

Contingency, Inherency, and the Onset of Civil War

Mark I. Lichbach
mlichbach@gvpt.umd.edu

Christian Davenport
cdavenport@gvpt.umd.edu

David A. Armstrong II
darmstrong@gvpt.umd.edu
University of Maryland
3140 Tydings Hall
College Park, MD 20742 *

December 9, 2003

*Draft: Do Not Cite Without Permission

Abstract

Existing literature stresses that civil wars are *contingent* on unusual or irregular external circumstances that produce major ruptures from conventional politics. We argue that civil wars are inherent to the process of contentious politics, always one potential outcome of the power struggle between regimes and oppositions. This paper makes the case for inherency in four ways. First, we present a case study of the Nicaraguan civil war. Second, we criticize Fearon and Laitin (2003) and show how theories and empirical analyses of civil war onset must take account of prior internal wars. Third, we question the appropriateness of Fearon and Laitin's conflict proxy variables by offering a different operationalization based on actual conflict events. Finally, we demonstrate that the prior level of internal conflict is a significant predictor of civil war onset, and in some contexts, vastly more important than any of structural variables highlighted by Fearon and Laitin.

1 Introduction

At least fifty quantitative studies of civil war have appeared in the last five years, dramatically outnumbering the output of the previous three decades.¹ Major scholars have received large grants, penned widely-cited articles, and produced important books that explore the onset of civil war (the focus of this study); analyze characteristics of civil war such as its intensity, severity, magnitude, and duration; and study outcomes of civil war such as the likelihood of negotiated settlement, diverse types of termination, and reoccurrence. The academic community's efforts have been supported by the financial and policy-making worlds. This attention has born fruit. Compared to most parts of the field of quantitative conflict studies or contentious politics, studies of civil war have greater empirical depth and methodological sophistication.² In a relatively short amount of time, our understanding of civil war has been elevated a great deal.

This impressive literature, however, has generally ignored a central theoretical puzzle: the impact of prior state and dissident conflict on the onset of civil war.³ The puzzle

¹See Sambanis (2002) for a good review. There are major studies of onset (Fearon and Laitin 2003; Reynal-Querol 2002); intensity, severity, magnitude, and duration (e.g., Azam 2002; Hegre et al. 2001); the likelihood of negotiated settlement (e.g., Licklider 1995); the diverse types of termination (e.g., Sambanis 2000); and reoccurrence (e.g., Fearon and Laitin 2003). For the World Bank's involvement, see Collier et al. 2003.

²See Davenport 1995, 1999; Davenport, Mueller and Johnston 2004; Duff and McCamant 1976; Francisco 1996; Harff 2003; Hibbs 1973; Koopmans 1995; Krain 1997; Lichbach and Gurr 1981; Markus and Nesvold 1972; McAdam 1982; McCarthy, McPhail and Smith 1996; Mitchell and McCormick 1988; Moore 1998; Poe and Tate 1994; Poe, Tate and Keith 1999; Rasler 1996; Rummel 1997; Zanger 2000.

³Since researchers in this field often ignore one another, many such issues have been neglected (Lichbach 1992).

is rooted in Eckstein (1980) classic distinction between two competing perspectives or approaches –contingency and inherency - to conflict studies. Are civil wars *contingent* on unusual, aberrant, or irregular external circumstances (e.g., deprivations, discriminations, and geographic configurations) that produce discontinuous changes and major ruptures from conventional politics? Or, are civil wars *inherent* in the process of contentious politics itself, an outgrowth of power struggles between regimes and oppositions? In other words, can one say that contentious politics causes civil wars, because civil wars are *inherent* to self-generative conflict processes? Alternatively, should one dig deeper than manifest conflict and uncover the “real” or “root” causes of civil wars, reducing them to *contingent* outcomes of some unmoved mover? On this point, opinions vary significantly.

For Fearon and Laitin (2003), the exemplary study in this literature on which we shall focus, civil war is not clearly connected to previous contentious behavior – the prior mobilization and counter-mobilization of contending parties. While those adopting their model would probably agree that civil war involves a struggle for power between in-groups and out-groups, Fearon and Laitin hold that the secrets to understanding the onset of civil war lay in the contingencies that allow rebels to hide from authorities (e.g., rough terrain, access to borders, and a supportive local population) and, more importantly, in the contingencies that affect the relative strength or weakness of the insurgents (e.g., the government’s police and military capabilities and the reach of the government institutions into rural areas).

More traditional scholars of contentious politics (e.g., Lichbach 1995; McAdam, Tarrow and Tilly 2001), on the other hand, maintain that the secrets to understanding the onset of events such as civil war lay in the inherencies of state-societal interactions. These scholars would argue that governments use restrictions and violence to threaten, sanction and/or eliminate challengers - that is, they engage in political bans, arrests, and mass

killings. These scholars would also suggest that challengers, throughout society and not just in opposition movements, use various strategies of violent and non-violent collective action (e.g., terrorism, guerilla warfare, and protest) to signal dissatisfaction with leaders and/or their policies, to inflict damage on the existing authority structure, and to outright displace those in power. Eckstein (1964, 1) used the term “internal war” to refer to all such phenomena.⁴ In this view, civil wars are just one kind of conflict that emerges from everyday contentious interactions between governments and their challengers.

By not exploring inherency, we believe that Fearon and Laitin’s model excludes what is probably the most theoretically significant and empirically proximate explanation for civil war – prior lower-level conflicts. Our analysis thus focuses squarely on the problem of escalation to civil war. We also examine the intersection of inherency and contingency, or the interaction between diverse aspects of political-economic context and contentious politics. Our study thus moves the civil war literature away from a myopic and incomplete focus on the structural conditions favoring insurgency and toward a deeper understanding of how processes of repression and dissent become civil wars.

The organization of the paper is as follows. Section 2 presents Fearon and Laitin’s contingency theory of civil war. We also present their data, methodological techniques and measurement strategies. Perhaps the most prominent piece in the field to date, their research includes 161 countries from 1950 to 1999. Section 3 shows that the Fearon-Laitin model does not fit the case of Nicaragua and Section 4 generalizes our critique. Section 5 offers alternative models of inherency: independent contention, cumulative contention, relative contention, and contextualized contention. Section 6 tests the competing arguments about internal war dynamics by introducing our measures into Fearon and Laitin’s model and showing that their proxy measures of conflict are, in fact, not good proxies

⁴These could be defined as attempts to sustain or to change a government’s policies, rulers, or organization, by coercion, or the threat of violence.

for contentious politics. In Section 7, we demonstrate that our internal war measures are generally better predictors of civil war onset than all of Fearon and Laitin's independent variables. Section 8 investigates the interaction of their structural conditions and our conflict variables. We show that the best way to understand civil war is to examine the interaction of context and prior lower-level internal wars. Section 9 concludes with a call to join the new quantitative literature on civil war with the well-established quantitative literature on internal war.

2 Contingent Explanations of Civil War Onset: The Fearon-Laitin Model

Near the end of their important article, Fearon and Laitin (2003) disclose their belief about a certain process of guerrilla insurgency that drives civil war:

(i)f, under the right environmental conditions, just 500 to 2000 active guerrillas can make for a long-running, destructive internal war, then the average level of grievance in a group may not matter that much. What matters is whether active rebels can hide from government forces and whether economic opportunities are so poor that the life of a rebel is attractive to 500 to 2000 young men. Grievance may favor rebellion by leading nonactive rebels to help in hiding the active rebels. But all the guerrillas really need is superior local knowledge which enables them to threaten reprisal for denunciation (Fearon and Laitin 2003, 88).

The recent World Bank report echoes what has become the conventional wisdom of the field: "(r)egardless of its political agenda, a rebel group is a military organization" (Collier et al. 2003, 67) and hence "in terms of recruitment rebel groups usually look much more like an army than a political movement" (Collier et al. 2003, 68). Consequently,

(c)ivil war occurs if a group of people forms a private military organization

that attacks government forces and ordinary civilians on a large scale with a degree of persistence. The typical such organization has been (somewhere between) 500 and 5,000 members, although a few such as the Sudanese People's Liberation Army, range up to 150,000 (table 3.1). Globally, such organizations are rare, but they are relatively common in extremely poor countries. To understand the root causes of civil war we need to understand the formation of these private military organizations (Collier et al. 2003, 54).

This literature, in short, offers “a theory of the supply of arms to private military organization” (Collier et al. 2003, 90). If rebels can secure enough resources for the battle against authorities, and if they can escape the persecution of state authorities, civil war is likely to occur. The recent struggles in Angola and Sierra Leone, which were fueled by profits from the diamond trade, are examples of political-economistic civil wars in which “the root is the loot” (Collier et al. 2003, 79).

Guided by this theory, Fearon and Laitin and others adopting this approach have utilized a wide variety of variables. We focus on the ones that Fearon and Laitin (2003, 84) report in their latest research.⁵ While we refer the interested reader to their article for a more detailed discussion, a basic description of these variables is provided in our Table 1.

[INSERT TABLE 1 ABOUT HERE]

One set of Fearon and Laitin's variables derive from theories that the authors hope to falsify. Since some claim that civil wars are contingent on exogenous sources of “ethnicity, discrimination, and grievances” (Fearon and Laitin 2003, 78), their models include ethnic fractionalization, religious fractionalization, and Polity, a democracy variable. Another

⁵We obtained these data from the authors at: <http://www.stanford.edu/group/ethnic/publicdata/publicdata.html>.

set of variables derive from their “logic of insurgency,” the theory which they hope to support. Fearon and Laitin (2003, 79-82) maintain that the relative strength of regime and opposition are contingent on exogenous structural factors, and hence their models include GDP/capita, population, percentage mountainous land mass, noncontiguous state (a periphery separated from a center), oil (at least one-third of country’s export revenues come from fuel export), newly independent state, and political instability (changes in regime type).

This theory, quite simply, does not fit many civil wars. One important counter-example that appears in Fearon and Laitin’s data is Nicaragua.

3 The Nicaraguan Civil War

Fearon and Laitin’s argument, as we indicated, centers on something called an insurgent organization: the principal actor that initiates and engages in civil war, and hence the collectivity that authorities are trying to attack and/or destroy. In the Nicaraguan case, one insurgent group has received the bulk of the attention – the Sandinista National Liberation Front or the FSLN. Composed of armed revolutionaries, this organization came into being in Nicaragua on July 23, 1961 to oppose the dictatorship of the Somoza regime. The FSLN engaged in numerous military-style attacks against the regime, including border raids in Ocotal (near the Honduran border) and attacks in San Carlos (near the Costa Rican border) and in Managua over the period from 1974 to 1977. Most notably, the FSLN stormed the National Palace during a session of congress in 1978. Approximately 1500 members of the existing government were taken prisoner and held hostage for the exchange of 59 political prisoners (e.g., Central Intelligence Agency 1977; Ortega 1979)

One can argue that Fearon and Laitin’s structural factors played a role in increasing the capacity of the FSLN relative to the Nicaraguan authorities. For example, terrain appeared to matter a great deal. An extensive Maribios mountain range (the central

cordillera reaching about 8000 feet) as well as series of 25 volcanoes divided the country in two. On one side, towards the Pacific Ocean, there was Managua (the capital city), the largest concentration of population, and the flatlands (or open plains). On the other side, towards the Atlantic Ocean/Caribbean Sea, there was Bluefields (a small coastal city), sparsely populated, and with extensive tropical forests. The seclusion offered by the mountain range, volcanoes and forests as well as the easy access to neighboring Honduras, would prove to be extremely important for undermining “government police and military capabilities and the reach of government institutions into rural areas” (Fearon and Laitin 2003, 80). However, the mountains existed before there was a Nicaragua and hardly explain why the civil war began in 1978. To explain the onset of the civil war, we must turn to the dynamics of Nicaraguan internal wars.

