

**Political Institutions and Civil War
with a focus on Latin America**

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Jennifer Gandhi¹ and James Vreeland²

Abstract

Recent research published in the *American Political Science Review* contends “anocracies” – loosely defined as part democracy and part dictatorship – are more susceptible to civil war than either pure democracies or pure dictatorships. In our study, we consider one type of anocracy: dictatorships with nominally-democratic institutions, such as legislatures. Drawing on a new dataset of institutions under dictatorship covering 140 countries from 1946 to 1996 (Gandhi 2004), we show that these types of regimes are actually less prone to civil war than other regime types. We find little support for the famous inverted U-shaped relationship between regime and civil war. In this version of the paper we look specifically at Latin America, where there is no support for the original anocracy result, but there is strong support for our contention that dictatorships with legislatures are not prone to civil war.

¹ Assistant Professor of Political Science, Emory University, 1555 Dickey Drive, Atlanta, GA 30322.
Email: jgandh2@emory.edu

² Assistant Professor of Political Science, Yale University, 124 Prospect St., New Haven, CT 06520-8301.
Email: james.vreeland@yale.edu

1 Introduction

Is civil war more likely under certain political institutions than others? Recent research published in the *American Political Science Review* (Hegre et al. 2001, Fearon and Laitin 2003) contends that “anocracies” – loosely defined as part democracy and part dictatorship – are more prone to civil war than either pure democracies or pure dictatorships. In our study, we consider one type of anocracy: dictatorships with nominally-democratic institutions, such as legislatures. Such institutions enable dictatorships to coopt parts of society and build support for the regime. As a consequence, we expect such institutionalized regimes to be less susceptible to civil war than other regime types.

Nominally-democratic institutions under dictatorship, such as legislatures, elections and parties, are typically dismissed as mere window-dressing (Friedrich and Brzezinski 1961, Brooker 2000, Packenham 1970). Much of the literature on civil war suggests that this window dressing is actually a sign of a weak regime: “A regime that mixes democratic with autocratic features...is likely to indicate political contestation among competing forces and, in consequence, state incapacity” (Fearon and Laitin 2003: 81).

Yet dictators require political support to maintain their rule, and when they can, they attempt to build coalitions by “encapsulating” or coopting social groups outside of the ruling elite (Bueno de Mesquita et al. 2003, Linz 1973, O’Donnell 1979). In exchange for support, dictators may offer rents. They may also make policy concessions that require an institutionalized setting, such as a legislature. Within a nominally-democratic assembly, the regime and the potential opposition can reveal their preferences and negotiate policy compromises. One consequence of this cooptation strategy is that dictatorships with nominally-democratic institutions should be less likely to experience civil war.

The post-World War II period provides empirical foundations for this idea. Using data identifying precisely the institutions we theorize about, we find that dictatorships with legislatures are less likely to experience civil war than non-institutionalized dictatorships. Institutionalized dictators are better able to coopt social groups than their non-institutionalized counterparts, and thus, decrease the likelihood of civil strife.

Previous studies have focused on the effect of regime type on civil wars. A regime that “mixes democratic with autocratic features,” labeled “anocracies” or “semi-democracies,” is thought to be most at risk of civil conflict (Muller and Weede 1990, de Nardo 1985, Francisco 1995, Ellingsen and Gleditsch 1997, Krain and Myers 1997). As the argument goes, pure dictatorships can repress civil conflict, and pure democracies can accommodate civil disagreement peacefully, but anocracies are caught in the middle – they can neither repress nor accommodate civil strife and are thus the most susceptible to civil war. Consistent with this story, recent large-n work (Hegre et al. 2001) has found an “inverted U-shaped” relationship between level of democracy and the probability of civil war.

What exactly are anocracies is unclear, but dictatorships that have nominally-democratic institutions, such as legislatures, potentially fall within this category. If this is the case, then our findings run counter to the prevailing literature: institutionalized dictatorships are least likely to experience civil conflict.

Why the startling difference in findings? It is most likely due to previous studies' use of Polity to measure regime type. Indeed, one obvious defense of previous work is that "dictatorships with legislatures" is not what people had in mind when they imagined "anocracy."

This, of course, begs the question of what they did have in mind. It turns out that the answer to this question is entirely unclear. We show that after unpacking the previous measure of "anocracy" – measured as the mid-level of the Polity scale – previous results are dubious at best and tautological at worst. First of all, once Polity is dissected in greater detail, there is less empirical support for the overall inverted U-shape relationship with civil war. Furthermore, Polity suffers from a number of conceptual problems that plague its use to examine this topic in particular.

In contrast, our findings, derived from the use of clear, observable measures, bring to bear more concrete evidence to confirm a more specific causal mechanism. We no longer need point to "semi-democracies" or "anocracies" and hazard a guess about why regimes in the middle of some scale are more or less associated with civil conflict. Instead, we can clearly say that "dictatorships with legislatures" are more likely to keep the peace.

Our work, like the studies we follow, analyses civil war at a macro level. Much could be learned about the relationship between civil war and dictatorships with legislatures by studying specific cases more closely. With this in mind, we reproduce our analysis on the subset of observations for Latin America to begin the process of finding appropriate case studies.

We find that for the Latin American region, our result about dictatorships with legislative institutions holds even more strongly than in other parts of the world. Civil wars in Latin America were unlikely under this institutional arrangement, and were much more likely under pure dictatorships and even democracies. The democracy finding may be because dictatorships with legislatures combine the optimal mix of accommodation and repression when dealing with insurgencies.

Interestingly, the original anocracy result receives no support from the Latin American experience. There is no evidence of an inverted U-shaped relationship between regime and civil war in Latin America.

The paper proceeds as follows. First, we discuss the role of nominally-democratic legislatures under dictatorship. We go on to show that institutionalized dictatorships are less likely to suffer from civil war than pure dictatorships. Next, we explore why our findings differ so greatly from previous studies, detailing the problems with the Polity measure of democracy and showing empirically that the inverted U-shaped relationship

with civil war is dubious. We then explore our findings specifically in the region of Latin America. We conclude by offering a methodological suggestion regarding the study of political institutions that follows the arguments of Cheibub (2004).

2 Legislatures under dictatorship

In distinguishing between democracies and dictatorships, we follow Schumpeter (1942), who argued that the hallmark of modern day democracy is elections: “the democratic method is that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people’s vote” (Schumpeter 1942: 269). As a result, democracy is a system in which uncertainty is institutionalized since parties can lose elections. In dictatorships, in contrast, incumbents can “establish rules that prohibit actions that would lead to undesirable outcomes” and also “overturn such outcomes even if they result from following its own rules” (Przeworski 1991: 46).

Przeworski, Alvarez, Cheibub and Limongi (2000) have developed a dichotomous measure of regime that focuses on the role of elections and highlights the importance of ex ante uncertainty and ex post irreversibility: democracy is a political system in which key government offices are filled through contested elections. The definition has two parts: “key government office,” which they define as the executive and the legislature; and “contested,” which implies that more than one party has some probability of winning office through election.

