

# Explaining the Duration of Counterinsurgency Campaigns\*

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## Abstract

Why are some counterinsurgency campaigns resolved quickly while others go on for decades? Numerous studies examine the duration of civil and interstate wars but few examine insurgency as distinct type of war. Using a new dataset of counterinsurgency wars between 1800-2000, we find (1) that the duration of insurgencies has varied substantially over time and (2) that the effects of several key factors have varied across different eras. These results are consistent with the hypothesis that changes in the international system have had a strong impact on insurgency as a type of warfare.

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# 1 Introduction

Asymmetric war—warfare that usually pits states against non-state guerrilla or terrorist organizations—often results in protracted campaigns of insurgency and counterinsurgency (COIN). In recent years, US military commanders and advisers have cited this stylized fact to counsel patience for ongoing wars in Iraq and Afghanistan, each of which has lasted longer than any other war in American history.<sup>1</sup> In the aggregate our data supports the view of protracted counterinsurgency campaigns. Counterinsurgency campaigns typically do last longer than conventional wars, but claiming that COIN wars are necessarily long is both factually incorrect and obscures wide variation in COIN campaign duration. While guerrilla campaigns can go on for decades, others have been quickly resolved.

For example, protracted guerrilla wars in Ethiopia, Myanmar, the Philippines, and Sudan have persisted for decades, while campaigns in Rwanda, Iraq, Nepal, and Uganda have ended in a relatively short timeframe. Variation in COIN campaign duration can be observed not only across countries, but also within them: In colonial-era Burma, for example, multiple Burmese uprisings were resolved in three years or less, while in post-independence Burma, guerrilla campaigns have gone unresolved for as long as six decades. After annexing the Philippines from Spain in the late nineteenth century, the U.S. needed less than two years to defeat a nationalist insurgency, while post-independence Philippine governments have needed a decade or more to marginalize communist and Muslim insurgencies in the country's north and south. In Uganda, the National Resistance Army ended its campaign against the Ugandan government approximately five years after taking up arms; in contrast, the Lord's Resistance Army continues to execute an exacting guerrilla war against the Ugandan government more than two decades after commencing its campaign in the late 1980s. In post-Desert Storm Iraq, Saddam Hussein's tattered army quickly defeated insurgencies waged by the country's Shia majority and Kurdish minorities, while the US army—the most powerful and best equipped conventional military force in modern history—failed to defeat insurgencies for more than five years after defeating the Iraqi army and toppling the Iraq regime in the conventional phase of the Second Gulf War.

Our analysis of 169 different counterinsurgency campaigns from 1800 to 1999 echos what is widely know, insurgencies tend to be long-fought wars. The median counterinsurgency last 6 years, but exceptionally long campaigns draws the mean campaign duration just over 8 years. However, our analysis draws out a generally under appreciated phenomena, one that is obscured aggregate analysis. The duration of campaigns has changed noticeably over time. The mean duration of campaigns fought between 1800 and 1945 was 5.2 years and the median was 3 years. Post-1945 campaigns have, on average, lasted more than twice as long as

pre-1945 campaigns. The mean duration of post-1945 campaigns is 11.4 years and the median is 10 years. Figure 1 graphs the change in COIN campaign duration over time.

[INSERT FIGURE 1 ABOUT HERE]

This study examines trends in the duration of insurgencies, paying special attention to temporal trends and historical patterns. Our analysis reveals that the duration of insurgencies and the relevant factors for understanding this duration vary over time and largely depend to a considerable extent on the nature of the counterinsurgent and the insurgent's objectives.

## 1.1 Warfare in Civil Wars

A growing consensus among scholars, policy analysts, and civilian and military practitioners suggests that guerrilla and counter-guerrilla warfare differs fundamentally from conventional warfare (Kalyvas 2005; Nagl 2005; Weinstein 2007; Kalyvas and Balcells 2010). A core set of principles underlie guerrilla warfare, which analysts have used these core principles to demonstrate how the dynamics of guerrilla warfare differ from conventional war. The same theoretical logic implies that the causes, duration, and termination of guerrilla wars should differ from their analogues in conventional wars. Indeed, whereas conventional wars appear to arise from incomplete information about relative power, incentives to misrepresent this information (Fearon 1995), or security dilemmas that stem from the fear of being attacked by a rising power (Mearsheimer 2001; Jervis 1978), scholars have linked the onset of guerrilla war to conditions that favor insurgency, such as weak state structures incapable of repressing dissent, rough terrain that is difficult to fully control (Collier 2009; Fearon and Laitin 2003), and deteriorating economic conditions that increase that hurt labor markets (Miguel *et al.* 2004; Dube and Vargas 2009). Likewise, the duration of guerrilla wars (as noted previously) tends to be longer than that of conventional interstate wars. Indeed, guerrilla strategy centers on engaging state security forces in costly and protracted wars of attrition and fighting only at the times and places of their choice.

Because the nature of warfare in guerrilla campaigns differs from that of conventional warfare, we separate guerrilla wars from other types of warfare in our analysis.<sup>2</sup> By restricting our analysis to a single type of warfare, our study deviates from the common practice of analyzing either "civil" or "interstate" war. Although guerrilla warfare is most common during intrastate war and foreign occupation, many civil wars

are fought conventionally and some interstate wars are fought at least partly unconventionally. The American Civil War, the Spanish Civil War, and the recent civil war in Ivory Coast were fought primarily through conventional warfare, while partisan guerrilla movements in the former Soviet Union, Yugoslavia, Greece, France, and Norway emerged to fight German or Soviet occupations during World War II. Other examples of guerrilla war, as defined here include the Peninsular War, the Second Boer War, the U.S.-Philippines War, the Huk Rebellion, the French-Algerian War, the Vietnam War, the Soviet war in Afghanistan, the EGP in Guatemala, the FMLN in El Salvador, the Algerian Civil War, and the U.S. wars in Afghanistan and Iraq.

