.

The resulting political crisis led to increased violence between protesters. With no clearly legitimate leader and increasingly out of control protests and rioting, the military

was forced to once again step in and declare martial law. General Prayut Chan-o-cha shortly after announced on national television that a military council dubbed the National Council for Peace and Order would be assuming control of the national government. The 2006 coup retroactively became known as the “Unfinished Coup” after the removal of the second Shinawatra prime minister. While Thaksin ideology continues to affect Thailand to this day, the 2014 coup effectively put an end to the Shinawatra family's direct involvement in the Thai government.

How did the clashes between pro-Thaksin forces and anti-Thaksin forces allow the Thai military to successfully conduct two coups in less than a decade? Moreover, why would they want to, considering the damage that the 1992 Bloody May events did to their reputation and legitimacy? According to the theory proposed in Chapter Two, the nature of the protests led by the Red Shirts and Yellow Shirts would have made these coups difficult for the military to pass up.

The protests and violence from both the Red Shirts and the Yellow Shirts were extremely disruptive for the Thai economy. At multiple points, both of Bangkok's international airports were occupied by protestors (Phongpaichit and Baker 2008). The chaos and violence that ensued after the annulment of the 2014 election tanked the Thai stock market (Prasirtsuk 2015). Protesters from both sides often targeted government buildings, shutting down government services (Baffie 2023). These disruptions would have greatly decreased the military's satisfaction with the status quo as well as the satisfaction of the supporters of the elected governments. These fluctuations in satisfaction with the status quo would have strongly tipped the military's calculus towards staging coups.

## **Conclusion**

Overall, the analysis presented in this chapter provides some support for Hypothesis 1 outlined in Chapter 1: battles are more likely to lead to attempted coups when they occur in economically productive areas vs. less productive areas. Models 3.1a and 3.1b found that battles between armed, organized groups in economically productive areas increase the probability of coup attempts, while these same events in less economically productive areas reduce the probability of coup attempts. This matches the theoretical expectations outlined in Chapter Two as well as the expectations from previous research showing that economic downturns and crises can lead to coups (Djuve and Knutsen 2024; Kim 2016; Londregan and Poole 1990; Singh 2022)

However, Models 3.2a and 3.2b failed to show that protests in productive areas were more likely to lead to coups than protests in less productive areas. More than not exhibiting a significant difference between the two kinds of protests, however, none of the protest variables reached statistical significance themselves. This obviously does not match with my theoretical expectations, nor does it match with existing research such as Casper and Tyson (2014) and Johnson and Thyne (2018) which shows that protests are significantly associated with coups.

One potential problem with these models is that they have significantly fewer observations than the battle models due to data limitations. Alternatively, there could be other factors that play a role in the relationship between protest location and coups that have not been considered here. Some potential factors to consider could be protest size, protest violence, and the demographic makeup of protestors. I discuss both the potential

for data expansion and further theoretical work about the connection between protest location and coups in Chapter Seven.

## **Chapter Four – Testing the Impact of Political Instability in Densely Populated Areas**

### **Counting Battles and Protests in Densely Populated Areas**

In this chapter, I test Hypothesis 2. Hypothesis 2 stated that battles and protests are more likely to lead to a coup when they occur in densely populated areas compared to less populated areas. To measure battles and protests, I once again use the GED data and the SCAD data. To determine the population density of the areas in which these events take place, I utilize the Gridded Population of the World (GPW) dataset (Balk, et al. 2006; Deichmann and Yetman, 2001; Doxsey-Whitfield 2015; Tobler, et al. 1997; United Nations 2015). The GPW provides population estimates of each 0.5x0.5 km cell based on the 2010 round of censuses. Combining the GED, SCAD, and GPW datasets, I use a similar process to the one used in Chapter 3. First, I look at the average population in each 0.5 x 0.5 degree cell in a given year. I then calculate the average population for all cells in a country each year. I compare the country-average number to the population in the cells in which GED and SCAD events take place. If an event takes place in a cell with a population that is higher than or equal to the average population in all cells in a country, I code it as an event which occurred in a densely populated area. Otherwise, the event is coded as occurring in a sparsely populated area.

I then repeat the process with the median population of all cells within a country, so that in total I end up with four different indicators: whether an event occurred in an area with a population above the country average, an area with a population below the country average, an area with a population above the country median, and an area with a population below the country median. These indicators are then collapsed to a state-month level, so that my final independent variables are the counts of battles and protests that occurred in

productive and unproductive areas within a country in each month. All models include all countries covered by the range of the GED and SPEED datasets, minus cases with missing covariates.

### **Dependent Variable and Control Variables**

The dependent variable and the control variables are the same as the models from Chapter 3. The dependent variable in all models is whether a coup attempt occurred in a state-month. This data comes from Powell and Thyne (2011). For controls, I include the state's military expenditures as a percentage of the state's GDP, the number of armed personnel employed by the state (logged), the state's GDP/capita (logged), the state's regime type, and the state's population (logged).

Finally, to account for temporal dependency between cases, all models include the number of months since the state last experienced a coup, as well months since last coup squared and months since last coup cubed (Carter and Signorino, 2011). All monthly event variables are lagged by one month. Control variables are measured yearly and are lagged by one year. Standard errors for all models are clustered by country. I turn now to discussing model results, first discussing the battle models then turning to the protest models.

### **Modeling the Effects of Battles on Coups**

Table 4.1 presents logit models predicting the probability of a coup d'état attempt in each state-month with battle counts as the main independent variables. Model 4.1a tests the effects of battles that occur in areas that have a population above the country average and battles that occur in less populated areas. Looking at the results from Model 4.1a, the coefficient on battles in areas with a population above the country mean is positive and borders on statistical significance ( $p=0.095$ ). This indicates that a higher number of battles

Table 4.1 - Logit Models Predicting Effects of Battles in Densely Populated Areas on  
Coup Attempts

	(a)	(b)
Battles in Densely Populated Areas	0.0313 <sup>+</sup> (1.67)	
Battles in Less Populated Areas	-0.0466 (-1.30)	
Battles in Densely Populated Areas (median)		0.0198 <sup>+</sup> (1.94)
Battles in Less Populated Areas (median)		-0.110 (-1.31)
Military Expenditure (%GDP)	-0.142 <sup>+</sup> (-1.89)	-0.139 <sup>+</sup> (-1.84)
Armed Personnel (logged)	0.219 (1.58)	0.219 (1.59)
Population (logged)	-0.258 <sup>**</sup> (-2.02)	-0.255 <sup>**</sup> (-2.01)
GDP/Capita (logged)	-0.621 <sup>***</sup> (-3.11)	-0.625 <sup>***</sup> (-3.14)
Democracy	-0.379 (-1.22)	-0.385 (-1.24)
Authoritarian	-0.434 (-1.09)	-0.436 (-1.09)
Middle East	0.752 (0.83)	0.753 (0.82)
Africa	1.219 (1.22)	1.208 (1.21)
Asia	0.536 (0.55)	0.509 (0.52)
Americas	1.153 (1.40)	1.136 (1.38)
Months with no coup	-0.0323 <sup>***</sup> (-2.91)	-0.0324 <sup>***</sup> (-2.92)
(Months with no coup) <sup>2</sup>	0.000140 (1.52)	0.000141 (1.53)
(Months with no coup) <sup>3</sup>	-0.000000185 (-0.92)	-0.000000187 (-0.93)
_cons	0.112 (0.04)	0.130 (0.05)
<i>N</i>	43200	43200

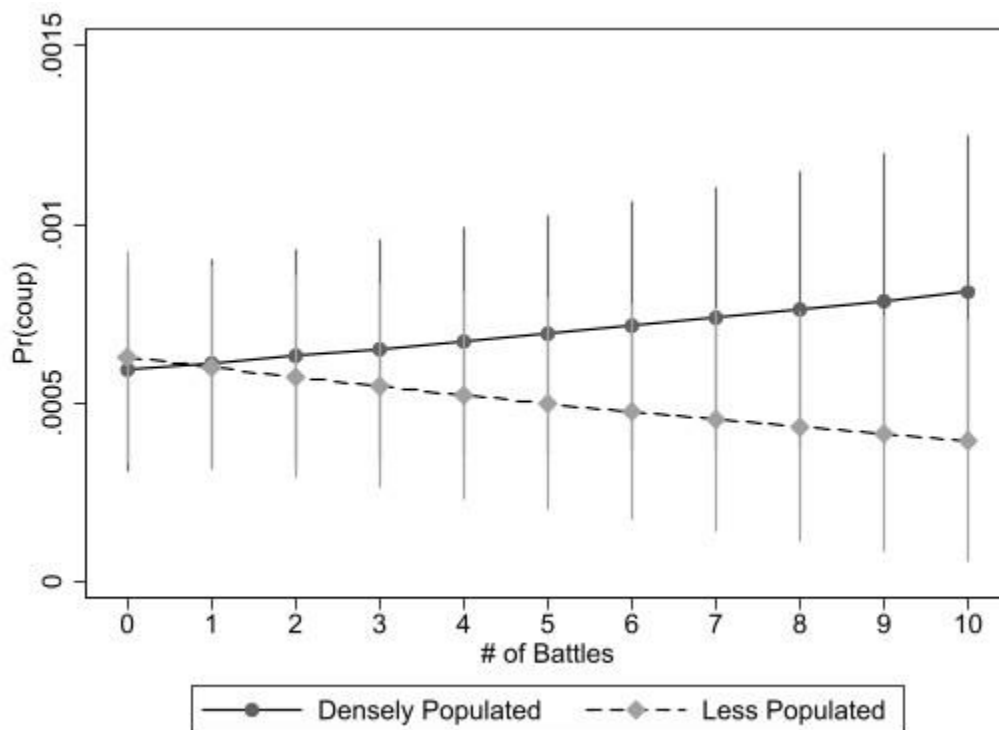
*t* statistics in parentheses; <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$

in densely populated areas is associated with an increased risk of a coup. The coefficient for battles in less densely populated areas is negative but does not reach significance ( $p=0.192$ ). These two results lend overall support to Hypothesis 2. However, the difference between these two coefficients does not reach statistical significance in a Wald test ( $p=0.14$ ).

Figure 4.1 displays predicted probabilities from Model 4.1a. Holding all other covariates at their mean, state-months with 0 battles in densely populated areas have a coup attempt probability of 0.0005. State-months with 10 battles in densely populated areas have a predicted coup probability of 0.0008. This means that increasing from 0 battles to 10 battles in densely populated areas leads to a 60% increase in the probability of a coup. Moving to battles in sparsely populated areas, state-months with 0 battles in these areas have a coup probability of 0.0006, holding all other covariates at their mean. Areas with 10 battles in sparsely populated areas have a coup probability of 0.0004, meaning that moving from 0 to 10 protests decreases the chance of a coup attempt by 33%.



Figure 4.1 – The Probability of a Coup per Number of Battles in Densely Populated Areas vs Less Populated Areas (Mean Population)



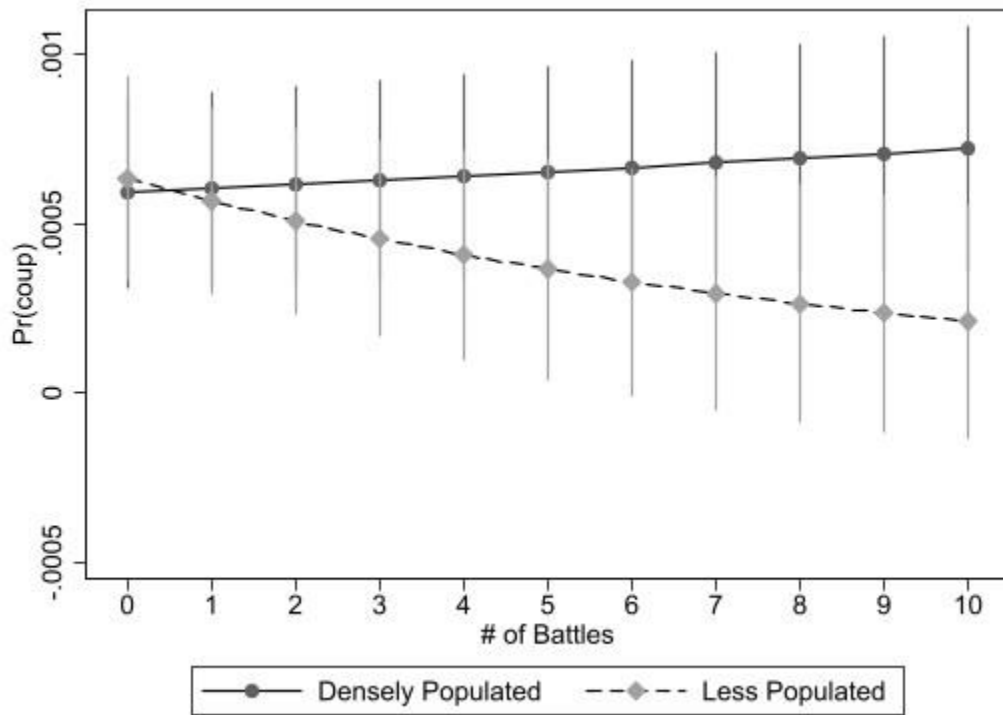
Control variables for Model 4.1a behave mostly as expected. Coefficients for military expenditure, population, and GDP are all negative and statistically significant, while the number of armed personnel, the regime type indicators, and region indicators fail to reach significance.

Model 4.1b test the effects of battles that occur in areas with populations above and below the country median. Looking at Model 4.1b, the coefficient for battles in areas with a population above the country median is positive and borders statistical significance ( $p=0.052$ ), indicating that higher numbers of these events are associated with a higher likelihood of coup attempt. The coefficient for battles in areas with a population below the

country median is negative, but fails to reach significance. These two results again lend support to Hypothesis 2. Again, however, a Wald test of equivalency between the two coefficients does not reach statistical significance ( $p=0.16$ ).

Figure 4.2 shows predicted probabilities from Model 4.1b. Holding all other variables at their mean, state-months with 0 battles in areas with an above-median population density have a predicted probability of a coup attempt of 0.0006. State-months with 10 battles in these areas have a 0.0007 probability of experiencing a coup attempt. This is a 17% increase in the probability of a coup attempt. Shifting focus to protests in areas with a population density below the country median, state-months with 0 battles in these areas have a predicted coup attempt probability of 0.0006. State-months with 10 battles in these areas have a coup attempt probability of 0.0002. This would mean that moving from 0 battles in areas with below-median population density to 10 battles decreases the chance of a coup attempt by 67%

Figure 4.2 – The Probability of a Coup per Number of Battles in Densely Populated vs Less Populated Areas (Median Population)



Turning briefly to control variables for Model 4.1b, the coefficients on GDP and population are negative and significant, while the military variables, regime type variables, and regional indicators all fail to reach significance. Now I will turn to models discussing the effect of protests on coups when they occur in areas with different population levels.

