

Riots, Coups and Civil War:
Revisiting the Greed and Grievance Debate

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Abstract

The most influential recent work on the determinants of civil wars found the factors associated with the grievance motivation to be largely irrelevant. Our paper subjects the results of this empirical work to further scrutiny by embedding the study of civil war in a more general analysis of varieties of violent contestation of political power within the borders of the state. Such an approach, we argue, will have important implications for how we think theoretically about the occurrence of domestic

war as well as how we specify our empirical tests. In the empirical model, the manifestation of domestic conflict range from low intensity violence and coups to civil war. Our multinomial specification of domestic conflict supports the hypothesis that diversity accentuates distributional conflict and thus increases the risk of civil war. We also find that democracies may be more efficient than autocracies in reducing the risk of civil war.

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“The factors that explain which countries have been at risk for civil war are not their ethnic or religious characteristics but rather the conditions that favor insurgency. These include poverty, which marks financially and bureaucratically weak states and also favors rebel recruitment, political instability, rough terrain, and large populations.” (Fearon and Laitin 2003)

“Political and social variables that are most obviously related to grievances have little explanatory power. By contrast, economic variables, which could proxy some grievance but are perhaps more obviously related to the viability of rebellion, provide considerably more explanatory power.” (Collier and Hoeffler 2004)

1. Introduction

The above citations epitomize the position of the recent academic scholarship on the determinants of civil war onset, especially with regard to the role of social fractionalization. While Fearon and Laitin fail to find any robustly significant association between social fractionalization and the hazard of civil war, Collier and Hoeffler results are even more striking. They find that, when controlling for ethnic dominance, social fractionalization actually reduces such risk. Moreover, according to the recent literature, the other notable insignificant factor is democracy. In general, grievance motives of the onset of civil wars (ethnic / religious fractionalization, democracy / autocracy) have received only weak and inconsistent support in the literature. Instead, and despite the very different theoretical underpinnings adopted by the above two leading research teams, their empirical findings are broadly similar with regard to the role of non-grievance factors. A high risk of civil war was found to be robustly associated with low and stagnating income, high dependence on natural resources and other insurgency promoting environmental and demographic factors, such as high and sparsely dispersed population or rough geographic terrain.

Despite what appears to be compelling empirical evidence, there is hardly a consensus, partly because the evidence is at odds with a large body of theoretical literature, as well as with the conventional wisdom held by politicians and journalists.¹ Moreover, civil wars are far too important for the scientific and development community to close the debate on the causes of civil conflict and some strands of the empirical literature attempt to subject this evidence to further scrutiny. For example, focusing on identity wars only, Sambanis 2001 finds a significant and positive effect for ethnic heterogeneity. Other research looks into the mechanics of how ethnic and religious factors should work: for example, whether we should expect ethnic and religious factors to affect conflict through polarization or fractionalization; and ethnic polarization was found to be robustly associated with increased risks of both prevalence and onset of civil wars (Reynal-Querol 2002). Finally, Sambanis 2004 relates the lack of robustness of the findings on ethnic fractionalization to different definitions of what constitutes a war, the inclusion or exclusion of observations from on-going civil

¹ See Cederman and Girardin 2007 and the review of the culturalist perspective in Fearon and Laitin 2003.

wars, different time periods of data availability, and the unreliability of (imputed) data for some of the newly established states.

Against this backdrop our paper constitutes a major departure from the prevailing empirical and theoretical literature. We take a different and, to our best knowledge, a new line of inquiry, which embeds the study of civil war in a more general analysis of varieties of violent conflicts within the borders of the state. Empirically, other possible manifestations of irregular and violent contestation of political power are coups and riots or low intensity conflict. Our approach, we argue, will have important implications for how we think theoretically about the occurrence of domestic war as well as how we specify our empirical tests. It will also have important implications for what we think the benchmark for our analyses should be, i.e. for what we think defines periods of peace as opposed to conflict. Further, thinking about political conflict in general will allow some probing into the dynamic of conflict escalation.

The older quantitative literature on violence pays little attention to the types of violence, how they are causally different and how they lead to different outcomes (Mueller and Weede 1990). The more recent literature on civil wars, however, completely divorces the war outcome from the overall phenomenon of political violence.² The literature implies that civil war is not an outcome that can be neatly isolated in our analytical work, but few studies have undertaken a serious theoretical and empirical analysis of organized political violence (Sambanis 2006 on terrorism is an exception). For example, embedding the study of civil war into the larger process of organized political violence is consistent with Fearon's (2004, pp. 289) view that "both coups and peripheral insurgencies are strategies for using violence to take power." However, similar to the recent literature, Fearon is interested only in those coups that have de facto developed into civil wars, though the potential exists for all coups (attempted or successful) to grow into a large-scale war. In addition, to the extent that violence escalates from low to high levels (e.g. Sambanis, 2004; Reagan and Norton, 2005; O'Brien, 2002), lower levels of violence can be thought of as yet another non-peaceful strategy to press for political change. Finally, Sambanis 2004 reviews the main approaches and results of the study of civil war. Supporting the importance of our approach, Sambanis notes: "If we cannot understand why we get civil war instead of other forms of organized political violence, then we do not understand civil war at all" (Abstract). He goes on to write that: "For many countries caught in a conflict trap, civil war is a phase in the cycle of violence. By isolating civil war in quantitative studies, we choose to focus on an event rather than a process, and we discard a lot of useful information that explains how we end up having a civil war" (pp. 268).

² The empirical literature in this tradition includes Cederman and Girardin 2007, Collier and Hoeffler 2002, Ellingsen 2000, Reynal-Querol 2003, Sambanis 2001 and 2004.

In our theory section we show that the combinations of low income (or major shocks to the economy) and low standards of democracy are likely to be associated with high probability of violence, regardless of the social characteristics of a society and for all types of political violence. Further we argue that because existing lines of identity and contestation will provide motivational and informational advantages to potential rebel leaders to grow a rebel organization, social fractionalization will be most likely associated with civil war. Also, fractionalization does not necessarily affect coup and low intensity violence, because coups require other type of organizational advantages (insider presence in the police and military) and lower levels of violence tend to be more random and lack coherent organization.

Subscribing to this simple and, hopefully, intuitive theoretical framework, our paper uses a multinomial logit empirical specification, in which the manifestations of violence range from lower intensity armed violence to coups and civil wars. If civil war is just one of the alternative expressions of violent contestation of political power, a multinomial model is more appropriate than the use of logit or probit models. Also, a multinomial framework is more appropriate than a bivariate model of domestic conflict (civil war, coups and armed violence lumped together) because it recognizes that different forms of conflict may have different determinants (Reagan and Norton 2005, O'Brien 2002). To investigate the determinants of conflict, we estimate a family of encompassing multinomial regressions using a global database from 1950 to 1999, accounting for three types of domestic violence (civil wars, coups and other violent outcomes) as well as a host of “grievance” and “opportunity” variables commonly analyzed in the recent empirical literature.

2. Theory

We argue that civil war is but one, albeit extreme, manifestation of a continuum of conflicts within a society that could also take the shape of cooperative or non-cooperative but peaceful outcome as well as violent non-cooperative outcomes. In addition to civil war, the latter would include coups as well as violent riots, demonstrations and uprisings. We try to justify this view of conflicts by addressing two issues: what makes some societies more prone to conflicts than others; and, given that a country or a society is inherently conflictive, what are the factors that favor certain type of conflicts?³

2.1 What makes some societies more prone to conflicts than others?

³ Some recent work attempts to link civil wars to other forms of violence and implies the existence of a relationship between civil wars and the larger phenomenon of domestic violent conflict. The hypothesis that civil war is nested in the larger violent conflict phenomenon is, however, unclear theoretically and in the empirical specifications (Bates 1999, Ellingsen 2000, Regan and Norton 2005).

To address the first issue we extend the political economy literature emphasizing social conflicts and polarization as a reason for inefficient economic outcomes to the case of violent outcomes. In particular, we draw on Rodrik 1998 and Caselli and Coleman 2006 to develop a stylized model of conflict that highlights the role of political institutions and “latent” social conflict in explaining why socially heterogeneous societies that lack functioning democratic institutions are likely to be exposed to violent conflict.