Conversely, then, dictatorships are regimes in which the executive and the legislature are not filled by contested elections. The many regimes that qualify as dictatorship under this definition can be subdivided even further. Classification of dictatorships dates from Aristotle’s attempt to distinguish between tyranny and monarchy to more contemporary attempts to distinguish dictatorships on the basis of their leadership styles, their ideological positions, and their institutional features (Geddes 1999, Linz 1973, Brooker 2000, Linz and Stepan 1996, Wintrobe 1998). In this vein, we distinguish between dictatorships that have nominally-democratic institutions and those that do not.

Why should institutional structure serve as the basis for distinguishing among dictatorships? Why do nominally-democratic institutions, such as legislatures, matter under dictatorship?

Stories of the functions of the institutions of dictatorship date back decades. For example, O’Donnell (1979) argued that the institutions of dictatorship served to “encapsulate” parts of society into the regime. Yet, the systematic study of the effects of institutions under dictatorship in a large-n setting has largely been ignored until recently. Gandhi has collected data on the institutions under dictatorships for all dictatorships that existed from 1946 to 1996. In particular, she has coded whether legislatures existed, whether they had any legislative jurisdiction, and whether independent political parties participated in them.

Gandhi argues, “Dictators maintain institutions to solicit cooperation or to extend their tenure in power” (Przeworski and Gandhi 2002: 15). But they must pay a price for their longer tenure in office. She finds – even after controlling for nonrandom selection – that pure dictatorships spend more on the military and less on education. Under more open dictatorships with a single party or non-partisan legislatures spending on education is higher on average and military expenditures are lower. Education spending is even higher with a full set of institutions – an open legislature with multiple, independent parties – and military spending is even lower.

Note that dictators must do more than just avert rebellion. Even if dictators act merely in their own interest – if they are “predatory” – up to a point they benefit more when the economy functions well and the country is militarily secure (Levi 1988, McGuire and Olson 1996). Unless they can rely on exporting mineral resources (Robinson 2000, Ross 2001, Wantchekon 2002), they need to solicit economic cooperation. To obtain cooperation, they must provide incentives for people to reveal their private information, to work, and to save. Hence, dictators must share the spoils of cooperation.

Dictatorships differ in their need for cooperation: those which can extract rents from natural resources need little of it, while those which must rely on bankers to loan them money, peasants to produce food, and scientists to do research need extensive cooperation. In turn, dictators are dictators because they cannot win elections, because their preferences diverge from those of the majority of the population. Hence, dictators may face a threat of rebellion, and the magnitude of this threat is again not the same for different dictators.¹

Dictators may use force to solicit cooperation and to eliminate threats of rebellion. But the use of force is costly and may not always be effective. Writing of military dictatorship in Latin America, Cardoso observes that the “State is sufficiently strong to concentrate its attention and repressive apparatus against so-called subversive groups, but it is not as efficient when it comes to controlling the universities, for example, or even the bureaucracy itself” (1979: 48). As a result, the dictator may find it useful to rely on other strategies to elicit cooperation and avert rebellion.

Two such instruments include policy concessions and rents. Since some people will cooperate with the dictatorship if it offers policies more to their liking, dictators generate cooperation and, if need be, thwart the threat of rebellion by making policy concessions. Alternatively, dictators can prevent threats to their power by sharing rents.

But the policy concessions that dictators make cannot be forged outside of an institutional setting. Policy compromises between the dictator and potential opposition require an institutional forum to which access can be controlled, where demands can be revealed without appearing as acts of resistance, where compromises can be hammered out without undue public scrutiny, and where the resulting agreements can be dressed in a legalistic form and publicized as such.

¹ For a formal treatment of this idea, see Przeworski and Gandhi (2004).

Legislatures are ideally suited for these purposes. The dictator can select the groups to be granted access while building the basis of support for the regime. Polish communists, for example, repeatedly sought the participation of some Catholic groups. In a 1990 interview, the former first secretary of the Polish United Workers' (Communist) Party, Edward Gierek, revealed that he "intended to introduce to the Sejm [Parliament] a significant group of 25 percent of Catholic deputies." As he put it, "It would have permitted us... to broaden the political base of the authorities" (Rolicki 1990).² In addition, the dictator can control the flow of information about negotiations, as subcommittees of communist legislatures did: "[they] collate suggestions from experts and the public on the circulated draft, then deliberate upon the incorporation of these suggestions without revealing the dirty linen" (Vanneman, 1977: 162).

Within the legislature, participating groups can reveal their demands without having to oppose the dictatorship. Even when defeat of the dictator's legislative initiatives on the Assembly floor is less rare, outside groups can still have a chance to shape decisions within legislative committees. Amendment rates of legislation within Polish Sejm committees under communism reached as high as 64% (Olson and Simon 1982).³ As a result, participation in legislatures may also provide an opportunity for the opposition to pursue its interests and values within the framework of a dictatorship, even transforming the dictatorship from within.

By way of contrast to the accommodation that legislative institutions provide, consider what happens in dictatorships that need legislatures, but do not have them. In this case, unions, student groups, and professional organizations may refuse to cooperate with the regime, but they can do even more damage. In Ecuador, for example, military officers seized power in 1963, closed Congress, and issued a manifesto declaring their "intention to guarantee capital and labor in an atmosphere of reason and patriotism" (Needler 1964: 49). They intended to implement policies to spark industrialization, which would benefit workers and capitalists. Yet two years later, general strikes were organized by the various Chambers of Commerce throughout the country. The very groups that were to benefit from the regime's policies were protesting the lack of access to decision-making. Without institutions through which their demands could be made, there was nothing to prevent the regime from acting as arbitrarily against them as for them (Neuhouser 1996).

As discussed earlier, whether dictators institutionalize depends on their need for cooperation and the strength of the potential opposition. When dictators face a low degree of opposition, they may not need institutions. When facing a stronger threat of resistance, they can use institutions to coopt the potential opposition.⁴ Yet dictators may err. Civil

² Translated from the original Polish by Adam Przeworski.

³ Discussion and amendment of regime decisions also may occur within party caucuses, as in Kenya.

⁴ This obviously begs a selection question: Is the distribution of political institutions observed in countries around the world non-random with respect to civil war? Fearon and Laitin (2003: 85) allude to this problem when they point out that the observation of a correlation between regime and civil war "does not explain why the leaders...are not able to implement [a regime] to avoid conflict and opposition." But to our knowledge, no one has addressed statistically the selection problem. One reason that the question has not been addressed is that while there are many selection models to deal with linear regression, only recently have models been developed that may address selection bias for problems of duration. Since the onset of

wars erupt despite leaders' best efforts to repress and accommodate groups to avoid conflict. The strength of potentially violent opposition may be imperfectly gauged. Governments may be overly optimistic or stubborn in believing that the opposition can be managed through force or legitimacy alone. Yet, civil wars occur under all types of institutions: pure dictatorship, dictatorships with democratic institutions, and even democracies. Our question is whether civil wars are more common under certain institutional arrangements than others. Do dictatorships with democratic institutions successfully accommodate or "encapsulate" opposition and systematically avoid civil war more than pure dictatorships? Or are mid-level, hybrid regimes the most susceptible to civil war as previous studies have contended? We expect dictatorships with legislatures to be less likely to experience civil wars than non-institutionalized dictatorships because these institutions reduce the opposition's incentives for conflict and the regime's uncertainty regarding the opposition's strength. In the next section, we show that this particular type of anocracy or hybrid regime – mixing the democratic institution of a legislature with dictatorial rule – is less prone to civil war than other regimes.