### Modeling the Effects of Protests on Coups

Table 4.2 presents logit models predicting the probability of a coup attempt in each state-month with protest counts as the main independent variables. Model 4.2a tests the effects of protests that occur in areas with a population above the country average and protests that occur in areas with populations below the country average. Looking at results

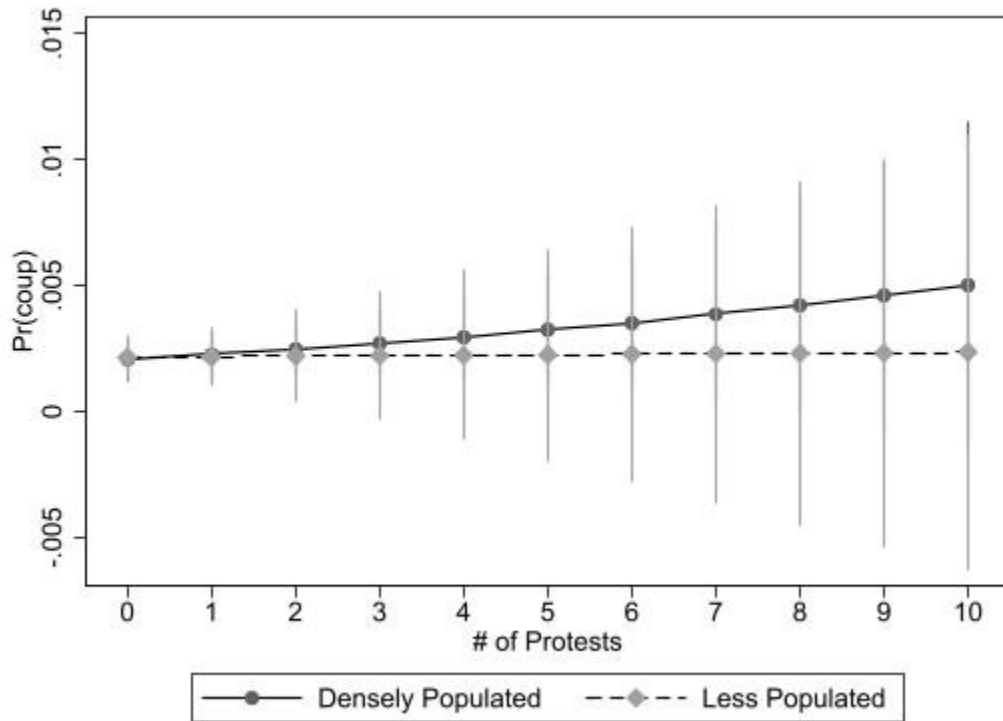
Table 4.2 - Logit Models Predicting Effect of Protests in Densely Populated Areas on  
Coups Attempts

	(a)	(b)
Protests in Densely Populated Areas	0.0888 (1.26)	
Protests in Less Populated Areas	0.00825 (0.04)	
Protests in Densely Populated Areas (median)		0.0530 (0.79)
Protests in Less Populated Areas (median)		0.457 <sup>+</sup> (1.77)
Military Expenditure (%GDP)	-0.180 <sup>**</sup> (-2.00)	-0.183 <sup>**</sup> (-2.07)
Armed Personnel (logged)	0.235 (1.56)	0.246 (1.59)
Population (logged)	-0.564 <sup>***</sup> (-2.89)	-0.573 <sup>***</sup> (-3.07)
GDP/Capita (logged)	-0.760 <sup>***</sup> (-3.00)	-0.759 <sup>***</sup> (-3.38)
Democracy	-0.287 (-0.85)	-0.286 (-0.85)
Authoritarian	0.0651 (0.15)	0.0760 (0.18)
Africa	-0.0629 (-0.07)	
nocoupmonths	-0.0369 <sup>**</sup> (-2.58)	-0.0369 <sup>***</sup> (-2.58)
Nocoupsq	0.000182 (1.54)	0.000182 (1.54)
Nocoupcubed	-0.000000250 (-0.98)	-0.000000250 (-0.99)
_cons	4.804 (1.46)	4.712 <sup>**</sup> (2.00)
<i>N</i>	12289	12289

*t* statistics in parentheses; <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$

from Model 4.2a, the coefficient on protests in areas with above average populations is positive but fails to reach statistical significance. Similarly, the coefficient on protests in less populated areas is also positive but also fails to reach significance. These models do not lend support to Hypothesis 2. Figure 4.3 presents predicted probabilities from Model 4.2a. Holding all other variables at their mean, state-months with 0 protests in areas with a population density above the country average have a predicted coup attempt probability of 0.0021, while state-months with 10 protests in these areas have a predicted coup attempt probability of 0.005. This is a 138% increase in the predicted probability of a coup attempt. Turning to protests in areas with a population density below the country average, state-months with 0 protests in these areas have a coup probability of 0.0022, while state-months with 10 protests in these areas have a predicted coup probability of 0.0024. This is an 8% increase in the probability of a coup. These results would lend support to Hypothesis 2, but again, the coefficients for both protests in areas with populations above the country average as well as for protests in areas with populations below the country average were statistically insignificant.

Figure 4.3 - The Probability of a Coup per Number of Protests in Densely Populated vs Less Populated Areas (Mean Population)

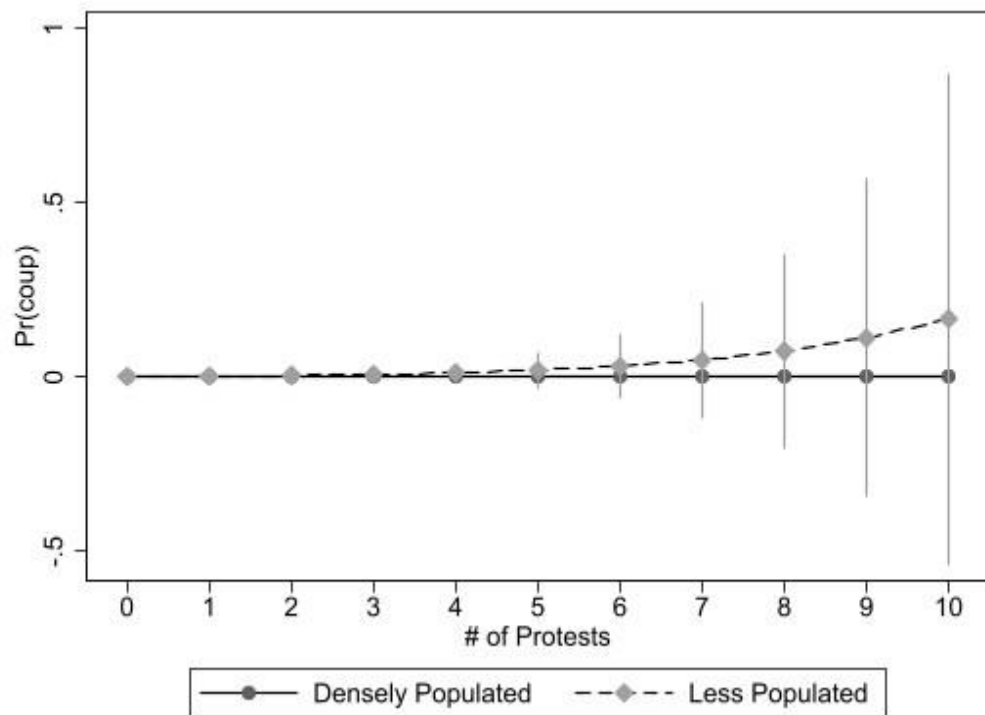


Turning to control variables for Model 4.2a, the coefficients on military expenditures, population, and GDP are all negative and statistically significant. The coefficients for military personnel, regime type, and region all fail to reach statistical significance.

Model 4.2b tests the effects of protests that occur in areas with a population above the country median and protests that occur in areas with a population below the country median. Looking at the results from Model 4.2b, the coefficient on protests in areas with above median populations is positive but not statistically significant. The coefficient on protests in areas with populations below the median is positive and borders statistical significance ( $p=0.077$ ). Again, these results do not lend support to Hypothesis 2.

Figure 4.4 displays predicted probabilities from Model 4.2b. Holding all other variables at their mean, state-months with 0 protests in densely populated areas have a predicted coup probability of 0.0021. State-months with 10 protests in densely populated areas have a predicted coup probability of 0.0035. This represents a 67% increase in the chance of the state experiencing a coup attempt event. Moving to protests in sparsely populated areas, state-months with 0 protests in these areas have a coup probability of 0.0021, while state-months with 10 protests in these areas have a coup probability of .1672. This represents a 7800% increase in the chance of a coup.

Figure 4.4 - The Probability of a Coup per Number of Protests in Densely Populated vs Less Populated Areas (Median Population)



The coefficients on control variables for Model 4.2b are almost identical to those of Model 4.2b: the coefficients on military expenditures, population, and GDP are all

negative and statistically significant. The coefficients for military personnel, regime type, and region all fail to reach statistical significance.

### **Illustrative Examples – The Democratic Republic of Congo and Mali**

Joseph Kabila became president of the Democratic Republic of Congo (DRC) in 2001 following the assassination of his father, Laurent Kabila. The younger Kabila ruled for 17 years, stepping down in 2018 when he was replaced by Félix Tshisekedi in the DRC's first peaceful transition of power since gaining independence in 1960.

Throughout Kabila's 17-year rule, he faced several rebel groups and other armed militants. One of the more notorious was the Mouvement du 23 mars, also known as the March 23 Movement or M23. M23 formed on April 4, 2012, when approximately 300 Democratic Republic of Congo soldiers defected in North Kivu province, allegedly in response to the Congolese government's unwillingness to enact provisions laid out in a March 23, 2009 peace deal, from which the group draws its name (Stearns 2021). In November 2012, M23 occupied Goma, the capital of the province. By December, however, a deal had been reached and M23 left the city.

M23 is just one of several armed groups that were active during Kabila's rule. According to the US Department of State, there are more than a dozen significant armed groups and about 100 criminal gangs and local militias operating in eastern Democratic Republic of Congo (US Department of State 2022). Many of these groups depend on the mining and production of tin, gold, and rare earth minerals used in electronics to operate (Stoop, Verpoorten, and van der Windt 2019). Heavy legislative regulations have been passed in the United States and other countries to curb international trade in these "conflict minerals," but markets still exist. Due to this fighting



and insurgent activity, approximately 450,000 civilians have been displaced in North Kivu alone.

Despite the operation of so many armed groups in the DRC, Kabila remained in power for 17 years, winning two presidential elections and extending his rule for an extra two years after that, and retaining a senator for life title. We can contrast this with the experience of Ibrahim Keïta, president of Mali from 2013 to 2020. Keïta gained power a year into the 2012 Tuareg rebellion. Throughout his rule, this turned from a small rebellion to a situation where the government lost control of the entire northern half of the country (Idris Erameh, Ojakorotu, and Odu Obor 2021).

Other groups began to take advantage of the instability. In particular, Islamist groups such as Al Qaeda in the Islamic Maghreb began to flourish in northern Mali (Alozieuwa and Demiroglu 2017). These groups have been responsible for dozens of attacks. One particularly heinous one occurred in 2015, when terrorists took 170 hostages at the Radisson Blu hotel in the capital city of Bamako, ultimately killing 20 people.

In response to the chaos in the north ever encroaching on Bamako, protests erupted in June 2020. Protests were sustained for two months, and on August 18th President Keïta was arrested. The following day he announced his resignation and dissolved parliament. He was replaced by Bah Ndaw, who was himself removed in another coup 8 months later. Mali remains under an interim military regime.

So why was Joseph Kabila allowed to rule for 17 years and peacefully retire, retaining a senator for life title, despite the constant presence of armed insurgents in the Democratic Republic of Congo, while the constant presence of armed insurgents in Mali resulted in the ouster of Ibrahim Keïta (as well as Bah Ndaw)? According to the theory

presented here, the armed groups in the DRC would be unlikely to lead to a coup because they operate in remote regions of the country. They operate in the mines and forests of North Kivu, on the opposite side of the country from the capital. M23 was able to control Goma for a month, and Goma is a fairly major city, but it is not in the top 10 DRC cities in terms of population. The instability caused by insurgents in eastern DRC simply did not disturb the status quo enough for Kabila's supporters in western DRC for them to support his ouster.

In Mali, on the other hand, insurgents were able to control large portions of the country for long periods of time. More importantly, they were able to carry out attacks in major population centers like Bamako. The Bamako hotel attack made international headlines, as did other attacks, bringing attention to the country. As a result of the number of people being impacted by the instability and the media attention it gained, President Keïta was removed in 2020, as was President Ndaw in 2021.

### **Conclusion**

Overall, the models presented in this chapter lend some support for Hypothesis 2. According to Models 4.1a and 4.1b, battles in above-average-population areas and above-median-population areas are associated with higher risk of coup attempt, while battles in less-populated areas are not, which matches my theoretical expectations. This finding and the theoretical expectations underlying them add to a few bodies of research. First, the idea that instability in densely populated areas would lead to more media coverage and thus a higher chance of coups contributes to research arguing for the importance of media coverage when exploring the effects of instability on coups (Casper and Tyson 2014) as well as research exploring the notion of the 'CNN effect' (Jakobsen 2000). Second, and perhaps most substantively, these findings contribute to literature such as Thyne (2010) that shows the impact of international support on coups. Finally, this theoretical story and empirical findings add to the literature showing how events in densely

populated areas can lead to revolutionary events, such as those in seen in Egypt in 2011 (Ardovini and Mabon 2020; Ketchley and El-Rayyes 2020)

While Models 4.1a and 4.1b met my theoretical expectations regarding battles in densely populated areas, Models 4.2a and 4.2b failed to show a statistically significant association between protests in densely populated areas and coups. As discussed in the conclusion of Chapter Three, this does not match with existing research. Similar considerations that were discussed in Chapter Three also apply here: perhaps more data could allow us to further explore this question, or perhaps more theoretical exploration regarding mediating factors between protest location and coups, such as protest size and violence, is warranted. Overall, however, this chapter demonstrated that coups are more likely to occur in response to battles in densely populated areas compared to battles in less populated, but not the same for protests.

