

Why are civil wars in Africa more difficult for governments to win? Civil war outcomes and sub-Saharan Africa

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20 March 2007

Abstract

Which factors best predict how civil wars will end? Civil war outcome - simplified as government or opposition victory, negotiated settlement, and ongoing war - are regressed on military, economic, political, social and geographical variables. The results suggest that government victory is more likely in states that are autocratic, immune to coups d'état, less industrialized, and possessing large populations. Government victory is less likely since the end of the Cold War. Few variables are associated with opposition victory. Opposition movements appear to win in states which suffer from a propensity to coups d'état, and in those conflicts which are short. Negotiated settlements are associated with longer conflicts, democracies and states with small populations. This study contends that civil wars in sub-Saharan Africa are not unique with regard to civil war outcome, but that they share features with other countries that also tend not to experience government victories. It appears that the factors reducing the likelihood of government victory in Africa are those of small population size, and the fact that many civil wars in Africa continued or began after the end of the Cold War.

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Contact the author for the dataset and project codebook.

Introduction

Previous research finds that the factors which may predict the locations of civil wars do not correspond to those that predict their duration, the reasons for their resumption, or as the findings here suggest, how they end. This paper expands and revises the state-centric approach of de Rouen and Sobek (2004) which contends that identifying the role of the state is significant in terms of understanding civil war outcome. This study finds that military, political, and social factors have more explanatory power in terms of how a war will end rather than economic conditions or structures. Moreover, sub-Saharan African states do not appear to be unique in terms of civil war outcome, but rather they share certain factors and with other states that experience similar civil war outcomes.

This study compiles five lists of civil wars from the major studies - (Collier & Hoeffler, 2004; Doyle & Sambanis, 2000; Fearon & Laitin, 2003; Gleditsch, 2004; Sambanis, 2004)- and assigns outcomes, largely from Sambanis (2004), for each civil war observation. For ease of presentation, results are reported in the body of the paper for one list of internal conflicts, that of Sambanis (2004). These regression results are generally comparable to the results with the four other lists, which are included in the appendix². Sambanis' list of civil wars and the outcomes assigned are presented in Table 1 in the appendix. There are 149 civil wars, for the period 1944-2002. This study considers four possible outcomes: government victory, opposition victory, negotiated settlement, and ongoing war.

The first section offers hypotheses and empirical measures grouped into military, economic, political/social, and geographical themes. Following each set of hypotheses, separate regression results are reported and interpreted. There are practical and empirical justifications to perform regression analysis by thematic category. Regression analysis on the relatively low number of civil war observations would not be usable without reducing the large set of variables proposed in this study. Testing by category also makes it possible to identify factors that may statistically impact the Africa variable. There are three variables in common with each thematic regression, including one which represents sub-Saharan Africa, and two common control variables in quantitative studies, the size of the population and the duration of each conflict in months.

The second section presents a combined regression model using only the best performing variables from the thematic category regressions. The second section also interprets the results for sub-Saharan Africa. The logit model is used throughout.

Section One – Thematic Categories

Common findings among the studies of civil war outcome are that decisive victories are more likely in shorter civil wars, and negotiated settlements are more likely in longer wars (Brandt, Mason, Gurses, Petrovsky, & Radin, 2006; Mason & Fett, 1996; Mason, Weingarten, & Fett, 1999). Longer civil wars are expected to be more costly, thus leveling the playing field between the combatants. A recent model by Mason et al (Brandt, *et al.*, 2006) uses a single variable for the length of civil wars, the natural log of duration in months. Using a natural log of duration is more appropriate to the phenomenon being studied, because it discards the presupposition that the effect of

² There are several civil wars that have end dates but are coded as ongoing because these conflicts dropped below the threshold of being an active civil war according to the original coders.

duration is linear. One extra month in the first year of a civil war may matter more than in the latter years³.

There are too few civil wars to create separate dependent variables for all types of opposition movements. One way to overcome this is by using a statistical control for one major type, that of coups d'état. The importance of distinguishing between different opposition movements and the factors which may predict outcome appears repeatedly in the upcoming sections. In military coups, the opposition obtains government resources, giving it a greater probability of victory and this usually occurs in the early stages of a civil war. Research finds that coups d'état and popular revolutions are short in comparison to civil wars involving 'peripheral rebellions'⁴ (Fearon, 2004). The first hypothesis is thus:

Hypothesis 1: Shorter wars should be associated with government victories and coups d'état, and therefore tend to end in decisive victories. Longer wars should be associated with peripheral rebellions, and are therefore more likely to end in negotiated settlements.

It is also common in the literature to use population size as a general-purpose scale variable. The population of a state may imply a large pool of military recruits, significant coercive resources and a powerful, centralized government, or it may imply few resources per person, a disaffected populace, and a weak government. Thus, there are two contrasting hypotheses in terms of how population size interacts with civil war outcome:

Hypothesis 2a: Large populations serve as a proxy for governments with more material and human resources, and therefore should be associated with government victories and coups d'état.

Hypothesis 2b: Or, states with a large population should be associated with negotiated settlements because this constitutes greater resources for opposition movements and government forces.⁵

Population size and the duration of civil wars in months are included in all of the thematic regressions and in the final, reduced model with all of the significant variables.

Military Factors

International relations literature contends that combatants with greater military capabilities will choose to continue fighting and that the 'balance of coercive capacity' is the primary determinate of war outcome (as quoted in Clausewitz, Maude, & Rapoport, 1968; Gurr & Harff, 1994; as quoted in Mason & Fett, 1996; Stam, 1996). Moreover, the perception of military capabilities and the decisions based on

³ This explanation of the usage of natural logs is from Gleditsch (2005).

⁴ Fearon creates a helpful typology of expected civil war duration categories. The categories are: 1) coup attempts and popular revolutions; 2) anti-colonial wars; 3) wars following the disintegration of the Soviet Union; 4) so-called 'sons of the soil' wars; and 5) contraband-fuelled civil wars. (Fearon, 2004) This study adopts the term 'peripheral rebellions' from Fearon's typology.

⁵ This study uses the Correlates of War (COW) project's National Material Capabilities (NMC) (Correlates of War Project, 2005, version 3.2.) figures for total population and calculates the natural log.

that information may be more important than the actual condition of material or number of personnel. In this view, confrontations are one of the means of providing information about the relative strength of opposing forces. One variant of the balance of coercive capacity view is Zartman's concept of the 'mutual hurting stalemate' (Zartman, 1995a, 1995b). If, after several engagements, there is parity or the perception of parity between opposing forces, then 'neither combatant is able to make noteworthy advances on the battlefield due to the strength of the opposing side, and neither side believes that the situation will improve in the near future' (as summarized by Walter, 1997; Zartman, 1985). Models derived from this vein of research presume that the goal of opposition movements is the violent overthrow of a state, and thus employ rational choice models to hypothesize about civil war outcome (Mason & Fett, 1996; Mason, *et al.*, 1999). This theory also assumes there are two distinct, opposing sides in a civil war.

In comparative studies of African civil wars another phenomenon emerges in which the goal of combatants may not involve victory in the conventional sense. Where there are lootable resources, weak institutions, or opposing forces with the perception of parity, combatants may choose guerilla tactics, avoid costly confrontations with the enemy, and become professional bandits (Keen, 2005; Nugent, 2004; Reno, 1998). Command and control structures may disintegrate, leading to relatively autonomous factions roaming within and without state territory (e.g. Keen, 2005) who may choose temporary arrangements with 'opposing' forces to facilitate illicit activities. Under these circumstances, combatants may choose longer wars if there are profitable opportunities created by the wartime situation, and have little incentive to fight each other, let alone end the civil war. The assumption of total victory also does not hold in separatist civil wars where the objective of opposition movements is the recognition of territorial autonomy, and generally not the overthrow of the government.

The objectives of combatants may be theorized quite differently, yet the associated hypothesis which emphasizes military capacity is the same: unless the balance of military power changes, a negotiated settlement is most likely. Where there are military coups at the start of or during civil wars the probability increases that the opposition will win a decisive victory and the government will be replaced by coup plotters. Thus, significant levels of militarization may predict decisive victories generally, not solely government victories, and we may reject the hypothesis that militarization only increases the probability of government victory. This yields the following hypothesis:

Hypothesis 3: High military capacity should be associated with decisive victories. In contrast, poorly equipped and under-supplied combatants may engage in looting and avoid decisive confrontations with the enemy, thus prolonging civil wars and increasing the probability of a negotiated settlement.

In common with other studies, this paper uses the size of the army per 1000 persons to serve as a proxy for military capacity.⁶ This study augments that measure with several factors not previously used in outcome studies, including a composite measure of a state's military-industrial base, which takes into account energy consumption, the percentage of the total population that resides in urban centers, iron and steel

⁶ Available time-series data sources for the number of military personnel leave out reservists, gendarmes, praetorian guards, paramilitaries, and militias.

production, military expenditures, and the number of active duty military personnel.⁷ Of course, the measures proposed here are problematic because it cannot be assumed that the military spending reported by a government, if it is even accurate, is used efficiently or for a specific civil war. This study also includes a control variable for coups d'état.

This study also includes a variable for civil wars that ended after the Cold War. A common finding in the literature is that the end of the Cold War meant decreased superpower sponsorship and provided an inexpensive supply of small arms, light weapons, and mercenaries for civil wars in the developing world (Craft & Smaldone, 2002). In this hypothesis, the proliferation of arms during the 1990s among state and non-state actors should be associated with parity in confrontations, leading to longer wars. Moreover, the United Nations, liberated from superpower tensions, sought to reinvent itself and increasingly intervened in internal conflicts. This leads to the following hypothesis:

Hypothesis 4: Civil wars that ended before 1989 should exhibit a greater chance of ending in decisive victories due to superpower sponsorship. Civil wars that ended after the Cold War should be more likely to end in negotiated settlements because of reduced sponsorship and/or UN involvement.⁸

In contrast to this theory, Ellis argues that the flood of arms into Africa preceded the end of the Cold War, and had already contributed to increased militarization in the mid-1980s (Ellis, 1999).

Military Category Regression

Military factors appear to predict quite well how civil wars will end and challenge several hypotheses.

⁷ Measures of military capacity are taken from the Correlates of War (COW) project's National Material Capabilities (NMC) (Correlates of War Project, 2005, version 3.2.) Army size is calculated by dividing the army size by the total population to arrive at the number of soldiers per 1000 persons. Military expenditure is divided by military personnel to arrive at per soldier spending. The measure for the military-industrial base is the Composite Index of National Capabilities (CINC) score from the same data source as above. There is no available measure for the military capacities of opposition movements.