3 The effect of nominally-democratic legislatures under dictatorship

In this section, we test whether the presence of a legislature under dictatorship makes civil war more or less likely. The statistical literature on the determinants of civil war is vast and growing (e.g. Sambanis forthcoming; Miguel, Satyanath, and Sergenti forthcoming), and we do not seek to advance a comprehensive theory of civil wars. Rather, we seek only to evaluate the impact of specific regime types on the likelihood of civil war. Hence, our hypothesis speaks directly to Hegre et al.'s (2001) recent study, which thoroughly establishes – using excellent methodology – that anocracy is the regime most susceptible to civil war. We begin by replicating their results, and throughout our empirical work we employ their same dependent variable – from the Correlates of War (COW) dataset – and their same statistical model – Cox regression. We do this to ensure that any differences result from our new institutional variables and not any other factors.

After describing the dependent variable (3.1), our principal independent variable of interest (3.2), and the control variables (3.3), we present the statistical model and results in section 3.4.

3.1 The dependent variable: civil war onset

The dependent variable is the onset of civil war, where civil war is defined as a situation in which "(a) military action was involved, (b) the national government at the time was actively involved, (c) effective resistance (as measured by the ratio of fatalities of the weaker to the stronger forces) occurred on both sides, and (d) at least 1,000 battle deaths resulted" (Singer and Small 1994: part 3, cited in Hegre et al. 2001: 36). The data cover 152 countries from 1816 to 1992 (although after inclusion of our control variables, data

civil war is a duration problem, one needs a duration model with a fix for non-random selection. We plan to pursue this in future work using a simple selection correction developed by Vreeland (2002).

are available only after 1946). The data are extremely precise, identifying the actual date of the onset of civil war.⁵

3.2 Democracies, dictatorships, and dictatorships with legislatures

For reasons we will explain in Section 4, we choose not to employ Polity to measure regime. Instead, we use Przeworski et al.'s (2000) dichotomous classification of regime type, which distinguishes democracies and dictatorships on the basis of contested elections. By definition, then, all democracies have an elected legislature. They make up 38.7 percent of the sample, or 2,608 observations of the total 6,740 observations of 199 countries from 1946 to 1996.⁶

Under dictatorship, not all governments have legislatures. Following Gandhi (2004), a legislature under dictatorship is defined as a body of at least twenty members with formal law-making powers. As defined, legislatures under dictatorship do not include “juntas” which are usually smaller in membership. Juntas are the inner circle of military dictatorships, and we do not want to conflate these smaller bodies with legislatures, which are designed to coopt larger groups within society while keeping them from the real center of power. Similarly, “consultative councils” are also not included because they have only the authority to provide advice and council to the ruler with no formal legislative power.⁷ Finally, “constituent assemblies” are not included unless they also serve as legislative bodies deliberating ordinary legislation. Because we are interested in the cooptation of outside groups in ordinary political life, we exclude these bodies, which typically are established for exceptional purposes (i.e., to consider constitutional provisions). Of 4,132 country-years of dictatorships, 3,161 cases, or 76.5 percent, have legislatures.

The selection of legislators for these assemblies primarily occurs through elections, which are tainted with varying degrees of fraud. Even if the elections, themselves, are conducted relatively fairly, candidates may face significant hurdles before they present themselves to voters. In Iran, for example, the Guardian Council, a conservative body of clerics, vets all candidates for elected office. A small number of legislatures are filled by appointment or some mix of appointment and election. These constitute only 274 observations. Otherwise, in 91.3 percent of cases in which a dictatorial legislature exists,

⁵ Fearon and Laitin (2003) employ alternative measures of civil war. We obtain similar results for our independent variables of interest using their measures. Their data follow the same basic definition as COW, they also draw on other studies of civil war: Doyle and Sambanis (2000), Esty et al. (1998), Gleditsch et al. (2002), the Institute for International and Strategic Studies (2000), Licklider (1995), Sivard (1996), and Valentino (2002). They also include anti-colonial wars as examples of civil conflict, while other studies do not. Most of their results, however, hold whether they use only the COW dataset or their more inclusive measure. Note that Fearon and Laitin find that political institutional variables do not predict specifically ethnically driven civil wars. We find the same for our political institutional variables. For an analysis of the different measures of civil war, see Sambanis (2002).

⁶ The panel is unbalanced because countries enter and leave the sample in different years.

⁷ Consultative councils are used especially in monarchies of the Middle East where the distinction between *majlis al-shura* (consultative council to advice the king) and *majlis al-umma* (legislative council to deliberate on law) is maintained (Herb 1999: 41).

elections determine its membership. Similarly, 91.3 percent of these legislatures are filled by members of formally recognized political parties. All of our qualitative results below hold whether we consider dictatorships with legislatures, or whether we restrict our attention to only dictatorial legislatures filled by political parties. It seems that the key institution that matters under dictatorship is the presence of a legislature.

Thus, in lieu of the Polity-based “anocracy” measures employed by previous studies, we introduce two new variables: *Dictatorship* and *Dictatorship with Legislature*. *Dictatorship* is a dummy variable coded 1 for all dictatorships and 0 for all democracies. *Dictatorship with Legislature* is a dummy variable coded 1 only for dictatorships with legislatures and 0 otherwise, making democracies the residual category.

We will show that dictatorships with legislatures are definitively less prone to civil war than dictatorships without legislatures. What is less clear is whether dictatorships with legislatures are less prone to civil war than even democracies. Some specifications indicate this to be the case. We speculate that dictatorships with legislatures may be better at reducing civil conflict than democracies because they combine the optimal mix of accommodation and repression in dealing with insurgencies. But in some specifications, the difference is not statistically significant.

Thus, when it comes to civil war, the key institutional distinction is not democracy vs. dictatorship, but rather legislature versus no legislature. This finding may open up other avenues of research testing whether this distinction may be salient elsewhere.⁸ Indeed, as Przeworski and Limongi (1993: 65) observe in their study of regime and economic growth: “it does not seem to be democracy or authoritarianism per se that makes the difference but something else.”

To test the generic importance of legislatures, we employ one additional dummy variable, *All Legislatures*, coded 1 for any regime with a legislature (dictatorship or democracy), and 0 for regimes without legislatures. We find that the presence of a legislature substantially lowers the risk of civil war.

3.3 Control variables

In our results presented below, we find that the control variables by and large have the same qualitative effects as in Hegre et al. (2001). For an in-depth discussion of the hypotheses behind their inclusion, we refer readers to the original studies.⁹ Briefly, the variables from the Hegre et al. (2001) study are: *Proximity of Regime Change*, *Energy Consumption Per Capita*, *Ethnic Heterogeneity*, *Proximity of Civil War*, *Proximity of Independence*, *International War*, and *Neighboring Civil War*.

⁸ We are grateful to Dan Posner for raising this suggestion.