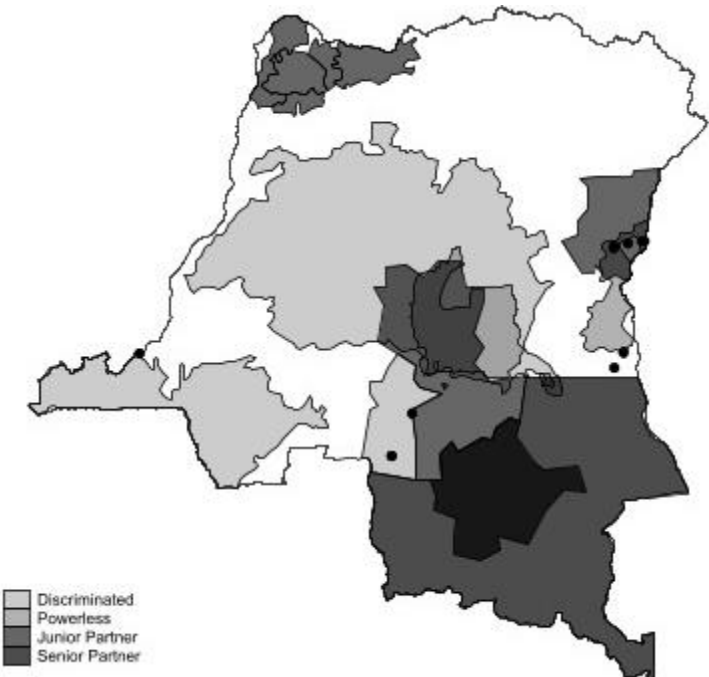
## **Chapter Five – Testing the Impact of Political Instability in the Territory of Powerful Ethnic Groups**

This chapter tests Hypotheses 3a, 3b, and 3c. As a reminder, Hypothesis 3a stated that political instability should have a greater effect on the chance of coup when it occurs in the territory of powerful ethnic groups. Hypothesis 3b stated that the odds of a coup attempt originating from a particular ethnic group would increase as more political instability occurred in the territory of that ethnic group, while Hypothesis 3c stated that this effect would be conditional on the power of the group within the national government. I begin this chapter by testing Hypothesis 3a before turning to Hypotheses 3b and 3c.

### **Counting Battles and Protests in the Territory of Powerful Ethnic Groups**

To determine which ethnic group/s inhabit the territory where political instability occurs, I use the GeoEPR dataset of the Ethnic Power Relations (EPR) data family. The EPR codes information on all politically relevant ethnic groups from 1946 to 2021, including their access to state power, while GeoEPR records their settlement patterns and locations. I couple the GED and SCAD data with the EPR data to determine the level of access to national power held by ethnic groups living in the areas where protests and battles occur. The process is depicted in Figure 1.

Figure 5.1 – The Distribution of Battles in Democratic Republic of Congo, July 2017



EPR categorizes groups into six categories: groups with a Monopoly on power, groups with Dominance in the national government, Senior Partners, Junior Partners, Powerless groups and groups that are Discriminated against. To count events of political instability that occur in the territory of powerful ethnic groups, I count the number of events that occur in the territory of groups coded by the EPR as Monopoly, Discriminated, Senior Partner, or Junior Partner in a state-month. To count events in the territory of weak groups, I count events that happen in the territory of groups coded as Powerless or Discriminated, as well as events that occur on territory where no politically relevant group lives. For example, in July of 2017 in the Democratic Republic of Congo, there were 6 battles that occurred in the territory of powerful groups and 9 battles that occurred in the territory of weak groups, as shown in Figure 1. The count of events in the territory of powerful groups in a state-month and the count of events in the territory of weak groups in a state-month serve as my main independent variables.

Groups often cohabitate, and the territory of ethnic groups can overlap with the territory of other ethnic groups. This means that a single event can occur in the territory of multiple ethnic groups. If an event occurs in an area where both a powerful group (or multiple powerful groups) and a weak group (or multiple weak groups) live, then I include that event in both the powerful group count as well as the weak group count. In some models, however, I exclude an event from the weak group count if it also occurs in the powerful group count.

### **Modeling the Effect of Battles in the Territory of Powerful and Weak Ethnic Groups**

Table 5.1 presents results from logit models predicting the likelihood of a military coup attempt in a state-month. Model 5.1a tests the impact of battles that occur in powerful group territory and battles that occur in weak group territory (with some battles being counted in both categories). Looking at the results from Model 5.1a, the coefficient on Battles in Powerful Group Territory is negative, indicating more battles in powerful group territory leads to a lower likelihood of a coup attempt. The coefficient on Battles in Weak Group territory is positive and statistically significant at the  $p < .01$  level. These two results do not lend support to Hypothesis 3a.

Figure 5.2 examines predicted probabilities from Model 5.1a. Holding all other variables at their mean, state-months with 0 battles in powerful group territory have a predicted coup attempt probability of 0.0006. State-months with 10 battles in these areas have a predicted probability of 0.0005. That translates to a 17% decrease in the probability of a coup attempt, although this result was not statistically significant. Turning to battles in weak group territory, state-months with 0 battles in these areas have

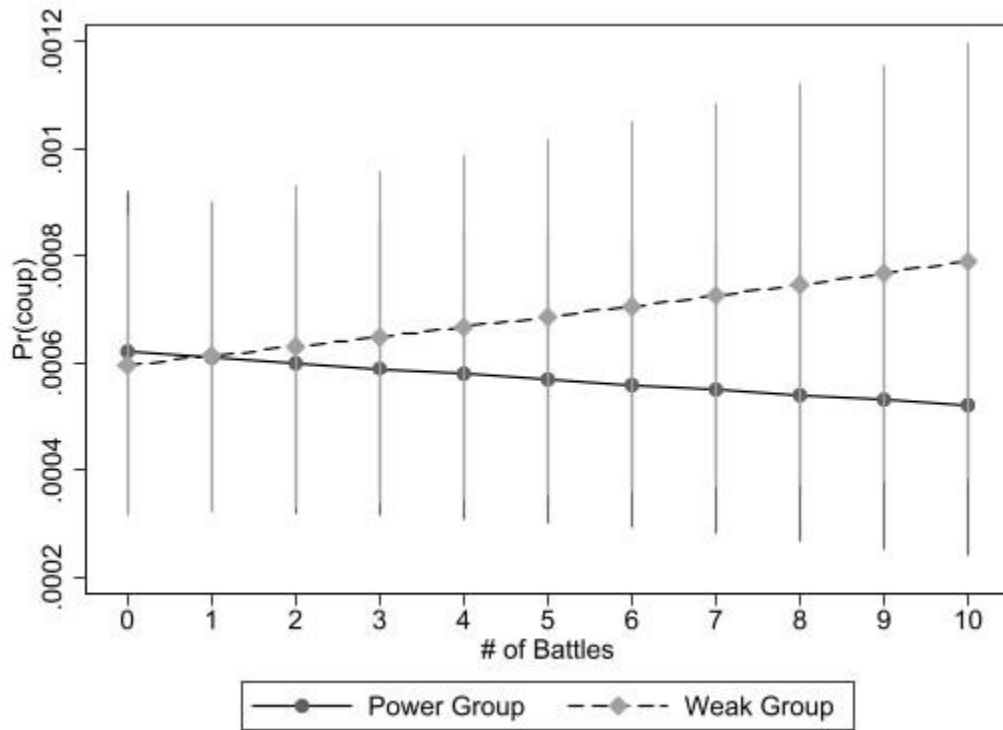
a predicted coup attempt probability of 0.0006. State-months with 10 battles in weak group territory, on the other hand, have 0.0008 predicted probability. This

Table 5.1 - Logit Models Predicting Effect of Battles in Powerful Group Territory on Coup Attempts

	(a)	(b)
Battles in Powerful Group Territory	-0.0174 (-0.84)	-0.00636 (-0.54)
Battles in Weak Group Territory	0.0281** (3.11)	
Battles in Weak Group Territory (Excluding Power Group Battles)		0.0296** (3.06)
Military Expenditure (%GDP)	-0.147* (-1.96)	-0.144 (-1.92)
Armed Personnel (logged)	0.215 (1.54)	0.214 (1.54)
Population (logged)	-0.260* (-1.97)	-0.260* (-1.99)
GDP/Capita (logged)	-0.619** (-3.16)	-0.622** (-3.17)
Democracy	-0.399 (-1.27)	-0.393 (-1.26)
Authoritarian	-0.415 (-1.04)	-0.415 (-1.04)
Middle East	0.700 (0.76)	0.694 (0.76)
Africa	1.160 (1.16)	1.160 (1.17)
Asia	0.477 (0.49)	0.486 (0.50)
Americas	1.115 (1.35)	1.121 (1.36)
Months with no coup	-0.0326** (-2.91)	-0.0326** (-2.92)
(Months with no coup) <sup>2</sup>	0.000139 (1.52)	0.000139 (1.52)
(Months with no coup) <sup>3</sup>	-0.000000180 (-0.90)	-0.000000181 (-0.91)
Constant	0.230 (0.09)	0.254 (0.10)
N	43114	43114

*t* statistics in parentheses; \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 5.2 – The Probability of a Coup per Number of Battles in  
Powerful Group Territory vs Weak Group Territory



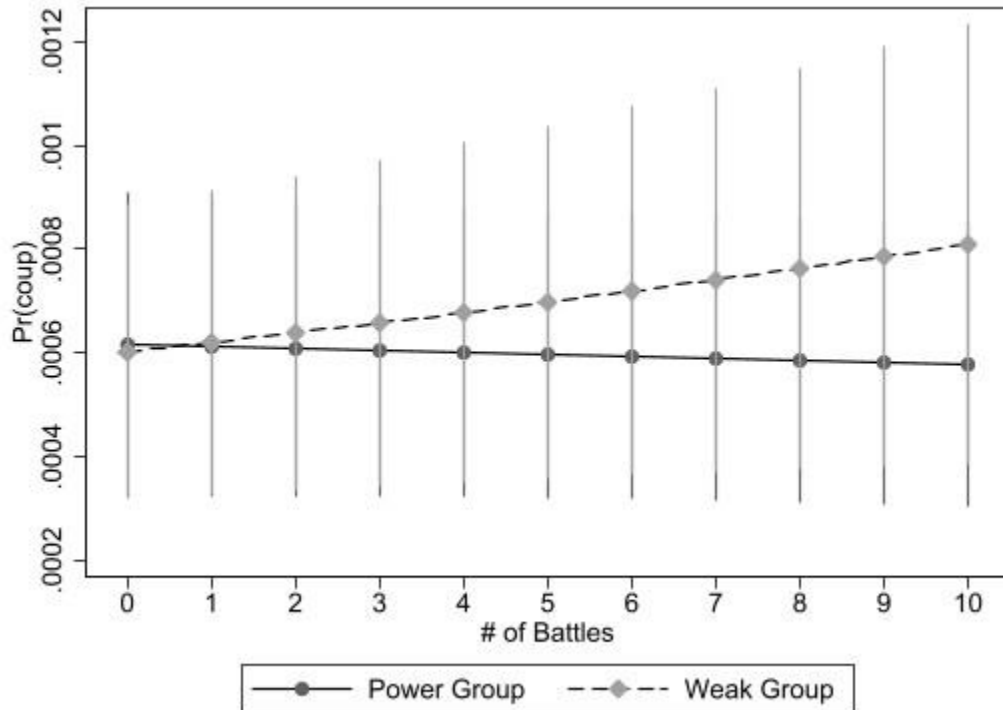
represents a 25% increase in the likelihood of a coup attempt. Again, these results do not lend support to Hypothesis 3a.

Model 5.1b is identical to Model 5.1a with the exception that the Battles in Weak Group Territory variable excludes protests that also occur in powerful group territory. The results from Model 5.1b are also similar to those of Model 5.1a: the coefficient on Battles in Powerful Group Territory is negative but statistically insignificant, while the coefficient on Battle in Weak Group Territory is positive and statistically significant at the  $p < 0.01$  level. These results also fail to lend support to Hypothesis 3a.



Briefly looking at predicted probabilities from Model 5.1b, which are presented in Figure 5.3, state-months with 0 battles in powerful group territory have a predicted coup attempt probability of 0.00062. State-months with 10 battles in these areas have a predicted probability of 0.00058. This represents a 6% decrease in the chance of a coup. Turning to battles in the territory of weak groups, state-months with 0 battles in these areas have a predicted coup attempt probability of 0.0006. State-months with 10 battles in weak group territory, however, have a predicted probability of 0.0008. This represents a 33% increase in the likelihood of a coup attempt. Again, these results do not lend support to Hypothesis 3a.

Figure 5.3 - The Probability of a Coup per Number of Battles in Powerful Group Territory vs Weak Group Territory (Excluding Weak Group + Power Group Cases)



### **Modeling the Effect of Protests in the Territory of Powerful and Weak Ethnic Groups**

Table 5.2 presents results from logit models predicting the likelihood of a military coup attempt in a state-month with protests in powerful group and weak group territory as the main predictor variables. Model 5.2a tests the impact of protests that occur in powerful group territory and protests that occur in weak group territory with some protests being counted in both categories. Looking at the results from Model 5.2a, the coefficient on Protests in Powerful Group Territory is negative, indicating more protests in these areas is associated with a lower likelihood of a coup attempt. This result is, however, statistically insignificant. Looking at Protests in Weak Group territory, the coefficient on this variable is positive, but also fails to reach statistical significance.