Following Caselli and Coleman, we assume two socially distinct coalitions: A and B, with A being the larger and also the stronger group. Group sizes are N_A and, respectively, N_B , where $N_A + N_B = N$ and $N_B < N_A$. Members in a given group are assumed to be identical; each has an initial exogenous income stream from assets that cannot be expropriated (y_A and y_B). Society members from both groups have equal shares ($z = Z/N$) from the aggregate common wealth (Z). We use a follow-leader game, where group A makes the first move on whether or not to mount an opportunistic grab on the common resource Z and internalize the benefits to its members only. However, unlike Caselli and Coleman, we do not rule out that the weaker group (B) might choose to fight, which will result in conflict. Moreover, we assume that the decision by group B on whether to fight or to capitulate depends on its prior about the probability that group A would mount an opportunistic grab on Z , which is given by the extent of ethnic fractionalization in society (π). Also unlike Caselli and Coleman, we assume that if group B decides to capitulate the ex-post outcome will depend on the strength of society’s institutions for conflict management (in short democracy). Under well-established democratic rules, groups will eventually be forced to play by the rules and the common resource (net of the cost of conflict) will be equally distributed among all members of the society. On the other hand, when such institutions are weak, all of Z (net of the cost of conflicts) will be expropriated by group A. Moreover, the strength of conflict management institutions tends to moderate the potential inequities arising from the symmetric claims. This feature of the model borrows from Rodrik 1998, who develops a model of social conflicts arising from coordination failure, with two social groups acting independently and facing a shrinking pie as a result of an external shock. In the Rodrik model, depending on a prior opinion about whether the rival group is likely to be “cooperative”, each group will attach a high probability to an opportunistic grab of resources by its rival. Therefore, *ceteris paribus*, the game results in higher claims than available resources, leading to distributional conflicts and strong conflict management institutions moderate the conflict arising from the symmetric claims by credible rules that govern the ex post distribution of resources.

We specify the per capita pay-off for each group under the peace-peace (PP); conflict-conflict (CC) and conflict-capitulation (CP) outcomes:

$$(1) \quad \mu_A^{PP} = y_A + z; \mu_B^{PP} = y_B + z$$

$$(2.1) \quad \mu_A^{CP} = (1 - \delta)(y_A + \frac{N \cdot z}{N_A}); \mu_B^{CP} = (1 - \delta)y_B : \text{under weak institutions } (I_w)$$

$$(2.2) \quad \mu_A^{CP} = (1 - \delta)(y_A + z); \mu_B^{CP} = (1 - \delta)(y_B + z) : \text{under strong institutions } (I_s)$$

$$(3) \quad \mu_A^{CC} = (1 - \delta)(y_A + z); \mu_B^{CC} = (1 - \delta)(y_B + z)$$

Where, for simplicity, we assume the cost of conflict to be the same when group B decides either to fight or capitulate in response to a conflictive move by group A.⁴ Accounting for the ex-ante perception by group B on whether or not group A will mount an opportunistic grab (respectively given by π and $1 - \pi$), we can derive the expected payoffs of peace (P) and of conflict (C) strategies for each group (See Figure).

Group A Strategy:

The expected value of peace for this group happens with probability 1 because group B (the weaker group) is assumed to prefer peace; conditional on group A's decision to avoid wresting control of the common assets Z. Therefore, it is simply given by:

$$(4) \quad EV^A(P) = \mu_A^{PP} = y_A + z$$

On the other hand, the expected value of conflict for group A would depend on group B' reaction as well as the strength of the prevailing institutions for mediating conflicts:

$$(5) \quad EV^A(C) = \pi \mu_A^{CC} + (1 - \pi) (\phi_w \mu_A^{CP}(I_w) + (1 - \phi_w) \mu_A^{CP}(I_s))$$

The second term on the RHS of the above equation assumes the strength of the prevailing institution to be a weighted average of the two extremes:

$$I = \phi_w \cdot I_w + (1 - \phi_w) \cdot I_s, \text{ where } I \text{ is weakest (strongest) when } \phi_w = 1 (\phi_w = 0).$$

By using the expressions in (2.1)-(3) in (4) and collecting terms we have:

$$(6) \quad EV^A(C) = (y_A + z)(1 - \delta) + \phi_w (1 - \pi)(1 - \delta)z \frac{N_B}{N_A}$$

Proposition 1: for Group A the conflict strategy will dominate if and only if:

$$(7.1) \quad EV^A(C) > EV^A(P), \text{ or}$$

⁴ When group B decides to capitulates only minor or even non-violent conflict should be envisaged, hence its cost should be lower than when group B decides to challenge the attempted resource grab by group A. However, it can be shown that the general qualitative results will not change if we assume different cost implications.

$$(7.2) \quad (y_A + z)(1 - \delta) + \phi_w(1 - \pi)(1 - \delta)z \frac{N_B}{N_A} > y_A + z, \text{ or}$$

$$(7.3) \quad \phi_w > \frac{\delta}{1 - \delta} \cdot \frac{N_A / N_B}{1 - \pi} \cdot \left(\frac{y_A}{z} + 1 \right) = \bar{\phi}^A \left(\underset{(+)}{\delta}, \underset{(+)}{\pi}, \underset{(+)}{N_A / N_B}, \underset{(+)}{y_A / z} \right)$$

Group B Strategy:

For group B the expected value of peace would depend on group A's strategy as well as the strength of the prevailing institutions, should group A chose to mount a grab on the appropriate assets (Z):

$$(8) \quad EV^B(P) = (1 - \pi)\mu_B^{PP} + \pi \left(\phi_w \mu_B^{CP}(I_w) + (1 - \phi_w)\mu_B^{CP}(I_s) \right)$$

As before, using the expressions in (2.1)-(3) in (8) and collecting terms we have:

$$(9) \quad EV^B(P) = (y_B + z)(1 - \pi\delta) - \phi_w\pi(1 - \delta)z$$

On the other hand, the expected value of conflict for the case B is conditional on group A choosing to mount a grab on Z. Therefore, it is simply given by:

$$(10) \quad EV^B(C) = \pi\mu_B^{CC} = \pi(1 - \delta)(y_B + z)$$

Proposition 2: for Group B the conflict strategy will dominate if and only if:

$$(11.1) \quad EV^B(C) > EV^B(P), \text{ or}$$

$$(11.2) \quad (1 - \delta)\pi(y_B + z) > (1 - \pi\delta)(y_B + z) - \phi_w\pi(1 - \delta)z, \text{ or}$$

$$(11.3) \quad \phi_w > \frac{1 - \pi}{\pi(1 - \delta)} \cdot \left(\frac{y_B}{z} + 1 \right) = \bar{\phi}^B \left(\underset{(+)}{\delta}, \underset{(-)}{\pi}, \underset{(+)}{y_A / z} \right)$$

Proposition 3: Under perfectly strong conflict management institutions ($\phi_w = 0$ & $I = I_s$), such as the case of well functioning democracies, peace will be the dominant strategy for both groups at all levels of π (follows from 7.2 & 11.2).

Proposition 4: Conflict will be a dominant equilibrium strategy if and only if:

$$(12) \quad \phi_w > \text{Max}(\bar{\phi}^A, \bar{\phi}^B).$$

This suggest that when institutions are less than perfect, there exist *reservation* institutional level for each group ($\bar{I}^A = \bar{\phi}^A I_w + (1 - \bar{\phi}^A) I_s$, $\bar{I}^B = \bar{\phi}^B I_w + (1 - \bar{\phi}^B) I_s$); and that when the prevailing institution for conflict management is weaker than the minimum of the two reservation levels, conflict will be the dominant strategy for both groups.

Proposition 5: Characterizing the functional dependence of the *reservation* weights (associated with the reservation institutional setting for groups A and B) suggests the following (7.3 & 11.3):

- The higher the intensity of violence (as reflected by the extent of destruction of assets δ) the weaker the reservation institutions required by both groups, i.e. the higher $\bar{\phi}^A$ & $\bar{\phi}^B$.

This result suggests that onset of civil wars might require much weaker institutions than coups; and that other forms of low-intensity violence might happen even in the presence of strong institutions.

- The larger the weight of human capital and other types of non-appropriable assets relative to the common appropriable one ($\frac{y_A}{z}, \frac{y_B}{z}$), the weaker the reservation institutions for both groups for conflict to be the dominant strategy.

This follows because for group A the gain from the resource grab will be small relative to the forgone non-appropriable income due to the destruction effect. However, if institutions are so weak and it chooses to initiate a conflict, the likelihood of an equitable ex-post distribution of Z will be very small, thus making the expected payoff large enough to favor a conflict strategy. On the other hand, for group B a very low weight for asset Z will make a capitulation strategy that avoids violent conflict more attractive than contesting an opportunistic grab by group A, unless institutions are so weak to the extent that the likelihood for an equitable ex-post distribution of Z is very remote. In this case the payoff for B from a conflict strategy could be higher.

- When group B is too small relative to A, the latter is less likely to initiate a conflict by attempting to wrest control of Z unless institutions are extremely weak.

This result follows because the per capita gain for group A from this grab will be too small, unless institutions are weak enough to ensure that, ex-post, it can deprive group B from all or most of the Z assets.

- Group A's reservation level will be higher the more fractionalized the society (i.e. high π); while group B's level will be lower.

In societies with high latent social conflicts, group B is likely to contest a conflictive opportunistic grab of assets Z on the part of group A. This will mean that the payoffs for A from the conflict strategy will be smaller unless countered by the effect of sufficiently weak institutions that would minimize the chance for an ex-post equitable distribution of Z. On the other hand, high degree of "latent" conflict would reduce the payoff for B from capitulation to group A's conflictive strategy unless compensated by relatively strong institutions that would increase the chances of an ex-post equitable distribution of Z.