⁸ There are no accurate measures available for the extent of covert and overt foreign assistance. De Rouen and Sobek use a variable for United Nations' interventions, but this study discards this measure because of the endogeneity problem, which they recognize. The UN usually intervenes in protracted civil wars which are already more likely to end in a negotiated settlement (de Rouen & Sobek, 2004, pg. 311).

Table 1: Military Factors				
	Government	Opposition	Settlement	Ongoing
Sub-Saharan Africa	-0.38	0.34	0.07	0.18
	-0.46	-0.63	-0.87	-0.76
Army size per 1000	37.06	46.85	-46.61	17.45
	(0.078)*	-0.23	-0.17	-0.68
Military and industry score	-20.05	0.01	7.26	-18.47
	(0.013)**	-1.00	-0.54	-0.17
Coups during conflict	-1.12	4.03	-0.86	-1.28
	(0.038)**	(0.000)***	(0.082)*	(0.070)*
Ended after Cold War	-2.49	-0.31	1.34	
	(0.000)***	-0.65	(0.006)***	
Duration	-0.16	-0.77	0.49	0.66
	-0.20	(0.000)***	(0.001)***	(0.000)***
Population	0.51	0.37	-0.65	0.52
	(0.009)***	-0.22	(0.001)***	(0.024)**
Constant	-7.23	-7.69	8.24	-13.04
	(0.026)**	-0.13	(0.008)***	(0.001)***
Observations	149.00	149.00	149.00	149.00
Robust p values in parentheses				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Shorter wars are only associated with opposition victories and not government victories. The effect is strong which may be due to the inclusion of coups d'état. It is also very likely that longer wars will end in negotiated settlements. Large populations appear to be associated with greater chances of government victory, and smaller populations appear to be associated with negotiated settlements. This suggests that, if we rely on population size alone as predictor, governments have more resources in larger states to defeat opposition movements, and conversely, that smaller states are associated with more parity in confrontation. There is no support for the hypothesis that in smaller states in particular forces find it easier to monopolize resources and achieve quick victories. These findings do not appear to support the hypothesis that larger states serve as a proxy for more resources for all sides in a civil war. There is a strong benefit with population size that disproportionately accrues to the government.

The size of the army is weakly associated with the likelihood of a government victory but not an opposition victory. The regression demonstrates that expanding the measure of military capacity is profitable.⁹ It appears that a stronger military-industrial base make government victory less likely, in contrast to the impact of the amount of military personnel. This appears to lend serious support to the hypothesis that the longevity of a regime is not ensured with increased militarization as high military capacity strongly reduces the likelihood of government victory. However, this presents an endogeneity problem, as opposition movements choose the strategy that fits the state which they are challenging.

It is hardly surprising that the presence of coups d'état during an intrastate conflict are strongly associated with opposition victories, and those that do not experience coups during conflict are very likely to end in government victories. A closer look at these data reveals that 11 of the 26 opposition victories in the dataset began as coups. Government victories are more likely before 1989, and those that

⁹ This is expected given the low correlation between these measures, for example, army size is only 15% correlated with the military-industrial score despite coming from the same data source.

ended after the Cold War are more likely to end in negotiated settlements. These findings appear to only partially support the hypothesis about the impact of the Cold War on civil war outcome. State sponsorship or other factors during the Cold War made government victory more likely, but not opposition victory. This may be interpreted in different ways. Perhaps countries with significant foreign support during the Cold War were less likely to experience coups, and, therefore, coups were more likely only in non-aligned countries. It is also plausible that coups affected all countries equally and there is another explanation for this result. The findings lend credence to the hypothesis that civil wars which ended after the Cold War are more likely to end in negotiated settlements.

Again, De Rouen and Sobek (2004) find that African governments are much less likely to experience government victories. Interestingly, it is no longer less likely for African states that experience civil war to achieve government victory in this regression. This result should be interpreted as one or several of the factors used in this regression bears some resemblance with African states. It is not possible to pinpoint which variables impact the Africa result, except that the regression suggests that military factors or the scale variables (population size and duration) have a strong impact on the outcome of civil wars. When the significant variables from the military theme are combined with the other significant measures in the core model, then a more detailed interpretation will be offered.

Economic Factors

Civil war studies consistently find that countries that experience civil war share similar underlying economic risks. For instance, Elbadawi and Sambanis observe that Africa's high incidence of civil war is due to lower levels of economic development, institutional decay, and a relatively high dependence on primary commodity exports (E. Elbadawi & N. Sambanis, 2000). Collier and Hoeffler note that 'Africa's rising trend of conflict [...] is fully accounted for by divergent trends in African and non-African economic conditions' (Collier & Hoeffler, 2002). These studies conclude that African states are not exceptional as such, but they share the same underlying structural risks as other states which experience civil war.¹⁰

The dominant paradigm in studies of civil war is the rebellion-as-business approach, which posits that 'rebellion [is] an industry that generates profits from looting, so that "the insurgents are indistinguishable from bandits or pirates."' (as quoted by Collier, Hoeffler, & Sambanis, 2005; Grossman, 1999) Rebellion will occur where there are atypically high profitable opportunities for rebellion, and where there is low income (Collier & Hoeffler, 2004). Collier and Hoeffler find that civil wars are more likely to occur in states with a high reliance on primary commodity exports, with large, dispersed populations, low per capita income, low male secondary school enrollment, and low economic growth rates (Collier & Hoeffler, 2004). The interpretation is that civil wars begin and continue as a function of the viability of insurgent profit-making opportunities. In further support of the rebellion-as-business approach, Collier, Hoeffler and Soderbom observe that the most significant factor prolonging civil wars is income inequality, and in addition find that declines in

¹⁰ Studies show that Africa is the only continent where civil wars are on the increase, while other regions are decreasing, at least until 1999 when the coverage of most studies ends. (Collier & Hoeffler, 2002; I. Elbadawi & N. Sambanis, 2000) Compared to the rest of the world, African states also have, on average, lower levels of income and a higher reliance on primary commodity exports for foreign exchange earnings.

commodity prices increase the chances of war termination, though the type of termination is not specified, and that when prices for commodities increase, war termination is less likely (Collier, Hoeffler, & Soderbom, 2004).

The termination hypothesis for the rebellion-as-business approach would be that where there are lootable resources and limited economic opportunities, combatants from all sides have less incentive to fight each other and more incentive to 'tax' the local population and plunder natural resources. Of course, the benefits of lootable resources do not solely accrue to rebel organizations, because the government may also gain foreign exchange in this manner. An example would be the later phases of the Angolan civil war in which the government benefited by securing revenues from oil production, while UNITA obtained foreign exchange from mineral resources, extending the scope and duration of the civil war. Without knowing which combatants possess the most significant access to primary commodities, it is impossible to predict any outcome, except perhaps for a negotiated settlement.

The link between economic conditions and civil war is interpreted differently in the political science literature which generally argues that civil war arises from atypically high levels of grievances, as a result of factors which may include poverty, severe inequality, a repressive regime, and ethnic dominance (Collier and Hoeffler 2004). Thus, some factors which Collier and Hoeffler interpret as support for the greed approach, such as low per capita income, may also be interpreted as factors motivating opposition movements. For example, Walter (2004) argues that civil war recurrence originates in a glut in the supply of rebel recruits, which is in turn a function of 'desperation' in a post-conflict society. Walter interprets this result from similar economic measures used to support competing hypotheses. A termination hypothesis of grievance-based explanations is that civil wars end when rebels cannot sustain recruitment.

Much of the political science literature argues that dependence on primary commodity exports orients the national political economy externally, resulting in institutional decay (Humphreys, 2005; Leonard & Straus, 2003; Reno, 1998). Extraverted elites choose to enrich themselves at the expense of their populations, development infrastructure erodes and the opportunity for rebellion is greater (Leonard & Straus, 2003). Perhaps both interpretations of the effect of primary commodity exports on civil war are in operation (Collier, *et al.*, 2004, concede this point). The political science interpretation of primary commodity dependence would be that it signifies institutional decay, thus prolonging civil wars.

Despite the vast differences in the interpretation of economic risks on civil war, the application of the rebellion-as-business theory and the political science emphasis on institutional erosion produce similar hypotheses with regard to civil war outcome:

Hypothesis 5: Economic development should be associated with decisive victories. In contrast, economic discontent generates looting and pillaging, and results in less confrontations with opposing forces, and should therefore prolong civil wars and be associated with negotiated settlements.

Hypothesis 6: Negotiated settlements should be more common where there is a high concentration of primary commodity exports due to institutional decay/and or greater opportunities for plundering natural resources.

This study employs measures of GDP per capita, vertical inequality (using the Gini coefficient), and economic development.¹¹ Energy consumption per capita serves as the crude proxy for economic development, though it is more likely to represent the level of industrialization. Primary commodity exports are the ratio of primary commodity exports to GDP as proposed by Sachs and Warner (Sachs, Warner, & National Bureau of Economic Research., 1995), and are taken from the Doyle and Sambanis (2000) online dataset.¹² For a rough approximation of net fuel and mining exports, data was downloaded from the World Trade Organization.

Economic Category Regression

Table 2: Economic Factors	Government	Opposition	Settlement	Ongoing
sub-Saharan Africa	-0.46	0.25	0.27	0.81
	-0.45	-0.76	-0.57	-0.21
GDP per capita	0.35	-0.57	0.50	-0.45
	-0.39	-0.30	-0.14	-0.41
Energy consumption	-813.31	236.58	84.12	431.68
	(0.029)**	-0.41	-0.75	(0.074)*
Primary commodity exports	-1.31	-2.88	4.58	-0.77
	-0.62	-0.57	-0.16	-0.93
Mining and fuel exports	0.35	-4.79	0.21	2.98
	-0.81	-0.20	-0.82	(0.033)**
Income inequality	0.02	0.01	-0.03	0.01
	-0.44	-0.74	-0.22	-0.75
Duration	-0.42	-0.65	0.75	0.97
	(0.002)***	(0.003)***	(0.000)***	(0.007)***
Population	0.31	0.08	-0.67	0.60
	(0.063)*	-0.60	(0.000)***	(0.050)**
Constant	-6.82	2.67	4.99	-14.92
	-0.13	-0.67	-0.16	(0.024)**
Observations	118.00	118.00	118.00	118.00
Robust p values in parentheses				
* significant at 10%; ** significant at 5%; *** significant at 1%				

In contrast to the several studies which have found that economic factors strongly influence where civil wars will occur and their duration, they appear to matter less in terms of predicting civil war outcome. There is no support for hypotheses relating to primary commodity exports, or for inequality affecting outcome one way or another. The reason for this may be that the models which predict duration use different methods which take into account the changes in factors over time (Brandt, *et al.*, 2006; Collier, *et al.*, 2004). Duration has the expected effect: decisive victories are strongly associated with shorter wars, and negotiated settlements are associated with longer wars. Population has the same effect as in the regression for military factors, in that large states are more likely to have government victories, and smaller states are more likely to experience negotiated settlements.