⁹ For the Hegre et al. (2001) study, the details of how the control variables are measured as well as why they are included are described in on pages 37-38, 40-41. We have found similar results when we test our hypotheses using the specification of Fearon and Laitin (2003), discussed on pages 83-88.

Perhaps the most important control is *Level of Development*, due both to its direct causal impact on civil war (Hibbs 1973) and to its correlation with political regime (Przeworski et al. 2000). Democracies may survive in more developed countries, in part, because greater development staves off civil war. As Hibbs (1973) argues, higher levels of development should lead to lower levels of class conflict, although the early stages of development may actually exacerbate class conflict in agrarian societies. To measure development Hegre et al. (2001) use the log of energy consumption per capita (measured as annual coal-ton equivalents) from Singer and Small (1993) and include the squared term to test for possible nonlinear effects. They find evidence of the curvilinear effect described by Hibbs (1973).

Proximity of Regime Change is included to test whether political institutions per se or their instability have an impact on civil war. Hegre et al. (2001) find that the proximity of a change in regime, measured in terms of changes in Polity score, does make civil wars more likely.¹⁰

Using a measure of ethnic heterogeneity constructed from Ellingsen (2000), Hegre et al. find that ethnic heterogeneity makes civil war more likely.¹¹ When we include the variable as measured in Hegre et al.'s (2001) study with their data, we replicate their finding.

As for the other control variables in Hegre et al. (2001), *Proximity of Civil War* captures duration since a previous civil war and is included following Hibbs (1973), who found that a history of internal war made a subsequent civil war more likely. This variable has the expected effect and is marginally statistically significant. *Proximity of Independence* measures the length of time since independence and is intended to capture whether the age of a country and its institutions matter. It has a positive effect and is marginally statistically significant. The *International War* dummy variable has a positive effect, but it is not robustly significant. Similarly, the *Neighboring Civil War* dummy has a positive, but not robustly significant effect.

¹⁰ This variable, measured in terms of Polity scores, is problematic for reasons discussed in Section 4 below. Our qualitative results hold regardless of whether or not we include this variable. Furthermore, we also substitute similar measures of regime change using our measures of regime and find that they are not statistically significant. These results are not presented but are available upon request. Hegre et al. (2001) measure the proximity of regime change as $\exp(-\text{days since regime change}/\alpha)$, where α is a chosen divisor. Similarly, we use $\exp(-\text{years since regime change})$ (we set $\alpha=1$). For “regime change,” we track changes in the values of both *Dictatorship with Legislature* and *All Legislatures*.

¹¹ Fearon and Laitin, however, find that ethnic fractionalization does not have a significant impact on the likelihood of civil war, although religious fractionalization has a positive impact in some of their specifications. The contradictory findings may be due to differences in measurement. Posner (2004) and Fearon (2003) have shown the conceptual and operational difficulties of measuring ethnic heterogeneity. Our purpose is not to enter into this debate.

3.4 Results

Consider Table 1. Specification 1 replicates the original results of Hegre et al. (2001: 39, Table 2a). They employ a Cox regression to account for the fact that civil conflict occurs in specific countries under varying conditions over time. The Cox regression is a survival model that controls for duration dependence without any assumptions about the nature of the duration dependence. This is the safest statistical model to analyze duration data because of the weak assumptions involved. For a formal presentation of the model, see Hegre et al. (2001: 35-6).

Table 1 about here

To ease interpretation of the results, we report hazard rates instead of coefficients. The hazard rates have a convenient property making their quantitative interpretation more straightforward than coefficients. They indicate the risk of civil war relative to a baseline risk (or hazard) of 1. So, a hazard rate of 1 has no effect on the baseline risk, a hazard rate of 2 doubles the risk, and a hazard rate of 0.5 cuts the risk in half. Variables that are positively correlated with the onset of civil war have hazard rates greater than 1 while factors that decrease the likelihood of civil war onset have hazard rates less than 1.

In Specification 1, the non-significant hazard rate for *Polity*, the regime variable employed in other studies which can take on values from -10 to $+10$, and the significant hazard rate of 0.988 for *Polity Squared* indicate an inverted U-shaped relationship between regime and civil war with the apex precisely in the middle of the scale at zero. The baseline hazard when *Polity* = 0 is equal to 1. When *Polity Squared* takes on its maximum value of 100 (either pure democracy or pure dictatorship), the relative risk of civil war is $0.988^{100} \approx 0.3$. Civil war, then, is 0.3 times less likely at the extremes of the Polity scale than in the middle.

In Specification 2, we remove *Polity* and *Polity Squared* and introduce two dummy variables for political institutions (as defined in Section 3.2): *Dictatorship*, which is coded 1 for dictatorships and 0 for democracies; and *Dictatorship with Legislature*, which is coded 1 for dictatorships with legislatures and 0 otherwise. The significant hazard rate of 2.303 for *Dictatorship* indicates that dictatorships in general are more than twice as likely to suffer from civil war than democracies. The significant hazard rate of 0.444 for *Dictatorship with Legislature* indicates that when dictatorships have a legislature this risk is dramatically reduced – cut by more than half. Relative to democracies, the risk is nearly the same: $2.303 * 0.444 \approx 1$. Thus, civil war is most likely in pure dictatorships without nominally-democratic institutions, and civil war is less likely in democracies and anocracies, or institutionalized dictatorships with legislatures.

The difference between dictatorships with legislatures and democracies is small. Thus, in Specification 3 we replace *Dictatorship* and *Dictatorship with Legislature* with a new dummy variable, *All Legislatures*, which is coded 1 for any regime – democracy or dictatorship – with a legislature, and zero for pure dictatorships, as defined above. So the baseline hazard rate for pure, non-institutionalized dictatorships is 1. The significant

hazard rate of 0.442 indicates that the presence of a legislature reduces the risk of civil war by more than half. Any regime with a legislature is less susceptible to civil war than a regime without one.

In Specifications 4 and 5, we reintroduce *Polity* and *Polity Squared*. It may seem strange to include two different measures of regime in the same specification. We mainly do this to check for the robustness of our finding, although we recognize that *Polity* could be picking up on patterns left out by our measure. We are not surprised that *Polity Squared* remains significant; we will provide an explanation in Section 4 below. The important finding here is that *Dictatorship with Legislature* is robust to their inclusion in Specification 4 and *All Legislatures* is robust in Specification 5. The patterns are almost identical to those described above. The effect of *Dictatorship* in Specification 4 is not individually significant, but it is jointly significant with the *Dictatorship with Legislature* effect. This indicates that the key institutional difference is not along the democracy-dictatorship dichotomy, but the legislature-no legislature dichotomy.

4 Problems with Polity

Our findings differ substantially from studies claiming that hybrid regimes are the most prone to civil war. Instead, we find that dictatorships with nominally-democratic legislative assemblies are less likely to experience civil war. Why the startling difference in results?

The difference is due to previous studies' use of Polity to measure regime type. Indeed, the obvious defense of the original inverted U-shaped relationship between regime and civil war, in light of the evidence presented above, is that the scholars who posited the relationship never had in mind the specific form of anocracy we have tested. So, while we may be right that some specific forms of anocracy are less susceptible to civil war, other forms of anocracy may be more susceptible. This may very well be the case. We have studied only one specific type of hybrid: dictatorships with seemingly democratic institutions. We stake no claim on other forms of anocracy.