To summarize, the above model provides a theory for grievance factors, namely social fractionalization and democracy, as determinants of political violence. Moreover, our model illuminates the interaction between these grievance factors and non-appropriable income and natural resources. The latter two "economistic" correlates have been the main stable of the recent large N

empirical models of the risk of civil wars (Collier and Hoeffler 2004, Fearon and Laitin 2003). Our theory, therefore, suggest that both grievance as well as economic factors are relevant to the analysis of political violence. The failure of the civil war empirical literature to account for this theory, we will argue, is the failure of this literature to model civil war as part of an evolving process of political violence. Having analyzed the factors determining political conflict in general, next we discuss a set of hypotheses on the manifestation of political violence, namely riots/uprising, coups, and civil wars.

2.2 What are the factors that favor certain type of conflicts?

From the above model we infer that the combinations of low incomes (or major shocks to the economy) and low standards of democracy are likely to be associated with high probability of violent conflict, regardless of the social characteristics of a society.

Higher income per capita will decrease all violent and irregular contestation of political power, but will have the strongest effect on civil war. In the literature, high income reduces the risk of civil war both because richer states have a greater capacity to react to nascent rebellions (Fearon and Laitin 2003) and because in richer states the opportunity costs of rebellion are larger (Collier and Hoeffler 2004). Coups d'état on the other hand are likely to be affected by income per capita only to the extent to which it proxies the capacity of the central government for administration, policing and control of the military (Londregan and Poole 1990). Further, Regan and Norton 2005 argue that initial mobilization and low levels of violence involve low costs and low levels of repression from the government. They also suggest that no side payments may be needed and grievance may be enough to observe low levels of violence. If government reaction to low levels of violence is not on a massive scale, then per capita income levels as a measure of government reaction capacity is not highly relevant.

If grievance factors are sufficient to observe low levels of violence (Reagan and Norton 2005), then democracy and the peaceful resolution of conflict associated with it are strongly related with lower levels of violent protest (Tilly 2003). We also expect a strong relationship between democracy and fewer coups d'état as the lack of legitimacy of a current regime makes coups more likely (Belkin and Shofer 2003). Reagan and Norton 2005 argue that a full-scale revolt equivalent to civil war has high costs and there is expectation of government repression. This leads to the need for rebel leaders to provide selective benefits. Still, in democratic societies the use of violence or threats of violence is considered illegitimate as a means of resolving conflicts and democratic institutions and norms seek to replace force with peaceful mechanisms such as voting and the courts. Our expectation is then that credible democracy reduces the likelihood of civil war as well. However, we suggest that the effect

will be weaker since state repression may require side payments in addition to grievance motives (Collier and Hoeffler 2004, Reagan and Norton 2005). Following is the first testable hypothesis: *H1: Low income per capita and weak institutional capacity for conflict management (i.e. lack of functioning democracy) are associated with violent conflict.*

Next, we address what determine the type of violence, given that a society or a country is inherently prone to violence. We argue that for each type of violence there are certain “opportunities” or “favorable” conditions that determine the manifestation of violence in one type or another.

While rebel groups in civil wars do not need a very large number of members as support basis (Fearon and Laitin) they still need a level of support that would make them transcend the status of a terrorist network, or of an unorganized mob. Gurr 2000 notes that mobilization depends on the availability of collective identities, shared motivations, and opportunities for collective action. We hypothesize that because of the kind of entrenched, built-in support rebels can find within ethnic, religious, or language groups, large-scale civil wars will tend to develop in socially fractionalized societies. Socioeconomic grievance (Gellner 1983) or political grievance (Wimmer 2002) can contribute to the articulation of group shared motivations and collective action. We suggest therefore that socially fractionalized societies are likely to harbor grievances against the ruling elites and, in such societies, there are more opportunities for would-be rebel leaders to emerge or manipulate a larger number of aggrieved communities. Fearon and Laitin 2003 posit an information mechanism instead of our grievance explanation of the effect of fractionalization on civil war: Rebel groups take advantage of “local knowledge” and dense social networks in ethnic groups to credibly enforce punishment for denunciation (p. 80). Moreover, Caselli and Coleman 2006 argue that if countries are ethnically heterogeneous, coalitions can be formed along ethnic lines, where ethnic identity (particularly visible, unalterable identifiers like skin color or height) can be used as a marker to recognize potential infiltrators. By lowering the cost of enforcing membership in the winning coalition, ethnic diversity makes it less susceptible to ex-post infiltration by members of the losing party. Therefore a “strong” ethnic group finds it more profitable to bid for a country’s resources in an ethnically heterogeneous country. Caselli and Coleman argue then that we should observe more conflict over resources in ethnically heterogeneous societies. Even if our grievance-based mechanism or, instead, the ones posited by Fearon and Laitin and Caselli and Coleman apply, we should still expect ethnic fractionalization to increase the chance of civil wars. However, if social fractionalization is related to civil wars for reasons of grievance, informational advantages or technology of exploitation – we place the burden of distinguishing between motivations on the political regime variable. In particular, if grievance is part of the motivation for civil war onset, we contend that political institutions that allow for broad-based participation and do not discriminate

along traditional ethnic lines have the potential to mitigate the deleterious effect of social heterogeneity on civil war.

At the other extreme, mounting a coup requires that the perpetrators are not locked-out from the formal state institutions of violence, such as the army and the police. While leaders in countries with a high risk of coup may stack their militaries with loyalists, including members of their ethnic group, we do not expect that social fractionalization increases the risk of coup d'état. If social characteristics affect in any way the likelihood of coup d'état we expect this to happen through indexes of polarization. To the extent that it is costly to discriminate against large minorities and members of such minorities are present in the formal institutions of the state, the strategy of mounting a coup is available to large minorities. It is more likely then, that countries experience coups or coup attempts in situations when large minority groups face an ethnic majority, i.e. in polarized societies. Finally, low levels of violence in the form of violent demonstrations or riots may have an element of randomness and lack of coherent coordination attached to them (Tilly 2003). The motivation for lower levels of violence can be very different and can activate a wide range of collective boundaries from whole nations, special interests, religious and ethnic groups, local communities to workers in different industries or sectors. Therefore, if individual grievance has the major role in mobilization at low levels of violent manifestations of conflict (Reagan and Norton 2005), it is possible but not necessary that mobilization takes place along lines of social fractionalization.

If our analysis is correct, the following hypotheses follow:

H2: Given that a society is inherently ripe for violence, social fractionalization will be most likely associated with civil war. Existing lines of identity and contestation will provide motivational and informational advantages to potential rebel leaders to grow a rebel organization. Fractionalization, on the other hand, does not necessarily affect coup and riots, because coups require other type of organizational advantages and lower levels of violence tend to be more random and lack coherent organization.

3. A Multinomial Model of Conflict

In our theoretical account, armed conflict, coups and civil war are specific, alternative outcomes of an underlying weak state structure that is unable to solve peacefully, credibly and forcefully conflicts among various groups. To test this view of domestic conflict we need a multinomial model. That is we need to specify a model compatible with a single decision being made amongst more alternatives as opposed to a model that is the solution to a problem in which there are several decisions, each between two alternatives (Green 2003, pp. 719). Obviously, war, coups or riots are not choices, but outcomes of the interaction of the different domestic societal actors. Applying Green's terminology

of choices and decisions to our theoretical problem, we need a model that is able to encompass the realization of specific outcomes of the same propensity for civil strife.

3.1 The Multinomial Logit Model

As the estimation method, we choose an unordered multinomial logit model with four outcomes: violent riots/uprisings, coups, civil war and a “peace” or “no new conflict” outcome (the reference category). A series of binomial logit regressions side by side can be specified instead of a multinomial.⁵ However, in order to compare the effect of the independent variables on alternative outcomes, the binomial logit regressions need to have the same reference category (the 0 outcome in the dependent variable). Reagan and Norton (2005) write that they “view civil conflict as a process that has discrete levels or breakpoints. These begin with low levels of protest and proceed through higher levels of rebellion and, finally, if not sufficiently addressed, to civil war” (pp.326). This view of civil conflict is similar to our own description of armed conflict, coups and civil wars as alternative manifestations of non-peaceful political contestation. In terms of the research design, Reagan and Norton study the determinants of civil wars in a logit regression in which the dependent variable takes the value of 1 for all country years of war incidence. All other data points are coded as the reference outcome 0. The reference category for civil war then includes instances of peace, protest and rebellion. Further, for the logit regression on rebellion outcomes, the reference category for rebellion includes peace, protest and war. Given the lack of a common reference category for the three civil conflict outcomes, it is inappropriate to interpret the results in a comparative fashion. Further, if all the alternative manifestations of conflict have some common determinants, then it is likely that a multinomial model will be able to identify the common determinants better than a simple probit or logit on the civil war outcome. In particular, the multinomial setting allows easy testing of hypotheses regarding the size of estimated coefficients for variables of interest for all three outcomes: riots, coups, civil wars.