¹¹ GDP per capita data are from the State Failure Task Force (version 3), with a few missing observations taken from Penn World Tables, version 5.6 as there is a very high correlation between these data sources.

¹² Ten countries are missing data for primary commodity exports.

States with relatively high levels of economic development are *less likely* to experience government victory. This partially corresponds with the hypothesis that economic development should reduce motives for opposition, and should therefore be associated with decisive victories, yet only government victories are less likely. A closer look at the dataset reveals that these civil wars are generally separatist: the states which did not experience government victory but have high levels of energy consumption are the United Kingdom (IRA) and the Russian Federation (Chechnya I and II). The goal of separatist movements is autonomy from the state; they may not challenge the fundamental right of the state to exist, only that state's claims to the region in question. If the enemy is an industrial state, then neither a coup, nor a conventional military confrontation is a feasible strategy for opposition movements.

The variable representing civil wars which occurred in sub-Saharan Africa also loses its statistical significance in this regression, leading to the conclusion that economic factors or one or both of the scale variables for population and duration are strongly associated with those civil wars.

Political and Social Factors

The quantitative literature on civil war has rendered obsolete the theory that high levels of ethnic diversity cause civil war (e.g. Collier & Hoeffler, 2004; Fearon & Laitin, 2003; Sambanis, 2004). However, the dynamics of ethnicity during civil war may be more complicated. Authors emphasize that ethnic identities are perpetually reconstructed, and not uncommonly exploited by elites to facilitate military, economic, and political mobilization (Fearon & Latin, 2000). While civil wars may not begin merely because of ethnic differences, we may theorize that civil wars can, to a large extent, shape ethnic identities which may, in turn, have an effect on civil war outcome. In very diverse societies ethnic divisions may inhibit recruitment and fragment opposition movements.¹³ This leads to the following hypothesis:

Hypothesis 7: High ethnic diversity should be associated with negotiated settlements because there may be increased potential for ethnic mobilization, and thus more difficulty in achieving consensus in negotiations. Moreover, a civil war may create ethnic tensions which can, in turn, prolong civil war.

Ethnicity is measured using an additive index of linguistic, religious, and ethnic difference (Vanhanen, 1999). The weakness of this index is its impreciseness, which generally relates to its underlying assumption that identity construction is static. The index assigns the same value for a country over the entire post-1945 period, and, for the most part, it ignores international and internal conflicts and forced migration.

Some authors argue that autocracies promote rebellion and facilitate recruitment, as actors will choose violent movements to challenge the status quo if there are no mechanisms for redistribution or participation, and that, conversely,

¹³ Oberschall argues that early in a civil war there is a security dilemma, a one-time iteration derived from the prisoners' dilemma in game theory. In this situation, 'there is no external authority to enforce compliance so that people choose to join increasingly polarized social groups out of fear that others are making the same decision which will, in turn, affect their personal security. While almost everyone prefers to avoid civil war, when there is little or no overarching state authority, self-interests become paramount, leading to an escalation of violence' (Oberschall & Seidman, 2005, pg. 375). This tendency may explain how ethnic diversity may not appear to matter very much prior to civil war onset, but may be of great significance during civil wars.

'democracies should be relatively immune to civil war in the first place' (Brandt, *et al.*, 2006, pg. 12). However, democracy is not generally found to be a significant indicator of civil war incidence, onset, or duration in quantitative studies (Collier & Hoeffler, 2004; Collier, *et al.*, 2004; E. Elbadawi & N. Sambanis, 2000; Fearon & Laitin, 2003). With this in mind, Brandt et al hypothesize that, on the one hand, in democratic states civil wars should end sooner because there are mechanisms for settlement, and on the other hand, civil wars in autocratic regimes should also end quickly due to high coercive capacity (Brandt, *et al.*, 2006).¹⁴ This leads to the following hypothesis:

Hypothesis 8: Autocratic regimes should be associated with decisive victories while democratic regimes should be associated with negotiated settlements.

Thus far state capacity has been expanded to include military capacity, economic development, and democracy. Another aspect of state capacity is effective institutions, which this study measures from several angles.¹⁵ States that provide social services such as education, health care, and transport infrastructure may penetrate deeper into society. The associated hypothesis is thus:

Hypothesis 9: States which effectively distribute social services should be associated with government victories because there are fewer incentives to use force in opposing the government.

Democracy is measured using the Polity III data and social service provision is measured using primary school enrollment as a proxy.¹⁶

This paper also tests two new hypotheses and measures of state capacity. First, there may be significant differences in terms of institutional development between those states decolonized relatively early, for example in Latin America, and those states decolonized relatively late in Africa, the Middle East, and Asia. Therefore, an alternative measure of state capacity may be the length of time a state has been sovereign. If a state has been sovereign for a lengthy period, it may have had more time to develop effective political and economic institutions, and develop bargaining mechanisms between interest groups. Where states are newly sovereign, there may be a lack of significant institutional capacity, and therefore more motives and opportunities for opposition movements to challenge the government. Furthermore, the measure may serve as a proxy for former colonial power involvement in the security matters of their former colonies. This theory implies the following hypothesis about civil war outcome:

¹⁴ Autocratic regimes may generate sympathy for rebellion, in effect creating parity between a repressive government with significant coercive capacity, and an opposition movement constantly replenishing its lost personnel. Perhaps, though, the parity would be short lived.

¹⁵ The DRS model employs a measure of bureaucratic institutional quality. However, the measure is incomplete for many civil war observations. Instead, this study uses a measure of legislative effectiveness which has no missing values.

¹⁶ Polity III data produces several variables. This study uses the democracy score minus the autocracy score with missing values interpolated by the producers of these data. The data are converted from the -10 to +10 scale to 1-21. This is the same data source as de Rouen and Sobek. Primary enrollment data comes from Bank's Cross-National Time-Series data archive. However, there is a reason to doubt the accuracy of these data. For example, primary enrollment for the United Kingdom in 1971 is 1108 per capita, while Zimbabwe in 1972 is 1402 per capita. These data may not control for the number of primary age children; it is unclear in the documentation and they do not provide a control measure.

Hypothesis 10: A longer period since sovereignty should be associated with government victory due to more effective institutions. Newly sovereign states should be associated with negotiated settlements due to weak institutions or intervention by a former colonial power.

One serious weakness in this hypothesis is that it presumes that states routinely become stronger over time. Strong institutions and bargaining mechanisms may exist before a state is formally recognized, and may not be present even if a state is sovereign for a lengthy period. Institutional capacity may vary greatly over time, no matter when the state became independent. As for measuring the variable, the years of sovereignty for formerly colonized societies are calculated using the years since independence from the colonial power, and non-colonial powers are assigned a backwards threshold year.¹⁷

The second previously untested hypothesis connects food security to civil war outcome. This theory proposes that when food is scarce, civil war becomes a struggle of combatants versus the civilian population for daily necessities. Food coercion tactics may include forced rustication and cultivation, pillaging of humanitarian aid, ‘scorched earth’ policies, and violent contests over black-market food acquisition and distribution channels. Oberschall and Seidman argue that the winners of revolutionary and civil wars are those ‘who control the food supply, which may not necessarily be the side with the largest military capacity, access to foreign exchange, or external assistance’.¹⁸ This theory emphasizes food as an ongoing concern which is constantly renegotiated, and also complements that of the rebellion-as-business approach, because rebels may plunder natural resources to gain foreign exchange in order to replenish arms supplies, yet may still tax the population (or ‘live off the land’) for daily necessities. This yields the following hypotheses about food supplies and civil war outcome:

Hypothesis 11: An insufficient food supply should be associated with decisive victories because food coercion tactics are more effective. Where there is an adequate food supply combatants should be more willing to negotiate because food coercion tactics are ineffective.

This study employs a measure of the caloric intake, per day, per capita, as estimated by the Food and Agricultural Organization of the United Nations, as a rough proxy for food supply. Average rainfall is used as a control variable.¹⁹ Obviously, this measure obscures sub-national variations in food supply and it does not tell us who actually

¹⁷ States such as Ethiopia, Iran (Persia) and China present coding problems, hence the use of a backwards threshold. Non-colonial states use the threshold of 1800 from which to calculate years of sovereignty. The date of the threshold does not seem to matter much, as 1648 as a threshold produces similar results. Regime changes and periods of foreign domination in states are not included -- Ethiopia, for example, is considered independent despite Libyan occupation. See the project codebook for specifics.

¹⁸ I am grateful to David Anderson, African Studies Centre, for passing on this excellent article.

¹⁹ I am grateful to Alexander Moradi, Postdoctoral Research Fellow, Centre for the Study of African Economies, for suggesting these measures to proxy and control for food supply. Rainfall data is provided by researchers affiliated with the Tyndall Center (Mitchell, Carter, Jones, Hulme, & New, 2003; Mitchell, Hulme, & New, 2002).

controls food acquisition and distribution during a civil war.²⁰ In addition, it has been forcefully argued that food supply issues may be attributed to the institutional willingness and capacity of the state (de Waal, 1997; Sen, 1982). So that any impact caloric intake has on outcome may be going through a much more complex mechanism or process than that outlined by the food coercion thesis.

Political and Social Category Regression

The results for political and social variables are very significant. First, the effects of duration and population on outcome are consistent with the previous regression results. Whereas previous studies find that ethnicity is not a significant factor in civil war onset or duration, the results indicate a small effect, suggesting that civil wars in diverse societies are more likely to end in negotiated settlements. This may be due to increased potential for ethnic mobilization by all sides, greater difficulty in achieving consensus in negotiations, or because civil wars create ethnic tensions which then extend the scope and duration of civil wars. The countries with these characteristics in the dataset are Chad, South Africa, India, Sudan, and the states of the former Yugoslavia. However, it should be noted that this result only occurs in this regression and not with other civil war lists.

Table 3: Political and Social Factors				
	Government	Opposition	Settlement	Ongoing
sub-Saharan Africa	-0.78	-0.39	0.77	0.48
	-0.11	-0.59	-0.14	-0.54
Years sovereign	0.00	0.01	-0.01	0.00
	-0.29	(0.020)**	(0.047)**	-0.85
Ethnicity	-0.01	0.00	0.01	-0.01
	-0.28	-0.73	(0.042)**	-0.58
Democracy-autocracy	-0.13	-0.06	0.09	0.09
	(0.005)***	-0.29	(0.025)**	-0.18
Caloric intake	0.00	0.00	0.00	0.00
	-0.80	(0.002)***	(0.001)***	-0.74
Average rainfall	0.00	0.00	0.00	0.00
	-0.15	-0.43	-0.31	-0.52
Primary school enrollment	0.68	-0.22	-0.66	0.74
	-0.19	-0.41	(0.032)**	-0.22
Duration	-0.36	-0.42	0.61	0.52
	(0.008)***	(0.007)***	(0.000)***	(0.008)***
Population	0.39	-0.24	-0.71	0.34
	(0.004)***	(0.090)*	(0.000)***	(0.080)*
Constant	-9.47	9.64	6.57	-14.87
	(0.027)**	(0.004)***	(0.026)**	(0.007)***
Observations	147.00	147.00	147.00	147.00
Robust p values in parentheses				
* significant at 10%; ** significant at 5%; *** significant at 1%				

²⁰ The FAO data appears to be heavily interpolated, extrapolated, and estimated. For example, countries which experience long civil wars with utter devastation, such as Lebanon and Angola, strangely experience a steady increase in caloric intake. Some increases may be associated with food aid, but it is not possible to control for this as there are only complete food aid statistics available for the period 1970-present from the World Food Programme.