Our analysis is not oriented around the political objectives of combatants, which can range from but, are not limited to, overthrowing a national government, seceding from an existing sovereign state and creating a new one, or prompting the withdrawal of an occupation force. Rather we organize our analysis around the type of warfare combatants use to achieve these ends, focusing on "insurgency" as opposed to "conventional" or "regular" warfare. An "insurgency" is an organized movement that uses guerrilla warfare to pursue political goals. We adopt Lyall and Wilson's (2009: 70) definition of guerrilla warfare as "violent, asymmetric conflict in which small, mobile units avoid open battle with incumbent forces by using unconventional tactics such as hit-and-run attacks and ambushes while attempting to mobilize at least a segment of the civilian population"<sup>3</sup> "Counterinsurgency," then, is defined as the military, paramilitary, political, economic, psychological, and civic actions taken by regular armies of governments, or incumbents, to defeat insurgencies. Government armed forces can attempt to restore order by inducing insurgents to terminate violence or by suppressing insurgent violence with military force.

The difference between guerrilla and conventional warfare is stark. Conventional war involves face-to-face confrontations between regular armies along demarcated front lines. Although conventional warfare does not necessarily imply a balance of military power among belligerents, it can be thought of as "symmetric warfare" because each belligerent employs regular armed forces and engages in pitched battles (Kalyvas 2005; Kalyvas 2006). By contrast, insurgencies organize clandestine networks and initiate contact with government armed forces at the times and locations of their choice (Kalyvas 2006; Berman 2009). They differ from regular armies in their relative strength, professionalization, and tactics, which center on ambush, bombing, kidnapping, and targeted killing. These tactics minimize insurgents' direct contact with stronger government conventional forces but enable them to inflict damage against government assets and reduce overall government morale for war (Taber 2002; Galula 1964; Mack 1975; Merom 2003; Nagl 2005; Polk 2007; Mackinlay 2009).<sup>4</sup> Militants who adopt a guerrilla strategy attempt to attrit government stakeholders. They do so by (1) reducing morale among relevant government stakeholders; (2) using violence to perpetuate fear among real

or potential government loyalists; and (3) and provoking protracted, costly counterinsurgency campaigns that can empty government coffers.

## 2 Hypotheses on Counterinsurgency Duration

We draw on insights from disparate bodies of scholarship on the duration of civil conflict and the dynamics of insurgency and counterinsurgency to derive hypotheses on the duration of counterinsurgency warfare. Until the last 15 years, scholars have devoted relatively little attention to interstate war duration (Bennett and Stam 1996, 239), yet in this time a significant body of scholarship on civil war duration has emerged (Balch-Lindsay and Enterline 2000; Collier *et al.* 2004; DeRouen and Sobek 2004; Hegre 2004; Cunningham 2006; Balch-Lindsay *et al.* 2008; Buhaug, Gates, and Lujala 2009; Cunningham *et al.* 2009; Cunningham 2010; Thyne forthcoming).<sup>5</sup> Scholars have used similar variables to explain civil and interstate war duration.<sup>6</sup> However, a wider array of variables appear to influence the duration of civil wars than interstate war duration, perhaps because the capabilities and cultures of civil war participants varies more than those of interstate war participants.<sup>7</sup>

Appropriate modeling of counterinsurgency duration should differ from duration models of interstate war because insurgent strategies are relatively similar across conflicts. Bennett and Stam's (1996) model of conventional interstate war duration, for example, shows how the strategies used by attackers and defenders—mobility, attrition, and punishment—are important predictors of war duration.<sup>8</sup>

A central factor in both interstate and intrastate duration models is the material capacity available to combatants (Collier *et al.* 2004; Balch-Lindsay and Enterline 2000; Bennett and Stam 1996). Because data simply does not exist to build a reliable measure of the material capabilities of insurgent groups, we follow the suggestions of Mason and Fett (1996) and rely instead upon absolute measures of state capacity rather than ratios of capacity, which are more appropriate for studies of interstate war. The logic, however, remains the same: as the power of the state increases, the duration of the insurgency will decline because stronger states are better positioned to defeat insurgencies.

**Hypothesis 1** Insurgencies facing more powerful counter insurgents will be shorter than insurgencies facing weaker counter insurgents.

Geography is widely thought to influence the duration of conflict and the viability of insurgent groups. Rough terrain is anticipated to lengthen conflicts (Cunningham 2006; Bennett and Stam 1996) in part

because it improves the viability of insurgent groups (Fearon and Laitin 2003). By a similar logic we argue that insurgencies far from the government's base of power will be longer and that insurgencies in larger states will be longer. This relationship has been demonstrated in studies of civil war by Bugauh *et al.* (2009). The effect of state size on conflict duration has been noted by Collier et al. (2004) and by Balch-Lindsay and Enterline (2000).<sup>9</sup>

**Hypothesis 2** Insurgencies that are more remotely located will be longer in duration than insurgencies closer to the base of counter insurgent power.

**Hypothesis 3** Insurgencies in larger states will be longer in duration than insurgencies based in smaller states.

**Hypothesis 4** Insurgences in more mountainous states will be longer in duration than insurgencies in less mountainous states.

Many arguments have been advanced linking democracy and the duration of conflicts, but these arguments do not reach a consensus on the direction of the effect. Democracies are thought to be more prudent in selecting targets, which would in theory make conflicts initiated by democracies shorter (Bennett and Stam 1996), but democracies are also thought to be less efficient at counter insurgency because of a heavy reliance on capital intensive military power (Caverley 2010) and a cost sensitivity that makes them less willing to commit to a long process of counterinsurgency (Arreguín-Toft 2001). Regime type is a potentially relevant factor to consider although its anticipated effect on duration is not clear. Consequently, we offer two hypotheses relating the type of political system to the duration of insurgencies. Hypothesis 5a assumes that democracies are less effective in counter insurgency, while Hypothesis 5b assumes that democracies are more prudent in entering into conflicts. Regardless of the ruling structure in a state, a regime that undergoes a political transition may also see a different pattern in conflict duration.