Before 1978, the FSLN was engaged in a protracted but small guerilla campaign against the existing regime (e.g., Ortega 1979), who responded to the attacks with very precise tactical strikes on the people of Matagalpa, Masaya, Leon, Esteli, and Chinandega (Gentile 1989). In this earlier period, most of the population was not involved, which provided a major part of the explanation as to why there was no civil war before 1978: the battle was contained and society was still “governable” (del Cid 1979). Mass resistance did eventually become more widespread, destabilizing the regime and facilitating the FSLN’s challenge. In January 1978, while Somoza was out of the country, the death of Pedro Joaquin Chamorro Cardenal, a publisher of Nicaragua’s most popular newspaper *La Prensa* and a tireless reformist who consistently struggled within the existing political system, provoked mass protests among students, workers, farmers, and professionals. Even before 1978, however, students and the other protest groups had been slowly increasing their resistance to the regime (Wheelock 1986). Moreover, Indians in Masaya and Monimbo – near Managua – began to increase their anti-regime activity (Central Intelligence Agency 1977), further challenging authorities and providing a breeding ground

for resistance.

The expansion of resistance beyond the guerrilla insurgent organization – the FSLN – is what those in the field of social movements refer to as a growth in the “conflict cycle” (e.g., Porta 1995; Tarrow 1993; Tilly 1978).⁶ According to this work, an increase in internal war would affect many things (Hodges 1986). The rise in contentious politics signaled to the regime that it lacked popular support; prompted the regime to increase its repressive behavior even further – now targeting more of the population and giving people less of an opportunity to insulate themselves from the state-societal conflict; signaled to the FSLN that widespread dissatisfaction with the regime existed and that its insurgency would likely receive indirect (if not direct) support; prompted moderation in the FSLN’s platform so that it could acquire new members and build a broader coalition; led numerous actors in the country who were previously unsupportive of resistance, regime change, and/or the FSLN to move in these directions; and, finally, convinced numerous actors outside of the country that the existing regime lacked popular support and that the challenge to the authorities was both legitimate and likely to succeed.

In short, focusing on the military and predatory aspects of the key insurgent organization, without considering the wide-spread resistance manifest in internal wars and contentious politics, mis-specifies the etiology of the Nicaraguan civil war. While the FSLN was engaged in a battle with authorities, it was not until peasants, Indians, workers, and everyday citizens voted with their feet, fists, and firebombs that civil war began. The “onset” of the civil war must therefore be traced to a country made ungovernable by several conflict processes we will shortly model: the independent efforts of regime and opposition, the total scope of repression and resistance, and the complex interaction of authorities and challengers.

⁶Others would use different labels to address the same point (Skocpol 1979; Goldstone 1991).

Although we do not have the space to provide a thick description of the many Nicaraguan internal wars, Figure 1 offers some key stylized facts: five internal war time-series that run ten years before the onset of the 1978-1979 civil war. With the exception of violations of political rights, which seem, along with the Fearon and Laitin's variables, to remain relatively stable throughout the period, all of our measures of ongoing internal wars spike the year of the civil war. Dissident conflict - riots and anti-government demonstrations – and state conflict – political sanctions and violations of civil liberties – were precursors of civil war.

[Insert Figure 1 About Here]

This figure supports four important points. First, some of the variables highlighted by Fearon and Laitin do not vary over time. Second, the only ones that do vary over time (population and economic development) likely provide cues to societal and political actors that that the moment was appropriate to act. Third, if the structural constants and variables discussed by Fearon and Laitin were important, it was only because they refracted ongoing state-dissident interactions. Finally, the mobilizations and countermobilizations into various internal wars, consistent with the inherency perspective, eventually joined together and produced the Nicaraguan civil war. The civil war was indeed an outgrowth of long-standing political struggles.

4 A Critique of the Contingency Model

Whereas scholars of civil war focused on the remote macro-structural determinants of the resource problems of small-n guerrilla armies bent on predation, the traditional internal war literature specialized in the social mobilization and collective action problem of regimes and dissidents exemplified in Nicaragua (e.g., Lichbach 1995; Olson 1971; Tilly

1978). Even as they emphasized contingency, however, civil war scholars have found it impossible to study the onset of civil wars without exploring some mobilization dynamics.

Sambanis (2003) thus recognizes that “by isolating civil war in quantitative studies, we have made an arbitrary decision to consider one form of organized political violence in isolation from other forms” (Sambanis 2003, 46). Hence,

(c)oding war onset as a binary variable allows us to study the transition from an observation of ‘0’ (no war) to an observation of ‘1’ (war). The question we ask here is if all observations of ‘0’ are homogenous. It might be the case that country years coded as “0” in some cases hide substantial amounts of conflict, while in other cases these years are peaceful (Sambanis and Zinn 2002, 1).

Sambanis and Zinn are even more cognizant of the potential problem. They note that civil war “typically escalates from a process of lower-level violence” (Sambanis and Zinn 2002, 30) and hence that it is probably useful to “forge a link between the quantitative literature on civil war and the literature on social protest movements and contentious politics (Sambanis and Zinn 2002). Fox (2002, 3) follows basic inherency logic when he suggests that civil wars are really coup attempts, popular revolutions, break-ups of empires, secessionist movements by noncontiguous regions, and “peripheral insurgencies involving rural guerrilla bands operating typically near the state’s borders.” Hegre et al. (2001, 37) recognize that “the probability of civil war also depends on the country’s conflict history.” Even World Bank research highlights the fact that a “conflict trap,” where conflict does breeds conflict, exists (Collier et al. 2003, 84). Here, “(c)ivil war is fueled partly by the circumstances that account for the initial resort to large-scale organized violence, and partly by forces generated once violence has started and that tend to perpetuate it” (Collier et al. 2003, 53).

To take account of the inherency of civil wars and to move their investigations closer to the real struggles for power between regimes and oppositions, Fearon and Laitin thus

make two ad-hoc empirical adjustments to their theory. First, they advance several interpretations of their structural variables, seeing GDP/capita and mountainous terrain as “proxies” for a logic of insurgency, or in our terms, for regime-opposition dynamics. We will soon examine these empirical claims about “proxies” for conflict. Secondly, Fearon and Laitin include a variable called “previous war”⁷ in their regression analyses, implicitly advancing an inherency argument via “a control variable indexing whether the country had a distinct civil war ongoing in the previous year” (Fearon and Laitin 2003, 82-83). A similarly untheorized control variable, a measure of previous civil war activity (Collier, Hoeffler and Soderbom 2001), has been termed “peace duration.”⁸

These and other variables have produced important results. Fearon and Laitin (2003, 77) discover that the current global amount of civil wars “resulted from a steady, gradual accumulation of civil conflicts that began immediately after WWII” and hence the imbalance of outbreak over resolution led to “a steady, almost-linear accumulation of unresolved conflicts since 1945.” However, they also find that “the main factors determining both the secular trend and the cross-section variation in civil violence in this period are . . . conditions that favor *insurgency*” (italics in original). These two findings, reported as major by Fearon and Laitin, are quite interesting because they lead in different directions: The first implies inherency dynamics and the second contingency statics. What “main factors” account for the “steady, gradual” accumulation of ongoing civil wars? It cannot be the mountains. If civil wars are becoming longer, perhaps their self-generating dynamics have become more powerful.

More generally, Fearon and Latin offer a static theory in which a *presumably* latent civil war is suddenly turned by its environment into a manifest civil war. Their causal variables, however, do not change rapidly and hence cannot explain the sudden onset of

⁷This is defined as involvement in a distinct civil war in the previous period.

⁸As Sambanis notes above, given the infrequent and large-scale nature of civil war, this variable cannot capture the prior lower-level mobilization of authorities and challengers.

civil war. It is hard to believe that civil wars emerge de novo from sudden structural shifts, and Fearon and Laitin offer no evidence that such sudden shifts have gradually accumulated since World War II.

Studies of civil wars therefore do not adequately consider prior conflicts and historical mobilizations. While several authors note that civil wars emerge from such lower-level conflicts as riots, demonstrations, guerilla wars, and human rights violations, existing statistical models do not explicitly address this part of the etiology of civil war. Research has privileged contingency over inherency, structure over agency, context over mobilization, and statics over dynamics. To redress the imbalance, we turn to an earlier quantitative tradition.

5 The Onset of Civil War: Models of Inherency

Quantitative internal war studies were initiated by Eckstein (1964) and include seminal contributions by Bruce Russett, Rudolph Rummel, Charles Tilly, and Ted Gurr. The field has grown tremendously since these pioneers addressed state⁹ and societally-initiated¹⁰ conflict. In many ways, the current civil war literature represents a continuation of this earlier conflict literature: it utilizes similar concepts to describe the relevant behaviors (conflictual interactions within states between authorities and challengers), data (systematic compilations of events over time), theory (rationalism and structuralism),

⁹See Davenport 1995, 1999; Davenport, Mueller and Johnston 2004; Harff 2003; Hibbs 1973; Krain 1997; Markus and Nesvold 1972; McAdam 1982; Mitchell and McCormick 1988; O’Kane 1996; Poe and Tate 1994; Poe, Tate and Keith 1999; Rummel 1997; Zanger 2000.

¹⁰See Duff and McCamant 1976; Enders and Sandler 1993; Francisco 1996; Goldstone 1991; Koopmans 1995; Lichbach and Gurr 1981; McCarthy, McPhail and Smith 1996; Moore 1998; Rasler 1996.

independent variables¹¹ and method (qualitative, quantitative, and formal analyses to tease out structure and agency). In other ways, however, the recent civil war literature represents a setback to conflict studies. It forgets that forty years worth of scholarship established the validity of two interrelated claims.

First, while much current research isolates civil war as a distinct form of conflict, the pioneers of this field recognized that civil war was not the only internal war that threatened the existence of the state. The pioneers believed that civil war was a part of the complex of political violence, instability, and conflict that is nowadays referred to “contentious politics.” The early quantitative studies thus parsed and combined several different types of internal wars (e.g., Banks 1972; Hibbs 1973; Rummel 1966). We use this earlier literature to advance measures of opposition and regime mobilization that more directly address ideas implicit in the civil war literature.

Second, while much current research argues contingency – civil war is conditional on structures and contexts that produce actors’ preferences, beliefs, and resources - the pioneers recognized that civil war is part of a self-generative conflict process, where the dynamics of contention mobilize contending actors into the many different types of internal wars. The key issue then becomes the escalation of lower-level conflicts into the sort of deadly conflagrations that we label civil war. We use the mini-case study of Nicaragua and this earlier literature to suggest several plausible hypotheses about how on-going lower-level internal wars between challengers and authorities escalate to a more deadly civil war.

11

Causal models of political violence from the earlier literature, for example, included such factors as the level of democracy, the complexity of geographic terrain, and the level of economic development (e.g., Grossman 1991; Billon 2000; Gleditsch 2002).

5.1 Independent Contention

While the statics and dynamics of the political-economy may be related to the onset of civil war, the trajectory of previous state and societal conflicts below the threshold of civil war could directly influence the occurrence of civil war. Rather than a step-level change from the lowest scale of political violence to the highest, civil war could emerge from two separate streams of internal wars.

Hypothesis 1. Prior to civil war, state and/or societal mobilization are at elevated levels.