The results support the notion that democratic regimes are associated with negotiated settlements, and that more autocratic regimes tend to be more successful in defeating insurgencies.

The results suggest some support for the notion that states with little primary school enrollment will experience negotiated settlements. These results suggest only partial empirical support for the hypothesis that regimes which distribute social services most effectively are more likely to win civil wars, and those that do not will experience negotiated settlements. However interesting, the finding is not consistent and strong across different lists nor for other outcomes.

The results appear to support the notion that the longer a state has been sovereign, the more likely an opposition victory, and also effect that states which are relatively new experience negotiated settlements. A closer look at the dataset shows that fourteen of the twenty-seven civil wars fought in states that had been sovereign for less than thirty years and experienced negotiated settlements are in sub-Saharan Africa, five of the civil wars are in former Soviet states, and only five of the twenty-seven civil wars began as coups. There may be many interpretations of this phenomenon, and among them are the two proposed hypotheses involving institutional capacity and interventions by former colonial powers.

High caloric intake is negatively associated with opposition victory and is positively associated with negotiated settlements. These results suggest only the opposition victory is associated with an adequate food supply, not government victory. An interpretation of this may be that food coercion tactics constitute a small cost to rebels who have fewer mouths to feed, but a great benefit in costs that they may inflict on the government. For the government, food coercion tactics are highly costly, with minimal benefits, and difficult to target only at the opposing forces without high costs being imposed on the larger population. It is very unclear how to interpret the results.

Finally, the significance of the variable for sub-Saharan Africa disappears in the regression, indicating that political and social factors which explain civil war outcome globally also appear to explain the outcome for sub-Saharan Africa.

Geographical Factors

Quantitative scholarship produces contradictory findings with respect to the effects of geographical factors on civil war.²¹ De Rouen and Sobek (2004) observe that in the early stages of a civil war, insurgents may benefit from rough terrain, but that over the course of a civil war, geography plays less of a role. This study includes several geographical variables.

Research finds that land-locked countries experience less economic growth due to a lack of access to oceanic transit routes, foreign investment in tourism, and seafood resources (MacKellar, Wörgötter, & Wörz, 2000). The lack of growth may undermine political, economic, and military capacities to fight internal conflicts. This yields the following hypothesis:

²¹ Other geographical factors not included here which may impact civil war outcome include factors such as population dispersion, support from refugees in neighboring countries, and civil war contagion in bad neighborhoods. Contagion is a particularly interesting factor as K. Gleditsch (2005) shows that contagion is very significant in terms of civil war start.

Hypothesis 12: Land-locked countries may be possess a low level of economic development and should therefore be associated with negotiated settlements.²²

A rough proxy for the potential for interference from neighboring states in an internal conflict is the number of international borders (de Rouen & Sobek, 2004). More international borders may mean support for, if not outright intervention, on behalf of combatants. States with a high number of international borders indicates more opportunities for peripheral supply routes and secure bases for peripheral rebellions to develop. Conversely, many international borders may be a proxy for the territorial size of the state, which means the government's army must spread itself thinly (de Rouen & Sobek, 2004).

Hypothesis 13: More international borders should be associated with negotiated settlements, as it may indicate a larger territory or significant sources of assistance for opposition movements.

Mountainous and heavily forested terrain may assist peripheral insurgencies in hiding from government forces. (Collier & Hoeffler, 2004; de Rouen & Sobek, 2004; Fearon & Laitin, 2003)

Hypothesis 14: Difficult terrain assists peripheral rebellions and should therefore be associated with opposition victories or negotiated settlements.

This study uses three measures of difficult terrain: the percentage of the country that is mountainous, the percentage covered in forest, and the difference in elevation between the lowest and highest points.²³

Finally, high levels of urbanization may facilitate government control over a population more easily than a large rural population.

Hypothesis 15: High urban population density should be associated with government victory, while high rural population density should be associated with negotiated settlements.

Geographical Category Regression

There are almost no significant factors in the regression result for geographical variables that relate to civil war outcome. The effects of duration and population on outcome are similar to the military, economic and political/social regressions. The only other significant variables are the difference in elevations in a country and the level of urbanization. The elevation measure performs as expected and partially confirms the hypothesis that rough terrain increases the chances for an opposition victory, but provides no support for the notion that difficult terrain increases the probability for a negotiated settlement. Interestingly, higher levels of urbanization are associated with negotiated settlements.

²² The measure for land-locked states includes any border with a sea or ocean. The measure does not include rivers or large lakes which enable significant transit opportunities, commerce, and food supplies, such as Lake Victoria and the Caspian Sea (which is actually a lake).

²³ These measures are rough approximations of difficult terrain, as not all flat landscapes, such as marshes and swamps, may be easily traversed. (Fearon & Laitin, 2003)

Table 4: Geographical Factors				
	Government	Opposition	Settlement	Ongoing
sub-Saharan Africa	-0.93 (0.083)*	0.40 -0.61	0.57 -0.25	0.40 -0.61
Land-locked	-0.23 -0.70	-0.20 -0.81	-0.07 -0.90	1.31 -0.13
International borders	0.10 -0.21	0.03 -0.77	-0.06 -0.62	-0.10 -0.51
Mountains	0.02 -0.18	0.01 -0.64	-0.01 -0.26	-0.01 -0.75
Difference in elevation	0.00 -0.14	0.00 (0.031)**	0.00 -0.95	0.00 -0.84
Forests	0.01 -0.55	-0.01 -0.57	0.00 -0.63	0.00 -0.92
Urban population/total	-2.02 -0.32	-1.88 -0.39	1.89 -0.28	4.03 (0.033)**
Duration	-0.43 (0.001)***	-0.36 (0.012)**	0.57 (0.000)***	0.70 (0.002)***
Population	0.44 (0.047)**	-0.48 (0.021)**	-0.43 (0.022)**	0.62 (0.048)**
Constant	-5.85 (0.071)*	5.87 (0.043)**	4.49 -0.12	-15.68 (0.007)***
Observations	149.00	149.00	149.00	149.00
Robust p values in parentheses				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Section Two -- Interpretation and Summary

The combined regression with the best performing variables allows a closer examination of the effects of combining the significant variables into one regression and provides a more solid basis for suggesting the relevance of particular hypotheses. Many of the variables tested impact strongly on government victory and negotiated settlements. However, only a few variables appear to predict opposition victories.

Table 5: Combined Best Performers				
	Government	Opposition	Settlement	Ongoing
sub-Saharan Africa	-0.81	0.09	0.64	0.37
	(0.097)*	-0.92	-0.12	-0.58
Military and industry score	-25.33	-15.49	1.32	-18.32
	(0.043)**	-0.25	-0.91	-0.32
Coups during conflict	-1.22	4.10	-0.50	-1.44
	(0.030)**	(0.001)***	-0.30	(0.063)*
Ended after Cold War	-2.18	-0.54	1.03	
	(0.000)***	-0.54	(0.052)*	
Energy consumption	-1234.05	151.62	61.03	600.36
	(0.005)***	-0.81	-0.83	(0.039)**
Years sovereign	0.00	0.01	-0.01	0.00
	-0.51	(0.077)*	(0.028)**	-0.87
Democracy-autocracy	-0.09	-0.10	0.08	0.04
	(0.024)**	-0.22	(0.067)*	-0.47
Caloric intake	0.00	0.00	0.00	0.00
	-0.19	(0.005)***	-0.11	-0.28
Difference in elevation	0.00	0.00	0.00	0.00
	-0.21	-0.26	-0.88	-0.63
Urban population/total	1.54	0.50	-0.45	0.41
	-0.41	-0.85	-0.75	-0.88
Duration	-0.16	-0.88	0.54	0.63
	-0.24	(0.001)***	(0.000)***	(0.001)***
Population	0.75	-0.04	-0.66	0.38
	(0.007)***	-0.91	(0.002)***	-0.26
Constant	-10.94	5.27	4.70	-9.34
	(0.014)**	-0.26	-0.19	-0.13
Observations	147.00	147.00	147.00	147.00
Robust p values in parentheses				
* significant at 10%; ** significant at 5%; *** significant at 1%				

It appears that higher levels of military-industrial capacity are associated with an inability for governments to win civil wars. This may suggest that increased industrial militarization threatens regime survival in states that experience civil war, a finding counter-intuitive to the conventional wisdom that military capabilities solely determine civil war outcome. But the results may also suggest an endogeneity issue – the only opposition movements likely to engage in conflict with a strong military may not see regime overthrow as the dominant strategy anyway.

Coups d'état during civil wars are very positively associated with opposition victory and work against government victory. If a civil war ended before or during the Cold War, it is much more likely to have ended in a government victory, consistent with the military regression. It is unclear why governments were more successful winning wars during the Cold War. This may be due to the hypothesis that state sponsorship during the Cold War disproportionately favored regime longevity. Civil wars that ended after the Cold War appear only slightly more likely than others to end in negotiated settlements or opposition victories.

Contrary to the findings of previous research that economic factors play the lead role in determining the onset and duration of civil war, this study finds little support for an economic explanation of civil war outcome. As mentioned above, these economic factors are better modeled with different methodological approaches. The

only significant finding from the economic regression is retained in the core model: high levels of economic development appear to prevent government victory. The best interpretation for this finding is that in industrialized states, government victory is unlikely over separatist movements. Perhaps such conflicts are better handled through negotiation as government victory is unlikely, at least in industrialized states.

Democracies again are associated with negotiated settlements and autocracies with government victory over opposition movements.

Two previously unmeasured political and social phenomena, the length of time a state has been self-governing and caloric intake, have strong results in the final model. The effect of states enjoying a lengthy period of sovereignty is retained in the final regression, with the strong result (across several of the civil war lists) that new states are much more likely to experience opposition victory. The results are not strong across other lists of civil war for the association with negotiated settlements. The reasons for this are speculative, and may include institutional factors, access to resources, or foreign intervention by former colonial powers.