**Hypothesis 5a** Insurgencies against more democratic states will be longer in duration than insurgencies against less democratic states.

**Hypothesis 5b** Insurgencies against more democratic states will be shorter in duration than insurgencies against less democratic states.

**Hypothesis 6** Insurgencies against states undergoing political transition will be different in duration than insurgencies against more politically stable states.

Additionally, we anticipate that foreign intervention will be relevant to the duration of insurgency. Regan (2002) argues that because interventions are targeted at ending a conflict, intervention ought to be associated with shorter conflicts. However, his analysis of intrastate wars showed that intervention has no clear effect on the duration of intrastate conflicts (Regan 2002). Balch-Lindsay and Enterline (2000), using a different operationalization of intervention, found that interventions on behalf of the government actually results in longer conflicts. Gent (2008) argues that because intervening states are strategic in their interventions, pro-government intervention is only observed in the most difficult conflicts. This might account for observed discrepancies in the impact on duration of pro-government and pro-rebel interventions. Given the ambiguous results of past studies, we leave the door open that intervention might have a systematic effect on insurgencies that either lengthens or shortens their duration.

**Hypothesis 7** Insurgencies involving foreign intervention on behalf of the government will be different in duration than insurgencies in which no intervention takes place in support of the government.

**Hypothesis 8** Insurgencies involving foreign intervention on behalf of the insurgents will be different in duration than insurgencies in which no intervention takes place in support of the insurgents.

Over the past 210 years, changes in the structure of the international system, the technology of warfare, and the norms of international behavior have evolved in ways that potentially affect the duration of warfare. One of the objects of this paper is to explore the change in duration of insurgency over time. The rise of nationalism and the decline of colonialism in the post-World War II world is just one aspect of the structural shifts that occurred in the post-war period. The Cold War period also produced a change in the “technology of rebellion” in a way that favored rebels and asymmetric warfare (Kalyvas and Balcells 2010). While the end of the World War II changed the environment in which insurgencies were fought, the Second World War, itself, was an anonymous period with the fate of multiple insurgencies tied to the fortunes of the Axis powers. These conflicts potentially bear little similarity in their duration to other insurgencies.

**Hypothesis 9a** Insurgencies prior to 1945 will be shorter in duration than insurgencies occurring after 1945.

**Hypothesis 9b** Insurgencies related to the Second World War will be different in duration than conflicts occurring prior to and after World War II.

We also consider the context under which a guerrilla strategy is adopted. A weaker party initiating a conflict will likely anticipate a long, slow campaign of attrition. By contrast, a weaker party employing

a guerrilla-style campaign in response to invasion is likely turning to asymmetric conflict as part of a final attempt at resistance. Consequently, we anticipate that insurgencies launched against campaigns of conquest will be shorter in duration than insurgencies initiated against entrenched forces, as would be the case in civil wars and anti-colonial struggles.

**Hypothesis 10** Insurgencies initiated in response to foreign conquest will be shorter in duration than insurgencies initiated as part of civil wars or anti-colonial campaigns.

Lastly, we recognize that a fundamental shift began in the late 1950s that led to a proliferation of new states in the international system. In our analysis the emergence of these new states is doubly important for several reasons. First, our analysis includes anti-colonial struggles that were linked to the creation of many of these new states. Second, the new states gaining independence during the period of de-colonization were often weaker in state capacity than other states in the system. This proliferation of weak states means that civil wars will be more frequent (Hironaka 2005). We anticipate that these new states will struggle to implement effective counterinsurgency operations.

**Hypothesis 11** Insurgencies involving states that recently gained independence will be longer in duration than insurgencies in long established states.

### 3 Methodology

To assess the duration of insurgencies, a series of Cox proportional hazard duration models were run. Duration analysis focuses on the time it takes for a process to terminate. In duration models, the relationship between the time to termination and a given explanatory variable is expressed through a coefficient that describes the effect of a particular variable on the hazard rate. The hazard rate, in turn, reflects the likelihood that a process will end, conditional on the process's survival until a specified time (Box-Steffensmeier and Jones 2004, 13-15). Positive coefficients increase the "risk" that a conflict will terminate over a given unit of time. Thus, negative coefficients mean that a 1 unit increase in the independent variable will be associated with longer durations, while positive coefficients decrease duration.

The Cox model offers a key advantage in duration modeling because it does not require an assumption about the underlying shape of the hazard function to test the impact of specific variables on conflict duration. The trade off that comes with a Cox model is that predicted duration cannot be readily extracted from these models. To predict duration time would first require positing a baseline hazard rate (Box-Steffensmeier and



Jones 2004). For this reason, Cox models are ill suited for evaluating the goodness of fit of a model compared with parametric models (Bennett and Stam 2009).<sup>10</sup>

## 4 Data and Variables

### 4.1 Data

We analyze a new dataset of counterinsurgency campaigns from 1800-1999 to examine variation in duration within insurgency campaigns (for more on the dataset, see Johnston 2009). Because of the differences between guerrilla and conventional wars, a dataset that pools together both types of wars—as most datasets of “civil” or “interstate” wars do—is, we believe, inappropriate for both theoretical and empirical reasons. Building on the growing consensus that guerrilla/counter-guerrilla war differs from other types of warfare, we exclude non-guerrilla wars from our study.

Campaigns were identified based on three observable criteria. The first criterion was power asymmetry between the incumbent and the opposition. Each side’s relative power, and their consequent strategic calibrations, contributes to the interactions observed in guerrilla campaigns. The relative weakness of insurgencies vis-a-vis incumbent governments’ forces creates a unique operational environment that requires insurgencies to adopt a strategy of guerrilla warfare to compensate for their conventional weakness.<sup>11</sup> In turn, when insurgencies adopt a guerrilla strategy, incumbents must adapt their strategy to address the nature of the guerrilla threat. Power asymmetry is observed when incumbent forces make use of highly sophisticated, lethal weapons or when they are numerically stronger than insurgencies.