Yet, this defense begs the question of what exactly people had in mind when they originally defined anocracy. Careful analysis of their measure of anocracy – the middle of the Polity scale – reveals that the answer to this question is entirely unclear. In this section, we show that after unpacking Polity, previous results are dubious at best and tautological at worst. Numerous studies have highlighted the problems of Polity (Gleditsch and Ward 1997, Munck and Verkuilen 2002, Treier and Jackman 2003, Vreeland 2003, Cheibub 2004). These studies have discussed general deficiencies of the index. Here we seek to show how the arbitrariness of Polity's aggregation rule wreaks havoc on attempts to study the effects of regime on civil wars.

What is the middle of the Polity scale intended to capture? Hegre et al. (2000: 33) claim that the middle of the scale identifies “semi democracies” that are “partly open yet somewhat repressive” in contrast to “Institutionally consistent democracies and stark

autocracies” (2000: 35). Fearon and Laitin (2003: 75-6) claim the middle captures “politically weak central governments” with “weak local policing or inept and corrupt counterinsurgency practices” and also regimes mixing “democratic with autocratic features” (2003: 81).

But does Polity really capture all of these ideas? The Polity scale is a measure of regime that attempts to capture “authority patterns” (Marshall et al. 2002). It is created by aggregating five separate variables into one overall index ranging from -10 to +10. The five component variables of Polity are: (1) Competitiveness of executive recruitment (*XRCOMP*), with 3 possible values, (2) Openness of executive recruitment (*XROPEN*), with 3 possible values, (3) Constraints on chief executive (*XCONST*), with 7 possible values, (4) Regulation of political participation (*PARREG*), with 3 possible values, and (5) Competitiveness of political participation (*PARCOMP*), with 6 possible values.¹²

Because of the number of possible values that may be assigned to each separate component, there are potentially hundreds of combinations of the different values of the five variables. All of this information, however, is reduced to a 21-point scale. To make it clear just how ambiguous this is, consider Tables 4 and 5. In Table 4, we outline the definitions of the five components of Polity.¹³ In Table 5, we list countries with scores of 0, precisely in the middle of the 21-point Polity scale. These countries are presumably the most susceptible to civil war. Out of 152 countries in the data set used by Hegre et al. (2001), 17 of them have a score of 0 at some point in their histories. While they all receive the value of 0 on the Polity scale, however, they do not all have the same set of features as measured by the components of Polity.

Table 2 about here

Table 3 about here

Consider, for example, Ecuador (1970-1972) and Uruguay (1904-1910, 1934-1952). Both cases are coded as 0 on the Polity scale. Yet in the competitiveness of political participation (*PARCOMP*), which is defined as “the extent to which alternative preferences for policy and leadership can be in the political arena” (Gurr 1997: 13), they score quite differently. Ecuador has only “factional” competitiveness, but Uruguay allows for the highest degree of competition: “relatively stable and enduring political groups...regularly compete for political influence at the national level” (Gurr 1997: 14). The political institutions of Ecuador and Uruguay are obviously quite different, but their overall Polity scores are the same. So they are both considered as “anocracies.” It would seem, however, that this has little meaning if a country can arrive at a mid-level score through literally hundreds of different combinations.

¹² We will go into greater detail about the components below. For a history of the Polity measure, see Jagers and Gurr (1995). For the codebook and data themselves, see Kristian Gleditsch's Polity Data Archive: <http://weber.ucsd.edu/~kgledits/Polity.html>

¹³ In fact, the Polity measure provides two variables, democracy and autocracy, which are typically combined into one “Polity” measure. For the Democracy scores, simply replace all of the negative numbers in Table 4 with 0 and leave the non-negative numbers. For the Autocracy scores, replace all of the positive numbers with 0 and multiply the negative numbers by -1. Polity is formed by subtracting Autocracy from Democracy, which produces the scores listed in Table 4.

Furthermore, by assumption, the specific institutional arrangements of these countries are supposed to have exactly the same effect on the propensity for civil war. Also – by assumption – a one-point change in any of the five dimensions of Polity is equivalent. The implications for evaluating the effect of regime on civil wars are disturbing, as the following example with Ecuador and Uruguay illustrates:

Suppose, as indicated by Specification 1, that there is a symmetrical inverted U-shaped relationship between Polity and civil war with the highest likelihood of civil war at 0. For countries with a score of 0, a change in any of the five components of Polity – going either up or down – will make civil war less likely. This means that if Uruguay were to adopt Ecuador’s low level of political competitiveness, and Ecuador were to adopt Uruguay’s high level of political competitiveness, both would become less prone to civil war. Indeed, if Ecuador were to become more like Uruguay in any single dimension, Ecuador would lower its risk of civil war, even though Uruguay is at the highest propensity-level for civil war.

Previous studies may indicate a correlation between the middle of the Polity scale and the likelihood of civil war, but the meaning of this correlation is entirely unclear because countries can arrive at the middle of the Polity scale through so many different combinations of institutions. Perhaps the problems associated with the arbitrariness of Polity’s aggregation rule can be avoided by using the index’s components separately. Thus we explore whether the inverted U-shaped relationship holds between civil wars and the five components of Polity.

Again we employ the original specification of Hegre et al. (2001), substituting for *Polity* and *Polity Squared* the components of Polity along with their squared terms.¹⁴ First we include all five components along with their squared terms in one specification. Although a joint significance test indicates marginal significance at the 90 percent confidence level ($p=0.08$), we find that none of the individual coefficients has a significant impact.¹⁵ Since the individual components are positively correlated, however, their insignificance may be due to multicollinearity. Consequently, we also include each component one by one. The results are presented in Table 6.

Table 4 about here

The results for Openness of executive recruitment (*XROPEN*), Competitiveness of executive recruitment (*XRCOMP*), and Constraints of chief executive (*XCONST*) are not significant. Furthermore, while the insignificant coefficients for *XRCOMP* and *XROPEN* at least indicate an inverted U-shaped effect on the likelihood of civil conflict, *XCONST*

¹⁴ Once again the effects of the control variables do not change qualitatively, so we do not discuss them. They are included in each specification and are presented in Table 6.

¹⁵ Results are not reported here but are available upon request.

exhibits a completely different pattern. The opposite U-shaped relationship is more likely.¹⁶

The coefficients for Competitiveness of political participation (*PARCOMP*) and Regulation of political participation (*PARREG*) do indicate a possible significant and inverted U-shaped effect on civil war. Neither relationship turns out to be robust if we control for per capita income as a measure of development instead of energy consumption.¹⁷ Nevertheless, the original inverted U-shaped relationship between Polity and civil war onset appears to be driven by *PARCOMP* and *PARREG*.

What does this mean substantively? To answer this question, return to the definitions of these variables (originally presented in Table 4) in more detail. First of all, note that the definitions are extremely similar, particularly with respect to the definitions of the middles of the scales (“factional” in both cases). The variables are correlated at 0.93 and appear to be capturing the same set of features.