Larger food supplies are strongly associated with opposition victories. Of course, caloric intake may also be a proxy for the redistributive (institutional) capacity of the state or other characteristics not considered and not support the food supply hypothesis whatsoever.

Sub-Saharan Africa and Government Victory

The results from the final model may now inform a more detailed analysis of why civil wars in Africa appear more difficult for governments to win. Table 6 gives a snapshot of the probabilities of observing a particular outcome with all variables from the final model held at their mean.

	Government victory	Opposition victory	Negotiated settlement
Globally	33.95	0.82	14.06
Sub-Saharan Africa	9.27	1.69	49.37
Non-African Countries	43.17	0.54	9.28

The probability of government victory is about 43% for non-African countries and only 9% for sub-Saharan African countries. What explains this gap? From the model above the most important factors to consider in a government victory are duration, population size, military-industrial base and the Cold War. Table 7 lists the means for key factors associated with government victory for civil wars in sub-Saharan Africa, non-African countries, and globally.

	Non-African	Sub-Saharan	Globally
Duration in months	85	72	80
Population in millions	101,000,000	13,800,000	70,900,000
Military-Industrial Score	.0174	.0013	.0119
Energy Consumption (megawatts per capita)	.9	.4	.7
Ended after the Cold War	.48	.63	.53

Shorter civil wars are very strongly associated with government victory, yet Africa actually experiences *shorter* wars in this dataset, with a mean of 71 months in sub-Saharan Africa, compared to nearly 85 months for those outside Africa. High energy consumption is also negatively associated with government victories, such that the

low energy consumption for African countries is not a significant factor. A larger military-industrial base is negatively associated with government victory, and though this does not impact African countries, as they possess a significantly lower composite score in this regard. Thus, duration, energy consumption, and the military-industrial base do not appear to be factors which explain the tendency for African civil wars not to end in government victory.

However, several factors are significant. A large population size is strongly associated with government victory, and here states experiencing civil war in Africa have a lower mean average population than civil wars in the rest of the world: 13.8 million persons versus 101 million for countries that experienced civil wars in non-African countries. More African civil wars ended after the Cold War than conflicts in the rest of the world.

A tentative interpretation would be that civil wars in sub-Saharan Africa began later than others in the dataset and thus progressed into the post-Cold War period, making government victory less likely. African civil wars did not, on average, last longer, but they began later, therefore leading to a higher probability of negotiated settlements. Collier and Hoeffler note an atypically high risk of civil war in Africa from 1985 to 1995, compared to other non-OECD countries, which supports the interpretation that African conflicts tended to enter the post-Cold War era, and are therefore less likely to experience government victory (Collier & Hoeffler, 2002). The rise in the incidence of civil war in Africa in the mid-1980s may be due to several economic factors, and does it not appear to be a typical feature associated with late decolonization, as it is not significant in terms of government victory in the final regression.

Conclusion

Twenty-four factors were tested including several new measures in outcome studies, including industrial capabilities, economic development, food security, and self-governance, as well as a variety of geographical variables, in order to distill a core model of significant variables.

A wide range of characteristics relating to state capacity may predict civil war outcome. Military, political and social factors appear to have more impact on how civil wars end than economic factors. The results do not support the assumption that coercive capacity is the primary determinant of outcome. The results suggest that government victory is more likely in states that are more autocratic, less industrialized, and immune to coups d'état, with larger populations. It appears that states which are prone to coups d'état, and have issues with food scarcity are more likely to experience an opposition victory.

Finally, this preliminary analysis supports the view that civil wars in sub-Saharan Africa are not unique with regard to civil war outcomes, but that they share features with civil wars in other regions that also tend not to experience government victories. Though the hypotheses presented are not exhaustive, and the methodology is not suitably precise, it appears that the factors reducing the likelihood of government victory in Africa are those of state population size and the fact that many civil wars continued or began after the Cold War, decreasing the likelihood of a government victory.

Table 1. List of civil wars from Sambanis (2004) with outcomes				
Country	Start	End	Conflict	Outcome
Afghanistan	1978	1992	Mujahideen, PDPA	opposition victory
Afghanistan	1992	1996	Taliban v. Burhanuddin Rabbani	opposition victory
Afghanistan	1996	2001	United Front v. Taliban	opposition victory
Algeria	1962	1963	post-independence strife	government victory
Algeria	1992		FIS, AIS, GIA, GSPC	ongoing
Angola	1975	1991	UNITA	negotiated settlement
Angola	1992	1994	UNITA	negotiated settlement
Angola	1994	1999	Cabinda; FLEC	ongoing
Angola	1997	2002	UNITA	negotiated settlement
Argentina	1955	1955	Peron v. military	opposition victory
Argentina	1975	1977	Montoneros, ERP, Dirty War	government victory
Azerbaijan	1991	1994	Nagorno-Karabakh	negotiated settlement
Bangladesh	1974	1997	Chittagong Hills/Shanti Bahini	negotiated settlement
Bolivia	1952	1952	MNR rebellion in La Paz	opposition victory
Bosnia	1992	1995	Rep. Srpska/Croats	negotiated settlement
Burma/Myanmar	1948	1951	Karen rebellion 1	government victory
Burma/Myanmar	1948	1988	Communist insurgency	negotiated settlement
Burma/Myanmar	1960	1995	var. ethnic groups; Karen rebellion 2	government victory
Burundi	1965	1969	Hutu uprising	government victory
Burundi	1972	1972	Hutu uprising	government victory
Burundi	1988	1988	Org. massacres on both sides	government victory
Burundi	1991		Hutu groups v. govt	ongoing
Cambodia	1970	1975	FUNK; Khmer	opposition victory
Cambodia	1975	1991	Khmer Rouge, FUNCINPEC, etc	negotiated settlement
Central African Republic	1996	1997	Factional fighting	negotiated settlement
Chad	1965	1979	FROLINAT, various ...	negotiated settlement
Chad	1980	1994	FARF; FROLINAT	negotiated settlement
Chad	1994	1997	FARF; FROLINAT	negotiated settlement
China	1946	1949	PLA	opposition victory
China	1947	1947	Taiwanese v. Nationalist soldiers	opposition victory
China	1950	1951	Tibet; "re-annexation"	government victory
China	1956	1959	Tibetan uprising	government victory
China	1967	1968	Red Guards	government victory
Colombia	1948	1966	La Violencia	negotiated settlement
Colombia	1978		FARC, ELN, drug cartels, etc	ongoing
Congo-Brazzaville	1993	1997	Lissouba v. Sassou-Nguesso	opposition victory
Congo-Brazzaville	1998	1999	Cobras v. Ninjas	negotiated settlement
Congo-Zaire	1960	1965	Katanga, Kasai, Kwilu, Eastern	government victory
Congo-Zaire	1967	1967	Kisangani mutiny	government victory
Congo-Zaire	1977	1978	FLNC; Shabba 1 & 2	government victory
Congo-Zaire	1996	1997	AFDL (Kabila)	opposition victory
Congo-Zaire	1998	2001	RCD, etc v. govt	negotiated settlement
Costa Rica	1948	1948	NLA	opposition victory
Croatia	1992	1995	Krajina, Medak, Western Slavonia	negotiated settlement
Cuba	1958	1959	Castro revolution	opposition victory
Cyprus	1974	1974	TCs; GCs; Turkish invasion	negotiated settlement
Djibouti	1991	1994	FRUD	negotiated settlement
Dominican Republic	1965	1965	Mil. coup	negotiated settlement
Egypt	1994	1997	Gamaat Islamiya; Islamic Jihad	ongoing
El Salvador	1979	1992	FMLN	negotiated settlement
Ethiopia	1974	1991	Eritrean war of independence	opposition victory
Ethiopia	1976	1988	Ogaden; Somalis	negotiated settlement
Georgia	1991	1992	South Ossetia	negotiated settlement
Georgia	1992	1994	Abkhazia (& Gamsakhurdia)	negotiated settlement
Greece	1944	1949	EDES/ELAS; EAM	government victory
Guatemala	1966	1972	Communists;	government victory

Guatemala	1978	1994	Communists; Indigenous	negotiated settlement
Guinea-Bissau	1998	1999	Vieira v. Mane mutiny	opposition victory
Haiti	1991	1995	Cedras v. Aristide	government victory
India	1946	1948	Partition and ethnic rioting	negotiated settlement
India	1984	1993	Sikhs	government victory
India	1989		Kashmir	ongoing
India	1989		Naxalites (CPI-M; PWG; MCC)	ongoing
India	1990		Assam; Northeast States	ongoing
Indonesia	1950	1950	Rep. S. Moluccas	government victory
Indonesia	1953	1953	Darul Islam	government victory
Indonesia	1956	1960	Darul Islam, PRRI, Permesta	government victory
Indonesia	1975	1999	East Timor	negotiated settlement
Indonesia	1976	1978	OPM (West Papua)	ongoing
Indonesia	1990	1991	Aceh	government victory
Indonesia	1999	2002	Aceh	negotiated settlement
Iran	1978	1979	Khomeini	opposition victory
Iran	1979	1984	KDPI (Kurds)	government victory
Iraq	1959	1959	Shammar	government victory
Iraq	1961	1970	KDP, PUK (Kurds)	negotiated settlement
Iraq	1974	1975	KDP, PUK (Kurds)	negotiated settlement
Iraq	1985	1996	Kurds; Anfal	negotiated settlement
Iraq	1991	1993	Shiite uprising	government victory
Israel	1987	1997	Intifada; Palestinian conflict	ongoing
Israel	2000		Intifada; Palestinian conflict	ongoing
Jordan	1970	1971	Fedeyeen/Syria v. govt	government victory
Kenya	1963	1967	Shifita war (Somalis)	negotiated settlement
Laos	1960	1973	Pathet Lao	opposition victory
Lebanon	1958	1958	Nasserites v. Chamoun	government victory
Lebanon	1975	1991	Aoun; militias; PLO; Israel	negotiated settlement
Liberia	1989	1990	Doe v. rebels	negotiated settlement
Liberia	1992	1997	NPLF; ULIMO; NPF; LPC; LDF	negotiated settlement
Liberia	1999		anti-Taylor resistance	ongoing
Mali	1990	1995	Tuaregs; Maurs	negotiated settlement
Moldova	1991	1992	Transdnistria	negotiated settlement
Morocco	1975	1991	Polisario	negotiated settlement
Mozambique	1976	1992	RENAMO; FRELIMO	negotiated settlement
Nepal	1996		CPN-M/UPF (Maoists)	ongoing
Nicaragua	1978	1979	FSLN	opposition victory
Nicaragua	1981	1990	Contras & Miskitos	negotiated settlement
Nigeria	1967	1970	Biafra	government victory
Nigeria	1980	1985	Muslims; Maitatsine rebellion	government victory
Oman	1971	1975	Dhofar rebellion	government victory
Pakistan	1971	1971	Bangladesh secession	opposition victory
Pakistan	1973	1977	Baluchistan	government victory
Pakistan	1994	1999	MQM:Sindhis v. Mohajirs	government victory
Papua New Guinea	1988	1998	BRA (Bougainville)	negotiated settlement
Paraguay	1947	1947	Febreristas, Libs, Comms	government victory
Peru	1980	1996	Sendero Luminoso, Tupac Amaru	government victory
Philippines	1950	1952	Huks	government victory
Philippines	1971		MNLF, MILF	ongoing
Philippines	1972	1992	NPA	negotiated settlement
Republic of Vietnam	1960	1975	NLF	opposition victory
Russia	1994	1996	Chechnya 1	negotiated settlement
Russia	1999		Chechnya 2	ongoing
Russia (USSR)	1944	1947	Latvia/LTSPA, etc.	government victory
Russia (USSR)	1944	1948	Lithuania/BDPS	government victory
Russia (USSR)	1944	1948	Estonia/Forest Brthers	government victory
Russia (USSR)	1944	1950	Ukraine/UPA	government victory
Rwanda	1963	1964	Tutsi uprising	government victory