The benefits of the multinomial logit are that it is inexpensive to estimate, and the formula for the logit probabilities is easy to interpret when compared to other choice models (Train 1993). The one weakness of the multinomial logit is the assumption that the random disturbance terms in the equations for each alternative are identically and independently distributed in accordance with the extreme value distribution. This assumption (Independence of Irrelevant Alternatives) is inappropriate when the disturbances of a subset of the outcomes are correlated due to some similar

⁵ The assumption of Independence of Irrelevant Alternatives (IIA) in the multinomial logit allows the estimation on subsets of alternatives (Train 1993, pp. 20). However, the estimation sample needs to be adjusted to exclude those observations for which the chosen alternative is not in the estimation subset.

unobservable characteristics or omitted variables. Possible remedial methods that we also try are the estimation of a nested logit (selective relaxation of the IIA assumption) or a multinomial probit (correlation of disturbance is allowed across the board). Substantively, the assumption of the nested logit that the error terms for the war, coup and armed violence outcomes are correlated is very attractive. Theoretically, it is likely that the three types of onset of domestic conflict are correlated through some unobservable factors, or factors that we are unable to measure. However, upon estimating variants of the nested logit model, likelihood ratio tests are unable to support the use of the nested logit versus the simpler multinomial logit. Finally, the results of our multinomial logit models are robust to running a multinomial probit instead.

3.2 Data

The Dependent Variable

The data for the civil war alternative of the multinomial is from Sambanis 2004 (version b of the civil war variable). Coups (attempted and successful) come from Belkin and Schofer 2003 and violent domestic protest is identified from the Banks Cross National Time Series Data Archive. The unit of observation in the data is country year.

Sambanis 2004 provides a lengthy and comprehensive discussion of the issues involved in coding civil war. Central to his definition, wars are “fought by well organized groups with political agendas, challenging the sovereign authority and violence was reciprocal” (pp.820). In addition wars should pass a relatively high, but flexible threshold with respect to the number of deaths resulting from the conflict. We adopt Sambanis’ coding of civil war onset including onsets that occur in countries with an already ongoing civil war, which gives us 144 distinct war onsets from 1945 to 1999.⁶

Belkin and Schofer 2003 use a new data set of attempted and successful coups. There are 204 successful coups and 171 attempts between 1945 and 2000. Generally, countries have had only one coup in a year, either successful or just attempted: 348 cases. Still, there are years when countries experienced two attempts or two successful coups: 25 cases. Finally, Syria is the one country with three successful coups in 1949 and three attempts in 1975.

To operationalize low intensity organized violence we use the variable riots from the CNTS Data Archive. Riots are defined as any violent demonstration or clash of more than 100 citizens involving the use of physical force. For each year the original data sets counts the total number of riots that has occurred in that particular year. Most countries experience no riots (83% of country years) and less than 5% of country years have more than two riots each year. There are some outliers still: For example, in 1967 the US is documented with 55 riots, and India with 29. We transform the original

⁶ The Sambanis 2004 Civil War Coding Notes codes the Burmese communist insurgency as starting in 1948.

riot data into a binary variable, taking the value of 1 for country years with riots and 0 for country years with no riots.⁷

For constructing a multinomial dependent variable we need to decide on how to treat country that experience multiple outcomes in a particular year. For example, El Salvador experienced a successful coup in 1979, which is also the year the civil war has started. Pakistan in 1971 experienced both a coup and the onset of a civil war. Also, Argentina saw both riots and a successful coup d'etat in 1962, 1966, 1970, 1971 and 1976. While our outcomes are not ordered to the extent that we could estimate an ordered probit model, there is still a gradation in the amount of damage our outcomes inflict both on the legitimacy of the political process and on people's lives.⁸ We rank war as the most damaging outcome, followed by coups and then riots. Thus, if a country experienced either a coup or riots and the onset of a war in the same year we code the multinomial alternative as a war. Also, if a country experienced both riots and a coup we code the multinomial alternative as a coup. The multinomial dependent variable, then, has 144 war onsets, 319 coups and 1064 years with low intensity conflict.

Independent Variables

The explanatory variables we use are similar to those in Sambanis 2004, Fearon and Laitin 2003, and Collier and Hoeffler 2001. All independent variables are from the Sambanis 2004 replication data set, with the exception of coups (Belkin and Schofer 2003), the polarization measures (Reynal-Querol 2002) and the democracy variables (Polity IV).

Democracy; Anocracy; Autocracy

Our novel theoretical approach to the study of violence is accompanied by a strong interest in re-assessing the role that grievance factors – social fractionalization and lack of a fully functional democracy– play in the onset of political violence. We investigate the effect of democratic governance and practices on political violence by using a more nuanced operationalization of democracy than the literature on civil wars has done so far. We use the typology of democracy put forward by Goldstone et al.2005 in their study of political instability. Specifically, we follow Goldstone et al. and rely on two underlying components of the Polity score: The measure of executive recruitment (exec) and the competitiveness of political participation (parcomp).⁹ A

⁷ The riot variable from CNTS Data Archive is less than ideal. We would prefer to be able to discriminate between large and small violent clashes or demonstrations, but, to our knowledge, no such variable is readily available.

⁸ We do not use an ordered model because due to the nature of the data, events in two of our categories – riots and coups - are relatively heterogeneous.

⁹ There are multiple criticisms of the use of Polity IV –10 to 10 scale: Goldstone et al. discover that working with the components of the Polity IV scale better predicts instances of political instability. Gleditsch and Ward 1997 argue that the –10 to 10 scale should not be treated as a cardinal, or even as an ordinal measure.

combination of these two components has the best predictive ability in Goldstone et al. and, moreover, reflects the degree to which the political system allows societal actors to translate their preferences into policy with the help of peaceful mechanisms such as voting and elections. The upshot is that meaningful elections will decrease the appeal of violent means of political contestation. Figure 1 (Appendix) shows the classification of political regimes along the lines of executive recruitment [Show the ways superordinates come to occupy their positions (Polity IV manual pp. 19)] and the competitiveness of political participation [Refers to the extent to which alternative preferences for policy and leadership can be pursued in the political arena (Polity IV manual pp. 25)]. Full autocracies involve repressed political participation and no leader elections. Partial autocracies involve either some degree of competitive political participation or elections for the executive, but not both. Partial democracies see some degree of political participation and election of political leaders. However, only full democracy is characterized by both competitive elections of leaders and fully competitive political participation. Further, we distinguish partial democracies that are characterized by factional politics, i.e. “polities with parochial or ethnic-based political factions that regularly compete for political influence to promote particularist agendas that favor group members to the detriment of common, secular and cross-cutting agendas” (Polity IV manual pp. 26). We choose to treat interregnum periods (code –77) and transition periods (code –88) as distinctive categories, as they are characterized either by the collapse of the state or by fluidity between characteristics of new and old regimes. Similar to other studies of civil war, we treat interruption periods (code –66) as missing data. In our estimations of political violence, democracy variables are lagged one year and the reference category is autocracies.

Social fractionalization; Ethnic, Religious, Language

We use measures from Fearon 2003 and Fearon and Laitin 2003 to capture the degree of fractionalization of societies: ethnic (*ef*), religious (*relfrac*), and linguistic (*numlang*). We also use polarization measures from Reynal-Querol 2002 to test the potentially non-linear effect of social diversity. Finally, Collier and Hoeffler (2004) find that ethnic dominance increases the chances of civil war and we employ two measures of ethnic and religious dominance (dummy variables that take the value of 1 if the largest ethnic / religious group is between 45 and 90 percent of the population).

History of conflict

Thinking about conflict as the irregular contestation of political power allows some probing into the dynamic of conflict escalation. For example, in countries with a history of coups, leaders are afraid of powerful actors in the military and will actively try to weaken the armed forces by dividing them into rival organizations that check and balance each other. We believe that accounting for a country’s history and risk of coup d’etat is a more direct measure of the potentially inefficient use of the

military than income per capita and, thus, a better proxy for a weak state in the sense of Fearon and Laitin 2003. Also, frequent violent riots will legitimize the use of force as a tool for pressing for political outcomes and could train potential future rebel leaders (Tilly 2003). To test hypotheses about conflict escalation, our empirical models would have to account for countries' history of violence: We include a dummy variable that takes the value of 1 if a country experienced a coup in the past five years (*priorcoup5years*), we count the number of years with riots in the past 5 years (*priorviolence5years*) and include a dummy variable measuring whether a civil war was ongoing in the previous year (*warpastyear*).