Since challengers are always the weaker party, increased levels of previous dissident mobilization probably enhance the subsequent likelihood of civil war. In line with all of the civil war literature and part of the internal war literature (e.g., Bates 2001), prior repression might decrease the likelihood of civil war, because it reduces the effectiveness of insurgent mobilization and diminishes the willingness of everyday citizens to engage in conflict activity. In line with other parts of the conflict literature, however, it is also possible that prior repression increases the likelihood of civil war because it draws rebels and everyday citizens alike into a violent struggle over political power (Sambanis 2000).

5.2 Cumulative Contention

An alternative expectation from the Nicaraguan case does not stress the independent influence of state and/or societal conflict, but rather emphasizes that the sum of all local internal wars eventually accumulates to a statewide struggle for the control of government.

Hypothesis 2. Prior to civil war, the total amount of state and dissident activity is at elevated levels.

This hypothesis highlights the general inability of either states or members of society to eliminate or deter the other from continuing to engage in contentious activity. Building on arguments advanced by Timasheff (1965); Gurr (1970); Benson and Kugler (1998),

there is no sudden, phase-shift in conflict behavior. Rather, in a Clausewitzian sense, internal war continues at another level along the aggregate spectrum of political violence.

5.3 Relative Contention

The first mechanism by which lower-level internal wars escalate to a civil war relies on the idea that there is no one-sided path to civil war: states and societal members engage in conflict activity on their own. The second mechanism relies on the idea that conflictual interactions accumulate to some gross amount of contentious activity: the total level of all political violence eventually gets out of hand. The relative contention mechanism suggests that the simultaneous mobilization of both states and oppositions produces civil war only when societal actors are relatively more mobilized. Otherwise dissidents, as usual, are crushed by the state.

Hypothesis 3. Prior to civil war, citizen mobilization will greatly outpace state mobilization.

This hypothesis probably comes closest to elaborating the Fearon-Laitin theory: the balance of power between regimes and oppositions, which can be shifted by various structural factors, is decisive. Our conception differs to the extent that it more explicitly attempts to operationalize the phenomenon of interest.

5.4 Contextualized Contention

Contingency effects are probably marginal because they can be deflected by the inherency of the conflict process. Inherency effects are probably more important, that is, because the chaos and complexity of internal wars overwhelm relatively fixed structural conditions. The older and larger quantitative internal war literature, however, does suggest that context is important because it refracts mobilization dynamics that are already underway. The combination of inherency and contingency is thus decisive: When context

prompts preexisting conflicts, a civil war can take place. If the context is not ripe for conflict escalation, low-level conflicts persist.

Hypothesis 4. Prior to civil war, citizen and state mobilization interacts with political-economic context to influence the likelihood of conflict escalation.

For instance, a country’s “political opportunity structure” (McAdam, McCarthy and Zald 1996) is often held responsible for the escalation of lower-level conflicts into more major conflagrations.

Of course, one could argue that violence does not necessarily escalate to civil war, regardless of context. The differences among internal wars could be differences of kind. In line with this, Kalyvas (1999, 244) Kalyvas suggests that “civil war violence is fundamentally different from contentious politics” and that that “civil war violence should be distinguished from violent collective action (such as riots and pogroms) because war structures choices and selects actors in fundamentally different ways than peace – even violent peace” (Kalyvas 1999, 245).

Null Hypothesis. Prior internal wars bear no relationship to subsequent civil wars.

The logic of contingency theories, more generally, seems to imply that there is no single scale of violence, or, equivalently, that there are no escalatory and de-escalatory dynamics to overwhelm structural determinants.

6 The Proxies for Internal War

As indicated above, Fearon and Laitin suggest that the key to civil war onset is the supply of insurgency. Hence, they are concerned with the deep forces or causal mechanisms behind dissident mobilization and state capacity - successful violent insurgencies and wide scale protest, on the one hand, and political repression and state control, on the other. Though Fearon and Laitin are very interested in actual dissident and state behavior, implying (2003, 80) that lower-level conflicts have a significant impact on the

onset of civil war, they make no direct attempt to assess it. Relying on highly aggregated and macro structural variables as “proxies” for the mechanisms by which dissidents and states mobilize coercive power, they suggest that rough terrain, outside military and financial support from neighboring countries, diasporas, and population improve a challenger’s military prospects. For example, Fearon and Laitin (2003, 76) argue that “economic variables such as per capita income matter primarily because they proxy for state administrative, military and police capabilities” and that “police and counterinsurgent weakness . . . is proxied by a low per capita income” (Fearon and Laitin 2003, 76). Others in this literature argue similarly: government “strength” is measured by the size of the economy and the size of the military (Elbadawi and Sambanis 2002), the ease with which challengers can coordinate with one another is measured by ethnic fractionalization (Collier, Hoeffler and Soderbom 2001), and state suppressive “capability” is measured by democracy (Hegre et al. 2001). In sum, this literature tries to explain civil wars without actually looking at other internal wars present in the country. The models are oblivious to the specific conflicts and contentious politics whose dynamics might ultimately drive the outbreak of a civil war.

Given that they are more readily available, the use of proxy variables such as GDP and topography is not surprising. Their use, however, is troublesome for three reasons. First, while data on conflict variables is frequently more difficult to obtain than data on macro structural conditions, such data are available. The literature on domestic conflict offers numerous variables that directly measure how the existing government defends the status quo relative to how challengers mobilize against the authorities (e.g., measures of state repression and dissident protest, respectively).

Second, more specific conflict variables are preferable to proxies (Sambanis 2003; Mack 2002). Proxy operationalizations are often problematic; for example, suppressive capability is not derivative of regime type. The proxy measures, moreover, are often invariant

over time and it is not clear how they could predict phenomena, like civil war, that do vary over time. Direct measures of conflict, in addition, offer a more detailed analysis of the factors in a country, for example the government's counterinsurgency efforts, that may precipitate civil war. Proxy variables are therefore useful for approximating a causal factor that cannot be measured in any other way. Effort should always be made to directly measure concepts, however, less we test approximations of abstractions, or mere shadows of our theories.¹²

Finally, while it is relatively easy for researchers to assert that their variables act as proxies for insurgency or conflict, it is an empirical question that remains unanswered in their work. Researchers who use proxies, however, should explore the validity of their proxies. For variables to function properly as proxies for other variables, they need to be linearly (though not perfectly) related (e.g., Wooldridge 2003). That is to say, there needs to be some reasonable correlation between the two variables; the higher the correlation, the better the proxy variable.

6.1 Proxy Variables and Conflict Variables: An Assessment

To begin our investigation of the inherency of civil wars, we thus examine the validity of the conflict proxy variables generally employed in the civil war literature. We employ conventional indicators of domestic/societal conflict and state/government repression.

¹²From a statistical point of view, coefficient estimates will be unbiased only if the estimated model includes all systematic elements of the true data generating process or if some very strict and unlikely assumptions are made about the relationship between the variable that is excluded (Wooldridge 2003). From a substantive standpoint, the coefficients on these variables are not nuisance parameters. We are very interested in the effect of conflict on the probability of civil war onset. The closer we get to capturing conflict, the better our understanding of civil wars.

Data on domestic conflict (e.g., riots and anti-government demonstrations) come from Banks' Cross-National Time-Series Data Archive (Banks 2001). Data on state conflict come from the *World Handbook of Political and Social Indicators* – specifically, the imposition of negative sanctions (i.e., “actions taken by the government to neutralize, to suppress, or to eliminate perceived threat to the security of the government, the regime, or the state itself” [Taylor and Jodice 1983, 6]; see Jodice [1985] for useful review),¹³ and

¹³The measure for repression is a combination of two variables. First, *political sanctions*. This category encompasses a diversity of governmental activities, all of them share the characteristic of constituting specific responses to a perceived security problem at the national level even though sanctions are sometimes carried out by subnational governmental units. An attempt has been made to exclude sanctions against criminal behavior that has no political relevance. This does not mean that organized crime or crime in the streets are unimportant or that they do not indicate a degree of social dissatisfaction. Rather, we have tried to maintain a focus on behavior that is directly political, i.e., behavior concerned with the distribution and use of political power in the polity (Taylor and Jodice 1985, 27-28). Second, we have censorship. The imposition of censorship includes actions by the government to limit, to curb or to intimidate the mass media, including newspapers, magazines, books, radio, and television. Typical examples of such action are the closing of newspapers or journals, the censoring of articles in the domestic press, and the controlling of dispatches sent out of the country (Taylor and Jodice 1985, 25).

Freedom House¹⁴ - violations of civil liberties and political rights (Karatnycky 1999).¹⁵ Descriptions of these measures and other conflict measures derived from them appear in Table 2.

[INSERT TABLE 2 ABOUT HERE]

Since we do not have data on all conflict variables for the full time-period, we conduct our analyses in three different ways. We investigate two sub-samples of the data: from 1950-1982, the years for which negative sanctions data are available, and from 1972-1999, the years for which Freedom House data are available. For both sub-samples we

¹⁴The *Freedom House* measure has recently been used as an indicator of political democracy but it was initially created and used to measure state repression and human rights (e.g., Goldstein 1986, 620;Stohl et al. 1986, 599; indeed, the U.S. State Department used it to develop their own human rights status reports (Scoble and Wiseberg 1981, 152) and Gastil (the creator of the measure) identifies that what they do at *Freedom House* is comparable to the work of other human rights organizations such as Amnesty International (Gastil cited in Scoble and Wiseberg 1981, 162). According to Gastil, “civil rights are the rights of the individual against the state, rights to free expression, to a fair trial; they are what most of us mean by freedom” (Gastil 1973, 5). The measure thus captures an outcome of a political process and allows one to evaluate whether or not a particular nation-state is “free” (i.e., not repressed in a negative rights manner). This does not capture the process by which one could achieve freedom, i.e., political democracy as conceived by Dahl, Schumpeter and others.

¹⁵In order to answer a series of 13 questions about rights, “a broad range of international sources of information, including both foreign and domestic news reports, NGO publications, think tank and academic analyses, and individual professional contacts” (Karatnycky 1999, 546) are consulted. From this information, a 7-point indicator is developed.

also created indicators of cumulative contention (state conflict plus dissident conflict) and relative contention (dissident conflict divided by state conflict). Finally, we examine the 1950-1999 period with our measure of societal conflict (for which we have the most complete data); this most closely approximates the Fearon and Laitin study. All state conflict variables and dissident conflict variables are standardized such that the mean within each country is 5 and the variance equals 1.

To test the argument that the three variables mentioned above – GDP/capita, the natural logarithm of population, and the natural logarithm of the percentage of the terrain that is mountainous - are adequate proxies for conflict, we assume that our conflict variables, generated from conflict-related data sources, accurately measure the lower-level conflicts that civil war scholars are trying to proxy. One possible test is to regress conflict variables on the GDP, population, and mountainous terrain variables to see if any of these variables are statistically significant. There is, however, a better way. We use a generalized additive model to test whether a linear model is as good as a model that allows the variables to take a non-parametric smoother, in this case a cubic spline (e.g., Beck and Jackman 1998; Fox 2002; Hastie and Tibshirani 1990).¹⁶ This test is important because proxy variables assume that relationships are linear in nature.

When each of our three basic conflict variables (state conflict 1950-1982, state conflict 1972-1999, and dissident conflict 1950-1999) is used as a dependent variable, the non-parametric model was significantly better (at $\alpha = 0.05$) than the competing linear model.

¹⁶For linear regression, the $E(Y|X) = b_0 + b_1X_1$. This assumes a linear relationship, which is exactly what we want to test. To properly test this relationship, we need a statistical estimation procedure that allows for non-linear relationships to be estimated where they exist. Generalized Additive Models allow for any type of non-linear relationship to be estimated between the variables of interest. In other words, the model does not make any particular assumptions about functional forms.