Rwanda	1990	1993	Hutu vs. Tutsi groups	negotiated settlement
Rwanda	1994	1994	RPF; genocide	opposition victory
Senegal	1989	1999	MFDC (Casamance)	negotiated settlement
Sierra Leone	1991	1996	RUF, AFRC, etc.	negotiated settlement
Sierra Leone	1997	2001	post-Koroma coup violence	negotiated settlement
Somalia	1988	1991	SSDF, SNM (Isaaqs)	opposition victory
Somalia	1991		post-Barre war	ongoing
South Africa	1973	1989	SWAPO; SWANU; SWATF	negotiated settlement
South Africa	1976	1994	ANC, PAC, Azapo	negotiated settlement
South Korea	1948	1949	Yosu Rebellion	government victory
Sri Lanka	1971	1971	JVP	government victory
Sri Lanka	1983	2002	LTTE, etc.	negotiated settlement
Sri Lanka	1987	1989	JVP II	government victory
Sudan	1963	1972	Anya Nya	negotiated settlement
Sudan	1983	2002	SPLM, SPLA, NDA, AnyanyaII	negotiated settlement
Syria	1979	1982	Muslim Brotherhood	government victory
Tajikistan	1992	1997	Popular Democratic Army; UTO	negotiated settlement
Thailand	1966	1982	Communists (CPT)	government victory
Turkey	1984	1999	PKK (Kurds)	government victory
Uganda	1966	1966	Baganda rebellion	government victory
Uganda	1978	1979	Tanzanian war	opposition victory
Uganda	1981	1987	NRA/Museveni, etc	opposition victory
Uganda	1990	1992	Kony (pre-LRA)	negotiated settlement
Uganda	1995		LRA, West Nile, ADF, etc.	ongoing
United Kingdom	1971	1998	Northern Ireland	negotiated settlement
Yemen	1948	1948	Yahaya rebellion	opposition victory
Yemen	1994	1994	South Yemen	government victory
Yemen AR	1962	1970	Royalists	negotiated settlement
Yemen PR	1986	1986	Faction of Socialist Party	opposition victory
Yugoslavia	1991	1991	Croatia/Krajina	negotiated settlement
Yugoslavia	1998	1999	Kosovo	negotiated settlement
Zimbabwe	1972	1979	ZANU, ZAPU	negotiated settlement
Zimbabwe	1983	1987	Ndebele guerillas	government victory