Controls

Lagged GDP/capita (*gdpnl*) is expected to reduce the likelihood of civil war (Fearon and Laitin 2003, Collier and Hoeffler 2001). GDP/capita has also been shown to reduce the risk of coups (Belkin and Schofer 2003, Londregan and Poole 1990). We use the natural log of the income per capita variable, as we can expect that income increases make a larger difference for poorer countries. In addition, the log of lagged population (*lpop11*) and political instability (*instab*) (Fearon and Laitin 2003, Hegre et al. 2001) have been shown to significantly affect the onset of civil wars (Fearon and Laitin 2003, Hegre et al. 2001). We also control for countries that are oil exporters (*oil*), and are geographically mountainous (*lnmtn*), which are argued in Fearon and Laitin 2003 to increase the appeal of the insurgency technology.¹⁰

4. Econometric Results

In Table 1 we show the effect of political regime, social fractionalization on the onset of conflict. We further investigate the effect of polarization in Table 3 (Appendix), and the robustness to an alternative definition of civil war in Table 4 (Appendix). The dependent variable takes the value of 1 for the onset of violent demonstrations, the value of 2 for coups, the value of 3 for the onset of civil wars and the value of 0 for periods with no new conflict. The results for the independent variables are displayed distinctly for our three alternatives of domestic conflict: armed violence, coups and civil war. Also, the effect of the each measure of social diversity (ethnic, religious, language) is determined in separate models. The results that we present come from a multinomial logit model, but are robust to a multinomial probit specification that allows for the correlation of the unobserved

¹⁰ In general the literature abstracts from controlling for neighborhood effects (except Murdoch and Sandler 2004). One can imagine that war in a neighboring country will lower the economic prospects of that country, leading to migration and refugees, which will then worsen prospects in the domestic country, leading to increased chances of war. Similar to much of the literature, we control directly for many of the potential consequences of wars in neighboring countries (income, population, instability), and thus mitigate the effect of not directly controlling for neighborhood effects.

disturbances across outcomes. Because we estimate the effect of the history of conflict, the estimation samples have 125 countries and go from 1951 to 1999.

Generally, our results confirm the stylized facts of the empirical literature. We find broad support for the hypothesis that richer countries experience less irregular and violent contestation of political power. Countries with higher per capita income display a lower chance of spiraling into civil war or experiencing a coup. Across our models, the effect is statistically significant for both coups and civil wars and substantively important: A move from the bottom 25th percentile in terms of GDP/capita to the 75th percentile reduces the chances of a country experiencing a coup by about 30% and the chances of civil war by 50%. The one year lagged value of income per capita does not appear to affect the likelihood of violence onset. This result may be an artifact of the fact that the identification of violence onset is not as precise as we would like it to be. We also find that populous countries are more prone to civil wars and violent demonstration, while at the same time being inconsequential for countries experiencing a coup. In our models, oil significantly increases the chances of civil war in most of our specifications while leaving unaffected the chances of a coup or lower intensity violence. Other extractable resources (Reagan and Norton 2005: diamonds, other gem stones and opiates) are statistically insignificant, regardless of whether or not we include oil exports. The presence of mountainous terrain leaves unaffected the likelihood of all manifestations of violence - civil wars, coups, and violent demonstrations.

Democracy; Anocracy; Autocracy

To ascertain the effect of the political power of meaningful elections we use the typology of democracy put forward by Goldstone et al.2005. There are several important differences between our use of the Polity score and the prevalent specification from the literature. First, our coding is more stringent with the requirements for full democracy and identifies fewer countries that have meaningful political participation and executive recruitment. In our sample we have about 21% of observations that qualify as full democracies, while the ubiquitous truncation of the Polity score for values larger than 5 results in about 33% of observations being classified as democracies. Second, Fearon and Laitin 2003 find that anocracies (Polity score in between 5 and -5 and regime interruptions (-77)) are more prone to experience civil wars than autocracies and that democracies (Polity score larger than 5) have the same risk as autocracies to experience civil wars. Fearon and Laitin interpret their findings as evidence that anocracies have a higher risk of war because they are weak, incoherent regimes. At the same time, the two authors dismiss the idea that democracies face a lower risk of civil war because of less discrimination and that autocracies also face a low risk of war because they specialize in repression (Hegre et al. 2001). We believe Fearon and Laitin's interpretation to be speculative and that the Polity data affords further testing. In particular, we have

the anocracy category unbundled into factional partial democracy, non-factional partial democracy, partial autocracy, and transition and interregnum periods. It is habitual for researchers to interpolate the Polity values for transition periods and code interregnum periods as anocracies (Polity score of 0). This practice, however, results in a loss of information and potentially biased inferences. De facto, the practice results in assigning values characterizing normal politics to extraordinary periods that the Polity project researchers were reluctant or unable to place in their regular coding scheme.

In our regressions the reference category for the political regime dummy variables are autocracies. Similar to Belkin and Schofer 2003 we find that democracies consistently reduce the chances for irregular takeover of power through coups. Democracy is also found to negatively affect the likelihood of observing violent demonstrations, although the negative effect is not robustly statistically significant.¹¹ The most important finding, however, is that democracies are less likely than autocracies to experience civil wars. The democracy coefficient is consistently negative and statistically significant or close to significance in many of our specifications. Moreover, while democracy has been shown in the literature to reduce chances for civil war when compared to anocracies or semi-democracies, it is novel to show that a credible democracy granting full political rights may reduce the risk of civil war more efficiently than a repressive autocracy.¹²

Contrary to Fearon and Laitin, we find it not to be the case that all anocracies are weak political regimes. While partial autocracies appear to be vulnerable to violent demonstrations or coups, non-factional partial democracies are as strong as autocracies in their ability to contain all types of conflict. Also, even partial autocracies do not have a higher risk of civil war onset than full-blown autocratic regimes. The countries most vulnerable to conflict, from violent demonstrations to coups and civil wars are factional partial democracies. Countries that are relatively open in the recruitment of leaders and political participation face a large risk of conflict, contingent on the presence of parochial or ethnic based political factions. About 20% of the observations in our sample are partial democracies or countries with relatively open political contestation, of which about half engage in deeply factionalized competition. Our findings cast doubt on the idea that anocracies are weak states because they combine a generally unstable mix of democratic and autocratic features. Rather, the problem is a specific combination of institutional openness and political participation channeled through networks rooted in traditional identities. Also, our findings point to potential grievance

¹¹ Our expectation has been that democratic politics has the strongest effect on low levels of conflict – riots or violent demonstrations in our operationalization. The lack of robustness of the democracy variable is attributable to the heterogeneous nature of violent demonstrations in the Banks data set. Arguably, very small scale scuffles with the police and large-scale demonstrations turned violent have different causes.

¹² The coefficients for the democracy dummy variable are negative but statistically insignificant if we use Fearon and Laitin's definition of civil war. With the Collier and Hoeffler definition of war there are no civil wars occurring in countries classified as democracies according to the Goldstone et al. approach.

motivations for conflict: By definition political factions promote particularistic agendas and favor group members. Moreover much of the literature on Africa points to distribution of patronage resources according to ethnic division lines.¹³ Our evidence shows that states with potentially discriminatory policies face larger chances of violent demonstrations, coups and civil wars. Finally, transition and interregnum periods consistently increase the risk of violent demonstrations and civil wars. On the other hand, political instability as defined by Fearon and Laitin 2003 is never statistically significant across our specifications. Political instability takes the value of 1 when the Polity regime index has a three point or greater change in the previous three years. Political instability also includes instances of transition and interregnum periods. Our findings show that conflict is the result of extraordinary instability of the political regime. Instability is still statistically insignificant if we recode it not to include transition and interregnum periods. Our findings show that it is misleading to blame all types of political instability for increased propensity for conflict.

Past history of conflict

History is an important determinant of the amount and type of conflict we observe. The following results hold robustly across all our specifications: Riots or violent demonstrations are connected with more riots in the future, as well as more coups and civil war. Coups are associated with future coups and wars, yet, surprisingly, appear to reduce the likelihood of riots. Also, countries at war are less likely to see violent demonstrations. While previous work has shown that the risk of civil war increases in political instability, here we are able to show that two specific forms of instability of the political regime (coups and violent demonstration) matter for the risk of civil war.

Belkin and Schofer 2003 summarize the consensus in the literature on coups: “When leaders are vulnerable to coups, they commonly counterbalance their militaries, that is they divide their armed forces into rival organizations that check and balance each other” (pp. 613). Counterbalancing can involve creating additional (perhaps redundant) army branches so that no military faction controls large resources or setting up paramilitary units for the sole protection of the leader.¹⁴ Belkin and Schofer also note that a good indicator of the threat of coups is whether the country has experienced a coup before.¹⁵ Our evidence shows that countries that have a history of coups will be more likely to see rebel movements evolve into large-scale civil wars. That is, the threat of coups and the resulting

¹³ See for example Posner 2007, Bates 1989 or van de Walle 1989.

¹⁴ This behavior is consistent with the increase in military spending that Collier and Hoeffler 2006 predict should happen when the risk of coup runs high. Collier and Hoeffler 2006, however, posit a different mechanism in which the leader does not have the upper hand to divide and conquer the military, but is being “blackmailed” into spending by the military.

¹⁵ See also Bueno de Mesquita et al. 1992. Belkin and Schofer 2003 use the history of coups over the previous ten years.

inefficient use of military resources make it both more likely for insurgents to rebel and for the government to have an inadequate response.