For *PARREG*, civil war is estimated to be least likely at either extreme. At one end, civil war is unlikely when political participation is defined as “restricted” or when “some organized Political participation is permitted...but significant group, issues and/or types of conventional participation are regularly excluded from the political process” (Gurr 1997: 13). At the other extreme, civil war is unlikely when participation is allowed.

For *PARCOMP*, civil war is also estimated to be least likely at either extreme: when the competitiveness of participation is defined as “suppressed,” without any “significant oppositional activity outside the ranks of the regime and ruling party”; or when the political system is defined as “competitive,” such that there are “relatively stable and enduring political groups which regularly compete for political influence at the national level” (Gurr 1997: 14).

Civil war is estimated to be most likely when *PARREG* and *PARCOMP* take on middle values. The definition for the middle of the *PARCOMP* scale is simply “factional or factional/restricted patterns of competition.” The definition of “factional” is spelled out in more detail under the definition of *PARREG*:

Factional/Restricted: Polities which oscillate more or less regularly between *intense factionalism and restriction: when one group secures power it restricts its opponents’ political activities until it is displaced in turn.* Also coded here are polities in which political are factional but *policies of genocide or politicide are routinely carried out against significant portions of the population that historically have been excluded from positions of political power....* Transitions between factional/restricted and Regulated Participation, as well as shifts among

¹⁶ Interestingly, this dimension has been found to be the most important component of Polity. In their analysis, Gleditsch and Ward show that only a small portion of the possible Polity combinations is actually found in the data. Their factor analysis of the measure shows that most of the variation in Polity is driven by changes in the XCONST (Chief Executive Constraints) dimension.

¹⁷ Results are not reported here but are available upon request.

Factional/Restricted and Restricted modes of behavior are coded here (Gurr 1997: 15, emphasis added).

The problem with this definition is that it is very similar to the definition of the onset of a civil war! It is no wonder, then, that the likelihood of civil war is greatest when *PARREG* or *PARREG* take on middle values.¹⁸ Internal violence is part of the definition of both the middle of these scales and of civil war. These variables are completely inappropriate to test explanations of civil war. The inverted U-shape is in part true by definition.¹⁹

5 Latin America

The above section indicates that there is little support for the old inverted U-shaped relationship between regime and civil war once the Polity measure has been deconstructed. For the region of Latin America, however, one need not go through such lengths to show that the inverted U-shape story does not apply. Consider what we observe: In our data, there are 18 Latin American countries observed during 1,261 country-year experiencing a total of 15 civil conflicts. Only four of them occurred in countries scoring near the middle of the Polity scale. Eight of them occurred in countries scoring -5 or less; three occurred in the countries scoring +5 or more. Table 5 shows the cases. Even casual inspection of the data reveals little support for an inverted U-shaped story.

Our story of the function of legislative institutions under dictatorship, however, does receive support. Only three civil conflict occurred under dictatorships with legislatures, while seven conflicts occurred under dictatorships with no democratic institutions, and five conflicts occurred in democracies.

Table 5 about here

More rigorous analysis of the data from Latin America confirms these observations. In Table 6, we re-run the same analysis as presented in Table 1 for just the region of Latin America.²⁰ The results are startling.

Specification 1 shows no support for the inverted U-shape hypothesis. Neither *Polity* nor *Polity Squared* is significant. Indeed, both coefficients are greater than 1, so they do not even produce the predicted shape. There is simply no support for the idea that “anocracies” are prone to civil war in Latin America.

In general, Table 1 shows that civil conflict is more difficult to explain in Latin America than in the rest of the world. Variables that were significant in the original Hegre et al.

¹⁸ PARREG can also take on values of 0 when there is an explicit civil war.

¹⁹ This problem is mentioned in both Hegre et al. (2001: 36) and Fearon and Laitin (2003: 85, fn30). Yet neither study addresses the problem.

²⁰ We drop two variables due to collinearity: *Proximity of Independence* and *International Civil War in Country*.

study are not robustly significant here. *Proximity of Regime Change* is not always significant, nor is *Proximity of Civil War*. Even the energy consumption findings are weaker.

Yet, the variable we speculate about is significant. Specification 2 shows *Dictatorships with Legislature* to have a strong statistically significant negative effect: the hazard ratio is 0.11. The effect of *Dictatorship* is 3.86, so the overall effect of being a dictatorship with a legislature is 0.42, which indicates that dictatorships with legislatures are even less likely to suffer from civil war than democracies! Overall, the results indicate that pure dictatorships are nearly 4 times as likely to suffer from civil war than democracies, but dictatorships with legislatures are less than half as likely to suffer from civil war than democracies. They are nearly 90 percent less likely to suffer from civil war than pure dictatorships.

This implies that – if anything – there is a *U-shaped* relationship (as opposed to an *inverted U-shape*) between regime and civil war in Latin America. Consider the following way of thinking of a continuum of regimes, which differ in the degree to which incumbents are constrained: First, there are democracies in which institutions, such as legislatures and operate, and no political actor is authorized to arbitrarily overturn their decisions, change their procedures for operation, or dismantle them altogether. Decisions, outcomes, and institutions can be changed, but their alteration must follow pre-established procedures and rules. Second are dictatorships with legislatures in which institutions operate, but there is a political actor who maintains the authority: 1) to control the outcomes produced by these institutions, eliminating ex ante uncertainty; and, 2) to overturn the outcomes and even the institutions themselves should this actor disagree with the outcomes, eliminating ex post irreversibility. Finally, there are regimes in which these institutions do not operate at all (pure dictatorships). In this case, neither an institutional apparatus nor a strong potential opposition or need for cooperation constrains incumbents' actions.

These types roughly correspond to our current distinctions between democracy and dictatorship and between institutionalized and non-institutionalized dictatorships. Interestingly, we have found that in Latin America, democracies are more prone to civil conflict than dictatorships with legislatures, and pure dictatorships are the most prone to civil war. If we think of these regimes as along a continuum, these findings indicate a U-shaped relationship. It appears that dictatorships with legislatures combine the optimal mix of accommodation and repression when dealing with insurgencies.

Table 6 about here

Specification 3 shows that the *All Legislatures* finding receives less support in Latin America than in the world in general. Democracies and dictatorships with legislatures are less likely to suffer from civil war than pure dictatorships, but the finding is significant only at the 90 percent confidence level.

Specifications 4 and 5 show that the above patterns hold when *Polity* and *Polity Squared* are reintroduced.

In Latin America, as in the rest of the world, dictatorships with legislatures are less likely to suffer from civil war than dictatorships without them. The old intuition, suggesting that pure dictatorships repress insurgency, democracies accommodate conflict peacefully, and middle regimes are left the most prone to civil war, is not supported by the data.

The work presented in this paper is at a macro level. We feel that the work would be improved by detailed case-study analysis of civil wars and their relationship with legislative institutions under dictatorship. Our statistical analysis of Latin America indicates that the experience of this region may provide cases that would demonstrate our hypotheses at a micro level. We would also learn more about the logic of civil wars and dictatorships with legislative institutions from such case studies. Suggestions of specific countries and time periods on which to focus would be greatly appreciated by the authors.