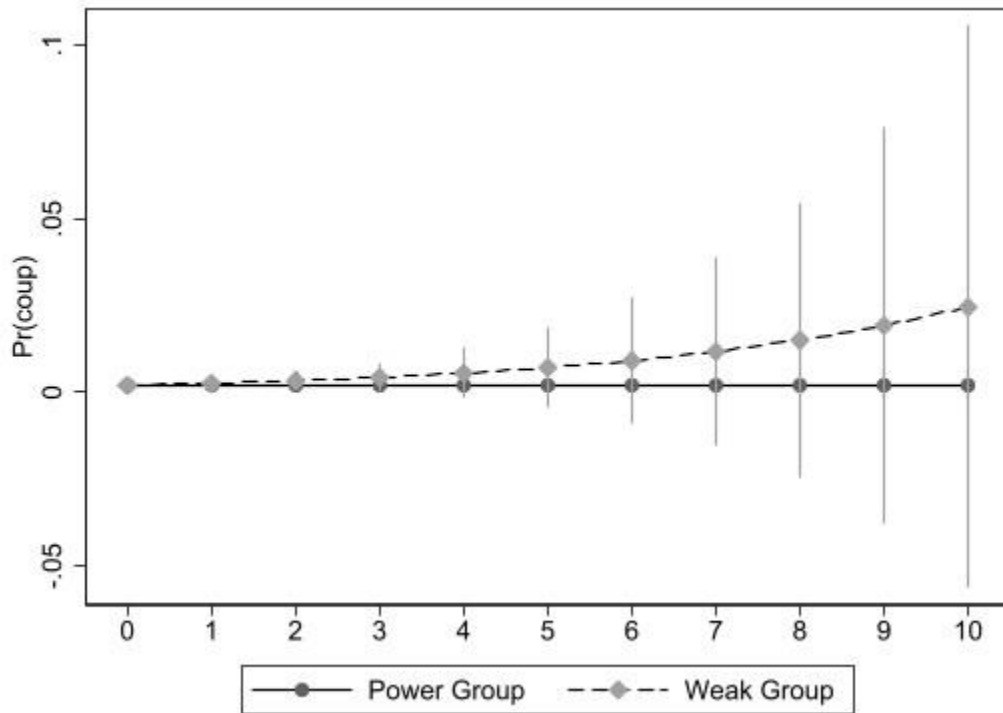
Figure 5.4 presents predicted probabilities from Model 5.2a. State-months with 0 protests in powerful group territory have a predicted coup attempt probability of 0.0022, while state-months with 10 protests in these areas have a predicted probability of 0.0021. This represents a 5% decrease in the likelihood of a coup. On the other hand, state-months with 0 protests in weak group territory have a predicted coup attempt probability of 0.002, while state-months with 10 protests in these areas have a predicted probability of 0.025. This represents a 1,150% increase in the probability of a coup. Again, however, these results are not statistically significant.

Table 5.2 - Logit Models Predicting Effects of Protests in Powerful Group Territory on  
Coups Attempts

	(a)	(b)
Protests in Powerful Group Territory	-0.00188 (-0.02)	0.00947 (0.11)
Protests in Weak Group Territory	0.252 (1.41)	
Protests in Weak Group Territory (Excluding Power Group Protests)		0.265 (1.38)
Military Expenditure (%GDP)	-0.192* (-2.28)	-0.179* (-2.03)
Armed Personnel (logged)	0.263 (1.69)	0.263 (1.77)
Population (logged)	-0.598** (-3.05)	-0.602** (-3.12)
GDP/Capita (logged)	-0.769** (-3.12)	-0.783** (-3.14)
Democracy	-0.253 (-0.75)	-0.264 (-0.79)
Authoritarian	0.0786 (0.19)	0.0738 (0.18)
Africa	-0.0894 (-0.11)	-0.109 (-0.14)
Months with no coup	-0.0366* (-2.55)	-0.0368** (-2.58)
(Months with no coup) <sup>2</sup>	0.000180 (1.52)	0.000182 (1.54)
(Months with no coup) <sup>3</sup>	-0.000000245 (-0.96)	-0.000000251 (-0.98)
Constant	4.904 (1.62)	5.054 (1.64)
<i>N</i>	12289	12289

*t* statistics in parentheses; \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 5.4 - The Probability of a Coup per Number of Protests in  
Powerful Group Territory vs Weak Group Territory

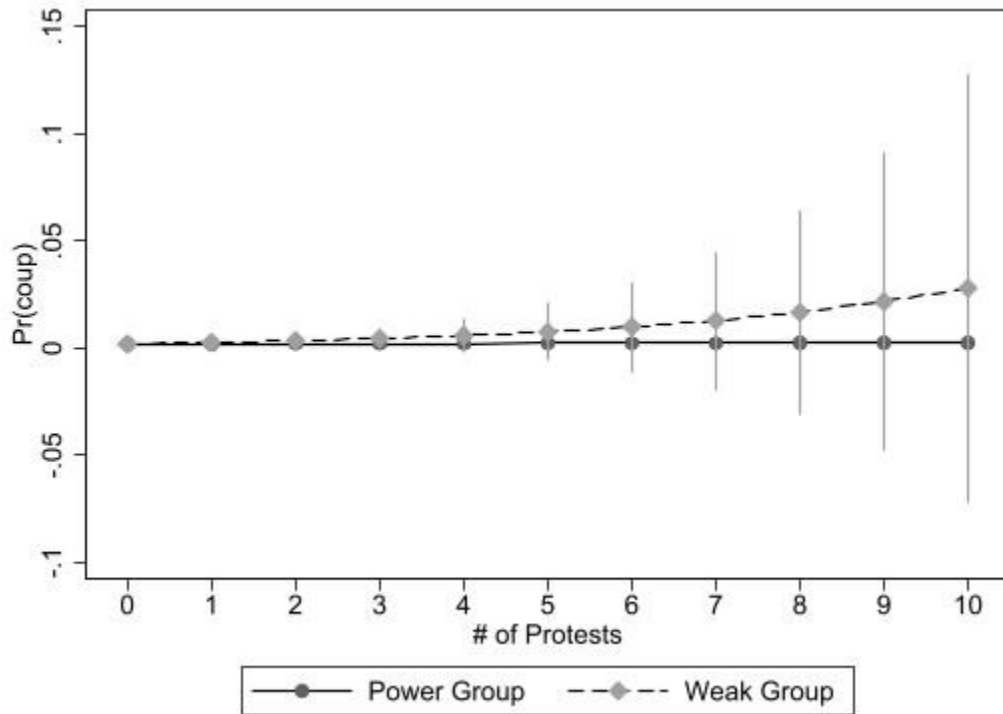


Model 5.2b also tests the effect of protests when they occur in powerful group territory and weak group territory, but excludes protests that occur in both powerful group territory and weak group territory from the weak group count. In this model, the coefficients for both categories of protests are positive but statistically insignificant. This model fails to provide support for Hypothesis 3a.

Figure 5.5 presents predicted probabilities from Model 5.2b. State-months with 0 protests in powerful group territory have a predicted coup attempt probability of 0.0021, while state-months with 10 protests in these areas have a predicted probability of 0.0024. This represents a 14% increase in the likelihood of a coup attempt. State-months with 0 protests in weak group territory have a predicted coup attempt probability of 0.002, while

states with 10 protests in these areas have a predicted probability of 0.028. That represents a 1300% increase in the likelihood of a coup attempt. Again, however, these results do not reach statistical significance.

Figure 5.5 - The Probability of a Coup per Number of Protests in Powerful Group Territory vs Weak Group Territory (Excluding Weak Group + Power Group Cases)



### **Modeling the Effect of Political Instability at the Ethnic Group Level**

I now turn to testing Hypotheses 3b and 3c. While Hypothesis 3a argued that *states* are more likely to experience a coup attempt when instability within the state happens in powerful group territory than when it happens in weak group territory, Hypotheses 3b and 3c argue that *ethnic groups* themselves are more likely to perpetrate a coup attempt when they experience events of instability in the territory they inhabit. In other words, the unit of analysis for Hypothesis 3a was the state, while the unit of analysis for Hypotheses 3b and 3c is the group.

In order to determine which ethnic groups are responsible for military coups, I use data from Roessler (2011). Roessler uses case files from the African Military Coups D'état database (McGowan, 2003) to find and code the ethnicity of coup perpetrators in African countries between 1955 and 2005. He combines this with EPR data, so that his final dataset contains ethnic group names, their political status, and whether representatives of the group were responsible for a coup attempt. Roessler's data is coded at the year level, so the unit of analysis for following models is the group-year (whereas models for Hypothesis 3a were at the state-month level).

For control variables in the following models, I include the country level control variables from previous models. I also include two group-level variables. First, I include the natural logarithm of the group's population as a proportion of the overall country population. The second group-level variable I include is the group's political status. In some models status is a control variable, while in others it is an interaction variable. I make the Powerless category the reference category. All variables are lagged by one year. To account for temporal dependency, I also include a variable measuring the number of years a group has appeared in the dataset without a coup attempt, as well as this number squared and this number cubed. In the next section, I test the effect that battles have on the likelihood of military coup attempts at the group level, and I test the effect of protests at the group level in the section following that.

### **Modeling the Effect of Battles on Military Coups at the Ethnic Group Level**

Table 5.3 presents results from logit models predicting coup attempts with the the number of battles experienced by an ethnic group as the main predictor variable. Looking at the results from Model 5.3a, the coefficient on battles in a group's territories is positive

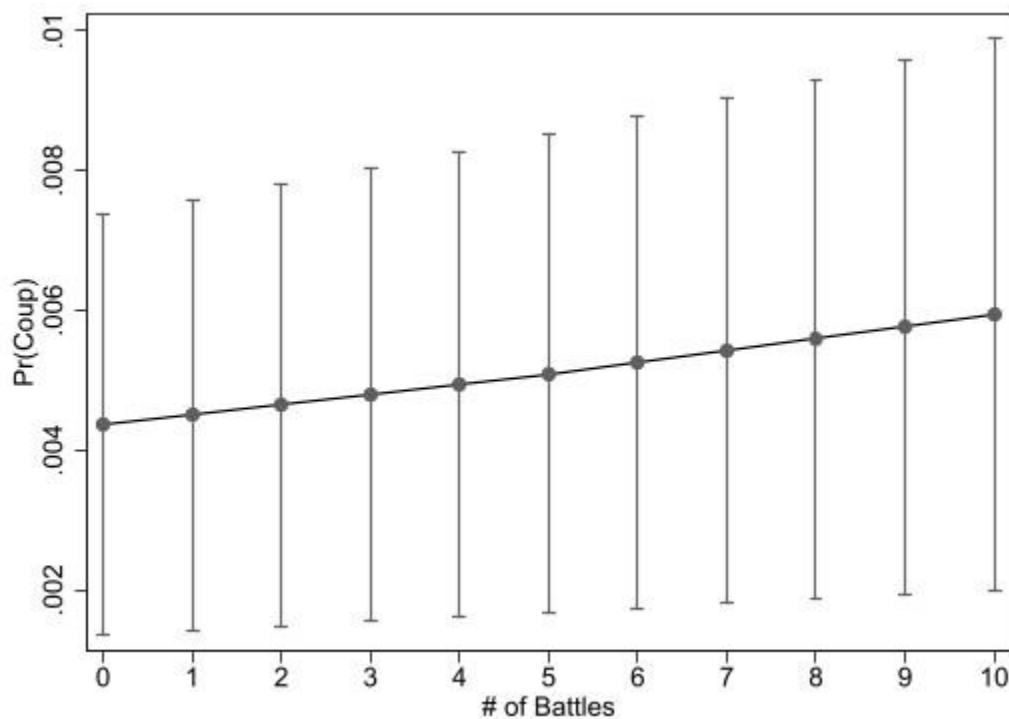
Table 5.3 - Logit Models Predicting Effect of Battles in a Group's Territory on the Coup Attempts

	(a)	(b)
No. of Battles	0.0309*** (3.34)	0.0276 (1.50)
Powerless - Base Category	--	--
Discriminated	-0.293 (-0.22)	0.552 (0.45)
Junior Partner	0.0660 (0.08)	-0.244 (-0.32)
Senior Partner	0.611 (0.76)	0.465 (0.62)
Dominant	1.594 <sup>+</sup> (1.91)	1.044 (0.98)
Monopoly	1.140 (0.85)	2.575** (2.08)
No. of Battles X Powerless Status - Base Category		--
No. of Battles X Junior Partner Status		0.180*** (3.51)
No. of Battles X Senior Partner Status		0.0191 (0.43)
No. of Battles X Dominant Status		0.0328 (1.35)
Group Population (% Country Population, logged)	0.155 (0.52)	0.193 (0.64)
Military Expenditure (%GDP)	-0.325 (-1.26)	-0.409 (-1.41)
Armed Personnel (logged)	-0.172 (-0.49)	-0.160 (-0.44)
Population (logged)	-0.626** (-2.31)	-0.706** (-2.41)
GDP/Capita (logged)	-0.916** (-2.16)	-0.897** (-2.00)
Democracy	-0.796 (-1.11)	-0.650 (-0.89)
Authoritarian	0.420 (0.80)	0.583 (1.01)
Months with no coup	-0.0152 <sup>+</sup> (-1.85)	-0.0148 <sup>+</sup> (-1.90)
(Months with no coup) <sup>2</sup>	0.0000556 <sup>+</sup> (1.75)	0.0000515 <sup>+</sup> (1.80)
(Months with no coup) <sup>3</sup>	-5.57e-08 <sup>+</sup> (-1.65)	-4.69e-08 <sup>+</sup> (-1.66)
<i>N</i>	1980	1896

*t* statistics in parentheses; <sup>+</sup>  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

and statistically significant at the  $p < 0.01$  level. This indicates that an increased number of battles in a group's territory is associated with a higher coup attempt probability. This finding supports Hypothesis 3b. Predicted probabilities for this model are displayed in Figure 5.6. Ethnic groups who experience 0 battles in their territory have a 0.0043 predicted coup attempt probability, while groups with 10 battles in their territory have a predicted probability of 0.0059. This means that moving from 0 to 10 battles increases a group's likelihood of perpetrating a coup by 37%. Again, Model 5.3a provides support for Hypothesis 3b.