Popular demonstrations involving violence may lead to further violence for a variety of reasons: Episodes of violence legitimize future violent contestation of power; Violent rioting and protest signals discontent and grievance; Participation in violent riots creates individual experience or even leadership in the practice of violence; Finally, some violent protest may elicit a similarly violent response on the side of the government, leading to cycles of violence and repression (Tilly 2003, Moore 1998).¹⁶ While we cannot distinguish among these explanations, our evidence suggests that countries with a history of violent protest are at risk of coups and escalation of violence into civil war.

Fractionalization and Polarization

In Table 1 we show our basic results for ethnic, religious and language fractionalization. Consistent with our story, all three types of fractionalization increase the risk of observing civil war and do not affect the other types of violent, irregular contestation of political power. A move from the bottom 25th percentile to the 75th percentile on language fractionalization or religious fractionalization increases the chances of war by about 70%. A similar move for ethnic fractionalization increases the chances of war by 80%. Fractionalization is unimportant for the other civil conflict outcomes, except that religious fractionalization has a substantively small, but statistically significant negative effect on the likelihood of violent demonstrations. For the civil war outcome, ethnic fractionalization remains statistically significant when including religious fractionalization, language fractionalization or the number of languages. Also, if included in the same regression model, both religious fractionalization and the number of languages are statistically significant.¹⁷ If used instead of the number of languages, Reynal-Querol's language fractionalization index is statistically significant at the 10% level. Ethnic and religious dominance are statistically insignificant.

In Table 3 (Appendix) we show the results for ethnic, religious and language polarization for each alternative manifestation of domestic conflict. All three aspects of polarization have a weak performance in our regressions, supporting the hypothesis of a monotonic relationship between

¹⁶ Tilly 2003 writes: "Not all scattered attacks, however, remain contained and segmented. In principle, we may expect salience and coordination to increase, if political entrepreneurs or violent specialists join the action on either side" (pp. 187) or (about El Salvador 1980) "though the demonstrations and strikes gradually became smaller, there was a concomitant shift within the left opposition toward a military strategy" (pp. 39).

¹⁷ We choose to present our results with only one measure of fractionalization included because of the way Fearon 2003 chooses to code ethnic groups, which includes sharing cultural features, such as a common language or religion.

ethnicity, religion, languages and domestic violent political conflict.¹⁸ In Table 4 (Appendix) we show the estimates from our model when using the Laitin and Fearon definition of civil war. Even with the different civil war data, ethnic fractionalization and the number of languages remain statistically significant. Also, a move from the bottom 25th percentile to the 75th percentile on ethnic fractionalization increases the chances of war by about 55%, while a similar move in the language fractionalization index increases the likelihood of war by 22%.¹⁹

From our estimations ethnic fractionalization appears to increase the prospects for civil war and leave unaffected the chances for other types of irregular contestation of power. Also, as we discussed above, Fearon's measure of ethnic fractionalization already incorporates cultural diversity along religious and language lines. Therefore, at this stage, we focus on civil wars and ethnic fractionalization only and go on and estimate models with interactions of fractionalization and measures of democratic governance. From the point of view of the developing world, full-fledged democracy is a long-term outcome. In the short term, the best outcome of a transition to liberal democracy is what we have labeled as a partial non-factional democracy. On the other hand, the worst outcome of such a transition would be a partial factional democracy, that is a country with open political participation and selection of leaders but a political discourse centered on ethnic, particularistic lines. We interact then ethnic fractionalization with partial factional and non-factional democracy. The coefficient of ethnic fractionalization remains positive and statistically significant. The interaction of ef and partial non-factional democracy is negative, and the interaction of ef and partial factional democracy is positive. While partial factional democracy was statistically significant in all of our previous specifications, in the interacted model it loses significance. A joint statistical significance test rejects the hypothesis that ef and all its interacted terms are indistinguishable from zero at the 10% probability level. The predicted probabilities of civil war from the interacted model are shown in Table 5 (Appendix). At low levels of ethnic fractionalization (25th percentile) factional and non-factional partial democracies reveal a probability of civil war onset hovering around 2%. For high levels of ethnic fractionalization (75th percentile), non-factional partial democracies lower the probability of civil war onset to about 1.3%, while partial factional democracies increase the same probability to about 4.6%. Our results indicate that political liberalization with free and open elections is not a panacea and that, to insure peace, governments need to moderate favoritism and instead engage in a broad based society dialogue.

¹⁸ If we test ethnic polarization is a less taxing way and not include the ef index, we get results consistent with our hypotheses: Ethnic polarization significantly increases the chance of observing coups, while leaving unaffected the likelihood of civil war or riots. Ethnic dominance continues to be statistically insignificant.

¹⁹ In the online Supplement for "What is Civil War" (2004), Sambanis finds a similar results using the Fearon and Laitin 2003 data and dropping observations for new states, or more generally not using the first wars in the data set that are potentially left censored.

Social fractionalization

We test the robustness of our findings for fractionalization in Table 2. Our purpose is to isolate the most fractionalized societies along both ethnic and language lines and test whether countries face a coordination problem in waging civil war. In particular, Collier and Hoeffler 2004 argue that fractionalized societies are safer than homogenous ones because of the difficulty faced by rebel organizations in maintaining cohesion if they need to span different social groups. Figure 2 (Appendix) shows the partition of the space of ethnic and language diversity. Uniform (homogenous) societies have both indexes of language and ethnic fractionalization lower than the 25th percentile of the whole sample. There are 852 observations of uniform societies, and 2 wars (0.23% civil war onset rate). Diverse societies have both indexes of language and ethnic fractionalization greater than the 75th percentile of the whole sample. There are 831 observations of diverse societies and 30 wars (onset rate of 3.6%). We group together societies that are fairly diverse ethnically (Ef greater than the 25th percentile and smaller than the 75th percentile) and in terms of language composition (Qlf greater than the 25th percentile and smaller than the 75th percentile) and we label them as moderately diverse societies. There are 1817 observations of moderately diverse societies and 33 wars (onset rate of 1.8%). Partially homogenous societies have either but not both of the Ef index or the Qlf index smaller than its respective 25th percentile. There are 1199 partially homogenous countries and 22 wars (onset rate of 1.83%). Partially diverse countries have either but not both of the Ef index or the Qlf index larger than its respective 75th percentile. There are 564 partially diverse countries and 12 wars (onset rate of 2.13%).

Table 2 shows the results from a multinomial logit that include measures of social fractionalization along both ethnic and language lines. Contrary to Collier and Hoeffler 2001, our results suggest that social fractionalization is not benign. The results for civil war show that ethnic and language diversity increase the chances that countries will experience domestic wars. The coefficient on diverse societies is positive and statistically significant, and the coefficient on homogenous societies is negative and statistically significant. Moreover, by looking at the predicted probabilities, a diverse country is twice more likely to experience civil war than a moderately diverse country and more than three times more likely than a homogenous country. Indeed, as Fearon and Laitin 1993 argue, it appears to be the case that rebel groups do not need large masses of people to start a bloody conflict and that the coordination problem posed by Collier and Hoeffler 2001 is not an important factor in the onset of civil war. Also, ethnic dominance continues to be statistically insignificant contradicting the idea that majorities (groups that make 45%-90% of the population) necessarily have the ability and the incentive to exploit minorities (Collier 2001) and the idea of preemptive civil war initiated by large ethnic groups facing moderately large ethnic minorities (Caselli and Coleman 2006).

5. Conclusion

In this paper we start by assessing the empirical support received by grievance motives in the onset of civil wars (political regime and social fractionalization measures). By and large, the Collier-Hoeffler 2004 and Fearon-Laitin 2003 contend that ethnic and religious diversity do not have deleterious effects on the propensity societies have to solve conflicts violently. Fearon and Laitin also argue that anocracies are at a higher risk of war because they are incoherent, weak regimes combining features of both autocracies and democracies. We believe that the subject is worth further investigation and propose a theory of domestic conflict in which low level armed violence, coups and civil war are specific, alternative outcomes of an underlying propensity to solve political conflict in a violent manner. Our model provides a theory for grievance factors, namely social fractionalization and democracy, as determinants of political violence. Moreover, our model illuminates the interaction between these grievance factors and non-appropriable income and natural resources. Our theory suggests that both grievance as well as economic factors are relevant to the analysis of political violence. The failure of the civil war empirical literature to account for this theory, we will argue, is the failure of this literature to model civil war as part of an evolving process of political violence. Faithful to our theoretical discussion, we specify and estimate a multinomial model of domestic conflict. If the alternative manifestations of conflict have some common determinants, then it is likely that a multinomial model will be able to better identify the common determinants better than a simple probit or logit on the civil war outcome. Also, a multinomial model recognizes that different forms of conflict may have different determinants.

Following a battery of estimations and robustness checks we find that: Not all anocracies are weak political regimes; Democracies may be more efficient than autocracies in reducing the risk of civil war; Not all political instability results in domestic war; Ethnic, religious and language diversity (fractionalization) increases the chances of civil wars; Ethnic and religious dominance or polarization do not affect civil war; Social fractionalization (ethnically and linguistically diverse societies) does not increase coordination costs for rebel groups but, rather, increases the likelihood of war.