The second criterion is popular support. A common feature of guerrilla insurgencies is their pursuit of civilian support; civilian support can also mitigate insurgencies’ conventional weakness.<sup>12</sup> Although observing insurgents’ desire for civilian support or the degree to which insurgents are genuinely popular is impossible, militant groups’ base locations are observable. Movements that implant themselves within civilian populations likely seek popular support; because civilian betrayal can lead to the demise of clandestine movements, armed groups embedded in the civilian population must prevent defection and induce or coerce civilian support. Only movements that are operating within civilian populations are included in the dataset.

The third criterion was tactical asymmetry. Guerrilla insurgencies prefer military tactics different from the tactics employed by incumbents. Tactical asymmetry is observed when small, mobile units perform hit-and-run attacks or ambushes while avoiding direct battle.<sup>13</sup>

The final criteria were 1,000 battle-death and one month duration thresholds. These criteria ensure that all campaigns in the dataset were sustained, asymmetric violent conflicts between organized military actors rather than brief, violent incidents. All campaigns that failed to meet any of the coding rules were excluded.

Using these criteria, 169 campaigns were identified during the 1800-1999 period of study.<sup>14</sup> These 169 campaigns span 1,376 campaign-years. We used three existing datasets, several military encyclopedias, and numerous secondary sources to locate appropriate campaigns. The datasets we used were the Correlates of War Project's Intra-State War and Extra-State War datasets and Fearon and Laitin's civil war dataset. The military encyclopedias, notably Michael Clodfelter's *Warfare and Armed Conflicts*, were used to supplement these datasets since only the COW datasets include pre-1945 campaigns.<sup>15</sup>

## 4.2 Explanatory Variables

In this section we describe the operationalization and measurement of our explanatory variables.

**MATERIAL CAPABILITIES** (Hypothesis 1) To control for cross-sectional and within-panel variation on countries' relative power, we use the natural log of the Correlates of War Project's aggregate indicator of material capabilities for each campaign-year. This variable is an index of indicators of national power and material capabilities, including countries' share of global military power (army size and military spending) and economic power (iron production, energy consumption, and population power).

**DISTANCE** (Hypothesis 2) measures the shortest distance from the incumbent's capital city to the conflict theater in logged kilometers. We control for distance because long-distance campaigns are costly and likely to favor counterinsurgent withdrawal. We measured distance using Google Earth's "Ruler" tool.

**SIZE** (Hypothesis 3) is the natural log of the area, measured in square kilometers, of the country in which the campaign took place. Data were collected from the GeoHive Global Statistics database.<sup>16</sup>

**ELEVATION** (Hypothesis 4) is the natural log of the average of five elevation readings in the conflict area. Data were obtained from Lyall and Wilson III's *Correlates of Insurgency* database. Lyall and Wilson III originally compiled the data from <http://www.digitalglobe.com>.

**DEMOCRACY** (Hypothesis 5) To measure counterinsurgents' level of democracy, we use the "polity2" variable from the Polity IV database. This variable measures each country's annual level of democracy based on a standardized index of institutional characteristics such as overall openness, constraints on executive power, and procedure of executive appointment. Polity researchers code indices of democracy and autocracy along a range from zero (least democratic) to 10 (most democratic). The latter are subtracted from the

former to create a 21-point scale that ranges from -10 to 10. We replaced missing values with the country's mean polity2 score for all non-missing years in the panel in which values were missing.<sup>17</sup>

REGIME TRANSITION (Hypothesis 6) To test the possibility that unstable or transitional regimes have a propensity to fight longer or shorter counterinsurgency campaigns, we use a separate indicator that is also based on Polity IV data. We recoded campaign-years coded by Polity IV researchers as years of "interruption" (years of foreign occupation or years in which there are short-lived attempts to create ethnic, religious, or regional federations), "interregnum" (a complete collapse of central political authority), and "transition periods" (years during which new institutions are planned, legally constituted, and put into effect) as a general measure of instability. However, this variable does not play a significant role in our analysis because these codings could reflect changes caused by the war itself.

INTERVENTION (COUNTERINSURGENT) (Hypothesis 7) is a dichotomous variable coded "1" if an foreign state intervened militarily on behalf of the counterinsurgent force during a given campaign-year.

INTERVENTION (INSURGENCY) (Hypothesis 8) is a dichotomous variable coded "1" if a foreign state intervened on behalf of an insurgency during a given campaign-year. These variables were coded with intervention data from the Correlates of War Project (COW). We extended this, coding campaigns not included in the COW datasets.

PRE-1945 PERIOD (Hypothesis 9a) To investigate whether historical time periods had a separate effect on the duration of counterinsurgency campaigns, we use a simple dichotomous variable, PRE-1945 PERIOD, which is coded "1" if the campaign-year was 1944 or earlier. To test the hypothesis that insurgency duration is endogenous to the nature of campaigns themselves, which, we propose, will depend on exogenous shocks in the international system, this variable is intended to capture the historical shift away from wars of foreign conquest to the defense and maintenance of distant colonial holdings, a much more difficult task.

Furthermore, we again anticipate that the exogenous upheaval caused by the end of World War II and the shift to bipolar superpower rivalry between the United States and the Soviet Union changed the nature of the COIN campaigns that occurred during this period. We anticipate that the superpower rivalry had an effect on the way COIN campaigns were fought, enhancing the role and importance of outside support for proxy insurgents and governments and increasing the costs of imperial maintenance and colonial war for Britain, France, Portugal, and the Netherlands. An observable implication of our argument is that intervention should play a more significant role in post-1945 COIN campaigns due to superpower rivalry and the necessity of superpower war by proxy to avoid a possible nuclear war. To test this proposition, we use two variables: INTERVENTION (COUNTERINSURGENT) and INTERVENTION (INSURGENT)

WWII PARTISAN (Hypothesis 9b) We use a dichotomous variable coded “1” for World War II resistance movements. Although this is not discussed as a hypothesis, it becomes a relevant control as we disaggregate the sample across different historical eras.