6 Conclusion

Under dictatorship, nominally-democratic institutions, such as legislatures, are typically dismissed as mere window-dressing. Yet we believe that these institutions are used to build political support, encapsulating social groups outside of the ruling elite. When dictators need the cooperation of outsiders or must neutralize the threat of rebellion, they create institutions, such as legislatures. They may occasionally err, stubborn in their beliefs that they maintain power through legitimacy or force alone. Or they may prefer to run the risk of civil conflict rather than provide the policy concessions and rents necessary to coopt the potential opposition within institutions. But if they choose, dictators can use institutions either to preempt the emergence of opposition that may grow into an insurgency or to vitiate an existing movement by offering participation within these institutions as part of a power-sharing agreement. Either way, dictators are able to lower the likelihood of civil war through the use of these institutions. As Section 3 shows, the evidence for this idea is strong. Dictatorships with legislatures are about half as likely to experience civil war as non-institutionalized dictatorships.

We find more generally that legislatures may be the key institutional variable that explains civil war. We find little difference between the risk of civil war for dictatorships with legislatures and democracies. But we are cautious: we know that in democracies, legislatures make decisions that can not be overturned arbitrarily while in dictatorships, not only can their decisions, but also the assemblies themselves can be overturned. As a result, we suspect that democratic and dictatorial legislatures are not the same animal. Yet, the two share common features. Both are arenas in which the government and the opposition announce preferences and forge policy compromises. Both are arenas in which cooptation occurs. When the King of Jordan makes policy concessions to legislators from moderate Muslim groups in exchange for their support for his regime, it is much like democratic incumbents crafting legislative logrolls with the opposition.

The commonality of democratic and dictatorial legislatures and their importance in mitigating the risk of civil conflict suggests that the emphasis on the distinction between democracy and dictatorship, found in the civil war literature as well as elsewhere, may be misplaced. As Przeworski and Limongi (1993) suggest, other institutional differences besides those of regime type may explain phenomena we care about. Perhaps the presence of a legislature is important in other areas beyond civil wars.

Regarding the broader civil war literature, our finding differs significantly from previous work that claims the greatest likelihood of civil war is in regimes that mix democratic and non-democratic elements. As the argument goes, pure dictatorships can repress civil conflict, and pure democracies can accommodate civil disagreement peacefully, but anocracies are caught in the middle – they can neither repress nor accommodate civil strife and are thus the most susceptible to civil war. The difference in findings is due to differences in the measure of regime type.

Since the difference is because of Polity, our work should not be taken as an indictment of previous work on civil war. Our statistical work builds directly on the excellent methodology of Hegre et al. (2001), and our study would not have been possible without relying on the previous work of many civil war scholars. Previous studies may have gone wrong by relying on Polity to measure regime type, but this is common. Nearly all published large-n work on democracy in political science relies on the Polity measure. So, if we are to criticize previous work on civil war for using a poor measure of regime, our critique should be taken to go well beyond the civil war literature in particular.

Indeed, we find the ubiquitous use of the Polity index puzzling given the general problems associated with its construction as pointed out by a number of other studies. Its availability and convenience are certainly advantages. Yet the assumptions about the aggregation of its components are problematic, and even using its components separately can lead to tautological findings when investigating civil conflict.

Putting aside these criticisms, a larger question looms: What is the use of pointing to “semi-democracies” or “anocracies,” as defined by their position on an aggregated index, then claiming their association with civil war (or any outcome)? Values on the index can result from hundreds of different combinations of its components, so one is ultimately left to hazard a guess about what it all means. If one seeks to test a theory of whether particular political institutions – such as dictatorships with nominally-democratic institutions – are more or less likely to experience civil conflict, why not just test the theory with more concrete information about the specific institutions? The broader point is that it is far more edifying to examine the effect of political institutions when they are conceptualized sharply and operationalized through clear, observable measures. The results are more substantively meaningful. As Cheibub (2004) contends, “What we think we gain by employing subjective measures that allegedly capture the nuances of complex political phenomena is far less than what we lose in terms of meaning and validity.”

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Table 1: The Effect of Dictatorships with Legislatures on Civil war
Cox Model Estimating the Hazard Rate of Civil War (z-statistics in parentheses)

Variable	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Dictatorship with Legislature		0.444** -(2.41)		0.428** -(2.61)	
Dictatorship		2.303* (1.90)		2.360 (1.48)	
All Legislatures			0.442** -(2.42)		0.428** -(2.57)
Polity	0.998 -(0.10)			1.008 (0.23)	1.007 (0.32)
Polity Squared	0.988** -(2.34)			0.990** -(1.98)	0.990** -(2.00)
Proximity of Regime Change	3.554** (2.72)	3.521** (2.77)	3.511** (2.68)	3.027** (2.43)	3.025** (2.38)
Proximity of Civil War	3.187** (3.30)	3.572** (3.64)	3.569** (3.65)	3.363** (3.38)	3.360** (3.42)
Proximity of Independence	4.549 (1.56)	5.855* (1.92)	5.866* (1.91)	5.757* (1.78)	5.778* (1.81)
International War in Country	2.359 (1.44)	3.828** (3.05)	3.843** (3.05)	3.661** (2.70)	3.664** (2.70)
Neighboring Civil War	1.102 (0.29)	1.312 (0.86)	1.311 (0.86)	1.296 (0.81)	1.295 (0.81)
Ln(Energy Consumption)	0.618** -(3.10)	0.605** -(3.13)	0.604** -(3.17)	0.632** -(2.74)	0.632** -(2.73)
Energy Consumption Squared	0.936* -(1.87)	0.922* -(1.88)	0.922* -(1.88)	0.934 -(1.59)	0.934 -(1.60)
Ln(Per Capita Income)					
Per Capita Income Squared					
Ethnic Heterogeneity	2.219** (2.07)	2.854** (2.54)	2.854** (2.53)	2.484** (2.32)	2.484** (2.32)
P-value of Joint Test for Dict. with Leg. and Dict.		0.05*		0.03**	
P-value of Joint Test for Polity and Polity Squared	0.04**			0.14	0.13
Number of countries:	152	151	151	151	151
Number of events:	63	60	60	60	60
Number of observations	8262	8175	8175	8175	8175

** Significant at the 95% confidence level. * Significant at the 90% confidence level

Table 2: Components of the Polity index

	Score
Competitiveness of Executive Recruitment (XRCOMP)	
(a) Election	2
(b) Transitional	1
(c) Unregulated (forceful seizure of power)	0
(c) Selection	-2
Openness of Executive Recruitment (XROPEN)	
(a) Election (if XRCOMP=2 or 1)	1
(b) Dual: Hereditary/Election (if XRCOMP=2 or 1)	1
(c) Dual: Hereditary/Designation (if XRCOMP=-2)	-1
(d) Closed (if XRCOMP=-2)	-1
(e) If the above conditions do not hold	0
Constraints on Chief Executive (XCONST)	
(a) Executive Parity or Subordination	4
(b) Intermediate Category 1	3
(c) Substantial Limitations	2
(d) Intermediate Category 2	1
(e) Slight to Moderate Limitations	-1
(f) Intermediate Category 3	-2
(g) Unlimited Power of Executive	-3
Regulation of Political Participation (PARREG)	
(a) Regulated	0
(b) Factional or transitional	0
(c) Factional/ Restricted	-1
(d) Restricted	-2
(e) Unregulated	0
Competitiveness of Political Participation (PARCOMP)	
(a) Competitive	3
(b) Transitional	2
(c) Factional	1
(d) Restricted	-1
(e) Suppressed	-2
(f) Not applicable	0