Figure 5.6 – The Probability of a Coup per Number of Battles in a Group's Territory



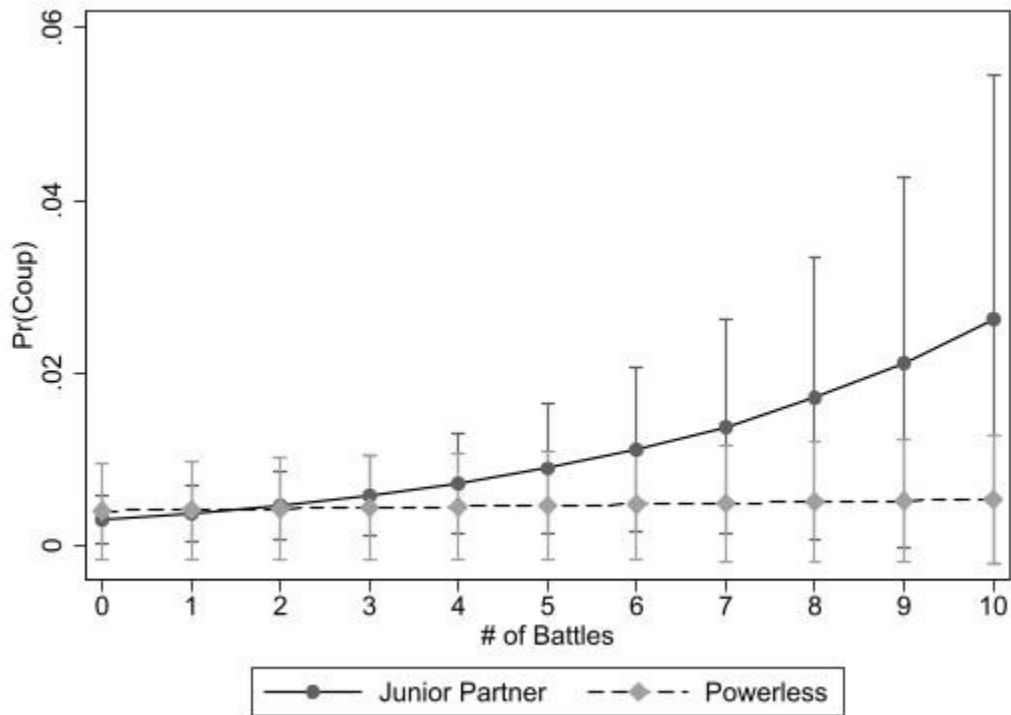
Hypothesis 3c argued that the effect instability has on a group's likelihood to perpetrate a coup attempt would be conditional on their access to state power. To test this hypothesis, in Model 5.3b I include an interaction term between the number of battles that occur



within a group's territory and their status as recored in the EPR. Looking at the results from Model 5.3b, the coefficient on the parent term for the number of battles is positive but fails to reach statistical significance. Only the Monopoly category has a statistically significant difference from the Powerless base category. The coefficient for this group is positive, indicating that group's with a monopoly on power are more likely to attempt a coup than powerless groups. Now, looking at the interaction term between battles and status, only the Junior Partner category has a stastically significant interaction with battles.

Figure 5.7 examines this interaction more closely by displaying predicted probabilities at various counts of battles for Powerless groups and Junior Partner groups. Powerless groups who experience 0 battles have a predicted coup attempt probability of 0.004. Junior Partner groups who experience 0 battles have a predicted probabilitiy of 0.003. But as the number of battles experienced increases, Junior Partner groups become more likely to perpetrate a coup attempt. The crossover appeaers to happen around 2 battles. Moving further to 10 battles, Powerless groups who experience this number of battles have a predicted probability of 0.005, while Junior Partner groups who experience 10 battles have a predicted probability of 0.026. This results provides some small support for Hpyothesis 3c.

Figure 5.7 – The Probability of a Coup per Number of Battles  
in a Group’s Territory by Group Power Status



**Modeling the Effect of Protests on Military Coups at the Ethnic Group Level**

Table 5.4 presents results from logit models predicting coup attempts with the the number of protests experienced by an ethnic group as the main predictor variable. Looking at the results from Model 5.4a, the coefficient on the number of protests experienced by an ethnic group is positive. This would indicate that more protests in a group’s territory is associated with a higher risk of members of that group attempting a coup, however, this result fails to reach statistical significance. Model 5.4a fails to provide support for Hypothesis 3b.

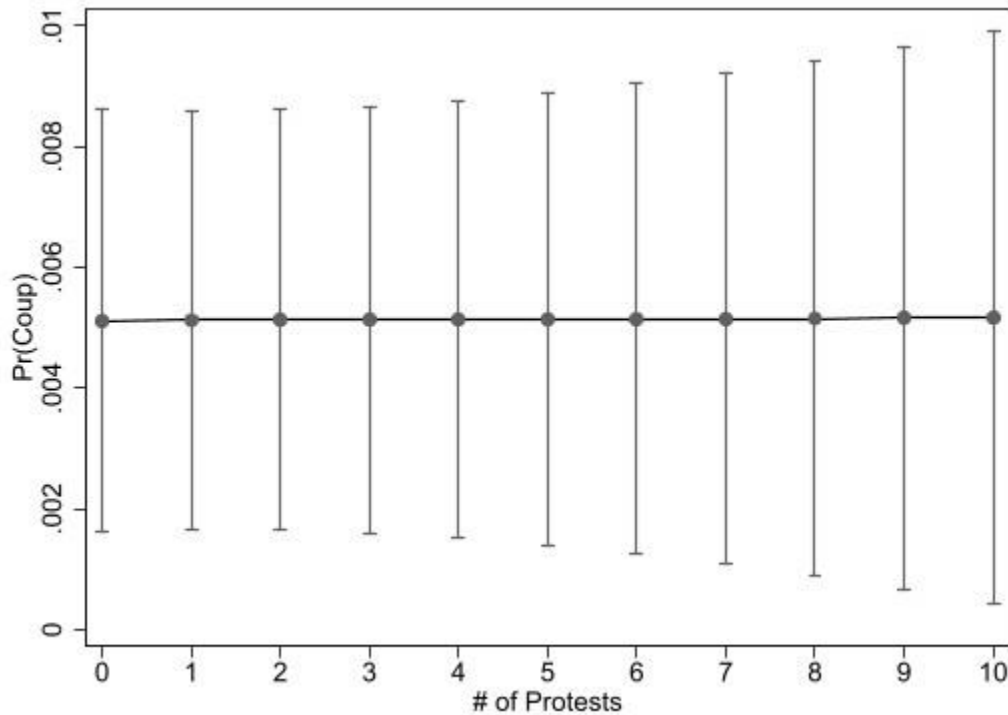
Briefly examining predicted probabilities from Model 5.4a, which are presented in Figure 5.8, ethnic groups that experience 0 protests in their territory have a 0.00512 predicted probability of attempting a coup. Groups that experience 10 protests, on the

Table 5.4 - Logit Models Predicting Effect of Protests in a Group's Territory on Coup Attempts

	(a)	(b)
No. of Protests	0.000873 (0.02)	-0.0212 (-0.40)
Powerless - Base Category	--	--
Discriminated	-0.125 (-0.11)	0.265 (0.23)
Junior Partner	0.0189 (0.02)	-0.0137 (-0.02)
Senior Partner	0.524 (0.67)	0.565 (0.76)
Dominant	1.639 <sup>+</sup> (1.91)	1.367 (1.46)
Monopoly	1.198 (0.95)	1.924 (1.61)
No. of Protests X Powerless Status - Base Category		--
No. of Protests X Junior Partner Status		0.0409 (0.34)
No. of Protests X Senior Partner Status		-0.0404 (-0.36)
No. of Protests X Dominant Status		0.0558 (0.82)
Group Population (% Country Population, logged)	0.185 (0.62)	0.211 (0.70)
Military Expenditure (%GDP)	-0.146 (-0.57)	-0.146 (-0.57)
Armed Personnel (logged)	-0.160 (-0.49)	-0.130 (-0.37)
Population (logged)	-0.643 <sup>**</sup> (-2.36)	-0.694 <sup>**</sup> (-2.30)
GDP/Capita (logged)	-1.074 <sup>***</sup> (-2.58)	-1.170 <sup>***</sup> (-2.61)
Democracy	-0.901 (-1.25)	-0.818 (-1.12)
Authoritarian	0.250 (0.43)	0.327 (0.58)
Months with no coup	-0.0132 <sup>+</sup> (-1.80)	-0.0140 <sup>+</sup> (-1.91)
(Months with no coup) <sup>2</sup>	0.0000444 <sup>+</sup> (1.65)	0.0000472 <sup>+</sup> (1.77)
(Months with no coup) <sup>3</sup>	-4.15e-08 (-1.53)	-4.34e-08 <sup>+</sup> (-1.65)
<i>N</i>	1980	1913

*t* statistics in parentheses; <sup>+</sup>  $p < 0.10$ , <sup>\*\*</sup>  $p < 0.05$ , <sup>\*\*\*</sup>  $p < 0.01$

Figure 5.8 – The Probability of a Coup per Number of Protests in a Group’s Territory

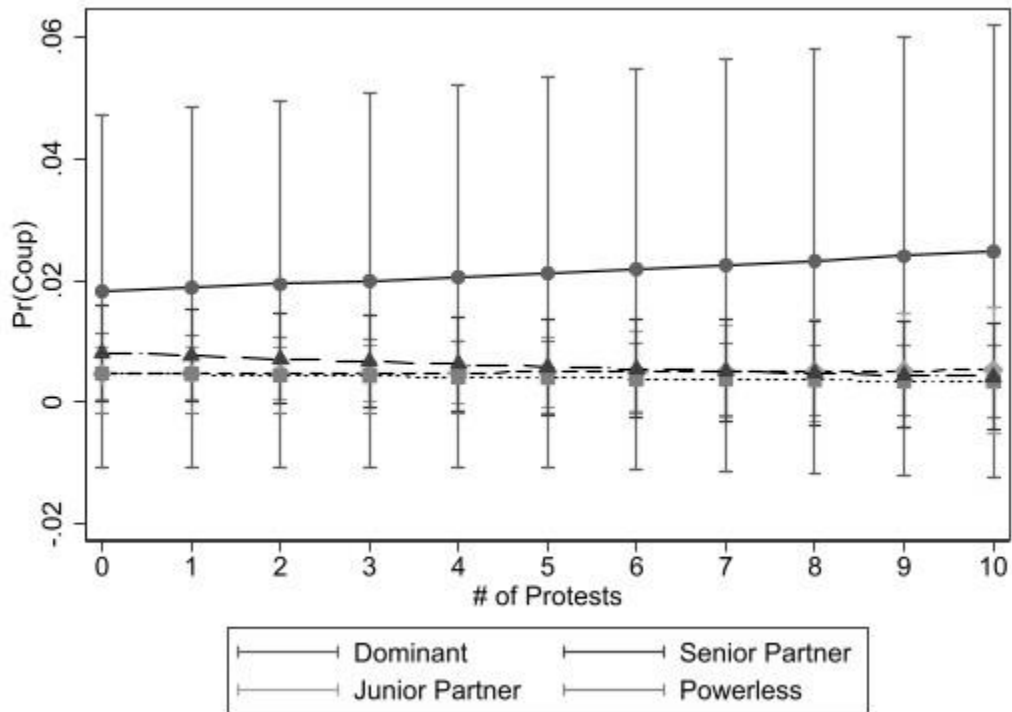


other hand, have a 0.00516 predicted probability. This represents a 0.7% increase in the likelihood of an ethnic group attempting a coup. This result is substantively negligible and also statistically insignificant, failing to provide support for Hypothesis 3b.

Model 5.4b tests the interaction between the number of protests experienced by an ethnic group and the group’s political status. Looking at the results from Model 5.4b, the coefficient on the parent term for the number of protests experienced by an ethnic group, turns negative, but is statistically insignificant. None of the status categories have a statistically significantly different from the base category of Powerless. Finally, none of the status categories have a statistically significant interaction with the number of protests experienced by the group. Model 5.4b fails to provide support for Hypothesis 3c. Figure

5.9 presents predicted probabilities from Model 5.4b, but again, none of the parent terms or interaction terms from this model are significant.

Figure 5.9 – The Probability of a Coup per Number of Protests in a Group’s Territory by Group Power Status



**Illustrative Example – Sudan and Omar al-Bashir**

Ethnic divisions were present from the beginning of Sudan’s independence. The Anglo-Egyptian Treaty of 1899 established Sudan as an Egyptian territory, with the caveat that it was to be administered by British officials on behalf of the Egyptian king (Johnson 2021). Reality evolved into a situation where there was heavy Egyptian

influence in the northern portion of Sudan and more British influence in the southern portion. Egyptian influence fostered an Arab culture and identity in the North, whereas British influence in the south fostered a more Western-oriented culture as well as the strengthening of traditional ethnic identities. These differing influences led to cultural and ethnic divisions between the north and south, so much so that by the time Sudan officially gained independence in January of 1956, the country was already several months into the First Sudanese Civil War.

The root cause of the First Sudanese Civil War was lack of representation for the South in the country's new government (Poggo 2008). This conflict ended in 1972 with the signing of the Addis Ababa Agreement. This agreement established a new constitution, which granted regional autonomy for the south. Disagreement over the allocation of resources from oil fields in the south led to the south accusing the north of violating the Addis Ababa agreement, sparking the Second Sudanese Civil War in 1983 (Collins 2007).

By 1989, the southern army had made significant military advances into northern territory. Dissatisfied with the current Prime Minister Sadiq al-Mahdi's handling of the situation, the military deposed him in a coup led by Brigadier General Omar al-Bashir. At first, Bashir's government did not fare much better against the south, but soon after his ascension infighting among the southern military weakened their position (Johnson 2024). The war dragged on for another 16 years, with neither side able to move the needle past a stalemate. In 2005, the Comprehensive Peace Agreement was signed, which paved the way for the independence of South Sudan in 2012.

Omar al-Bashir remained in power in Sudan until 2019. In late 2018, protests had spread across the country in response to rapidly rising food prices (Hassan and Kodoua 2019). In one particularly dramatic event, protestors burned down the headquarters of Bashir's National Congress Party. In response to these protests, after nearly three decades in power, the Sudanese military decided to remove Omar al-Bashir from power. He currently remains incarcerated in Sudan, where he stands to face trial against a special war crimes court for his role in the conflict in the Darfur region of Sudan, a separate conflict that I have not discussed here.

The story of Sudan and Omar al-Bashir highlights how important it is to consider which groups experience the instability when trying to determine whether instability might lead to a coup. Why would the Sudanese military allow Bashir to remain in power during 16 years of conflict with the south, during which he was unable to make any real military gains and negotiated away half of the country, not even to mention the violence in Darfur for which he currently sits on trial, when they removed the previous prime minister after just a few years of conflict?

According to the theory and hypotheses proposed in Chapter 2 and tested in this chapter, Prime Minister Sadiq al-Mahdi was removed because he failed to keep the conflict contained to the territory of politically weak ethnic groups. As southern forces encroached more and more into northern territory, the Arab groups that held influence in the northern regional government would have become more and more dissatisfied with the status quo and would have begun to signal this dissatisfaction to the military. This would have increased the military's ability to remove al-Mahdi with little resistance or consequences, paving the way for Bashir to seize power.

Bashir then ran into a stroke of luck in the form of southern infighting and was able to keep the fighting contained to border areas. Fighting continued for 16 years, but it never again reached the level where it was truly impacting the daily lives of the northern Arab groups. Even the secession of South Sudan would have had little impact on the daily lives of the politically important groups that Bashir depended on to remain in power. So despite 16 more years of conflict and instability, the instability never happened in an area where it would have increased the opportunity for the military to coup.