FOREIGN CONQUEST (Hypothesis 10) Foreign conquest is a dichotomous variable coded “1” if the counterinsurgent’s war aim involved the annexation or colonization of territory. Foreign Conquest does not involve foreign occupation or wars waged to maintain a country’s imperial holdings. Rather, Foreign Conquest involves a very specific type of counterinsurgency campaign that intends to establish, rather than defend, a country’s control over a foreign territory or people. The types of insurgencies observed at different points in time are determined exogenously by major power shocks in the international system. In other words, foreign conquest was largely a product of its time. It was most prevalent during the nineteenth century European expansion of colonial holdings in Africa and Asia, reaching its height during the Scramble for Africa of the late nineteenth century.

NEW STATE (Hypothesis 11) Another observable implication of our argument is that new states, most of which became independent in the wake of imperial dissolution in Africa and Asia, had less capacity than established states to repress insurgencies on their peripheries and consequently ended up fighting longer campaigns. This is consistent with evidence from the civil war literature that links state coercive capacity to civil war onset and duration (Fearon and Laitin 2003; Fearon 2004). To investigate this intuition, we created a dummy variable called New State coded “1” if the campaign occurred in a state less than five years after its national independence.

## 5 Results and Analysis

Because a Cox proportional hazards model allows for the testing of specific relationships but not predictions of conflict duration, it is worth beginning this analysis with a brief discussion of general trends in the duration of insurgencies. For the 169 insurgencies we examine that terminated by 2009, the average insurgency duration is 8.22 years with a standard deviation of 8 years. Our study of insurgency includes wars of conquest, anti-colonial struggles, center seeking civil wars and secessionist civil wars. Wars of conquest are frequently initiated by the stronger side. For this reason we anticipated in Hypothesis 1 that conquests would be shorter on average in duration than anti-colonial and civil wars. Indeed, a comparison of average duration supports this hypothesis. Wars of conquest have an average duration of 6.6 years, which is substantially shorter than the mean duration for civil wars of succession (11.9 years), anti-colonial wars (7.1 years) and center seeking

civil wars (8.1 years).<sup>18</sup>

Our analysis also covers three distinct historical eras, which we anticipate to effect the duration of conflict in part because the type of conflicts that are prevalent (conquest vs. anti-colonial) shift over time and in part because of systemic changes in the international system. We see a dramatic increase in the duration of insurgency following the end of the Second World War. During the period we refer to as the long century (1800 to 1917) insurgencies lasted, on average a little over six years. A nearly identical average duration is seen during the interwar period from 1918 to 1945. In the post-war period, however, the average duration of insurgencies rises to at least 11.5 years.<sup>19</sup> This change can also be seen in Figure 2, which presents a Kaplan-Meier graph depicting probabilities that an insurgency would remain active over time. The lines describing the probability of survival for both the inter-war period and the long century drop quickly over the first 10 years of a conflict. The survival rate for the post-war period falls much less slowly over the first 10 years and only approaches 0 after 30 years.

[INSERT FIGURE 2 ABOUT HERE]

When we test for a statistically significant difference in the duration of insurgencies prior to 1945 relative to conflicts occurring in the post-war period, we find a statistically significant difference (see Model 1). This difference appears even more pronounced in Model 2, which includes the full range of variables hypothesized to impact duration. When controlling for geography, regime type, and government capacity, the hazard rate for conflicts occurring prior to 1945 is 267% greater than the hazard rate of conflicts in the post-war period.<sup>20</sup> Model 2 certainly suggests that the duration of insurgency has changed over time, but somewhat surprisingly, only one other hypothesis is supported in this model. The coefficients related to counterinsurgent capabilities, regime, and intervention cannot be statistically distinguished from zero, and therefore we cannot reject the null hypotheses in favor of the hypotheses presented earlier. The one other statistically significant relationship in Model 2 relates to the size of the territory in which an insurgency is being fought. Larger territories are associated with longer insurgencies. Thus, we would anticipate the hazard rate for a conflict occurring in a large state the size of China to be 44.6% less than would be the case for a similar insurgency occurring in a smaller state comparable in size to Cambodia.

The results from Model 2, which includes all of the variables we hypothesized to affect duration, suggest that the variation in the duration of insurgency is driven in large part by changes that occur over time. To better understand changes in insurgency duration during these different historical periods, we run identical

models but temporally restrict our sample in different ways. We begin by separating out periods before and after the rise of mechanized warfare. Mechanized militaries are thought to be less effective at counter insurgency (Lyll and Wilson 2009), which provides a plausible explanation for the observed change in duration over time. Model 3 includes insurgencies during the long century (1800-1918). Model 4 includes insurgencies occurring after the Second World War.

In the fully mechanized era emerging after the Second World War (Model 4) the one variable that emerges as statistically significant is the role of foreign intervention on behalf of an insurgent group. All other variables have no systematic effect on duration. When foreign intervention occurs on behalf of insurgent forces, the hazard rate increases by 472%, which greatly reduces the duration of an insurgency. According to our analysis, intervention on behalf of an insurgency, as Gent (2006) argued, decreases conflict duration. This finding runs contrary to the conventional wisdom that intervention in the Cold War prolonged conflicts.<sup>21</sup> Foreign support for insurgents seems to be less of a factor prior to the mechanized era, but Models 3 and 4 show that geographic factors were more salient prior to mechanization compared with the post-war period of mechanized militaries. Prior to 1919, increases in geographic factors such as size and distance are associated with longer insurgencies. In a sense this is quite intuitive as space was a real obstacle prior to mechanized transport. On the other hand, mountainous terrain appears to be a negligible factor in both the pre-mechanized and mechanized periods.