Table 2: Military theme for all lists: Government Victory					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	0.41	-0.38	-0.22	0.47	-0.58
	-0.48	-0.46	-0.67	-0.55	-0.32
Army size per 1000	53.43	37.06	40.43	38.86	23.89
	(0.052)*	(0.078)*	-0.21	-0.32	-0.34
Military and industry score	-29.34	-20.05	-8.94	-12.10	-25.80
	(0.015)**	(0.013)**	-0.32	-0.59	(0.023)**
Coups during conflict	-1.10	-1.12	-1.75	-0.01	-2.16
	(0.052)*	(0.038)**	(0.022)**	-0.99	(0.002)***
Ended after Cold War	-1.98	-2.49	-2.48	-2.27	-2.63
	(0.002)***	(0.000)***	(0.002)***	(0.003)***	(0.000)***
Duration	-0.39	-0.16	-0.11	-0.14	0.04
	(0.044)**	-0.20	-0.55	-0.51	-0.79
Population	0.79	0.51	0.41	0.59	0.28
	(0.002)***	(0.009)***	(0.082)*	-0.12	-0.25
Constant	-11.35	-7.23	-5.57	-9.57	-3.21
	(0.002)***	(0.026)**	-0.15	-0.11	-0.41
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 3: Military theme for all lists: Opposition Victory					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.32	0.34	0.39	-0.27	0.05
	-0.59	-0.63	-0.58	-0.66	-0.94
Army size per 1000	29.68	46.85	39.45	-24.67	46.04
	-0.39	-0.23	-0.48	-0.54	-0.12
Military and industry score	-1.35	0.01	-5.35	-36.71	11.92
	-0.92	-1.00	-0.61	-0.17	-0.43
Coups during conflict	3.32	4.03	3.48	1.20	2.82
	(0.000)***	(0.000)***	(0.000)***	(0.094)*	(0.001)***
Ended after Cold War	-0.66	-0.31	-1.71	-1.15	-0.60
	-0.32	-0.65	(0.011)**	(0.099)*	-0.38
Duration	-0.62	-0.77	-0.43	-0.11	-0.37
	(0.009)***	(0.000)***	(0.068)*	-0.61	(0.006)***
Population	0.37	0.37	0.18	0.19	0.07
	-0.17	-0.22	-0.50	-0.55	-0.81
Constant	-6.83	-7.69	-4.68	-3.84	-2.99
	(0.088)*	-0.13	-0.33	-0.45	-0.55
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 4: Military theme for all lists: Settlement					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.57	0.07	-0.76	-0.82	0.19
	-0.35	-0.87	-0.20	-0.26	-0.74
Army size per 1000	-73.72	-46.61	-10.66	-50.52	-52.23
	(0.062)*	-0.17	-0.78	-0.23	-0.21
Military and industry score	57.17	7.26	7.90	38.41	13.90
	(0.001)***	-0.54	-0.44	(0.075)*	-0.35
Coups during conflict	-1.07	-0.86	-0.70	-0.96	-0.29
	(0.078)*	(0.082)*	-0.21	-0.14	-0.55
Ended after Cold War	1.82	1.34	1.69	1.86	1.79
	(0.003)***	(0.006)***	(0.019)**	(0.008)***	(0.003)***
Duration	0.84	0.49	0.20	0.09	0.21
	(0.000)***	(0.001)***	-0.30	-0.65	-0.28
Population	-1.49	-0.65	-0.76	-1.13	-0.42
	(0.000)***	(0.001)***	(0.002)***	(0.006)***	(0.090)*
Constant	20.13	8.24	10.05	17.07	4.44
	(0.000)***	(0.008)***	(0.008)***	(0.008)***	-0.25
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 5: Military theme for all lists: Ongoing war					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	0.64	0.18	1.35	0.77	0.88
	-0.42	-0.76	(0.028)**	-0.36	-0.27
Army size per 1000	27.03	17.45	-161.02	9.43	-8.65
	-0.45	-0.68	(0.087)*	-0.81	-0.81
Military and industry score	-163.50	-18.47	-6.87	-1.10	-9.20
	-0.17	-0.17	-0.36	-0.95	-0.61
Coups during conflict	-1.02	-1.28	-0.25	-0.35	-0.68
	-0.22	(0.070)*	-0.68	-0.56	-0.28
Duration	0.97	0.66	0.70	0.58	0.52
	(0.001)***	(0.000)***	(0.009)***	-0.11	(0.005)***
Population	1.09	0.52	0.52	0.46	0.43
	(0.021)**	(0.024)**	(0.002)***	-0.14	-0.15
Constant	-23.79	-13.04	-12.53	-11.81	-11.01
	(0.002)***	(0.001)***	(0.000)***	(0.018)**	(0.034)**
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 6: Economic theme for all lists: Government victory					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.19	-0.46	-0.52	0.26	-0.90
	-0.79	-0.45	-0.49	-0.77	-0.15
GDP per capita	0.05	0.35	0.13	0.62	-0.02
	-0.93	-0.39	-0.77	-0.44	-0.98
Energy consumption	-1036.48	-813.31	-655.60	-1801.65	-1492.90
	(0.043)**	(0.029)**	(0.077)*	(0.012)**	(0.011)**
Primary commodity exports	0.29	-1.31	-5.87	-0.52	-1.65
	-0.95	-0.62	-0.17	-0.93	-0.72
Mining and fuel exports	2.81	0.35	2.96	0.83	2.12
	-0.11	-0.81	-0.10	-0.69	-0.25
Income inequality	0.05	0.02	0.05	0.05	0.04
	-0.14	-0.44	-0.16	-0.18	-0.17
Duration	-0.67	-0.42	-0.56	-0.72	-0.31
	(0.003)***	(0.002)***	(0.005)***	(0.002)***	-0.12
Population	0.64	0.31	0.29	0.89	0.20
	(0.007)***	(0.063)*	-0.12	(0.003)***	-0.32
Constant	-11.09	-6.82	-5.41	-18.38	-3.47
	(0.037)**	-0.13	-0.31	(0.024)**	-0.50
Observations	94.00	118.00	93.00	62.00	100.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 7: Economic theme for all lists: Opposition victory					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.10	0.25	-0.54	-0.63	-1.37
	-0.89	-0.76	-0.57	-0.41	(0.090)*
GDP per capita	-0.17	-0.57	-0.29	-0.34	-0.13
	-0.74	-0.30	-0.62	-0.49	-0.80
Energy consumption	31.00	236.58	-36.09	-73.39	-4.08
	-0.90	-0.41	-0.90	-0.78	-0.99
Primary commodity exports	-1.87	-2.88	-4.26	-0.17	1.39
	-0.65	-0.57	-0.43	-0.98	-0.77
Mining and fuel exports	-4.46	-4.79	-3.12	-1.71	-4.43
	-0.20	-0.20	-0.35	-0.51	-0.13
Income inequality	-0.01	0.01	0.00	-0.03	-0.09
	-0.81	-0.74	-0.94	-0.50	(0.031)**
Duration	-0.42	-0.65	-0.35	-0.22	-0.20
	(0.048)**	(0.003)***	(0.056)*	-0.36	-0.28
Population	0.05	0.08	-0.12	0.12	-0.12
	-0.80	-0.60	-0.55	-0.67	-0.54
Constant	1.25	2.67	4.21	1.09	5.94
	-0.83	-0.67	-0.52	-0.87	-0.25
Observations	94.00	118.00	93.00	62.00	100.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 8: Economic theme for all lists: Settlement					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.09	0.27	-0.10	-0.23	0.85
	-0.90	-0.57	-0.87	-0.79	-0.19
GDP per capita	-0.01	0.50	0.67	0.47	0.49
	-0.98	-0.14	-0.16	-0.43	-0.38
Energy consumption	1145.16	84.12	222.24	357.00	182.88
	(0.001)***	-0.75	-0.42	-0.47	-0.56
Primary commodity exports	5.17	4.58	7.88	7.73	7.50
	-0.38	-0.16	-0.11	-0.15	-0.13
Mining and fuel exports	-2.74	0.21	-3.56	-0.94	1.18
	-0.37	-0.82	-0.25	-0.60	-0.61
Income inequality	-0.03	-0.03	-0.04	-0.03	-0.02
	-0.42	-0.22	-0.18	-0.54	-0.68
Duration	1.11	0.75	0.62	0.59	0.52
	(0.000)***	(0.000)***	(0.001)***	(0.009)***	(0.047)**
Population	-1.39	-0.67	-0.70	-1.05	-0.37
	(0.000)***	(0.000)***	(0.000)***	(0.001)***	-0.28
Constant	17.53	4.99	4.27	10.97	-0.85
	(0.007)***	-0.16	-0.39	(0.070)*	-0.87
Observations	94.00	118.00	93.00	62.00	100.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 9: Economic theme for all lists: Ongoing war					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	2.54	0.81	1.87	4.91	2.08
	(0.100)*	-0.21	(0.016)**	(0.052)*	-0.11
GDP per capita	2.22	-0.45	-0.38	2.60	0.47
	(0.057)*	-0.41	-0.53	(0.042)**	-0.53
Energy consumption	-1949.25	431.68	385.09	651.22	536.47
	(0.075)*	(0.074)*	-0.13	-0.14	-0.18
Primary commodity exports	-19.61	-0.77	0.40	-41.93	-12.92
	(0.074)*	-0.93	-0.95	(0.098)*	-0.37
Mining and fuel exports	6.36	2.98	1.60	4.98	-8.19
	(0.001)***	(0.033)**	-0.50	(0.072)*	-0.15
Income inequality	-0.05	0.01	0.01	0.02	0.01
	-0.25	-0.75	-0.79	-0.62	-0.91
Duration	1.46	0.97	0.89	1.20	0.42
	(0.000)***	(0.007)***	(0.022)**	(0.029)**	(0.040)**
Population	0.28	0.60	0.57	0.14	0.13
	-0.44	(0.050)**	(0.006)***	-0.74	-0.67
Constant	-25.48	-14.92	-13.97	-27.73	-8.76
	(0.033)**	(0.024)**	(0.021)**	(0.019)**	-0.32
Observations	94.00	118.00	93.00	62.00	100.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 10: Political/Social theme for all lists: Government					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.38	-0.78	-1.26	-1.39	-1.40
	-0.50	-0.11	(0.072)*	-0.16	(0.005)***
Years sovereign	-0.01	0.00	-0.01	-0.01	-0.01
	(0.093)*	-0.29	-0.14	(0.062)*	(0.035)**
Ethnicity	0.00	-0.01	0.00	0.02	0.01
	-0.92	-0.28	-0.81	-0.28	-0.26
Democracy-autocracy	-0.09	-0.13	-0.16	-0.25	-0.10
	(0.076)*	(0.005)***	(0.030)**	(0.002)***	(0.065)*
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.86	-0.80	-0.76	-0.97	-0.23
Average rainfall	0.00	0.00	0.00	0.00	0.00
	-0.14	-0.15	-0.91	(0.007)***	-0.14
Primary school enrollment	0.14	0.68	1.97	1.21	0.32
	-0.75	-0.19	(0.001)***	-0.20	-0.35
Duration	-0.52	-0.36	-0.44	-0.66	-0.30
	(0.005)***	(0.008)***	(0.045)**	(0.008)***	(0.056)*
Population	0.49	0.39	0.39	0.74	0.23
	(0.001)***	(0.004)***	(0.006)***	(0.010)**	-0.15
Constant	-7.40	-9.47	-16.77	-18.98	-3.22
	(0.041)**	(0.027)**	(0.000)***	(0.030)**	-0.26
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 11: Political/Social theme for all lists: Opposition					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.20	-0.39	-0.71	-0.67	-0.87
	-0.75	-0.59	-0.25	-0.39	-0.13
Years sovereign	0.01	0.01	0.01	0.01	0.01
	(0.013)**	(0.020)**	(0.098)*	-0.14	(0.004)***
Ethnicity	0.00	0.00	0.00	0.00	0.01
	-0.88	-0.73	-0.89	-0.81	-0.47
Democracy-autocracy	-0.07	-0.06	-0.04	-0.05	-0.08
	-0.21	-0.29	-0.46	-0.49	-0.11
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.24	(0.002)***	(0.088)*	(0.009)***	-0.38
Average rainfall	0.00	0.00	0.00	0.00	0.00
	-0.61	-0.43	-0.63	-0.18	-0.12
Primary school enrollment	-0.26	-0.22	-0.51	0.05	-0.32
	-0.37	-0.41	-0.15	-0.92	-0.46
Duration	-0.27	-0.42	-0.20	-0.08	-0.14
	-0.16	(0.007)***	-0.23	-0.71	-0.34
Population	-0.12	-0.24	-0.29	-0.20	-0.34
	-0.48	(0.090)*	(0.061)*	-0.45	(0.026)**
Constant	5.09	9.64	10.42	8.45	9.08
	-0.10	(0.004)***	(0.009)***	-0.19	(0.012)**
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 12: Political/Social theme for all lists: Settlement					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	0.37	0.77	0.52	0.53	1.41
	-0.54	-0.14	-0.39	-0.46	(0.030)**
Years sovereign	0.00	-0.01	0.00	0.00	0.00
	-0.45	(0.047)**	-0.66	-0.87	-0.40
Ethnicity	0.00	0.01	0.00	0.00	0.00
	-0.67	(0.042)**	-0.95	-0.94	-0.87
Democracy-autocracy	0.15	0.09	0.15	0.11	0.13
	(0.004)***	(0.025)**	(0.003)***	-0.12	(0.007)***
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.11	(0.001)***	(0.013)**	(0.057)*	(0.045)**
Average rainfall	0.00	0.00	0.00	0.00	0.00
	-0.73	-0.31	-0.48	-0.91	-0.43
Primary school enrollment	0.07	-0.66	-0.71	-0.38	-0.28
	-0.87	(0.032)**	(0.077)*	-0.40	-0.48
Duration	0.70	0.61	0.23	0.25	0.34
	(0.001)***	(0.000)***	-0.19	-0.14	(0.056)*
Population	-0.93	-0.71	-0.62	-0.78	-0.30
	(0.000)***	(0.000)***	(0.000)***	(0.008)***	-0.11
Constant	7.13	6.57	6.78	7.97	-0.43
	(0.092)*	(0.026)**	(0.054)*	-0.17	-0.92
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 13: Political/Social theme for all lists: Ongoing war					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	0.58	0.48	1.88	1.65	2.68
	-0.48	-0.54	(0.005)***	-0.11	(0.010)***
Years sovereign	0.00	0.00	0.00	0.00	0.00
	-0.53	-0.85	-0.71	-0.88	-0.77
Ethnicity	-0.01	-0.01	0.00	-0.02	-0.03
	-0.59	-0.58	-0.94	-0.26	-0.13
Democracy-autocracy	-0.01	0.09	0.01	0.18	0.06
	-0.83	-0.18	-0.80	(0.040)**	-0.44
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.60	-0.74	-0.74	-0.52	-0.19
Average rainfall	0.00	0.00	0.00	0.00	0.00
	-0.73	-0.52	-0.52	(0.086)*	-0.75
Primary school enrollment	-0.06	0.74	-0.09	-0.53	0.79
	-0.92	-0.22	-0.85	-0.29	-0.23
Duration	1.19	0.52	0.74	0.91	0.64
	(0.000)***	(0.008)***	(0.015)**	(0.037)**	(0.004)***
Population	0.43	0.34	0.48	0.57	0.58
	(0.058)*	(0.080)*	(0.000)***	(0.016)**	(0.073)*
Constant	-12.28	-14.87	-12.64	-12.62	-22.17
	(0.021)**	(0.007)***	(0.004)***	(0.065)*	(0.009)***
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 14: Geographical theme for all lists: Government					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.24	-0.93	-0.54	-0.14	-0.92
	-0.72	(0.083)*	-0.33	-0.84	(0.083)*
Land-locked	0.10	-0.23	-0.45	0.21	-0.51
	-0.86	-0.70	-0.48	-0.82	-0.37
International borders	0.08	0.10	0.01	-0.11	0.02
	-0.56	-0.21	-0.86	-0.28	-0.82
Mountains	0.01	0.02	0.02	0.01	0.00
	-0.40	-0.18	-0.22	-0.66	-0.80
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.32	-0.14	-0.22	-0.80	-0.57
Forests	0.01	0.01	0.00	0.01	0.00
	-0.61	-0.55	-0.96	-0.67	-0.94
Urban population/total	-1.19	-2.02	-1.20	-3.67	-4.52
	-0.65	-0.32	-0.60	-0.46	(0.027)**
Duration	-0.57	-0.43	-0.52	-0.42	-0.28
	(0.003)***	(0.001)***	(0.001)***	(0.087)*	(0.060)*
Population	0.64	0.44	0.44	0.57	0.15
	(0.011)**	(0.047)**	(0.037)**	-0.18	-0.49
Constant	-9.00	-5.85	-5.45	-8.41	-0.83
	(0.008)***	(0.071)*	(0.077)*	-0.16	-0.79
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 14: Geographical theme for all lists: Opposition					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.32	0.40	0.01	0.22	-0.57
	-0.66	-0.61	-0.99	-0.84	-0.47
Land-locked	-0.05	-0.20	-1.35	0.06	-0.17
	-0.94	-0.81	-0.11	-0.95	-0.80
International borders	0.06	0.03	0.10	0.18	0.11
	-0.66	-0.77	-0.41	-0.18	-0.31
Mountains	0.00	0.01	0.00	0.00	0.00
	-0.85	-0.64	-0.89	-0.85	-0.95
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.13	(0.031)**	(0.031)**	(0.090)*	-0.30
Forests	-0.01	-0.01	-0.01	-0.01	-0.02
	-0.35	-0.57	-0.22	-0.45	(0.093)*
Urban population/total	-3.41	-1.88	-6.29	-1.49	-2.97
	-0.14	-0.39	(0.006)***	-0.72	-0.17
Duration	-0.24	-0.36	-0.29	-0.02	-0.11
	-0.16	(0.012)**	(0.068)*	-0.91	-0.41
Population	-0.31	-0.48	-0.81	-0.64	-0.46
	-0.19	(0.021)**	(0.001)***	(0.090)*	(0.090)*
Constant	4.06	5.87	12.06	7.41	6.21
	-0.24	(0.043)**	(0.001)***	-0.18	(0.088)*
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 15: Geographical theme for all lists: Settlement					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	0.33	0.57	-0.75	-0.32	1.48
	-0.63	-0.25	-0.25	-0.68	(0.010)**
Land-locked	-0.11	-0.07	0.86	-0.55	-0.18
	-0.86	-0.90	-0.23	-0.53	-0.83
International borders	-0.17	-0.06	-0.04	-0.07	-0.23
	-0.32	-0.62	-0.77	-0.66	(0.038)**
Mountains	-0.02	-0.01	-0.02	-0.02	-0.03
	-0.19	-0.26	-0.28	-0.19	(0.094)*
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.80	-0.95	-0.22	-0.89	-0.92
Forests	0.00	0.00	0.01	0.00	0.01
	-0.98	-0.63	-0.53	-0.78	-0.19
Urban population/total	4.48	1.89	6.64	2.60	6.52
	-0.15	-0.28	(0.008)***	-0.37	(0.003)***
Duration	0.79	0.57	0.52	0.23	0.38
	(0.000)***	(0.000)***	(0.003)***	-0.21	(0.032)**
Population	-0.85	-0.43	-0.33	-0.58	-0.16
	(0.005)***	(0.022)**	-0.13	-0.11	-0.52
Constant	10.71	4.49	2.72	8.41	-0.22
	(0.015)**	-0.12	-0.41	(0.091)*	-0.95
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 16: Geographical theme for all lists: Ongoing war					
	revongoing	nsongoing	flongoing	chongoing	kgongoing
sub-Saharan Africa	1.33	0.40	2.01	0.34	0.73
	-0.19	-0.61	(0.019)**	-0.76	-0.43
Land-locked	0.70	1.31	1.17	0.72	3.70
	-0.60	-0.13	-0.18	-0.62	(0.011)**
International borders	-0.10	-0.10	-0.02	0.25	0.15
	-0.75	-0.51	-0.91	-0.26	-0.51
Mountains	0.04	-0.01	0.02	0.03	0.05
	(0.055)*	-0.75	-0.15	-0.12	(0.009)***
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.49	-0.84	-0.94	-0.13	-0.19
Forests	0.03	0.00	0.02	0.00	0.02
	-0.15	-0.92	(0.092)*	-0.95	-0.40
Urban population/total	1.37	4.03	1.48	3.50	6.67
	-0.64	(0.033)**	-0.56	-0.22	(0.033)**
Duration	1.17	0.70	0.95	0.84	0.78
	(0.000)***	(0.002)***	(0.000)***	(0.022)**	(0.009)***
Population	0.86	0.62	0.68	0.94	1.55
	(0.064)*	(0.048)**	(0.001)***	(0.070)*	(0.010)**
Constant	-23.31	-15.68	-18.96	-20.73	-33.25
	(0.016)**	(0.007)***	(0.000)***	(0.032)**	(0.003)***
Observations	109.00	149.00	114.00	73.00	119.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 17: Best performers for all lists: Government victory					
	DRS	NS	FL	CH	KG
Sub-Saharan Africa	-0.16	-0.81	-1.02	-0.08	-1.84
	-0.79	(0.097)*	-0.10	-0.93	(0.009)***
Military and industry score	-24.45	-25.33	-13.17	41.69	-43.96
	-0.15	(0.043)**	-0.22	-0.79	(0.005)***
Coups during conflict	-1.22	-1.22	-2.12	-0.44	-2.76
	(0.057)*	(0.030)**	(0.027)**	-0.55	(0.000)***
Ended after Cold War	-1.42	-2.18	-1.85	-1.55	-2.25
	(0.028)**	(0.000)***	(0.021)**	(0.093)*	(0.001)***
Energy consumption	-1594.58	-1234.05	-579.96	-1959.21	-2598.81
	(0.015)**	(0.005)***	(0.051)*	(0.008)***	(0.018)**
Years sovereign	0.00	0.00	0.00	0.00	-0.01
	-0.70	-0.51	-0.85	-0.69	-0.16
Democracy-autocracy	-0.06	-0.09	-0.12	-0.13	-0.14
	-0.25	(0.024)**	(0.069)*	-0.16	(0.016)**
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.33	-0.19	-0.38	-0.23	-0.75
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.30	-0.21	-0.97	-0.86	-0.46
Urban population/total	4.04	1.54	1.92	0.67	3.87
	-0.15	-0.41	-0.42	-0.85	(0.064)*
Duration	-0.43	-0.16	-0.06	-0.32	0.06
	(0.054)*	-0.24	-0.80	-0.18	-0.75
Population	0.98	0.75	0.43	0.50	0.79
	(0.000)***	(0.007)***	-0.18	-0.35	(0.084)*
Constant	-14.15	-10.94	-5.44	-8.72	-8.35
	(0.001)***	(0.014)**	-0.27	-0.27	-0.22
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 18: Best performers for all lists: Opposition victory					
	DRS	NS	FL	CH	KG
Sub-Saharan Africa	-0.46	0.09	0.08	0.10	-0.13
	-0.57	-0.92	-0.93	-0.90	-0.86
Military and industry score	-31.53	-15.49	-17.73	-49.83	6.70
	(0.076)*	-0.25	-0.24	(0.034)**	-0.72
Coups during conflict	3.35	4.10	3.58	1.02	2.71
	(0.001)***	(0.001)***	(0.001)***	-0.21	(0.001)***
Ended after Cold War	-0.50	-0.54	-1.88	-1.54	-0.36
	-0.55	-0.54	(0.050)*	(0.066)*	-0.66
Energy consumption	249.83	151.62	227.31	200.94	113.43
	-0.37	-0.81	-0.56	-0.36	-0.67
Years sovereign	0.02	0.01	0.01	0.01	0.01
	(0.012)**	(0.077)*	-0.16	-0.33	(0.087)*
Democracy-autocracy	-0.07	-0.10	0.00	-0.01	-0.09
	-0.35	-0.22	-0.98	-0.82	(0.094)*
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.90	(0.005)***	-0.46	(0.033)**	-0.45
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.38	-0.26	-0.42	(0.032)**	-0.83
Urban population/total	-9.48	0.50	-5.96	3.22	-5.32
	(0.052)*	-0.85	-0.23	-0.25	-0.14
Duration	-0.81	-0.88	-0.54	-0.12	-0.39
	(0.018)**	(0.001)***	-0.11	-0.61	(0.025)**
Population	0.39	-0.04	0.11	-0.09	-0.09
	-0.29	-0.91	-0.79	-0.80	-0.83
Constant	-6.78	5.27	-1.17	5.41	-1.22
	-0.24	-0.26	-0.86	-0.41	-0.85
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 19: Best performers for all lists: Settlement					
	DRS	NS	FL	CH	KG
sub-Saharan Africa	-0.18	0.64	-0.30	0.09	1.08
	-0.81	-0.12	-0.66	-0.91	(0.054)*
Military and industry score	3.63	1.32	-2.63	20.11	16.39
	-0.92	-0.91	-0.89	-0.60	-0.45
Coups during conflict	-0.61	-0.50	-0.04	-0.56	0.35
	-0.34	-0.30	-0.95	-0.39	-0.51
Ended after Cold War	0.89	1.03	0.78	1.33	1.03
	-0.22	(0.052)*	-0.39	(0.054)*	(0.097)*
Energy consumption	1273.78	61.03	171.41	165.93	126.87
	(0.002)***	-0.83	-0.56	-0.64	-0.60
Years sovereign	-0.01	-0.01	0.00	0.00	-0.01
	(0.082)*	(0.028)**	-0.46	-0.96	-0.15
Democracy-autocracy	0.13	0.08	0.13	0.04	0.15
	(0.028)**	(0.067)*	(0.014)**	-0.52	(0.000)***
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.45	-0.11	-0.49	-0.23	-0.75
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.58	-0.88	-0.17	-0.71	-0.28
Urban population/total	-0.76	-0.45	4.53	-0.32	4.47
	-0.77	-0.75	(0.078)*	-0.88	(0.013)**
Duration	0.91	0.54	0.28	0.19	0.20
	(0.001)***	(0.000)***	-0.23	-0.40	-0.24
Population	-1.35	-0.66	-0.49	-1.02	-0.34
	(0.000)***	(0.002)***	-0.13	(0.084)*	-0.33
Constant	17.51	4.70	2.92	11.53	0.94
	(0.001)***	-0.19	-0.56	-0.14	-0.86
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