If allowed to take a cubic spline smooth, the deviance of the model versus the linear model is reduced significantly. Rather than presenting a table of coefficients, the relationships estimated by this technique are best considered graphically, as in Figure 2.

[INSERT FIGURE 2 ABOUT HERE]

The solid black lines represent the effect of the independent variable identified in the column on the dependent variable listed on the left-hand side of the figure. The dotted lines are 95% confidence intervals around the effect. The first graph in the first row, for example, shows the relationships between GDP/capita and state conflict from 1950-1982, controlling for population and mountainous terrain. Both population and mountainous terrain are unrelated to conflict, as the lines are flat and not significantly different from zero. While the relationship between GDP and state conflict looks complex, zero is never outside the confidence bounds and thus the relationship between GDP and conflict is not statistically significant. The second graph in the second row, for another example, shows the relationship between population and state conflict from 1972-1999, controlling for GDP and mountainous terrain. While this relationship is also complex, it also is not significantly different from zero. In fact, the entire collection of figures provides strong evidence that the variables commonly used as proxies for conflict bear no relationship, linear or otherwise, with our internal war measures.

Assuming that we have reasonable measurements of conflict,¹⁷ we have shown that the three variables used to proxy internal wars are not effective proxies. While these variables may be valid statistical correlates of the onset of civil war, their interpretive understandings and explanatory powers remain mysteries. If they are not acting as proxy variables for internal conflict, other causal mechanism must be at work. We now explore this possibility.

¹⁷See Zimmerman 1980 for useful review.

7 Replicating and Extending the Fearon-Laitin Model

Models 1, 5 and 9 in Table 3 replicate Fearon and Laitin (2003) original specification in our three subsamples.¹⁸ Our results are generally similar to their results; with very few exceptions, the same variables are statistically significant. For example, prior war is insignificant for all of the models in the early period while population and GDP/capita are significant across all models.

[INSERT TABLE 3 ABOUT HERE]

Models 2, 6, and 10 test Hypothesis 1 about independent contention. When our internal war variables are introduced, one finds strong support for the inherency argument. In the early period, societal conflict increases the probability of civil war; in the later period, state conflict reduces the probability of civil war onset; and in the full time-period, societal conflict exhibits a positive, significant relationship with civil war onset. When our conflict variables are entered into Fearon and Laitin's model, conflict proxy variables tend to remain statistically significant, albeit generally weaker in explanatory power. Since there is relatively little linear relationship between the actual conflict variables and the proxies, this is not surprising.¹⁹

¹⁸The new state variable is conspicuously absent from all of the models presented. When conflict is lagged one period, the first year of every state's series is missing. The new state variable then only has 87 observations and when considered for the sample for which all of the other independent variables are available, civil war onset no longer varies as a function of this variable. Onset is constant (0) for new state=1, thus this variable drops out of our models.

¹⁹For the internal war variables to absorb the explanatory power of the internal war proxies, there would need to be some multicollinearity among them.

Models 3 and 7 test Hypothesis 2 about cumulative contention. These results show that the cumulative effect of conflict is not particularly important to explaining the onset of civil war. In contradistinction to much of the conflict literature, there is no general law that connects the aggregate amount of political violence and social instability in a country to the eventual outbreak of a civil war. As per Hypothesis 1 - the independent contention argument - to discover the causes of civil war, one must disaggregate preexisting internal wars.

Must one also tease out their subtle interactions and combinations? Models 4 and 8 test Hypothesis 3, one measure of synergism we called relative contention. While it may seem that these three variables – societal conflict, the inverse of state conflict and societal conflict times inverse of state conflict are not insignificant, a Wald test shows that they are jointly significant in both the early and late models.²⁰ We conclude that the effect of dissident behavior on civil war onset is conditioned by state conflict: When states are repressive, dissident conflict changes the probability of civil war; when states do not repress their citizens, dissident conflict changes the probability differently. While the simple arithmetic sum of state and dissident conflicts does not predict civil wars – the cumulative contention hypothesis is falsified - a more subtle combination of internal wars, one that reflects the balance of social forces, has predictive power (Gurr 1970).

[INSERT TABLE 4 ABOUT HERE]

7.1 Changes in Probability

Although independent variables may be statistically significant, they may not contribute much substantively to the explanation of the dependent variable. We thus evaluate the substantive importance of each of our independent variables by calculating the change in predicted probability that it produces as it changes from its minimum to its

²⁰Model 2: $\chi^2(3)=9.06$, $p> \chi^2=0.0285$; Model 6: $\chi^2(3)=9.06$, $p> \chi^2=0.0290$.

maximum, holding the other independent variables at their means or medians.²¹ This approach provides a sense of the total possible impact of an independent variable through its range. These changes in probability are presented in Table 4 for models 1-10.

For Fearon and Laitin's variables, these changes in probability from minimum to maximum show consistency across the different models, including those with and without our internal war variables. For example, in model 2, holding all other variables at their centers, the societal conflict variable exhibits the largest total effect of roughly 0.09, nearly three times larger than the next largest effect, population at 0.035. The magnitude of societal conflict is tempered in the model utilizing the full time-period (model 10), but this variable generally continues to be the one with the greatest ability to change probabilities of civil war as it moves from its minimum to its maximum. In model 6, for another example, societal conflict is not significant, but state conflict is significant. Holding all other variables constant at their centers and in line with existing expectations, increasing state repression reduces the probability of civil war by 0.042. While this is not the largest effect in that model, it is second to population's 0.055.

Perhaps the most interesting result concerns our relative contention measure. To better understand how the probability of civil war onset is changed by relative contention, it is useful to look at Figure 3, which analyzes the overall effect of the two internal war variables and their combinations. This figure displays the probability of civil war onset for the state-dissident conflict combinations of models 4 and 8. Since our measure of relative conflict is a multiplicative term ($\text{dissidents} \times \text{states}^{-1}$), we feel it necessary, from

²¹In linear regression, it is sufficient to hold all other variables constant, as the effect is the same over the entire independent variable space. With non-linear models, to understand the effect of any variable, other variables must be held constant at a specific value, usually some measure of central tendency. The change in probabilities any one variable exhibits changes based on the values of the other variables.

a statistical point of view, to include both of the constituent terms in the model. The values of the coefficients in the model present effects and standard errors at specific values of the independent variables.

[INSERT FIGURE 3 ABOUT HERE]

Figures 3A and 3B display, for the early and late time periods respectively, state and dissident conflict on the two horizontal axes and the probability of civil war onset on the vertical axis. Figure 3A shows that from 1950-1982, simultaneously decreasing state conflict and increasing dissident conflict can change the probability of civil war onset by nearly 1. If there were no interactive effect, the plane would be perfectly flat. Since this is not the case, there is an interactive effect between state and dissident activity which is consistent with the “balance” arguments behind the relative contention hypothesis. The same is true for figure 3B. When state conflict is at its minimum value in 1972-1999, however, much less dissident conflict is required to drastically increase the probability of civil war onset. In other words, as state conflict increases, the probability of civil war decreases rapidly.

8 Exploring Interactive Relationships

Hypothesis 4 is perhaps the most nuanced explanations of civil war offered by the contentious politics literature. Civil war thus should emerge out of the intersection of mobilization (inherency) and context (contingency). The wrong economic and political conditions (e.g., poverty, repression, state-breakdown) do not generate civil war *de novo*; by mobilizing actors, they escalate protracted low-level internal wars into deadly civil war. To explore this possibility, we investigate how the interaction between Fearon-Laitin structural conditions and our measure of internal wars affect the onset of civil war. Table 5 presents the Fearon and Laitin (2003) models with internal war variables and interactions

between internal war variables and structural variables - GDP/capita, % Mountainous, New State, Instability, Ethnic Fractionalization and Religious Fractionalization. For the early period (model 11) and the late period (model 12) we employ state conflict; for the entire time period (model 13) we employ dissident conflict.

[INSERT TABLE 5 ABOUT HERE]

The results indicate that previous wars are significant in the later time period and the full sample, but not in 1950-1982. While the oil exporter variable is significant only in model 13 (the full time-period), non-contiguous state and Polity do not attain statistical significance in any model. These results closely mirror those of the previous models without interaction terms.

[INSERT FIGURE 4 ABOUT HERE]

As the coefficients and standard errors for all of the other terms are contingent on the values of other variables in the model, the best way to consider the effects of these variables is again graphically (e.g., Friedrich 1982; Gill 2001; Golder 2003). Figure 4 thus presents graphical representations of the effects of the structural variables (rows) contingent on the level of conflict (x-axis). Each graph is interpreted similarly to Figure 2: the solid black line represents the logistic regression coefficient for that variable given that particular level of conflict; the dotted lines are point wise 95% confidence intervals for the effect; and a horizontal gray line represents the zero line. Imagine taking one particular value of conflict on the x-axis. If the zero-line lays inside the confidence bounds, at that level of conflict the structural variable (row) has no statistically significant effect on the onset of civil war. If zero (the solid gray line) lies outside the confidence bounds at this level of conflict, the effect is statistically significant. We consider six of Fearon and Laitin's variables.

8.1 GDP/capita

The first row of Figure 4 shows that GDP has a statistically significant (negative) impact for at least some values of conflict. The impact is significant for smaller values of conflict in model 13, while it is significant for middle-range conflict in the other two models.

8.2 Population

This variable has a positive impact in middle-range values of conflict in models 11 and 13. One possible explanation is that with low levels of preexisting conflict, civil war is unlikely no matter what the population. At higher levels of conflict, civil war is nearly inevitable regardless of the size of the population. When a country is experiencing moderate levels of conflict, the larger the population, the greater the probability of experiencing a civil war, all other things being equal. Larger populations could intensify the usual competition among groups and the animosity between citizens and governments that characterize internal wars. In contrast, population's effect is strong over nearly the entire range of conflict for model 12.

8.3 Instability

While instability approaches statistical significance in the middle range of conflict, it remains insignificant for all time-periods considered. A similar logic to the population argument would apply here as well. Since the result is only significant in one of five models, it may be inappropriate, however, to make much of this finding.

8.4 Ethnic and religious fractionalization

As per Fearon and Laitin, these have no significant effects for any value of conflict.

8.5 Mountainous

The percent of mountainous terrain is significant for lower levels of conflict in model 12 (state conflict 1972-1999). This means that when state conflict is low, the greater the percentage of terrain that is mountainous in nature, the greater the possibility that a civil war will break out, all other things being equal. However, this result does not seem to be particularly robust across models; generalizing this one finding may be again inappropriate.

In sum, our internal war variables modify Fearon and Laitin's relationships in crucial ways. The structural variables in the original model influence the probability of civil war for certain, often small, ranges of contentious behavior. This makes perfect sense: when there is absolutely no conflictual mobilization, there is absolutely no reason to believe that lower GDP or higher population will increase the probability of civil war. While we have shown that conflict, by itself, is an important explanation of the onset of civil war, we have also shown that conflict sets the political context that makes structural variables matter.

9 Conclusion

We set out to investigate the power of the inherency explanation of civil war – that prior internal wars matter - compared to the contingency explanation – that the political-economic contexts of insurgency matter. Our reanalysis of the data utilized by one of the most prominent contingency researchers (Fearon and Laitin 2003) reveals that explanations of civil war onset must include measures of prior internal wars. Lagged state and dissident conflict have statistically significant influences on the likelihood of civil war and their impacts generally outweigh that of the contextual variables traditionally employed in the civil war literature. Our findings also suggest that the best use of

political-economic factors is not as proxy measures for conflict behavior and mobilization but rather as contextual factors than can help escalate prior internal wars into a civil war. Our research, on the one hand, is a continuation of the existing civil war literature, which at least in principle recognizes the importance of prior conflicts, as well as a departure from this work, as we directly incorporate measures of contentious activity into our statistical examinations.