Further, the southern ethnic groups themselves did not have the ability to remove Bashir through a coup because they were excluded from the northern regional government as a result of the Addis Ababa Agreement that established separate regional governments for the north and the south. So, while they clearly would have been willing to remove him, they themselves did not have the ability to, nor were they able to disrupt the status quo enough to convince Bashir's supporters to revoke support.

Fast forward to 2019, however, and the situation looks much different. The instability has shifted from civil war to widespread protests, but more importantly the location of the conflict has changed. The instability is no longer occurring on the territory of groups who had no power in the government. Now it is happening in the north, in Arab territory, around people who have influence in the government and the military and who Bashir relies on for power. As the protests continued to grow, powerful Arab groups would have become increasingly dissatisfied with the status quo and the military's ability to successfully coup would have increased. Furthermore, this time the instability was impacting their fellow Arabs, so the military's willingness to coup would have increased.



Sure enough, after just a few months of protests, Bashir was removed from power in April 2019.

### **Conclusion**

In conclusion, models presented in Tables 5.1 and 5.2 failed to provide support for Hypothesis 3a, or the argument that states will have a higher likelihood of a coup attempt when they experience political instability in the territory of politically powerful ethnic groups compared to when instability occurs in the territory of weak groups. Model 5.3a provided support for Hypothesis 3b: ethnic groups are more likely to attempt a coup as the number of battles they experience increases. However, Model 5.4a failed to provide the same support for Hypothesis 3b when looking at protests. Model 5.3b provided some support for Hypothesis 3c: ethnic groups with a status of “Junior Partner” are less likely than “Powerless” groups to attempt a coup when experiencing a low number of battles, but Junior Partners become more likely to attempt a coup than Powerless groups at higher numbers of battles. Finally, Model 5.4b failed to provide the same support Hypothesis 3c when looking at protests.

I hope the findings presented above and their theoretical underpinnings presented in Chapter Two provide a valuable contribution to the literature regarding ethnicity and coups. The relationship between ethnicity and coups is a complicated one. For instance, as Houle and Bodea (2017) show, it is not simply inequality that is associated with coups. Drawing off work from Cedermann, Weidmann, and Bormann (2015) and the idea of horizontal inequality, Houle and Bodea show that horizontal inequality across ethnic groups is associated with coups, but only when within-group inequality is low and in-group cohesion is high.

It seems likely, then, that the relationship between instability, ethnicity, and coups is also a complicated one. Perhaps the null results for models 1-4 are an artifact of this complicated relationship. I believe that future work could investigate this relationship more thoroughly. A good starting point might be to incorporate the demographic makeup of the dissenters into the equation. For instance, perhaps it is the case that dissent that comes from dominant groups in a territory would lead to coups, but that dissent that comes from minority groups would have no effect or could possibly even inspire a rally effect and lead to more security for the leader rather than an ouster. I discuss this idea more thoroughly in the conclusion chapter. For now, I turn to testing the final hypothesis of this dissertation, Hypothesis 4.

## Chapter Six – Testing the Impact of Widespread Political Instability

### Measuring the Concentration/Dispersion of Political Instability

In this chapter, I test Hypothesis 4, which stated that geographically widespread political instability should be more likely to lead to a coup attempt than more localized political instability. To gauge how widespread events of political instability are, I use a measure called standard distance. Standard distance is calculated using the following formula:

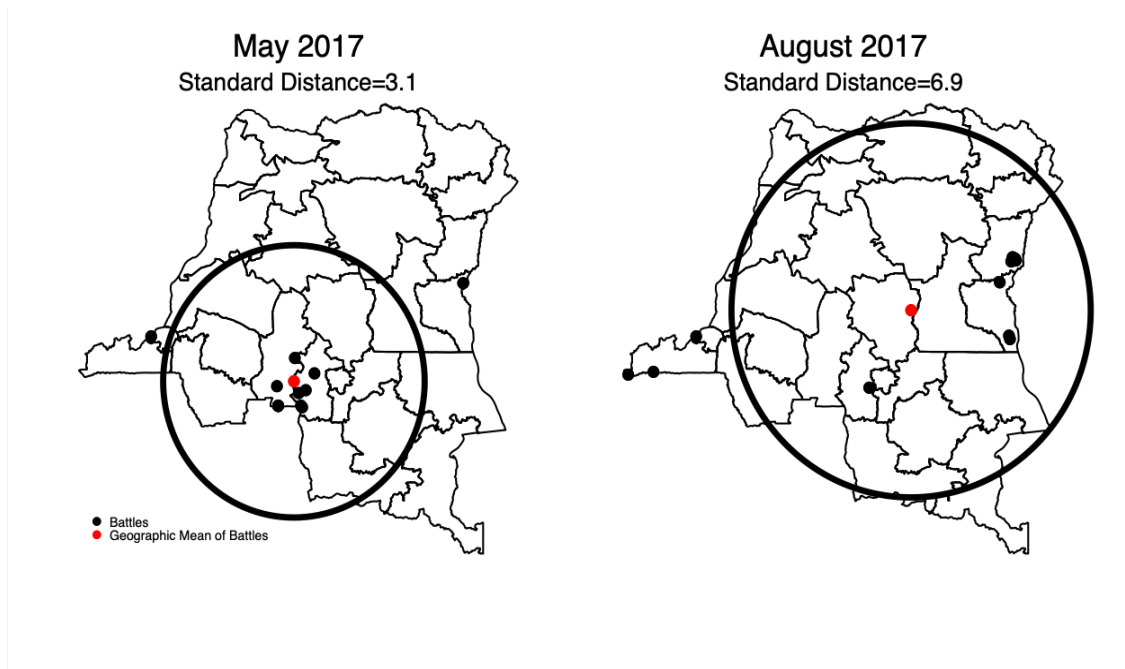
$$SD = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{X})^2}{n} + \frac{\sum_{i=1}^n (y_i - \bar{Y})^2}{n}}$$

where  $x_i$  and  $y_i$  are the latitude and longitude, respectively, for individual events,  $\bar{X}$  and  $\bar{Y}$  are the mean latitude and longitude for all events in each state-month, and  $n$  is the number of events in a state-month. This formula is simply the formula for the standard deviation of a variable extended to two dimensions to account for the two-dimensionality of geographic coordinate data. Much like standard deviation, standard distance measures the concentration or dispersion of points around the mean.

An example of standard distance is depicted in Figure 6.1. There were 13 battles in both May and August of 2017 in the Democratic Republic of Congo. In May, however, there was one battle on both the east and west portion of the country, but the majority of the battles were concentrated in the central/southern portion of the country. This distribution of battles yields a standard distance of 3.1. In August, on the other hand, there were 4 battles in the western portion of the country, 7 in the eastern portion, and 2 in the central portion. So, although August had the same number of battles as May, the geographic distribution of these battles was much more dispersed and widespread across the country,

yielding a standard distance more than double that of May's at 6.9. I will note here that converting these standard distance units to miles or kilometers is difficult. Standard

Figure 6.1 – Standard Distance of Battles in May and August 2017  
in Democratic Republic of Congo



distance is calculated using degrees of latitude and longitude. One degree of latitude is about 69 miles. One degree of longitude, however, is about 69 miles at the equator but decreases approaching the poles. Suffice it to say, a larger standard distance indicates a more widespread and dispersed scattering of events while a smaller standard distance indicates a more compact, concentrated clustering of events.

The sample here is necessarily restricted to state-months that had at least one event (either one battle in battle models or one protest in protest models). State-months with just one event would have a standard distance of zero. State-months with multiple events can also have a standard distance of zero if all events that month occurred in the same place.

Otherwise, state-months with multiple events would have a standard distance greater than zero.

Finally, standard distance does not account for the size of the country. A standard distance of, for example, 2 in the Democratic Republic of the Congo (a country that 2.3 million square kilometers) is not the same as a standard distance of 2 in neighboring Rwanda (26,300 square kilometers). To account for this, in some models I include standard distance divided by the square root of the total size of the country in square kilometers as the independent variable of interest.

To test Hypothesis 4, I find the standard distance of all battles in each state-month as well as the standard distance of all protests in each state-month. To find the location of battles and protests, I once again utilize the GED and SCAD datasets. The scope for all models below are all state-months that have at least one event appearing in the GED/SCAD data.

### **Dependent Variable and Control Variables**

Dependent and control variables are identical to those in previous chapters. The dependent variable in all models is whether a coup attempt occurred in a state-month. This data comes from Powell and Thyne (2011). For controls, I include the state's military expenditures as a percentage of the state's GDP, the number of armed personnel employed by the state (logged), the state's GDP/capita (logged), the state's regime type, and the state's population (logged).

### **Modeling the Effect of Battle Dispersion on Coup Attempt Probability**

Table 6.1 presents logit models predicting the probability of a coup d'état attempt with the standard distance of battles in the previous state-month as well as this number

standardized by country size as the main predictor variables. Model 6.1a tests the effect of standard distance without accounting for country size. Looking at the results for Model 6.1a, the coefficient is positive, indicating that a higher standard distance of battles in a given state-month is associated with a higher chance of coup risk. However, this coefficient fails to reach statistical significance. This model fails to provide support for Hypothesis 4.

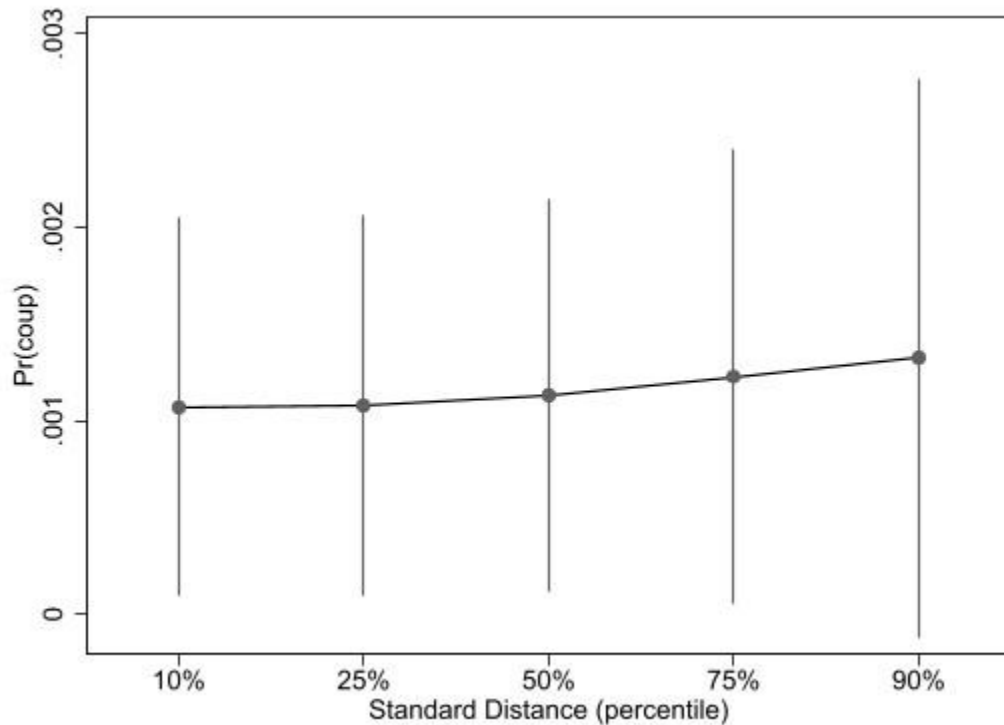
Figure 6.2 presents predicted probabilities from Model 6.1a. While holding all other variables at their mean, moving from the 10<sup>th</sup> percentile of standard distance to the 90<sup>th</sup> percentile increases the probability of a coup attempt from .0011 to .0013. This is an 18% increase in the probability of a coup attempt. Again, however, these results are not statistically significant.

Table 6.1 - Logit Models Predicting Effect of Battle Standard Distance on Coup Attempts

	(a)	(b)
Standard Distance - Battles	0.0578 (0.51)	
Standard Distance/Country Size - Battles		46.11 (0.37)
Military Expenditure (%GDP)	-0.200 (-1.21)	-0.201 (-1.25)
Armed Personnel (logged)	0.00838 (0.03)	0.00473 (0.02)
Population (logged)	-0.633** (-2.24)	-0.598** (-2.13)
GDP/Capita (logged)	0.0809 (0.18)	0.0839 (0.19)
Democracy	0.345 (0.52)	0.332 (0.48)
Authoritarian	-0.381 (-0.52)	-0.367 (-0.51)
Middle East	-0.720 (-1.17)	-0.691 (-1.11)
Africa	-0.0837 (-0.07)	-0.0602 (-0.05)
Asia	-0.957 (-0.88)	-0.996 (-0.88)
Americas	-1.544 (-1.62)	-1.519 (-1.57)
Years with no coup	-0.00347 (-0.15)	-0.00299 (-0.13)
(Years with no coup) <sup>2</sup>	-0.000160 (-0.71)	-0.000165 (-0.74)
(Years with no coup) <sup>3</sup>	0.000000517 (1.03)	0.000000526 (1.06)
<i>N</i>	4870	4870

*t* statistics in parentheses; +  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Figure 6.2 – Probability of a Coup per Standard Distance of Battles



Turning briefly to control variables for Model 6.1a, only population size reaches statistical significance. Others are in the expected direction, but none are statistically significant.