Table 20: Best performers for all lists: Ongoing war					
	DRS	NS	FL	CH	KG
Sub-Saharan Africa	1.06	0.37	1.96	1.49	1.64
	-0.20	-0.58	(0.003)***	(0.099)*	(0.025)**
Military and industry score	-110.55	-18.32	-19.71	-21.03	-12.54
	(0.051)*	-0.32	(0.072)*	-0.48	-0.57
Coups during conflict	-1.13	-1.44	-0.55	-0.18	-0.60
	-0.19	(0.063)*	-0.38	-0.77	-0.38
Energy consumption	-1003.95	600.36	554.94	521.32	314.56
	-0.23	(0.039)**	(0.041)**	(0.007)***	-0.29
Years sovereign	0.00	0.00	0.00	0.00	0.00
	-0.66	-0.87	-0.67	-0.63	-0.70
Democracy-autocracy	0.02	0.04	0.01	0.11	0.06
	-0.79	-0.47	-0.92	-0.14	-0.22
Caloric intake	0.00	0.00	0.00	0.00	0.00
	-0.99	-0.28	-0.34	-0.89	-0.57
Difference in elevation	0.00	0.00	0.00	0.00	0.00
	-0.57	-0.63	(0.097)*	-0.94	-0.35
Urban population/total	3.51	0.41	-3.80	0.35	-0.96
	-0.26	-0.88	-0.32	-0.90	-0.81
Duration	1.17	0.63	0.81	0.69	0.48
	(0.000)***	(0.001)***	(0.004)***	(0.083)*	(0.006)***
Population	0.97	0.38	0.45	0.57	0.13
	(0.031)**	-0.26	(0.037)**	-0.19	-0.68
Constant	-23.62	-9.34	-11.71	-16.14	-9.48
	(0.010)**	-0.13	(0.007)***	(0.036)**	-0.13
Observations	108.00	147.00	113.00	73.00	118.00
Robust p values in parentheses					
* significant at 10%; ** significant at 5%; *** significant at 1%					

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