One final difference observed in Models 3 and 4 is the presence of a statistically significant relationship between the type of counterinsurgent regime and duration during the pre-mechanized era. Prior to World War I it appears that democracies were more effective counterinsurgents than were non-democracies. Given the great deal of debate regarding the effectiveness of democracies as counterinsurgents, this is a potentially interesting finding if it proves to be robust. This relationship, however, does not hold up when we build into our analysis the shift in the type of insurgency campaigns fought over time.

[INSERT TABLE 1 ABOUT HERE]

In general, campaigns of conquest are shorter than other insurgencies (Model 5). During the 19th century democracies were actively engaged in conquest. Of the 24 conquests involving insurgency carried out between 1800 and 1917, 54% were carried out by democracies. By contrast, between 1918 and 1999, democracies fought no insurgencies as part of campaigns of conquest. To control for this, Model 6 replicates the analysis of the long century in Model 3 but includes a control for campaigns of conquest. Model 7

extends the temporal coverage of Model 6 through the interwar period, which experienced an additional six insurgencies in response to conquest. Across the three model specifications campaigns of conquests are found to be statistically shorter than other types of insurgencies. This pattern appears to extend throughout the interwar period. Also of note, the effect of democracy on campaign duration is statistically indistinguishable from 0 when controlling for campaigns of conquest.

We initially assumed that the World War II experience and the events that preceded it would be historically anonymous. Model 7 represents an attempt to control for this by controlling for Soviet partisan campaigns against Nazi occupation. This control, however, was not statistically significant nor substantively interesting. As we have noted throughout this paper, counterinsurgency campaigns have become markedly longer in recent years. The cumulative evidence from Models 1 through 7 indicates that this is not the result of changing political systems but rather a result of changing political objectives, which are in turn a function of a macro-historical shift from colonization to decolonization.

[INSERT TABLE 2 ABOUT HERE]

The last set of models (Table 3) attempts to explain the longer durations seen in the post-World War II, a period that saw the proliferation of comparably weak states. Hironaka (2005) has argued that these new states account for an increase in the frequency of civil war. Model 8 suggests that new states may also be partially responsible for the increase in the duration of insurgencies in the post-war period, although the relationship falls short of standard thresholds for rejection of the null hypothesis. When considering the impact of new states while controlling for other factors (Model 9), the substantive impact of new states remains, but again, we cannot have confidence that the estimated effect is statistically different than zero. By contrast, pro-insurgent intervention has a large substantive and statistically significant effect on the duration of conflicts in the post-war period. This lends support to Kalyvas and Balcells (2010) observation that Cold War asymmetric conflicts were closely linked to the foreign support provided to governments and in particular to rebels.

[INSERT TABLE 3 ABOUT HERE]

## 6 Conclusions

This study examines trends in the duration of insurgencies. By isolating a common but strategically and tactically distinct type of conflict, we have attempted to contribute to the larger understanding of conflict duration. Our analysis has shown that a great deal of the variation in the duration of insurgencies can be attributed to macro-historical processes. We have argued that part of this change is endogenous to the changes in the type of insurgencies waged (a shift from conquest to civil war). But, part of this trend also seems to be related to structural changes emerging in the post-World War II environment. Weak states and a decline in foreign conquest point to longer insurgencies after 1945.

One of the surprising findings of this study was how poorly many of the independent variables (e.g. rough terrain and state capacity) that have been found to impact duration in studies of civil and interstate war performed in this analysis. One possible explanation for this is that in many of these conflicts insurgents are making strategic decisions to challenge a much stronger party. Insurgents might be inclined to initiate a conflict only if they believed the conditions were at least moderately favorable. Another possible explanation is that a particular variable may have an impact not only on how quickly a conflict terminates but also on how the conflict ends. Disaggregating the conflict duration to account for different outcomes (counterinsurgent victory, insurgent victory or draw/negotiated settlement) may provide greater insights on the role of different variables as drivers of conflict duration. Our next phase of analysis will develop a competing risks model to account for the impact of different outcomes on duration.

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## Notes

<sup>1</sup>For example, see the February 12, 2008 story "Nagl: Beating Insurgents Takes Unconventional War," on National Public Radio's All Things Considered.

<sup>2</sup>Unlike guerrilla warfare, which is a manifestation of military asymmetry between adversaries, conventional and symmetric unconventional wars are a manifestation of military symmetry between adversaries. In conventional wars, each belligerent fields a regular army to fight battles; in symmetric unconventional wars, neither side fields a regular army. Symmetric unconventional wars occur most frequently in the wake of state collapse. Examples of symmetric unconventional wars include the recent civil wars in Somalia, Liberia, and Congo. For a full discussion of the differences between different types of warfare, see Kalyvas (2008, 88-108).

<sup>3</sup>By this definition, not all forms of violent, nonstate behavior can be categorized as insurgency. For example, spontaneous, unorganized uprisings are not considered to be insurgencies unless they developed organization and adopted political goals. Likewise, we do not consider urban riots and protests as insurgencies unless they became protracted and violent. On the counterinsurgent side, our definition excludes campaigns in which counterinsurgents deploy predominantly irregular forces; incumbents who rely exclusively on paramilitaries, local militia, or death squads to fight insurgencies are not included under our definition even if the adversaries they are fighting meet the definition of an insurgency. Finally, our definition also excludes local violence to which the national government or a foreign occupier is not a party.

<sup>4</sup>The role of the civilian population is another key difference between guerrilla and conventional warfare. Theorists of insurgency and counterinsurgency alike view the civilian population as the key to victory in irregular war (Mao 1937; Guevara 1961; Galula 1964; Kitson 1974; Trinquier 1964; Thompson 1966; Taber 2002; Nagl 2005; Sepp 2005; Killebrew 2006; Kalyvas 2006). Whereas civilian populations remain behind the front lines in conventional campaigns, the civilian population is the pivot of irregular warfare. In this environment, civilians are often quite literally caught between two armies (Stoll 1993); both insurgents and counterinsurgents need civilian cooperation to achieve their goals vis--vis the other. Among other things, clandestine insurgent organizations require secrecy. Silencing the civilian population, whether through reward or punishment, is of paramount importance to the insurgent. For the counterinsurgent, the civilian population holds the key to penetrating and destroying clandestine insurgent networks. The counterinsurgent who deprives the insurgent of civilian support and other resources will cripple the insurgent network and defeat or marginalize the insurgency.