Table 3: Countries scoring 0 on the Polity score 11 different ways in 17 different countries

	Country	Years	PARCOMP	PARREG	XRCOMP	XROPEN	XCONST
1st combination:	Haiti	1935-1946	0	0	2	1	-3
2nd combination:	Ecuador	1970-1972					
	Honduras	1904-1907	1	-1	2	1	-3
3rd combination:	Chile	1851-1874					
	Swaziland	1968-1973	1	-1	1	1	-2
	Zambia	1968-1972					
4th combination:	Honduras	1971-1972	1	0	0	0	-1
5th combination:	Uruguay	1904-1910					
	Uruguay	1934-1952	3	0	-2	0	-1
6th combination:	Hungary	1989-1990					
	Kenya	1966-1969	-1	-2	1	1	1
	USSR	1990-1991					
7th combination:	El Salvador	1964-1972	2	-1	-2	0	1
8th combination:	Yemen Arab Rep.	1962-1966	-1	-1	0	0	2
9th combination:	Burundi	1962-1963	1	0	-2	-1	2
10th combination:	Colombia	1900-1904					
	Guyana	1978-1980	1	-1	-2	0	2
	Indonesia	1950-1957					
11th combination:	Yugoslavia/Serbia	1921-1929	1	0	-2	-1	2

Table 4: Testing the Individual Components of Polity

Variable	Spec. 17 XROPEN	Spec. 18 XRCOMP	Spec. 19 XCONST	Spec. 20 PARCOMP	Spec. 21 PARREG
Polity Component	0.448 (1.19)	0.034 (0.44)	-0.052 (-0.87)	-0.019 (-0.22)	-1.161** (-2.46)
Polity Component Squared	-0.504 (-1.19)	-0.128 (-1.64)	0.009 (0.38)	-0.130** (-2.09)	-0.556** (-2.55)
Proximity of Regime Change	1.450** (3.31)	1.365** (2.99)	1.472** (3.32)	1.301** (2.80)	1.351** (3.01)
Proximity of Civil War	1.250** (3.78)	1.243** (3.68)	1.280** (3.82)	1.180** (3.40)	1.143** (3.18)
Proximity of Independence	1.469 (1.49)	1.542 (1.57)	1.548 (1.57)	1.463 (1.48)	1.595* (1.72)
International War in Country	0.914* (1.70)	1.005* (1.78)	0.960* (1.85)	0.894 (1.63)	0.924* (1.65)
Neighboring Civil War	0.123 (0.39)	0.173 (0.53)	0.135 (0.42)	0.107 (0.33)	0.116 (0.36)
Ln(Energy Consumption)	-0.499** (-3.34)	-0.526** (-3.41)	-0.513** (-3.29)	-0.460** (-2.96)	-0.528** (-3.35)
Energy Consumption Squared	-0.065 (-1.62)	-0.080** (-2.25)	-0.080** (-2.18)	-0.065* (-1.84)	-0.076** (-2.13)
Ethnic Heterogeneity	0.886** (2.14)	0.950** (2.26)	0.959** (2.37)	0.823** (2.10)	0.849** (2.13)
P-value of Joint Test for Polity and Polity Squared	0.44	0.13	0.69	0.10*	0.04*
Number of countries:	152	152	152	152	152
Number of events:	63	63	63	63	63
Number of observations	8262	8262	8262	8262	8262

** Significant at the 95% confidence level. * Significant at the 90% confidence level

Table 5: 15 Civil Wars in Latin America from 1946 to 1992

Country	Day	Month	Year	Regime	Legislature	Polity Score
Paraguay	7	Mar	1947	Dictatorship	NONE	-9
Costa Rica	12	Mar	1948	Dictatorship	NONE	10
Colombia	15	Sep	1949	Dictatorship	YES	-5
Bolivia	9	Apr	1952	Dictatorship	NONE	-5
Guatemala	8	Jun	1954	Dictatorship	YES	2
Argentina	15	Jun	1955	Dictatorship	NONE	-9
Dominican Republic	25	Apr	1965	Dictatorship	NONE	-3
Guatemala	1	Oct	1966	Democracy	YES	3
Guatemala	15	Nov	1970	Democracy	YES	1
Guatemala	12	Mar	1978	Democracy	YES	-5
Nicaragua	1	Oct	1978	Dictatorship	YES	-8
El Salvador	1	Jul	1979	Dictatorship	NONE	-6
Peru	4	Mar	1982	Democracy	YES	7
Nicaragua	18	Mar	1982	Dictatorship	NONE	-5
Colombia	15	Mar	1984	Democracy	YES	8

3 conflicts occurred under dictatorships with legislatures
7 conflicts occurred under dictatorships without legislatures
5 conflicts occurred under democracies
4 conflicts occurred when Polity is less than 5 and greater than -5

Table 6: The Effect of Dictatorships with Legislatures on Civil war
LATIN AMERICAN COUNTRIES ONLY
Cox Model Estimating the Hazard Rate of Civil War (z-statistics in parentheses)

Variable	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5
Dictatorship with Legislature		0.11** -(2.11)		0.11** -(2.14)	
Dictatorship		3.86 (1.48)		6.21 (1.57)	
All Legislatures			0.18* -(1.90)		0.13** -(2.25)
Polity	1.01 (0.21)			1.04 (0.88)	1.06 (1.24)
Polity Squared	1.01 (0.69)			1.01 (1.04)	1.01 (1.07)
Proximity of Regime Change	3.18** (2.06)	3.08 (1.49)	3.70 (1.39)	4.09** (2.20)	4.37** (2.07)
Proximity of Civil War	1.14 (0.10)	1.09 (0.05)	1.23 (0.15)	1.02 (0.01)	1.07 (0.05)
Neighboring Civil War	0.64 -(0.38)	0.48 -(0.65)	0.64 -(0.54)	0.62 -(0.41)	0.66 -(0.41)
Ln(Energy Consumption)	0.27* -(1.63)	0.24* -(1.94)	0.27** -(2.02)	0.21** -(2.51)	0.22** -(2.64)
Energy Consumption Squared	0.86 -(0.83)	0.85 -(1.19)	0.84 -(1.12)	0.83* -(1.77)	0.84* -(1.68)
Ethnic Heterogeneity	4.22 (1.39)	2.47 (0.76)	2.97 (0.92)	3.74 (1.10)	4.00 (1.28)
P-value of Joint Test for Dict. with Leg. and Dict.		0.10*		0.07*	
P-value of Joint Test for Polity and Polity Squared	0.68			0.38	0.08*
Number of countries:	18	18	18	18	18
Number of events:	15	15	15	15	15
Number of observations	1261	1261	1261	1261	1261

** Significant at the 95% confidence level. * Significant at the 90% confidence level