To test the effect of political regime on the risk of violent conflict we use a typology of democracy based on the two components of the Polity score that deal with competitiveness of the political system at the leadership and mass levels. We identify full-fledged democracies, partial non-factional democracies, partial factional democracies, partial autocracies and full-blown autocratic regimes. Our findings show that credible democratic regimes granting full political rights may reduce the risk of civil war more efficiently than repressive autocracy. We also find that countries most vulnerable to conflict, from violent demonstrations to coups and civil war are partial factional democracies,

while partial non-factional democracies are not more risky than autocracies. This finding casts doubt on the idea that anocracies are weak states because they combine an unstable mix of democratic and autocratic features. Rather, we suggest that the problem is the combination of institutional openness and political participation channeled through networks rooted in traditional, ethnic identities. Political instability has been found in the literature to increase the risk of civil war. Our empirical results challenge that finding and we suggest that specific types of instability are to blame. In particular, our results show that violent conflict is the result of extraordinary political instability of the kind that the Polity project researchers were unable to place in their regular coding scheme. We also show that the risk of civil war is increased by the political instability that results from a history of coups d'état and a history of violent protests and demonstrations. Finally, we find that ethnic, religious and language fractionalization significantly increases the likelihood of civil war. Ex ante we posited a grievance explanation to why fractionalization may increase the chances of civil war, while Fearon and Laitin 2003 and Caselli and Coleman 2006 argue for the informational value of ethnicity. The unconditional effect of fractionalization cannot extend support to either mechanism in particular. However, we interact ethnic fractionalization with the two types of partial democracy that are the most likely outcomes from a democratic transition in the developing world: partial non-factional democracy and partial factional democracy. We find that partial democracy of the non-factional kind reduces the deleterious effects of fractionalization, while partial factional democracy exacerbates the effect of diversity. We interpret our findings as evidence that states with discriminatory policies face larger chances of war in socially diverse societies.

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Table 1. Ethnic, religious, and language fractionalization
Multinomial logit regression on armed violence, coup and civil war outcomes (Sambanis)

	Multinomial 1			Multinomial 2			Multinomial 3		
	Riot	Coup	Civil war	Riot	Coup	Civil war	Riot	Coup	Civil war
Log lagged GDP/capita	0.11 (0.07)	-0.22** (0.11)	-0.42*** (0.15)	0.06 (0.06)	-0.38*** (0.11)	-0.42*** (0.15)	0.04 (0.07)	-0.35*** (0.12)	-0.35** (0.17)
Log lagged population	0.23*** (0.03)	-0.09 (0.06)	0.25*** (0.08)	0.24*** (0.03)	-0.09 (0.06)	0.24*** (0.08)	0.25*** (0.04)	-0.08 (0.06)	0.14 (0.09)
Oil	-0.17 (0.15)	-0.03 (0.23)	0.59** (0.28)	-0.17 (0.15)	0.06 (0.23)	0.85*** (0.27)	-0.13 (0.15)	0.04 (0.23)	0.81*** (0.27)
Log of mountainous terrain	0.00 (0.03)	0.05 (0.06)	0.06 (0.08)	-0.02 (0.03)	0.03 (0.05)	0.08 (0.08)	-0.01 (0.03)	0.03 (0.06)	0.09 (0.08)
Instability	-0.05 (0.14)	-0.22 (0.21)	0.23 (0.31)	-0.05 (0.14)	-0.17 (0.20)	0.20 (0.31)	-0.07 (0.14)	-0.18 (0.20)	0.28 (0.31)
<i>Lagged transitional & interregnum regimes</i>	<i>0.54*</i> (0.28)	<i>0.55</i> (0.37)	<i>1.27***</i> (0.45)	<i>0.57**</i> (0.28)	<i>0.47</i> (0.37)	<i>1.29***</i> (0.45)	<i>0.55**</i> (0.28)	<i>0.47</i> (0.37)	<i>1.28***</i> (0.45)
<i>Lagged democracy</i>	<i>-0.27*</i> (0.16)	<i>-3.08***</i> (1.04)	<i>-1.29</i> (0.81)	<i>-0.23</i> (0.16)	<i>-2.95***</i> (1.04)	<i>-1.59**</i> (0.80)	<i>-0.26</i> (0.16)	<i>-3.05***</i> (1.04)	<i>-1.45*</i> (0.80)
<i>Lagged factional partial democracy</i>	<i>0.41***</i> (0.14)	<i>0.56***</i> (0.21)	<i>0.74**</i> (0.30)	<i>0.43***</i> (0.14)	<i>0.55***</i> (0.21)	<i>0.76**</i> (0.30)	<i>0.43***</i> (0.14)	<i>0.54**</i> (0.21)	<i>0.69**</i> (0.30)
<i>Lagged non-factional partial democracy</i>	<i>0.12</i> (0.16)	<i>-0.13</i> (0.31)	<i>-0.41</i> (0.48)	<i>0.11</i> (0.16)	<i>-0.16</i> (0.31)	<i>-0.26</i> (0.49)	<i>0.15</i> (0.16)	<i>-0.11</i> (0.31)	<i>-0.48</i> (0.51)
<i>Lagged partial autocracy</i>	<i>0.38*</i> (0.20)	<i>0.72***</i> (0.25)	<i>-0.46</i> (0.61)	<i>0.33*</i> (0.20)	<i>0.53**</i> (0.26)	<i>-0.45</i> (0.60)	<i>0.35*</i> (0.20)	<i>0.61**</i> (0.25)	<i>-0.52</i> (0.60)
Coup in the past 5 years	-0.25* (0.13)	1.26*** (0.16)	0.45* (0.26)	-0.28** (0.13)	1.21*** (0.16)	0.45* (0.27)	-0.27** (0.13)	1.24*** (0.16)	0.44* (0.26)
Number of years with riots in the past 5 years	0.57*** (0.03)	0.36*** (0.06)	0.26*** (0.09)	0.57*** (0.03)	0.36*** (0.06)	0.29*** (0.09)	0.57*** (0.03)	0.36*** (0.06)	0.26*** (0.09)
Civil war ongoing in the past year	-0.24* (0.13)	0.26 (0.19)	-0.36 (0.27)	-0.20 (0.13)	0.37** (0.18)	-0.31 (0.28)	-0.21 (0.13)	0.34* (0.18)	-0.34 (0.28)
Ethnic fractionalization	0.22 (0.18)	0.47 (0.31)	1.28** (0.51)						
Ethnic dominance	-0.06 (0.10)	-0.05 (0.18)	0.09 (0.23)						
Religious fractionalization				-0.40* (0.23)	-0.52 (0.38)	1.30** (0.56)			
Religious dominance				-0.04 (0.10)	-0.19 (0.17)	-0.15 (0.26)			
Number of languages							-0.01 (0.01)	-0.01 (0.01)	0.03** (0.01)
Constant	-5.16*** (0.59)	-1.43 (1.01)	-4.20*** (1.43)	-4.63*** (0.57)	0.36 (1.00)	-3.79*** (1.42)	-4.67*** (0.58)	-0.18 (1.01)	-3.33** (1.35)
Number of events in the sample	835	210	91	835	216	92	835	216	92
Observations	4231			4272			4272		
Log Likelihood	-2806			-2828			-2831		

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. Results are robust if we include decade dummies or a cold war variable. Ethnic fractionalization remains statistically significant when including religious fractionalization, language fractionalization or the number of languages. If we use Reynal-Querol 's language fractionalization index it is statistically significant at the 10% level. We prefer using the number of languages as the measure is available for a larger sample. If included in the same regression model, both religious fractionalization and the number of languages are statistically significant. Lagged full democracy is significant at the 11% probability level in the civil war component of the Multinomial 1 model.