<sup>5</sup>On the duration of interstate war and foreign-imposed regime change, coercive aerial bombing campaigns, see also Bennett and Stam (2009); Lo *et al.* (2008); Allen (2007).

<sup>6</sup>For example, a comparison of Bennett and Stam (1996) and Slantchev’s (2004) reveals significant overlap.

<sup>7</sup>See, e.g., the disparate conceptual underpinnings and empirical results in seminal studies by Balch-Lindsay and Enterline (2000), Fearon (2004), and Collier *et al.* (2004).

<sup>8</sup>Bennett and Stam find that wars in which states use punishment tend to be particularly long and costly. As might be expected, states rarely adopt punishment as a strategy in interstate war, according to Bennett and Stam’s findings. See Bennett and Stam (1996).

<sup>9</sup>An alternative logic is possible for larger states causing smaller conflicts. Larger states are thought to benefit from economies of scale (Collier 2009) but this alternate logic would likely emphasize the size of a state’s population rather than territory. Likely, a larger state would find it harder to provide security and public services to its population than a smaller state with the same population.

<sup>10</sup>As part of the robustness testing of the models presented in this paper, all results were replicated using a parametric (Weibull) model. Results were largely comparable.

<sup>11</sup>Insurgencies’ relationship to the civilian population is another way of further distinguishing insurgency from other types of violent sub-state opposition movements whose members intend to achieve their goals without significant civilian support, such as rebel movements that use a “regular” or “conventional” strategy of direct military confrontation and small terrorist movements that have no social base.

<sup>12</sup>Insurgencies’ relationship to the civilian population is another way of further distinguishing insurgency from other types of violent sub-state opposition movements whose members intend to achieve their goals without significant civilian support, such as rebel movements that use a “regular” or “conventional” strategy of direct military confrontation and small terrorist movements that have no social base.

<sup>13</sup>This distinction is not always clear in practice. Some wars are characterized by varying types of warfare at different stages of the war—insurgents might use unconventional tactics in one phase and conventional tactics in another, as occurred during the U.S.-Philippines War, the Greek Civil War, the Chinese Civil War, and the Vietnam War. We address this issue by including only cases in which the guerrilla phase lasted longer than the conventional phase. Lyall and Wilson (2009, 70) adopt a similar coding rule.

<sup>14</sup>Insurgencies that terminated after 1999 have durations that are observed. The coding of these insurgencies were extended beyond 1999.

<sup>15</sup>The main sources were Clodfelter (2002), Beckett (1999), Asprey (1975), and Laqueur (1977).

<sup>16</sup>This database is available online at xist.org (accessed June 2009).

<sup>17</sup>We also used an alternative imputation approach for missing values in which we replaced

all missing values with "0" values. Using this method to impute missing values did not affect the results.

<sup>18</sup>The difference between conquest and these other types of conflicts is tested statistically in Models 5 and 6.

<sup>19</sup>This final estimate of duration includes a 23 year-old conflict in Uganda that had not terminated as of 2009.

<sup>20</sup>All percentages for change in the hazard rate are calculated using the method suggested by Box-Steffensmeier and Jones (2004, 60).

<sup>21</sup>An important distinction here is that we code substantial military interventions involving the deployment of troops but not the lower level forms of military or economic interventions that others, particularly Regan (2002) have investigated.