One obvious counterargument to our analysis is that our internal war variables are no explanation of civil war at all: Aren't these factors endogenous to the conflict process? If prior internal wars explain civil wars, then what, after all, explains prior internal wars? Laitin and Fearon (and others) sought contingency for good methodological reasons. While contingent variables, so the claim might go, produce conclusive comparative-static experiments, our inherency variables raise thorny theoretical, conceptual, and operational issues.

We are tempted to reply with a tale from Geertz (1973, 28-29): "There is an Indian story – at least I heard it as an Indian story – about an Englishman who, having been told that the world rested on a platform which rested on the back of an elephant which rested in turn on the back of a turtle, asked (perhaps he was an ethnographer; it is the way they behave), what did the turtle rest on? Another turtle. And that turtle? "Ah, Sahib, after that it is turtles all the way down." Our reply, therefore, would be: Prior internal wars are not contingent on environmental conditions as much as they are inherent to internal war. It is contentious politics all the way down.

To explain civil war, we would thus reorient scholarship away from investigations of civil war occurrence and toward the investigation of conflict escalation: Under what conditions do low-level internal wars become deadly civil wars? We would also require a theory of conflict de-escalation: Under what conditions do deadly civil wars become less conflictual internal wars? In the field of contentious politics, these topics have been

addressed for quite some time. Indeed, students of civil war should turn to theories of conflict and contentious politics at least as often as they turn to theories of neorealism and neoliberalism. These two literatures have ignored one another for too long.

This last point returns us to the larger purpose behind our research. Political economists and political scientists studying civil war have not interacted with political scientists, sociologists, and historians engaged in the study of domestic conflict. Recent efforts to build the field of conflict studies or contentious politics have been theoretical McAdam, Tarrow and Tilly (2001). Not since the early 1960's, however, has field building been conceived as a problem of solidifying the empirical problem domain. We believe that quantitative civil war studies can serve as the center piece, focal point, and analytical anchor of other quantitative internal war studies, thereby bridging the various research communities.

We thus seek to return to the pioneering and now neglected work of the Ancients - Russett, Eckstein, Rummel, Tilly, and Gurr - but this time with the improved methodological capabilities of the Moderns - Fearon and Laitin. The only way to understand civil war is to build a field of contentious politics that includes its long-term members as well as its more recent additions. In isolation, each will only provide a partial understanding of conflict.

References

- Azam, Jean Paul. 2002. "Looting and Conflict between Ethnoregional Groups: Lessons for State Formation in Africa." *Journal of Conflict Resolution* 46(1):131–153.
- Banks, Arthur S. 1972. "Patterns of Domestic Conflict: 1919-1939 and 1946-1966." *Journal of Conflict Resolution* 16(1):41–50.
- Banks, Arthur S. 2001. "Cross-National Time-Series Data Archive." Binghamton: Center for Social Analysis.
- Bates, Robert H. 2001. *Prosperity and Violence: The Political Economy of Development*. New York: Norton University Press.
- Beck, Neal and Simon Jackman. 1998. "Beyond Linearity by Default: Generalized Additive Models." *American Journal of Political Science* (42):596–627.
- Benson, Michelle and Jack Kugler. 1998. "Power Parity, Democracy, and the Severity of Internal Violence." *Journal of Conflict Resolution* 42(2):196–209.
- Billon, Philippe Le. 2000. "The Political Ecology of Transition in Cambodia 1989-1999: War, Peace and Forest Exploitation." *Development and Change* 31:785–805.
- Central Intelligence Agency. 1977. "Nicaragua: The Making of U.S. Policy, 1978-1990." Digital National Security Archives: <http://nsarchive.chadwyck.com/niintro.htm>.
- Collier, Paul, Anke Hoeffler and Mans Soderbom. 2001. "On the Duration of Civil War." World Bank, Developmental Research Group.
- Collier, Paul, Lani Elliott, Havard Hegre, Anke Hoeffler, Marta Reynal-Querol and Nicholas Sambanis. 2003. "Breaking the Conflict Trap Civil War and Development Policy." Policy Research Report, World Bank.

- Davenport, Christian. 1995. "Multi-Dimensional Threat Perception and State Repression: An Inquiry Into Why States Apply Negative Sanctions." *American Journal of Political Science* 39(3):683–713.
- Davenport, Christian. 1999. "Human Rights and the Democratic Proposition." *Journal of Conflict Resolution* 43(1):92–116.
- Davenport, Christian, Carol Mueller and Hank Johnston, eds. 2004. *Mobilization and Repression*. University of Minnesota Press.
- del Cid, Luis Eduardo. 1979. "Por Que Cayo La Dinastia Somocista." *Estudios Centroamericanos* 34(369-379):699–708.
- Duff, Ernest and John McCammant. 1976. *Violence and Repression in Latin America*. New York: Free Press.
- Eckstein, Harry. 1980. Theoretical Approaches to Explaining Collective Political Violence. In *Handbook of Political Conflict: Theory and Research*, ed. Ted Robert Gurr. New York: Free Press.
- Eckstein, Harry, ed. 1964. *Internal War: Problems and Approaches*. New York: The Free Press of Glencoe.
- Elbadawi, Ibrahim and Nicholas Sambanis. 2002. "How Much War Will We See? Explaining the Prevalence of Civil War." *Journal of Conflict Resolution* 46(3):307–334.
- Enders, Walter and Todd Sandler. 1993. "The Effectiveness of Antiterrorism Policies: A Vector-Autoregression-Intervention Analysis." *American Political Science Review* 87(4):829–844.
- Fearon, James and David Laitin. 2003. "Ethnicity, Insurgency and Civil War." *American Political Science Review* 97(1):75–90.

- Fox, John. 2002. *An R and S-Plus Companion to Applied Regression*. Thousand Oaks: Sage Publications.
- Francisco, Ron. 1996. "Coercion and Protest: An Empirical Test in Two Democratic States." *American Journal of Political Science* 40(4):1179–1204.
- Friedrich, Robert J. 1982. "In Defense of Multiplicative Terms in Multiple Regression Equations." *American Journal of Political Science* 26(4):797–833.
- Gastil, Raymond. 1973. "The New Criteria of Freedom." *Freedom at Issue* 17(January-February).
- Geertz, Clifford. 1973. *The Interpretation of Cultures*. New York: Basic Books.
- Gentile, William Frank. 1989. *Nicaragua*. New York: W.W. Norton and Company Ltd.
- Gill, Jeff. 2001. "Interpreting Interactions and Interaction Hierarchies in Generalized Linear Models: Issues and Applications." Presented at the Annual meeting of the American Political Science Association.
- Gleditsch, Kristian. 2002. *All International Politics is Local: The Diffusion of Conflict, Integration, and Democratization*. Ann Arbor: University of Michigan Press.
- Golder, Matt. 2003. "Electoral Institutions, Unemployment and Extreme Right Parties: A Correction." *British Journal of Political Science* 33(3):525–534.
- Goldstein, Robert. 1986. "The Limitations of Using Quantitative Data in Studying Human Rights Abuses." *Human Rights Quarterly* 8.
- Goldstone, Jack. 1991. *Revolution and Rebellion in the Early Modern World*. Berkeley: University of California Press.

- Grossman, Herschel I. 1991. "A General Equilibrium Model of Insurrections." *The American Economic Review* 81(4):912–21.
- Gurr, Ted. 1970. *Why Men Rebel*. Princeton: Princeton University Press.
- Harff, Barbara. 2003. "No Lessons Learned from the Holocaust: Assessing Risks of Genocide and Political Mass Murder Since 1955." *American Political Science Review* 97(1):57–74.
- Hastie, Trevor and Robert Tibshirani. 1990. *Generalized Additive Models*. New York: Chapman and Hall.
- Hegre, Havard, Tanja Ellingsen, Scott Gates and Nils Peter Gleditsch. 2001. "Toward a Democratic Civil Peace? Democracy, Political Change and Civil War, 1916-1992." *American Political Science Review* 95:33–48.
- Hibbs, Douglas. 1973. *Mass Political Violence*. New York: Wiley.
- Hodges, Donald. 1986. *Intellectual Foundations of the Nicaraguan Revolution*. Austin: University of Texas Press.
- Jodice, David. 1985. *Political Risk Assessment: An Annotated Biography*. Westport: Greenwood Press.
- Kalyvas, Stathis. 1999. "Wanton and Senseless? The Logic of Massacres in Algeria." *Rationality and Society* 11:243–285.
- Karatnycky, Adrian, ed. 1999. *Freedom in the World: The Annual Survey of Political Rights and Civil Liberties, 1998-1999*. New Brunswick: Transaction Publishers.
- Koopmans, Ruud. 1995. *Democracy from Below: New Social Movements and the Political System in West Germany*. Boulder: Westview Press.