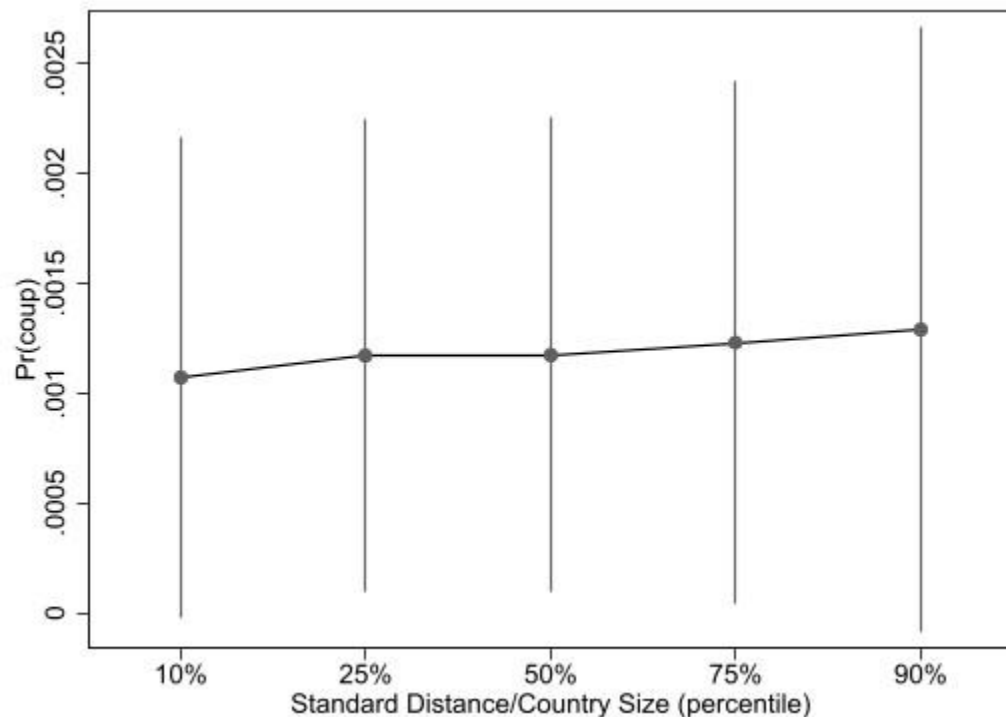
Model 6.1b tests the effect of the standard distance of battles in a given state-month when accounting for the overall size of the country by dividing the standard distance measurement by the square root of the country size in square kilometers. Looking at the results from Model 6.1b, the coefficient on standard distance/country size is positive, again indicating that a higher standard distance is associated with a higher coup risk, but this coefficient also fails to reach statistical significance. This model also fails to provide support for Model 6.1b.

Presented in Figure 6.3, predicted probabilities from Model 6.1b look very similar to those from Model 6.1a. While holding all other variables at their mean, moving from the



10<sup>th</sup> percentile of standard distance when accounting for country size to the 90<sup>th</sup> percentile increases the probability of a coup attempt from .0011 to .0013. This is an 18% increase in the probability of a coup attempt. Just like with Model 6.1a, these results are not statistically significant.

Figure 6.3 – Probability of a Coup per Standard Distance of Battles (Standard Distance/Country Size)



Control variables for Model 6.1b also look similar to Model 6.1a. Only population size reaches statistical significance, and it is negative, indicating a larger population reduces coup risk. All other control variables fail to reach statistical significance.

**Modeling the Effect of Protest Dispersion on Coup Attempt Probability**

Table 6.2 presents logit models predicting the probability of a coup d'état attempt with the standard distance of protests in the previous state-month as well as this number

standardized by country size as the main predictor variables. Model 6.2a tests the effect of standard distance without accounting for country size. Looking at the results from Model 6.2a, the coefficient on Standard

Table 6.2 - Logit Models Predicting Effect of Protest Standard Distance on Coup Attempts

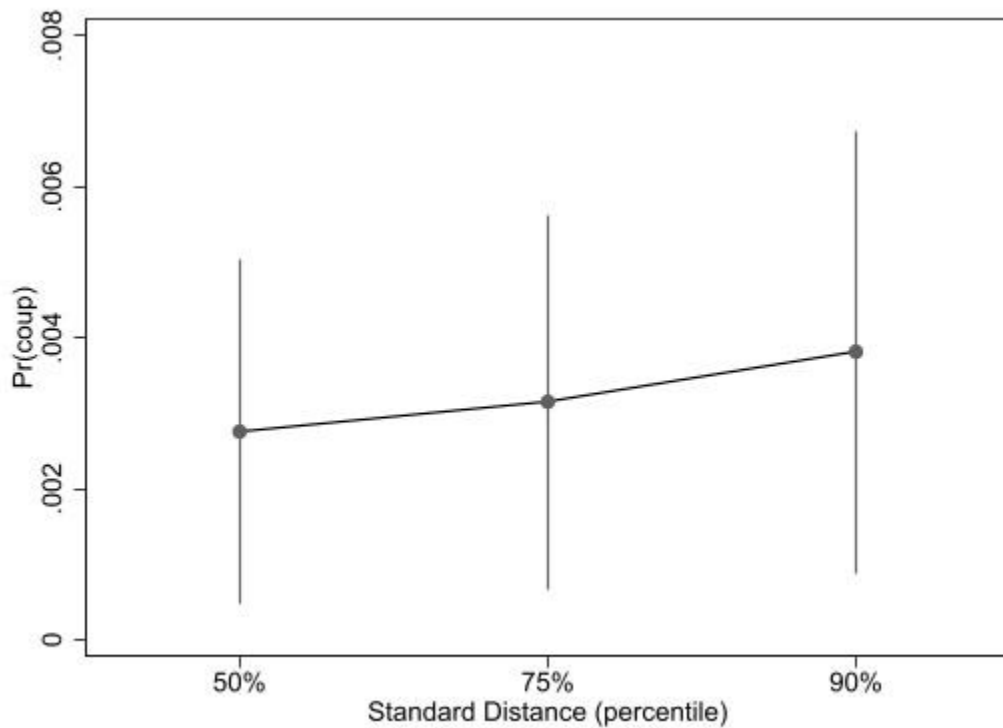
	(a)	(b)
Standard Distance - Protests	0.118** (1.99)	
Standard Distance/Country Size - Protests		3.993 (0.49)
Military Expenditure (%GDP)	-0.192 (-0.74)	-0.191 (-0.74)
Armed Personnel (logged)	0.356 (1.33)	0.327 (1.23)
Population (logged)	-0.643+ (-1.94)	-0.575+ (-1.72)
GDP/Capita (logged)	-0.809*** (-2.83)	-0.778*** (-2.80)
Democracy	0.487 (1.03)	0.511 (1.04)
Authoritarian	0.587 (1.05)	0.585 (1.05)
Africa	-0.0566 (-0.07)	-0.0348 (-0.04)
nocoupmonths_standpro	-0.0731** (-2.15)	-0.0719** (-2.17)
nocoupsq_standpro	0.000543+ (1.95)	0.000536** (1.97)
nocoupcubed_standpro	-0.00000107+ (-1.85)	-0.00000106+ (-1.88)
_cons	5.419+ (1.82)	4.880 (1.60)
<i>N</i>	1707	1707

*t* statistics in parentheses; +  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Distance is positive and statistically significant. This indicates that a coup attempt is more likely to occur when protests are occurring across large swaths of a state's territory as opposed to when protests are occurring in a more compact, concentrated area of a state. This result provides support for Hypothesis 4.

Figure 6.4 presents predicted probabilities from Model 6.2a. Holding all other variables at their mean, state-months with protests occurring with a standard distance of 0 (the 50<sup>th</sup> percentile) have a predicted probability of experiencing an attempted coup of 0.0028. Moving to the 90<sup>th</sup> percentile of standard distance increases this risk to 0.0038. This represents a 36% increase in the chance of a coup attempt.

Figure 6.4 – Probability of a Coup per Standard Distance of Protests



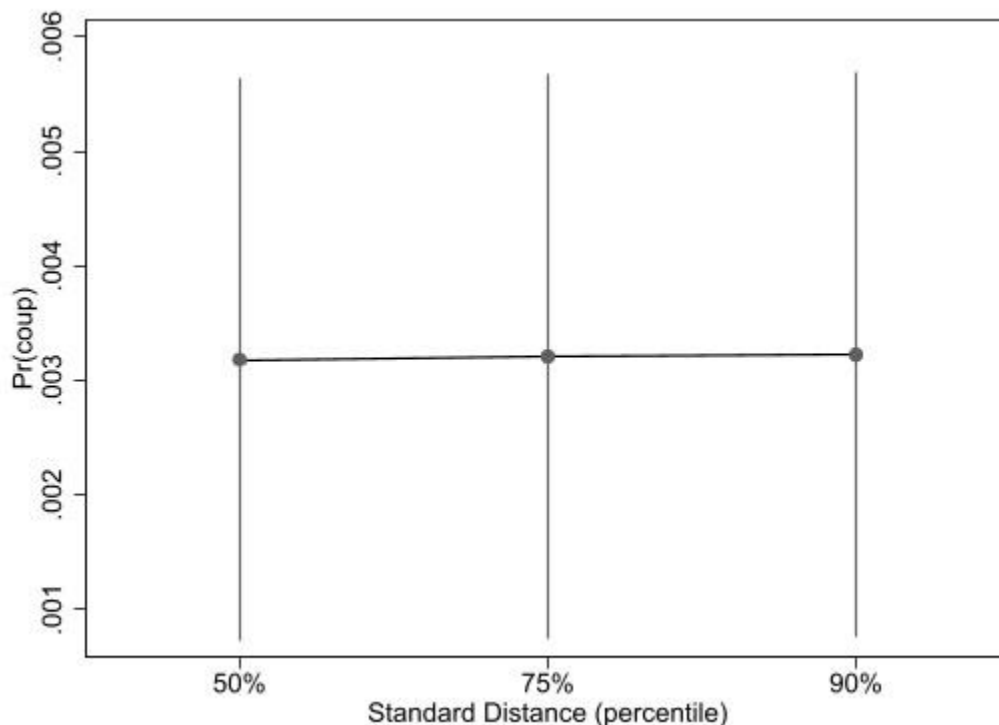
Turning to control variables for Model 6.2a, the coefficient on population size is negative and borders on statistical significance. Similarly, GDP/capita is negative and

statistically significant. The military variables, regime type variables, and region indicators all fail to reach significance.

Model 6.2b tests the effect of standard distance when adjusting for the size of the country. Looking at the results from Model 6.2b, the coefficient on Standard Distance/Country Size is positive, indicating that geographically dispersed protests increase coup risk more than geographically clustered protests. However, this coefficient fails to reach statistical significance, and thus Model 6.2b fails to provide evidence for Hypothesis 4.

Figure 6.5 presents predicted probabilities from Model 6.2b. State-months with protests occurring with a standard distance accounting for country size of 0 (the 50<sup>th</sup> percentile) have a predicted probability of experiencing an attempted coup of 0.00318. Moving to the 90<sup>th</sup> percentile of standard distance increases this risk to 0.00322. This represents a 1.2% increase in the chance of a coup attempt. This result is not, however, statistically significant.

Figure 6.5 – Probability of a Coup per Standard Distance of Protests (Standard Distance/Country Size)



### **Illustrative Example - Hosni Mubarak and the Arab Spring**

The self-immolation of Mohamed Bouazizi on December 17th, 2010 immediately kicked off protests and riots in Sid Bouzid, Tunisia (Bargu 2016; Kallio and Häkli 2017; Lim 2013). These protests quickly spread to the capital city Tunis and other cities, and by January 14, 2011 President Zine Ben Ali had fled the country. These protests spread not only across Tunisia, however, but also across international borders, starting the collection of revolution, conflict, and political strife now known as the Arab Spring.

After Ben Ali, the next leader to fall in the Arab Spring was Egyptian President Hosni Mubarak. Inspired by events in Tunisia (Mandaville 2013), large protests began in

several cities across Egypt on January 25th, 2011. Despite the use of repressive tactics from police and military units, protests continued to swell. The use of social media helped to keep the momentum growing (Clarke and Kocak 2020; Herrera 2014), and protests grew beyond repression. One area in Cairo, Tahrir Square, became the heart of the revolution (Gröndahl and Mohyeldin n.d.; Said 2011). At its peak, Tahrir Square held a famously large number of protesters, with estimates of up to 1 million protesters at one point (Rashed and El Azzazi 2011).

While Tahrir Square was the site of the largest gathering of protesters, Cairo was by no means the only city to see massive gatherings. Protests occurred in Alexandria, Giza, Suez, and many other Egyptian cities (El-Bendary 2013). With millions of protesters spread in every major city across the country, there were too many people in too many locations to repress or control. After 18 days of protests, Hosni Mubarak stepped down on February 11th, 2011, transferring power to the Supreme Council of the Armed Forces.

Hosni Mubarak ruled as Egypt's president for 30 years, ascending from vice president after Anwar Sadat was assassinated in 1981. He immediately implemented a state of emergency, greatly restricting civil liberties and freedoms in the country (Ardovini and Mabon 2020). Amnesty International consistently reported these emergency laws being used to stifle peaceful protests and demonstrations. Mubarak also founded the State Security Investigation Service, which was notorious for its use of torture as a policing tactic (UNITED NATIONS CAT Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment 2002). He was certainly not incapable of repressing dissent, as he did so consistently throughout his 30-year rule.

Why was Hosni Mubarak unable to successfully repress the Arab Spring protests in 2011 as he had repressed protests for 30 years? According to the theory tested in this chapter, the answer is that the protests in January and February of 2011 were far too widespread to be repressed. Had the military wished to support Mubarak, perhaps they could have put down the demonstrations in Cairo, despite the overwhelming number of protestors there. Had they theoretically been able to put down the overwhelming protests in Cairo, however, it is quite a stretch to think they could also put down the protests in Alexandria, Giza, Suez, etc. at the same time.

Despite his three-decade history of repression, the number of protests during the Arab Spring simply made it impossible for Mubarak and his supporters to repress all of them. The Egyptian armed forces did not have the ability to repress all the protests in all the different locations across the country and were thus forced to support a change in the status quo and revoke support from Mubarak.

### **Conclusion**

This chapter provided some limited support for Hypothesis 4. The standard distance of protests in a given state-month was shown to be associated with an increased risk of coup attempt. This matches my theoretical expectations, as well as research showing the importance of event dispersion (e.g. Greig, Mason, and Hamner 2018). However, when accounting for country size, this effect became statistically insignificant. Further, both the standard distance of battles and standard distance of battles divided by country size were insignificant predictors of coup attempt.

What can explain these null results? I believe that one issue could be potentially offsetting mechanisms to the ones described in my theory. This potentially offsetting mechanism is the reduction in the military's ability to coup that would come with having

to repress widespread dissent. Some research suggests a negative link between international conflict and the risk of coup d'état because international conflict means that the military must expend resources far from domestic seats of power (Belkin and Schofer 2003, Bell and Sudduth 2017). This stretching of resources reduces the military's ability to coup. Having to contest widespread domestic instability might produce a similar reduction in ability. So, while my theory predicted an increase in the military's ability to coup in the face of widespread instability as a result of widespread withdrawal of support from the leader, the logistical costs of fighting such dispersed could produce an offsetting reduction in their ability, thus producing the null results found in Models 2 through 4. In the end, however, while this chapter did not produce strong support for Hypothesis 4, it produced some support in that Model 1 found that an increased standard distance in protests was positively associated with coup attempts.