Figure 1: The Duration of Counterinsurgency Campaigns, 1800-2000

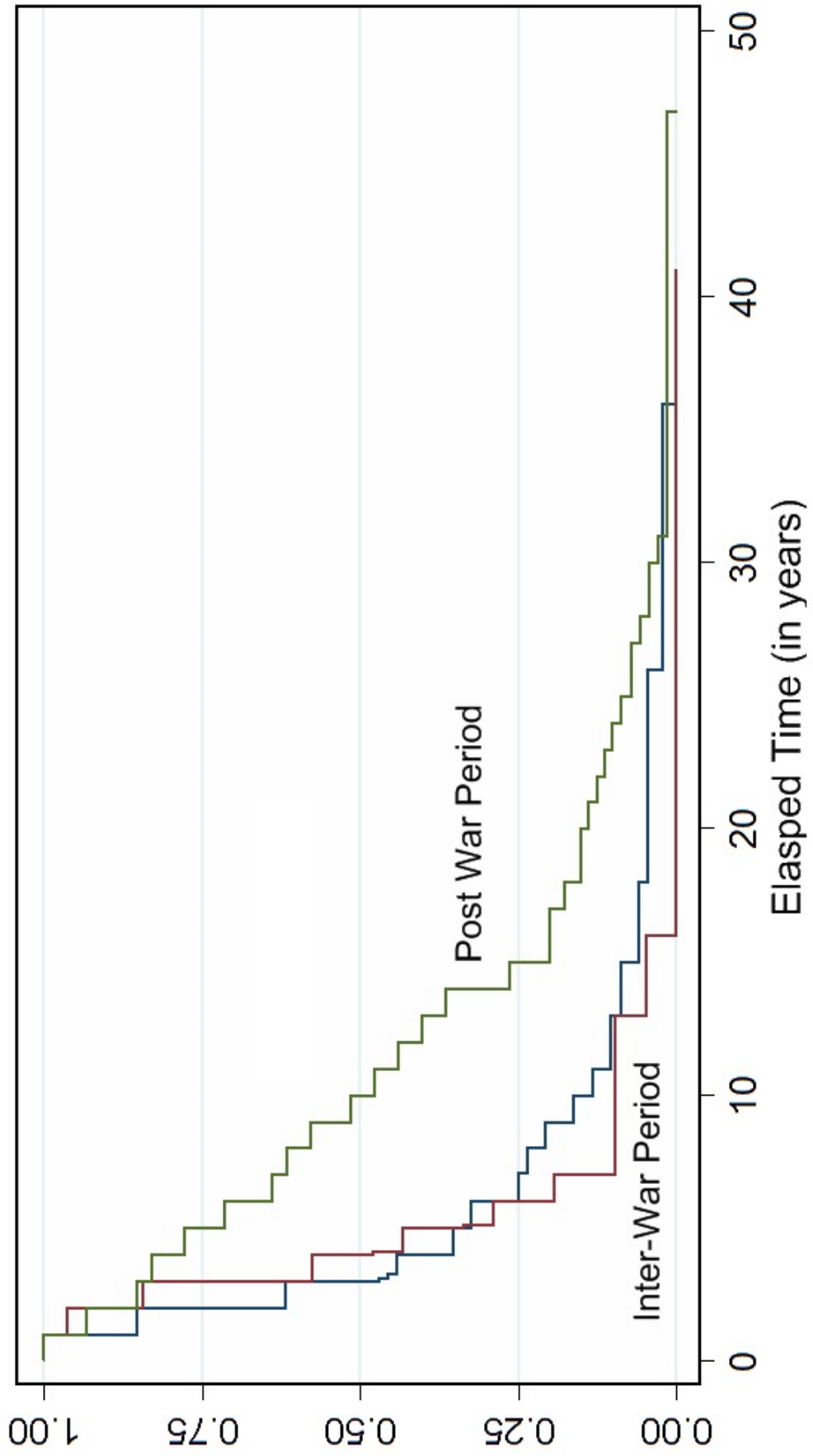


Figure 2: Kaplan Meier Estimates for Historical Periods



Table 1: Duration of Insurgency, Models 1-4

Variables	Model 1 (1800-1999)	Model 2 (1800-1999)	Model 3 (1800-1918)	Model 4 (1945-1999)
PRE-1945 PERIOD <sup>‡</sup>	0.88 * ** (0.166)	1.3 * ** (0.224)		
MATERIAL CAPACITY <sup>†</sup>		-0.146 (0.132)	-0.242 (0.225)	0.071 (0.19)
INTERVENTION (INSURGENT) <sup>‡</sup>		0.311 (0.36)	-1.078 (0.948)	1.745 * ** (0.405)
INTERVENTION (COUNTERINSURGENT) <sup>‡</sup>		-0.392 (0.271)	0.318 (0.436)	-0.595 (0.359)
DEMOCRACY		0.022 (0.013)	0.041* (0.02)	0.017 (0.019)
REGIME TRANSITION <sup>‡</sup>		-0.069 (0.329)	-1.151 (1.05)	0.494 (0.413)
DISTANCE <sup>†</sup>		-0.424 (0.386)	-0.767* (0.391)	-0.291 (0.606)
SIZE <sup>†</sup>		-0.344 * ** (0.106)	-0.675 * ** (0.121)	0.11 (0.202)
ELEVATION <sup>†</sup>		0.056 (0.049)	0.051 (0.062)	-0.002 (0.087)
Number of Subjects	169	169	69	79
Number of Failures	168	168	67	78
Time at Risk	1355	1355	331	890

\*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$ 

† Variable that was logged

‡ Dichotomous variable

Table 2: Duration of Insurgency, Models 5-7

Variables	Model 5 (1800-1918)	Model 6 (1800-1918)	Model 7 (1800-1944)
FOREIGN CONQUEST <sup>‡</sup>	0.47* (0.192)	0.603* (0.278)	0.627 * * (0.208)
WWII PARTISAN <sup>‡</sup>			0.096 (0.403)
MATERIAL CAPACITY <sup>†</sup>		-0.345 (0.24)	-0.195 (0.163)
INTERVENTION (INSURGENT) <sup>‡</sup>		-1.25 (0.775)	-0.476 (0.405)
INTERVENTION (COUNTERINSURGENT) <sup>‡</sup>		0.193 (0.433)	-0.283 (0.47)
DEMOCRACY		0.027 (0.022)	0.024 (0.016)
REGIME TRANSITION <sup>‡</sup>		-1.075 (1.031)	-0.569 (0.678)
DISTANCE <sup>†</sup>		-0.9* (0.392)	-0.877* (0.379)
SIZE <sup>†</sup>		-0.644 * ** (0.13)	-0.535 * ** (0.12)
ELEVATION <sup>†</sup>		0.042 (0.068)	0.066 (0.063)
Number of Subjects	69	69	95
Number of Failures	67	67	90
Time at Risk	331	331	465

\*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$

<sup>†</sup> Variable that was logged

<sup>‡</sup> Dichotomous variable

Table 3: Duration of Insurgency, Models 8-9

Variables	Model 8 (1945-1999)	Model 9 (1945-1999)
NEW STATE <sup>‡</sup>	-0.554 (0.32)	-0.517 (0.336)
MATERIAL CAPACITY <sup>†</sup>		0.067 (0.182)
INTERVENTION (INSURGENT) <sup>‡</sup>		1.684 * ** (0.409)
INTERVENTION (COUNTERINSURGENT) <sup>‡</sup>		-0.596 (0.359)
DEMOCRACY		0.016 (0.019)
REGIME TRANSITION <sup>‡</sup>		0.464 (0.423)
DISTANCE <sup>†</sup>		-0.287 (0.646)
SIZE <sup>†</sup>		0.141 (0.186)
ELEVATION <sup>†</sup>		-0.014 (0.089)
Number of Subjects	79	79
Number of Failures	78	78
Time at Risk	890	890

\*  $p \leq .05$ ; \*\*  $p \leq .01$ ; \*\*\*  $p \leq .001$

<sup>†</sup> Variable that was logged

<sup>‡</sup> Dichotomous variable