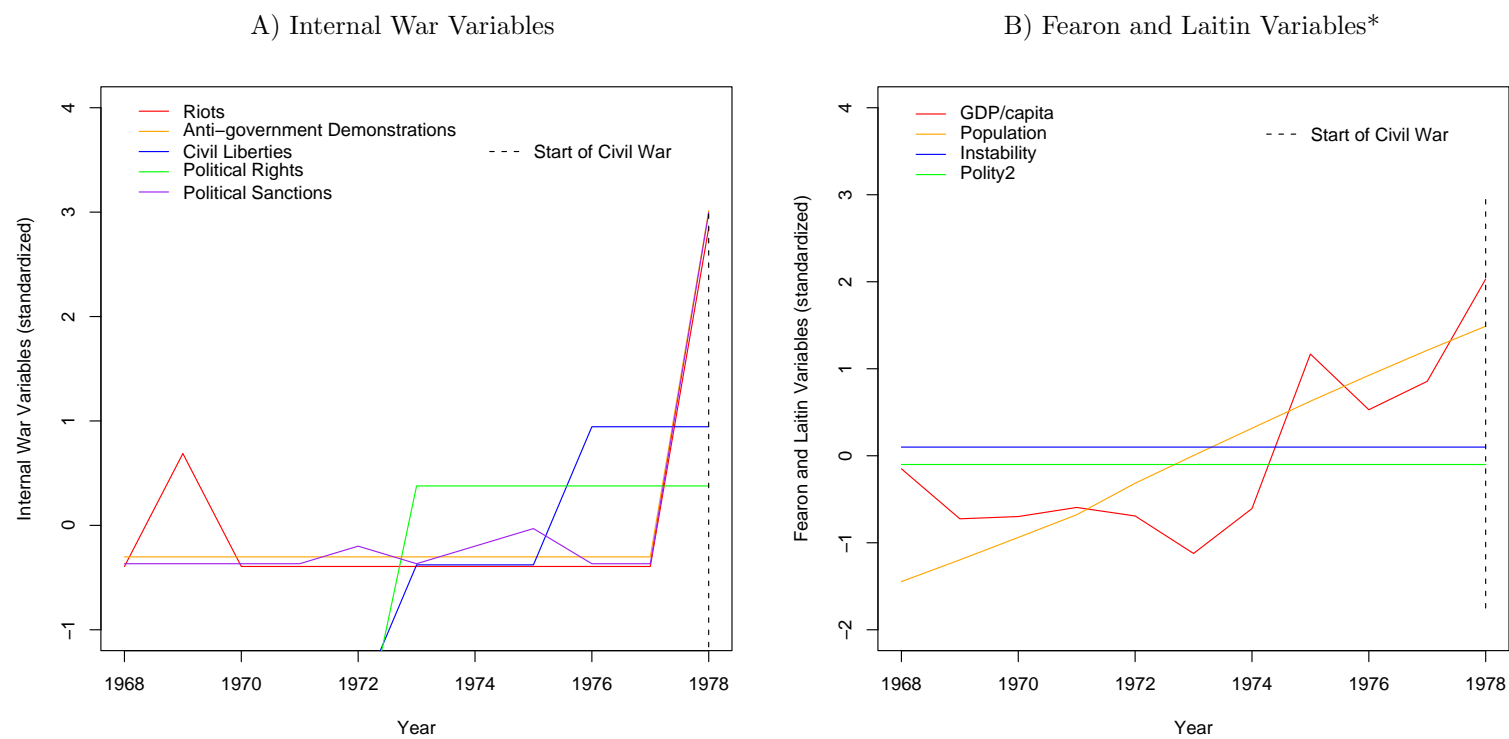
- Krain, Matthew. 1997. "State-Sponsored Mass Murder: A Study of the Onset and Severity of Genocides and Politicides." *Journal of Conflict Resolution* 41(3):331–360.
- Lichbach, Mark. 1995. *The Rebel's Dilemma*. Ann Arbor: University of Michigan Press.
- Lichbach, Mark Irving. 1992. "Nobody Cites Nobody Else: Mathematical Models of Domestic Political Conflict." *Defense Economics* 3:341–357.
- Lichbach, Mark and Ted Gurr. 1981. "The Conflict Process: A Formal Model." *Journal of Conflict Resolution* 25:3–29.
- Licklider, Roy. 1995. "The Consequences of Negotiated Settlements in Civil Wars, 1945–1993." *American Political Science Review* 89(3):681–90.
- Mack, Andrew. 2002. "Civil War: Academic Research and the Policy Community." *Journal of Peace Research* 39(5):515–525.
- Markus, Gregory and Betty Nesvold. 1972. "Government Coerciveness and Political Instability: An Exploratory Study of Cross-National Patterns." *Comparative Political Studies* 5:231–243.
- McAdam, Doug. 1982. *Political Process and the Development of the Black Insurgency, 1930-1970*. Chicago: The University of Chicago Press.
- McAdam, Doug, John McCarthy and Mayer Zald, eds. 1996. *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*. Cambridge: Cambridge University Press.
- McAdam, Doug, Sidney Tarrow and Charles Tilly. 2001. *Dynamics of Contention*. Cambridge: Cambridge University Press.

- McCarthy, John, Clark McPhail and Jackie Smith. 1996. "Images of Protest: Dimensions of Selection Bias in Media Coverage of Washington Demonstrations, 1982, 1991." *American Sociological Review* 61:468–499.
- Mitchell, Neil J. and James M. McCormick. 1988. "Economic and Political Explanations of Human Rights Violations." *World Politics* 40:476–498.
- Moore, Will H. 1998. "A Repression and Dissent: Substitution, Context and Timing." *American Journal of Political Science* 45(3):851–873.
- O'Kane, Rosemary. 1996. *Terror, Force and States: Path From Modernity*. Brookfield: Edgar Elgar Publishing Company.
- Olson, Mancus. 1971. *The Logic of Collective Action*. Cambridge: Harvard University Press.
- Ortega, Humberto Saavedra. 1979. *50 Anos de lucha Sandinista*. Managua: Ministerio del Interior.
- Poe, Steven and C. Neal Tate. 1994. "Repression of Personal Integrity Rights in the 1980's: A Global Analysis." *American Political Science Review* 88:853–872.
- Poe, Steven, C. Neal Tate and Linda Camp Keith. 1999. "Repression of the Human Right to Personal Integrity Revisited: A Global, Cross-National Study Covering the Years 1976-1993." *International Studies Quarterly* 43:291–313.
- Porta, Donatella Della. 1995. *Social Movements, Political Violence and the State: A Comparative Analysis of Italy and Germany*. New York: Cambridge University Press.
- Rasler, Karen. 1996. "Concessions, Repression, and Political Protest." *American Sociological Review* 61(1):132–152.

- Reynal-Querol, Marta. 2002. "Ethnicity, Political Systems, and Civil Wars." *Journal of Conflict Resolution* 46(1):29–54.
- Rummel, Rudolph J. 1966. "Dimensions of Conflict Behavior within Nations: 1946-1959." *Journal of Conflict Resolution* 10(1):65–73.
- Rummel, Rudolph J. 1997. *Power Kills*. New Brunswick: Transaction Publishers.
- Sambanis, Nicholas. 2000. "Partition as a Solution to Ethnic War An empirical Critique of the Theoretical Literature." *World Politics* 52(4):437–83.
- Sambanis, Nicholas. 2002. "A Review of Recent Advances and Future Directions in the Literature on Civil War." *Defence and Peace Economics* 14(3):215–243.
- Sambanis, Nicholas. 2003. "Expanding Economic Models of Civil War Using Case Studies." Manuscript.
- Sambanis, Nicholas and Annalisa Zinn. 2002. "The Escalation of Self-Determination Movements: From Protest to Violence." Prepared for Presentation at the Annual Meeting of the American Political Science Association.
- Scoble, Harry and Lori Wiseberg. 1981. Problems of Comparative Research in Human Rights. In *Global Human Rights: Public Policies, Comparative Measures and NGO Strategies*, ed. Ned P. Nanda, James R. Scarritt and George W. Shepherd. Boulder: Westview Press.
- Skocpol, Theda. 1979. *States and Social Revolutions: A Comparative Analysis of France, Russia, and China*. New York: Cambridge University Press.
- Stohl, Michael, David Carleton, George Lopez and Stephen Samuels. 1986. "State Violation of Human Rights: Issues and Problems of Measurement." *Human Rights Quarterly* 8:592–606.

- Tarrow, Sidney. 1993. "Cycles of Collective Action: Between Moments of Madness and the Repertoire of Contention." *Social Science History* 17(2):281–308.
- Taylor, Charles and David Jodice. 1983. *World Handbook of Political and Social Indicators III*. New Haven: Yale University Press.
- Taylor, Charles L. and David A. Jodice. 1985. *World Handbook of Political and Social Indicators, Volume III Codebook*. Ann Arbor: Inter-University Consortium for Political and Social Research.
- Tilly, Charles. 1978. *From Mobilization to Revolution*. Massachusetts: Addison-Wesley.
- Timasheff, Nicholas. 1965. *War and Revolution*. New York: Sheed and Ward.
- Wheelock, Jamie Roman. 1986. *Vanguardia y Revolucion en las Sociedades Perifericas*. Mexico: Siglo Veintiuno Editores.
- Wooldridge, Jeffrey M. 2003. *Introductory Econometrics: A Modern Approach*. 2 ed. Thompson/South-Western.
- Zanger, Sabine C. 2000. "A Global Analysis of the Effect of Political Regime Changes on Life Integrity Violations, 1977-1993." *Journal of Peace Research* 37(2):213–233.
- Zimmerman, Ekhart. 1980. Macro-comparative Research on Political Protest. In *Handbook of Political Conflict*, ed. Ted R. Gurr. New York: Free Press.

Figure 1: Internal Wars in Nicaragua, 1973-1984



* The other variables in Fearon and Laitin's model do not vary within countries, only between countries. Therefore, these measures are all constant for Nicaragua and have been excluded from the graph.

Table 1: Names and Definitions of Fearon and Laitin Variables

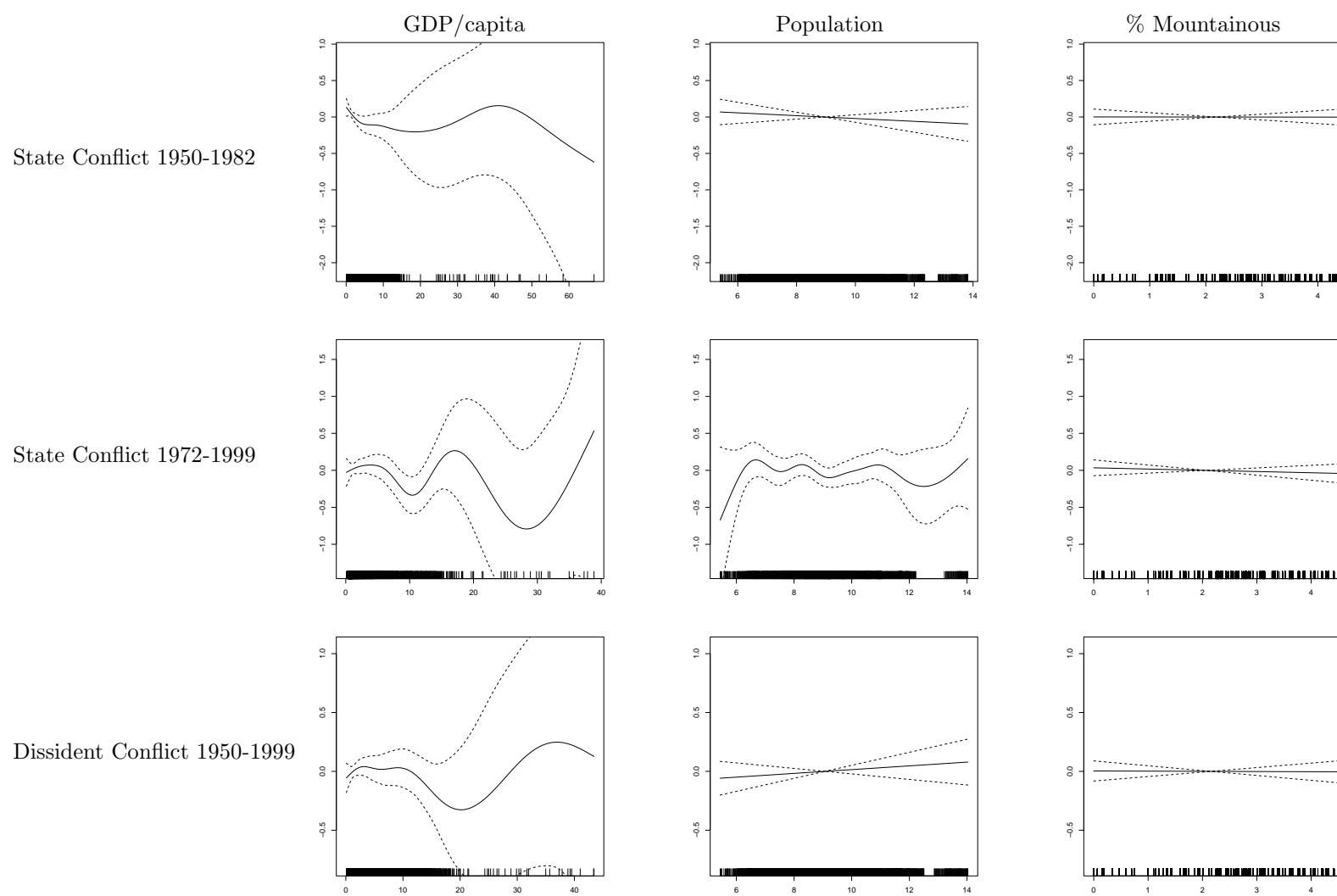
Variable	Definition
Previous War	Coded 1 if a country was involved in a distinct civil war in the previous period, zero otherwise.
Ethnic Fractionalization	The probability that any two individuals drawn at random from a country will be of the same ethnolinguistic group.
Religious Fractionalization	The probability that any two individuals drawn at random from a country will be of the same religious group.
Polity2 _{t-1}	-10 (autocratic) to 10 (democratic) scale of regime type from PolityIV. This measure is lagged one period.
GDP/capita _{t-1}	Gross Domestic Product per capita, lagged one period
Population _{t-1}	Natural logarithm of Total Population (World Bank) lagged one period.
% Mountainous	Natural logarithm of the estimated % of the entire land mass that is mountainous in nature.
Noncontiguous State	Coded 1 if the state has a territorial base separated by distance or water from the state's center, zero otherwise.
Oil	Coded 1 if greater than one-third of the country's export revenues came from fuel export in that year, zero otherwise.
New State	Coded 1 if the state is in its first or second year of independence, zero otherwise.
Instability _{t-1}	Coded 1 if the country experienced a change of greater than three points in the polity index in any of the three years prior to the year in question, zero otherwise.