## **Chapter Seven - Conclusion**

This dissertation attempted to fill a gap in existing literature by examining how various geographic characteristics of political instability within a state impact the likelihood of instability leading to a military coup d'état. I argued that instability is more likely to lead to a coup when it occurs in areas with high levels of economic productivity, areas with high levels of population density, areas occupied by politically powerful ethnic groups, and when it occurs across large swaths of the state's territory. To find instances of political instability, I used the Social Conflict Analysis Database (SCAD) and the Georeferenced Event Dataset (GED) to measure protests and battles, respectively. Then, in order to measure the locational characteristics of instability, I combined the SCAD and GED data with data from the PRIO Grid data system and the Ethnic Power Relations data family. The resulting instability variables were then used to predict attempted military coups d'état. Below, I first summarize my theoretical model, and then I summarize my empirical findings.

### **Theoretical Summary**

To explain how the location of instability would change the military's decision to coup, I crafted a theory that drew from expected utility models of coups (Thyne 2010, Powell 2012, Schiel 2019), exploring how instability would influence both the military's willingness and ability to coup, and how this influence would vary based on locational characteristics of the instability. I argued that when leaders' supporters withdraw their support, leaders become easier to depose. I also drew from research that uses the idea of signaling (Casper and Tyson 2014) and argued that dissent transmits both direct signals from the dissidents to the military as well as indirect signals from the dissidents to the leader's supporters to the military. I then argued that as supporters become dissatisfied

with the status quo, they become more likely to withdraw their support. As supporters withdraw their support, they signal to the military that they would not resist a coup attempt, increasing the chances of one occurring. Using this basic theoretical model, I then explored how instability would influence supporters' satisfaction with the status quo differently depending on the characteristics of the areas in which it occurs.

In line with research around the economics and coups (Londregan and Poole 1990, Singh 2022, Kim 2016, Djuve and Knutsen 2024), I argued that instability in economically productive areas would be more likely to induce a coup than instability in less productive areas for two reasons. First, instability in productive areas would increase the military's ability to coup by reducing the leader's supporters' satisfaction with the status quo by reducing the economic outlook in surrounding areas. Second, this instability would increase the military's willingness to coup because it would lead to disruptions in economic processes that threaten pay other coup-proofing goods.

I similarly argued that instability in densely populated areas would be more likely to induce a coup than instability in sparsely populated areas because instability in densely populated areas would decrease satisfaction with the status quo for a larger portion of the leader's supporters. I drew from literature regarding humanitarian crises, media coverage, and third-party interventions (Livingston 1997, Robinson 2002, Bell, Frank, and Macharia 2013; Burgoon et al. 2015) to show that international supporters would be more likely to withdraw support in the face of instability in heavily-populated areas. This would increase the military's ability to coup. Then I argued that the military's willingness to coup would increase in response to instability in heavily populated areas because the costs of repressing dissent in these areas would be quite high.

Next, borrowing from literature on ethnicity and coups (Roessler 2011, 2017; Houle and Bodea 2017), I argued that instability in the territory of powerful ethnic groups would be more likely to lead to a coup. If instability occurs in the territory of a powerful ethnic group and that group withdraws support, the instability would increase the military's ability more so than instability in a weak group's territory. Further, I argued that coups would be more likely to originate from a specific ethnic group when instability occurs on their territory, as the instability would increase their willingness. However, this effect was argued to be dependent on the political power of the group, as more power would increase their ability.

Finally, I argued that widespread instability would be more likely to lead to a coup than more concentrated instability. If the instability is occurring across a major portion of the country, then there would have to be a variety of supporters affected, leading to an increased ability for the military. Further, the logistical costs associated with repressing widespread instability would be higher than concentrated instability, leading to increased willingness on behalf of the military.

### **Summary of Empirical Findings**

To summarize the empirical findings, I found that battles in economically productive areas were more likely to be associated with a military coup than battles in less productive areas. However, I found no statistically significant difference between protests in productive areas and protests in less productive areas. I found moderate evidence that battles in densely populated areas are more likely to lead to a coup than battles in sparsely populated areas, but again failed to find a difference between protests in densely and sparsely populated areas.

Unexpectedly, I find that battles in the territory of politically weak ethnic groups are positively associated with coup attempts but not battles in the territory of strong ethnic groups. I find no difference between protests in strong group territory and protests in weak group territory. I find that ethnic groups are more likely to attempt a coup when they experience higher numbers of battles, and that ethnic groups with a power status of Junior Partner see an increased likelihood of attempting a coup with increased number of battles. I find no significant effect of protests on an ethnic group's chances of attempting a coup. Finally, I found some evidence that widespread protests were more likely to induce a coup than concentrated protests, but failed to find a difference in the effect that varying levels of battle dispersion.

To briefly summarize my findings: location matters. Now that I have summarized this dissertation, I will now discuss some implications that my theory and findings have for existing research.

### **Implications for Existing Research**

Perhaps the most specific implication for existing work that can be derived from this dissertation revolves around existing work dealing with the location of instability and coups. Bell and Sudduth (2017) found that civil wars are more likely to lead to a coup when they occur closer to the capital city, while Johnson and Thyne (2021) found a similar importance of proximity to the capital when examining the impact of protests on coups. However, capital cities are usually among the most economically productive, densely populated areas of a nation. Whether coups occur in response to instability because that instability occurs close to the capital or that instability occurs in productive

or densely populated areas would be a difficult question to untangle empirically, but I believe it would be a worthy endeavor to tackle.

Some of the theoretical concepts developed in this dissertation also have fairly specific implications for instability literature broadly. For instance, (Casper and Tyson 2014c) argue that protests send signals to potential coup plotters. Drawing off this idea, I argued that instability can also send what I called *indirect signals*, or signals that go from the perpetrators of instability to the leader's supporters and then to potential coup plotters. Considering the potential impact of indirect signals could change the theoretical underpinnings and empirical conclusions of work like Casper and Tyson and other work using the idea of signal transmission.

Some research on instability has shown that protest size is correlated with regime change (e.g. Chenoweth and Stephan 2011). For example, Erica Chenoweth and colleagues have argued that if a protest can reach 3.5% of a state's population, then change is inevitable. However, drawing off the theory presented in this chapter, the effect of protest size may itself be dependent on protest location. Moreover, the only feasible way for protests to reach such large sizes would be for them to occur in densely populated areas or across large swaths of a state's territory. Thus, it seems likely that protest size and protest location are correlated with one another, and therefore I believe that more theorizing and careful empirical work is required to tease out the effects of protest size vs. location.

In general, the theoretical framework and empirical findings presented in this dissertation have implications for the civil-military relations literature broadly. Work like Casper and Tyson, Johnson and Thyne, and Bell and Sudduth have shown that

mobilization of the domestic population must be taken into account when considering the calculus of the civil-military landscape. This dissertation adds to this body of research, adding an extra emphasis on the location of instability.

This dissertation also attempted to link the conflict literature with geography literature, and as such has certain implications for that field of research. One example would be the importance of place. The importance of place is a large topic in human geography but essentially is just the idea that the location in which events take place and human beings live has important practical and symbolic implications on the way events and lives unfold (Armstrong and Stedman 2019; Hess, Malilay, and Parkinson 2008; Muir 2021; Rumbach, Makarewicz, and Németh 2016; Yazdani Mehr and Wilkinson 2020). It is similar to what Fawzy (2021) calls “spatial iconization” in his study of Tahrir Square and Rabaa Square. These areas have been the center of many ground shaking events in Egypt, and therefore events that occur in these areas carry a certain weight and symbolism that similar events in other areas do not hold. One implication of this dissertation would be that, when considering the importance of place and the effects of place, one should not fail to consider the impact that place has on civil-military relations. Future work would do well to keep in mind the connection between instability, place, and civil-military relations. Speaking of future work, I now turn to the final section of this dissertation where I will discuss some other considerations for future work.

### **Considerations for Future Work**

#### **Expanded Protest Data**

An initial starting point for considering future avenues for research in this area should be the empirical results from the models analyzing the impact of protests on military

coups. The models with protest counts as the main explanatory variables produced much weaker results than the models with battle count explanatory variables, in terms of statistical significance and meeting with theoretical expectations. It is possible that this is an artifact of limited protest data availability. The SCAD data used in these models has a limited geographic scope, covering only countries in Africa from 1990-2017 (by contrast, the GED data used in the battle models covers the entire globe from 1989-2023). The collection of expanded protest data would enable a more thorough examination of how protest location influences coup likelihood and could potentially lead to different empirical results.

Potential data alternatives already exist. Two possibilities would be the Social, Political, and Economic Event Database (SPEED) (Nardulli, Althaus, and Hayes 2015) and the Global Database of Events, Language, and Tone (GDELT) (Leetaru and Schrodt 2013). SPEED is a “technology-intensive effort to extract event data from a global archive of news reports” that catalogs and geolocates many types of events, including protests, in the post-World War Two era, with the current public release extending through 2005. Similarly, GDELT is “a database of a quarter billion georeferenced records covering the entire world over 30 years” that “monitors the world's news media from nearly every corner of every country.” GDELT also catalogs a wide variety of events, including protests.

While SPEED and GDELT are potential alternative sources of protest data, they are not perfect solutions. First, SPEED’s temporal coverage is misaligned with the temporal coverage of much of the locational characteristic data I use. SPEED ranges from 1945-2005, while most of the locational data begins in 1990 and extends to near-present time.

Second, and more importantly, there has been some question regarding the accuracy of these machine-generated event datasets, particularly GDELT (Hammond and Weidmann 2014). A full discussion on the merits of machine vs. human generated data is beyond the present scope, but expanded, thoroughly validated protest data would be an excellent next step in this line of research.

#### Other Ways the Location of Instability can Impact Coups

Aside from expanded protest data, there are many potential avenues for future research in this area. The impacts of the geographic qualities of instability on military coups undoubtedly extend far past those explored in this dissertation. For the sake of space, I will discuss three potential paths here, although there are certainly more. The three paths that I believe could produce the most fruitful results would be exploring the how the outcomes of battles in certain areas influences coups, how the intensity of battles in certain areas influences coups, and how the makeup of protesters and rebel forces influences coups.

First, I believe the impact that the location of battles will have on coups could be more thoroughly understood by examining the outcomes of the battles. For instance, it is likely the case that, while battles in economically productive areas are more likely to lead to a coup than battles in less productive areas, battles in productive areas that are won by rebel forces are more likely to result in a coup than battles in productive areas in which government forces are victorious. If rebel forces win, the impact on local economic processes would be more severe and long-lasting. The more pronounced economic effects of a rebel victory would likely increase the likelihood of a coup even more than just any battle, regardless of victor. On the other hand, government victories in strategic areas



such as densely populated areas or ethnically important areas may potentially benefit the leader, increasing their perceived competence and making the path to a coup more difficult. Exploring the ways that battle outcome and battle location interact to influence military coups would help to understand the instability-coup nexus.

Second, the causes of battle deaths and the effects of battle intensity and battle deaths on conflict outcome and other conflict processes have been widely documented (Gates et al. 2012; Gohdes and Price 2013; Kevlihan, Derouen, and Biglaiser 2014; Lacina 2006; Lacina, Gleditsch, and Russett 2006; Ramos, Ron, and Thoms 2007; Solomon, Mikulincer, and Hobfoll 1986; Spagat et al. 2009; Weisiger 2016), and some research has shown that higher levels of battle deaths are related to a higher likelihood of coups during civil wars (C. Bell and Sudduth 2017b). It is likely, then, that battle deaths/intensity may influence how battle location impacts coups. Theoretically, I believe a higher battle intensity would mitigate the effect of battle location. While the military may be more likely to coup in response to battles in economically productive areas in order to preserve the economy, or in response to battles in ethnically important areas because the acquiescence of politically powerful groups makes coups easier, it seems unlikely that the military would not be moved to some action in response to massive casualties in their ranks, regardless of where the death was taking place. Similar arguments could be made regarding protest size and protest violence.

Finally, future work should consider the makeup of protestors and rebel military units. For example, this dissertation only examined the impact of all protests and all battles in the territory of politically powerful ethnic groups. However, it is possible that protests or battles whose participants are largely made up of individuals who belong to

the dominant ethnic group in the area would have a different level or type of impact on the likelihood of a coup than events originating from underrepresented minority groups in the area. Perhaps protests originating from minority groups could inspire a rally effect, where the dominant group supports the leader more in response to instability.

### The Location of Instability and other Aspects of Civil-Military Relations

There are less drastic actions than a full-blown coup that the military can take in response to instability. Further research into the connection between instability, the location of instability, and civil-military relations should consider these other actions. Two that I will discuss briefly here are military integration into civilian government and mutinies.

Scholars have recently begun to explore more subtle changes in civil-military relations, examining military involvement in politics short of coup d'etat. For example, Bove et al (2020) examine how terrorism influences military involvement, arguing that terrorism increases demands for security expertise in government, pulling the military into government. Kiyani et al (2023) argue that international sanctions are not likely to result in observable coups, but instead are more likely to result in increased policy concessions and relinquishment of control from civilian governments to the military.

Aside from terrorism and sanctions, something else that is likely to influence military involvement in politics is instability in the form of battles and protests. It would follow that there is a possible relationship between increased military involvement in politics and the location of instability. Following the logic of the theory developed in this dissertation, it is likely that instability would be more likely to lead to increased military

involvement in politics when it occurs in areas where it has the highest impact on the military's desire and ability to increase their role in the government. However, future work should explore how instability and where it occurs might lead to a coup compared to when it leads to more subtle increases in military involvement. Perhaps extreme instability is likely to induce a coup while more moderate instability is more likely to lead to more subtle changes in civil-military relations. However, I leave this to future work to decide.

Finally, recently scholars have begun to investigate a less drastic change in civil-military relations than a coup d'état, but more tangible than subtle increases in military involvement in politics: mutinies (Dwyer 2017; Johnson 2021; Schiel et al. 2021). A mutiny is an act in which military troops revolt against lawful authority but do not seek executive power (Johnson 2021). A fruitful future avenue of research would be to investigate the relationship between instability and mutinies. It seems reasonable that mutinies would have the highest chance of occurring in response to instability in areas in close proximity to the instability. Again, however, I leave this to future research to investigate.

### **Concluding Remarks**

In conclusion, location matters. Where protests and battles occur matters for determining what impact they will have on the likelihood of a military coup d'état. Moreover, the location of battles and protests surely has impacts on a multitude of other things. When one is trying to predict what impact instability is going to have, whether a coup or anything else, they must take into consideration the location of the instability and the characteristics of these locations.

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