Adopted from Fearon and Laitin (2003).

Table 2: Names and Definitions of Conflict Variables in Models

Variable	Definition
Riots (Banks) 1950-1999	Any violent demonstration or clash of more than 100 citizens involving the use of physical force.
Anti-government demonstrations (Banks) 1950-1999	Any peaceful public gathering of at least 100 people for the primary purpose of displaying or voicing their opposition to government policies or authority, excluding demonstrations of a distinctly anti-foreign nature.
Civil Liberties (<i>Freedom House</i>) 1972-1999	1 (better) to 7 (worse) scale of a state's respect of its citizens' civil liberties. See Karatnycky (1999) for greater detail and the checklist on which the countries are coded.
Political Rights (<i>Freedom House</i>) 1972-1999	1 (better) to 7 (worse) scale of a state's respect of its citizens' political rights. See Karatnycky (1999) for greater detail and the checklist on which the countries are coded.
Dissident Conflict _{t-1} 1950-1999	Scored first factor of a factor analysis of riots (Banks) and anti-government demonstrations (Banks) using an iterated principal axis solution, standardized within country, lagged one period.
State Conflict _{t-1} 1950-1982	Natural logarithm of the political sanctions measure (plus one) found within the annual <i>World Handbook of Political and Social Indicators</i> (Taylor and Jodice 1983). Lagged one period.
State Conflict _{t-1} 1972-1999	Scored first factor of a factor analysis of civil liberties (<i>Freedom House</i>) and political rights (<i>Freedom House</i>) using an iterated principal axis solution, standardized within each country, lagged one period.
Cumulative Conflict _{t-1} 1950-1982	State Conflict _{t-1} 1950-1982 + Dissident Conflict _{t-1} 1950-1999.
Cumulative Conflict _{t-1} 1972-1999	State Conflict _{t-1} 1972-1999 + Dissident Conflict _{t-1} 1950-1999.
Relative Conflict _{t-1} 1950-1982	Dissident Conflict _{t-1} 1950-1999/State Conflict _{t-1} 1950-1982.
Relative Conflict _{t-1} 1972-1999	Dissident Conflict _{t-1} 1950-1999/State Conflict _{t-1} 1972-1999.

Figure 2: Generalized Additive Model Effects of Laitin and Fearon Internal War Proxies on Actual Internal Wars



* The solid black lines represent the effect of the independent variable (column) on the dependent variable (row), controlling for the other two independent variables. The dotted lines are the upper and lower bounds of a 95% confidence interval.

Table 3: Logit Results Predicting Civil War Onset with Internal Wars_{t-1}

	1950-1982				1972-1999				1950-1999	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
War _{t-1}	-0.985 (0.070)	-1.029 (0.059)	-1.034 (0.058)	-1.009 (0.064)	-1.079* (0.010)	-0.997* (0.017)	-1.080* (0.010)	-1.000* (0.017)	-0.879* (0.015)	-0.894* (0.013)
GDP/capita _{t-1}	-0.211* (0.014)	-0.220* (0.012)	-0.209* (0.015)	-0.217* (0.012)	-0.337* (0.001)	-0.300* (0.003)	-0.337* (0.001)	-0.311* (0.002)	-0.301* (0.000)	-0.303* (0.000)
Log(Population) _{t-1}	0.298** (0.008)	0.294* (0.009)	0.302* (0.008)	0.293* (0.010)	0.332* (0.001)	0.319* (0.001)	0.332* (0.001)	0.321* (0.001)	0.291* (0.001)	0.288* (0.001)
Log(%Mountainous)	0.198 (0.117)	0.200 (0.114)	0.199 (0.115)	0.204 (0.109)	0.191 (0.084)	0.193 (0.083)	0.191 (0.084)	0.201 (0.074)	0.168 (0.080)	0.170 (0.077)
Non-contiguous State	-0.097 (0.841)	-0.062 (0.898)	-0.104 (0.829)	-0.069 (0.888)	0.239 (0.627)	0.315 (0.523)	0.238 (0.628)	0.293 (0.555)	0.200 (0.584)	0.239 (0.517)
Oil	0.723 (0.112)	0.717 (0.114)	0.726 (0.108)	0.722 (0.111)	0.647 (0.134)	0.574 (0.187)	0.648 (0.134)	0.585 (0.180)	0.862* (0.014)	0.845* (0.016)
Instability _{t-1}	0.374 (0.315)	0.299 (0.431)	0.252 (0.505)	0.299 (0.428)	0.602 (0.059)	0.458 (0.165)	0.601 (0.060)	0.440 (0.187)	0.543* (0.047)	0.448 (0.105)
Polity2 _{t-1}	0.029 (0.269)	0.026 (0.336)	0.028 (0.299)	0.024 (0.360)	0.027 (0.264)	0.004 (0.871)	0.027 (0.279)	0.015 (0.546)	0.025 (0.207)	0.023 (0.264)
Ethnic Fractionalization	0.753 (0.176)	0.754 (0.179)	0.795 (0.154)	0.746 (0.183)	0.526 (0.329)	0.542 (0.320)	0.526 (0.329)	0.503 (0.356)	0.449 (0.304)	0.451 (0.304)
Religious Fractionalization	-0.023 (0.976)	-0.037 (0.961)	-0.037 (0.962)	-0.029 (0.970)	0.342 (0.644)	0.256 (0.731)	0.344 (0.644)	0.313 (0.674)	0.700 (0.246)	0.676 (0.263)
Independent Contention										
Dissident Conflict _{t-1}		0.363* (0.008)		-0.394 (0.550)		0.197 (0.093)		-0.324 (0.443)		0.261* (0.008)
State Conflict _{t-1}		-0.056 (0.728)				-0.295* (0.050)				
Cumulative Contention										
Cumulative Conflict _{t-1}			0.172 (0.057)				0.003 (0.975)			
Relative Contention										
1/State Conflict _{t-1}				-19.560 (0.260)				-8.766 (0.307)		
Relative Conflict _{t-1}				3.781 (0.236)				2.255 (0.180)		
Constant	-7.232* (0.000)	-8.750* (0.000)	-9.010* (0.000)	-5.096 (0.175)	-7.190* (0.000)	-6.730* (0.000)	-7.222* (0.000)	-6.106* (0.011)	-7.144* (0.000)	-8.445* (0.000)
N	3333	3333	3333	3333	3146	3146	3146	3146	5386	5386

Main entries represent logistic regression coefficients, observed probability values appear in parentheses; results obtained with STATA 8.1

*p<0.05

Table 4: Changes in Probabilities for Models 1-10

	1950-1982				1972-1999				1950-1999	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
War _{t-1}	-0.007	-0.006	-0.006	-0.007	-0.008	-0.008	-0.008	-0.008	-0.006	-0.006
GDP/capita _{t-1}	-0.016	-0.015	-0.015	-0.017	-0.027	-0.023	-0.027	-0.026	-0.021	-0.019
Log(Population) _{t-1}	0.043	0.037	0.041	0.044	0.062	0.055	0.062	0.059	0.042	0.038
Log(% Mountainous)	0.009	0.008	0.009	0.010	0.012	0.011	0.012	0.012	0.008	0.007
Noncontiguous State	-0.001	-0.000	-0.001	-0.000	0.003	0.004	0.003	0.004	0.002	0.002
Oil	0.011	0.010	0.011	0.012	0.012	0.009	0.012	0.010	0.015	0.013
Instability _{t-1}	0.005	0.003	0.003	0.004	0.010	0.007	0.010	0.007	0.008	0.005
Polity2 _{t-1}	0.008	0.006	0.007	0.006	0.008	0.001	0.008	0.004	0.006	0.004
Ethnic Fractionalization	0.009	0.008	0.009	0.009	0.006	0.006	0.006	0.006	0.005	0.004
Religious Fractionalization	-0.000	-0.000	-0.000	-0.000	0.003	0.002	0.003	0.003	0.006	0.005
Independent Contention										
Dissident Conflict _{t-1}		0.094		†		0.031		†		0.048
State Conflict _{t-1}		-0.003		†		-0.042		†		
Cumulative Contention										
Cumulative Conflict _{t-1}			0.042				0.000			
Relative Contention										
Relative Conflict _{t-1}				0.981				1.000		

Entries are changes in predicted probability of civil war onset as the variable in question moves from its minimum to its maximum.

The inverse of state conflict is held at its mean, dissident conflict is held at its mean, and relative conflict is held at the mean of inverse state conflict times the mean of dissident conflict. All other variables are held at their medians.

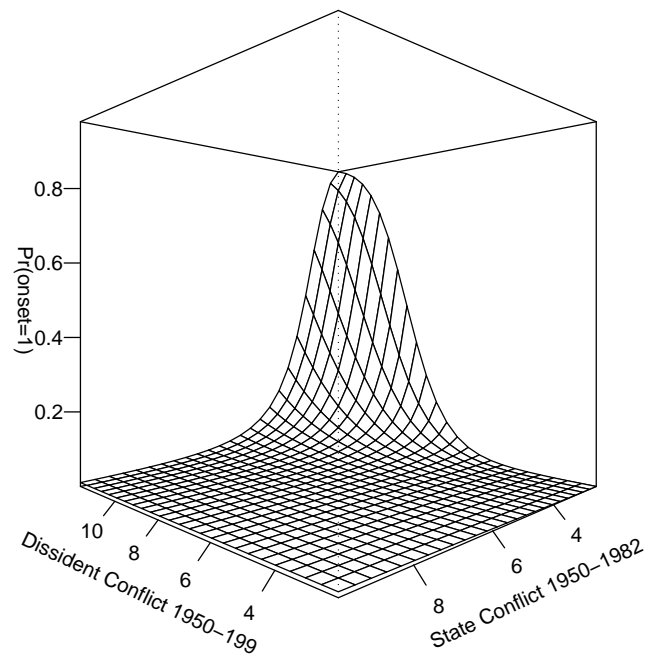
Estimates obtained with the SPost suite of add-on programs in STATA 8.1.

† In the absence of the relative conflict measure, the probability changes for state and dissident conflict cannot be properly considered .

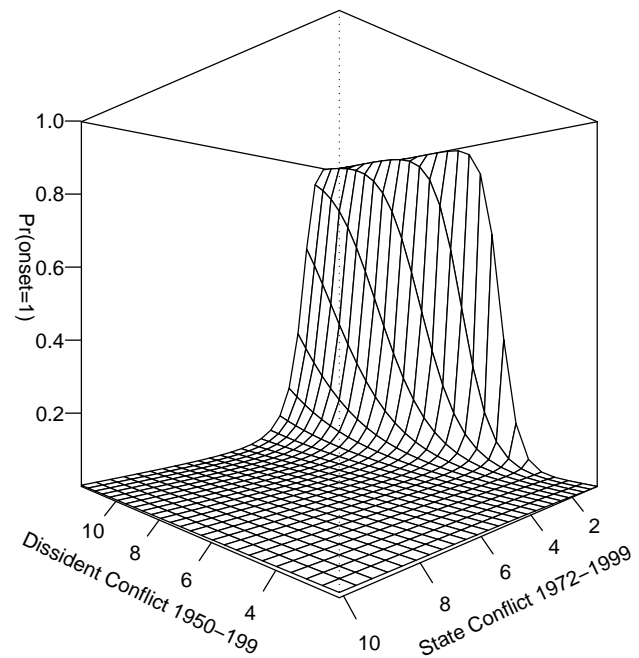
Thus, the changes in probability for all three measures (state, dissident and relative conflict) are captured in figures 4A and 4B.

Figure 3: Probability of Civil War Onset given Relative State and Dissident Conflict^a

A) 1950-1982



B) 1972-1999



^a These figures show the probability of civil war onset given different combinations of lagged state and dissident conflict; other variables are held at their medians.

Table 5: Logit Results Predicting Civil War Onset with Internal Wars $_{t-1}$ and Interactions

	1950-1982 Model 11 State Conflict	1972-1999 Model 12 State Conflict	1950-1999 Model 13 Dissident Conflict
War $_{t-1}$	-0.957 (0.079)	-1.034* (0.014)	-0.907* (0.013)
GDP/capita $_{t-1}$	-0.211 (0.582)	0.011 (0.978)	-0.805* (0.002)
Log(Population) $_{t-1}$	0.244 (0.641)	-0.290 (0.429)	0.401 (0.276)
Log(% Mountainous)	0.540 (0.414)	1.088* (0.028)	0.351 (0.383)
Noncontiguous State	-0.100 (0.836)	0.206 (0.676)	0.245 (0.506)
Oil	0.731 (0.110)	0.662 (0.131)	0.874* (0.013)
Instability $_{t-1}$	1.152 (0.552)	-0.645 (0.615)	1.052 (0.386)
Polity2 $_{t-1}$	0.028 (0.298)	0.011 (0.664)	0.025 (0.220)
Ethnic Frac	2.881 (0.314)	2.035 (0.392)	-0.788 (0.697)
Religious Frac	0.412 (0.916)	6.004 (0.052)	2.062 (0.427)
Conflict $_{t-1}$	0.389 (0.700)	-0.424 (0.637)	0.391 (0.569)
Conflict $_{t-1}$ × GDP/capita	0.001 (0.988)	-0.069 (0.431)	0.088* (0.026)
Conflict $_{t-1}$ × Population	0.011 (0.912)	0.132 (0.080)	-0.021 (0.758)
Conflict $_{t-1}$ × Mountainous	-0.067 (0.600)	-0.188 (0.061)	-0.034 (0.641)
Conflict $_{t-1}$ × Instability	-0.153 (0.675)	0.243 (0.366)	-0.108 (0.622)
Conflict $_{t-1}$ × Ethnic Frac	-0.419 (0.446)	-0.287 (0.553)	0.237 (0.532)
Conflict $_{t-1}$ × Religious Frac	-0.085 (0.911)	-1.227 (0.056)	-0.273 (0.563)
Intercept	-9.246 (0.080)	-5.341 (0.222)	-9.074* (0.015)

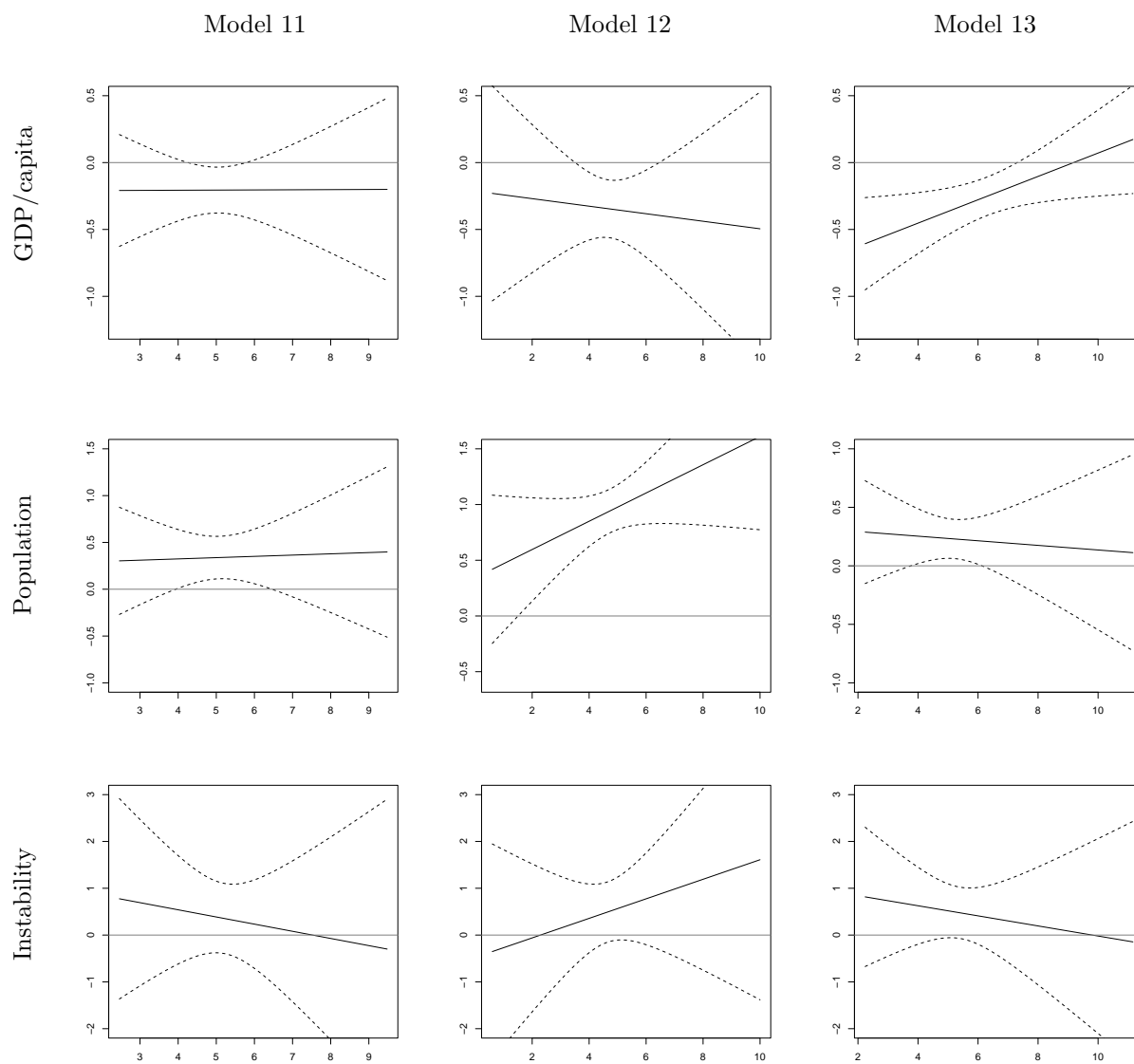
Fractionalization abbreviated with "Frac."

Main entries represent logistic regression coefficients, observed probability values appear in parentheses.

Results obtained with STATA 8.1.

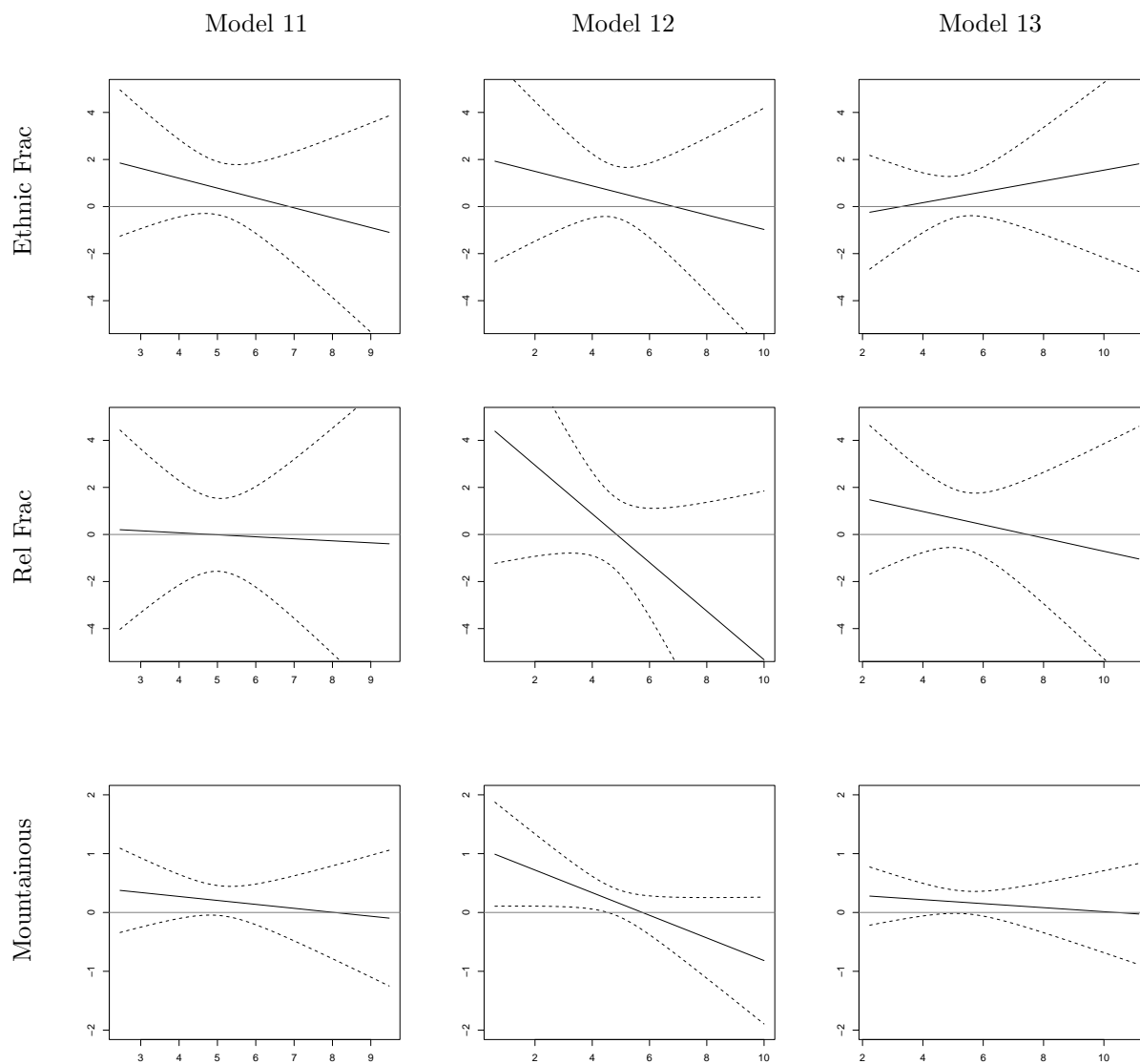
* p<0.05

Figure 4: Effect and Confidence Intervals for Continuous Variables Interacted with Internal Wars



Solid lines represent the effect of the variable (row) on the Conflict variable in the model (column). The dotted lines give the 95% confidence interval around the effect.

Figure 4 (continued): Effect and Confidence Intervals for Continuous Variables Interacted with Internal Wars



Solid lines represent the effect of the variable (row) on the Conflict variable in the model (column). The dotted lines give the 95% confidence interval around the effect.