Table 2. Social diversity: Ethnic and language fractionalization (Sambanis war)

	Multinomial – Social Fractionalization		
	Riot	Coup	Civil war
Log lagged GDP/capita	0.10 (0.07)	-0.22* (0.12)	-0.31* (0.18)
Log lagged population	0.23*** (0.03)	-0.08 (0.06)	0.19** (0.09)
Oil	-0.18 (0.15)	-0.06 (0.23)	0.67** (0.29)
Log of mountainous terrain	0.01 (0.03)	0.03 (0.06)	0.10 (0.09)
Instability	-0.12 (0.14)	-0.24 (0.22)	-0.01 (0.35)
Lagged transitional and interregnum regimes	0.47 (0.30)	0.29 (0.42)	1.45*** (0.52)
Lagged democracy	-0.33** (0.17)	-3.10*** (1.04)	-1.33 (0.83)
Lagged factional partial democracy	0.43*** (0.15)	0.53** (0.22)	0.87*** (0.31)
Lagged non-factional partial democracy	0.11 (0.16)	-0.14 (0.31)	-0.28 (0.49)
Lagged partial autocracy	0.35* (0.21)	0.71** (0.28)	-0.18 (0.62)
Coup in the past 5 years	-0.25* (0.14)	1.36*** (0.17)	0.45 (0.28)
Number of years with riots in the past 5 years	0.56*** (0.03)	0.37*** (0.06)	0.29*** (0.09)
Civil war ongoing in the past year	-0.20 (0.13)	0.34* (0.20)	-0.40 (0.31)
Partially homogenous	0.13 (0.13)	-0.07 (0.24)	0.27 (0.36)
Partially diverse	0.29* (0.18)	0.20 (0.27)	0.21 (0.43)
Diverse	0.27 (0.20)	0.15 (0.32)	0.95* (0.51)
Homogenous	0.32* (0.18)	-0.15 (0.36)	-1.64* (1.01)
Ethnic dominance	0.13 (0.13)	0.03 (0.23)	0.16 (0.34)
Constant	-5.25*** (0.65)	-1.32 (1.08)	-4.20** (1.65)
Number of events in the sample	801	193	79
Observations	3975		
Log Likelihood	-2605		

Appendix

Table 3. Ethnic, religious, and language polarization
Multinomial logit regression on armed violence, coup and civil war outcomes (Sambanis)

	Multinomial 1			Multinomial 2			Multinomial 3		
	Riot	Coup	Civil war	Riot	Coup	Civil war	Riot	Coup	Civil war
Log lagged GDP/capita	0.09 (0.07)	-0.26** (0.12)	-0.47*** (0.15)	0.04 (0.06)	-0.37*** (0.11)	-0.46*** (0.17)	0.05 (0.07)	-0.30** (0.12)	-0.34* (0.19)
Log lagged population	0.23*** (0.03)	-0.09 (0.06)	0.26*** (0.08)	0.24*** (0.03)	-0.07 (0.06)	0.24*** (0.08)	0.23*** (0.04)	-0.07 (0.06)	0.14 (0.09)
Oil	-0.17 (0.15)	-0.02 (0.23)	0.62** (0.29)	-0.15 (0.15)	0.06 (0.23)	0.89*** (0.29)	-0.14 (0.15)	-0.03 (0.23)	0.81*** (0.27)
Log of mountainous terrain	0.00 (0.03)	0.03 (0.06)	0.06 (0.08)	-0.01 (0.03)	0.01 (0.05)	0.08 (0.08)	0.00 (0.03)	0.01 (0.06)	0.06 (0.08)
Instability	-0.06 (0.14)	-0.27 (0.21)	0.20 (0.31)	-0.08 (0.14)	-0.29 (0.21)	0.17 (0.32)	-0.12 (0.14)	-0.27 (0.22)	0.03 (0.34)
<i>Lagged transitional & interregnum regimes</i>	0.60** (0.28)	0.47 (0.39)	1.30*** (0.49)	0.63** (0.28)	0.47 (0.40)	1.29*** (0.48)	0.48 (0.30)	0.35 (0.41)	1.43*** (0.52)
<i>Lagged democracy</i>	-0.27 (0.17)	-2.99*** (1.05)	-1.32 (0.81)	-0.24 (0.16)	-2.99*** (1.04)	-1.53* (0.81)	-0.32* (0.16)	-3.09*** (1.04)	-1.34 (0.82)
<i>Lagged factional partial democracy</i>	0.41*** (0.14)	0.54** (0.22)	0.81*** (0.31)	0.42*** (0.14)	0.58*** (0.22)	0.80*** (0.31)	0.41*** (0.14)	0.51** (0.22)	0.78** (0.31)
<i>Lagged non-factional partial democracy</i>	0.12 (0.16)	-0.15 (0.31)	-0.31 (0.50)	0.11 (0.16)	-0.15 (0.31)	-0.19 (0.49)	0.10 (0.16)	-0.12 (0.32)	-0.35 (0.52)
<i>Lagged partial autocracy</i>	0.37* (0.20)	0.77*** (0.26)	-0.37 (0.61)	0.31 (0.20)	0.63** (0.26)	-0.37 (0.61)	0.30 (0.21)	0.68** (0.28)	-0.23 (0.62)
Coup in the past 5 years	-0.28** (0.13)	1.24*** (0.17)	0.37 (0.28)	-0.31** (0.13)	1.23*** (0.17)	0.38 (0.28)	-0.27** (0.14)	1.34*** (0.17)	0.50* (0.28)
Number of years with riots in the past 5 years	0.57*** (0.03)	0.38*** (0.06)	0.28*** (0.09)	0.57*** (0.03)	0.38*** (0.06)	0.31*** (0.09)	0.56*** (0.03)	0.38*** (0.06)	0.29*** (0.09)
Civil war ongoing in the past year	-0.26** (0.13)	0.28 (0.19)	-0.37 (0.29)	-0.21 (0.13)	0.36* (0.20)	-0.31 (0.29)	-0.17 (0.13)	0.33* (0.20)	-0.32 (0.30)
Ethnic fractionalization	0.36 (0.24)	0.13 (0.38)	1.60** (0.66)						
Ethnic polarization	-0.16 (0.28)	0.58 (0.45)	-0.85 (0.76)						
Ethnic dominance	-0.03 (0.11)	-0.14 (0.20)	0.30 (0.28)						
Religious fractionalization				-0.44 (0.27)	-0.82 (0.51)	1.14* (0.61)			
Religious polarization				0.14 (0.23)	0.28 (0.50)	0.40 (0.68)			
Religious dominance				-0.07 (0.10)	-0.19 (0.20)	-0.28 (0.28)			
Number of languages							-0.00 (0.01)	-0.01 (0.01)	0.03** (0.02)
Language polarization							-0.44** (0.19)	0.34 (0.33)	0.29 (0.57)
Constant	-5.04*** (0.59)	-1.20 (1.01)	-3.64** (1.45)	-4.52*** (0.57)	0.05 (1.02)	-3.61** (1.55)	-4.40*** (0.60)	-0.78 (1.04)	-3.60** (1.60)
Number of events in the sample	824	203	85	824	203	85	801	193	79
Observations	4139			4139			3971		
Log Likelihood	-2726.6			-2724.9			-2605.6		

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. The reference category for regime dummy variables are autocracies. Polarization variables are not statistically significant even if we exclude measures of fractionalization.

Table 4. Ethnic, religious, and language fractionalization
Multinomial logit regression on armed violence, coup and civil war outcomes
Fearon and Laitin 2003 definition of civil war

	Multinomial 1			Multinomial 2			Multinomial 3		
	Riot	Coup	Civil war	Riot	Coup	Civil war	Riot	Coup	Civil war
Log lagged GDP/capita	0.09 (0.07)	-0.18 (0.11)	-0.49*** (0.18)	0.04 (0.06)	-0.34*** (0.11)	-0.52*** (0.18)	0.03 (0.07)	-0.31*** (0.12)	-0.44** (0.18)
Log lagged population	0.24*** (0.03)	-0.09 (0.06)	0.29*** (0.10)	0.25*** (0.03)	-0.09 (0.06)	0.26*** (0.09)	0.25*** (0.04)	-0.09 (0.06)	0.20** (0.10)
Oil	-0.21 (0.15)	-0.09 (0.23)	0.46 (0.34)	-0.22 (0.15)	-0.00 (0.23)	0.70** (0.33)	-0.18 (0.15)	-0.02 (0.22)	0.70** (0.33)
Log of mountainous terrain	0.01 (0.03)	0.05 (0.06)	0.16 (0.10)	-0.01 (0.03)	0.03 (0.05)	0.16 (0.10)	-0.01 (0.03)	0.03 (0.06)	0.18* (0.10)
Instability	-0.07 (0.14)	-0.17 (0.20)	-0.13 (0.36)	-0.07 (0.14)	-0.11 (0.20)	-0.16 (0.36)	-0.08 (0.14)	-0.13 (0.20)	-0.10 (0.36)
<i>Lagged transitional & interregnum regimes</i>	0.51* (0.27)	0.50 (0.36)	1.40** (0.55)	0.55** (0.28)	0.42 (0.37)	1.44*** (0.55)	0.52* (0.27)	0.42 (0.36)	1.45*** (0.56)
<i>Lagged democracy</i>	-0.26 (0.16)	-3.12*** (1.04)	-0.93 (0.85)	-0.22 (0.16)	-3.00*** (1.04)	-1.10 (0.83)	-0.25 (0.16)	-3.09*** (1.04)	-1.06 (0.84)
<i>Lagged factional partial democracy</i>	0.43*** (0.14)	0.60*** (0.21)	0.99*** (0.34)	0.45*** (0.14)	0.59*** (0.21)	0.99*** (0.34)	0.44*** (0.14)	0.58*** (0.21)	0.97*** (0.33)
<i>Lagged non-factional partial democracy</i>	0.13 (0.16)	-0.08 (0.30)	0.07 (0.51)	0.12 (0.16)	-0.11 (0.31)	0.13 (0.52)	0.16 (0.16)	-0.06 (0.30)	0.02 (0.53)
<i>Lagged partial autocracy</i>	0.42** (0.20)	0.73*** (0.25)	-0.03 (0.62)	0.37* (0.20)	0.54** (0.26)	-0.07 (0.61)	0.39** (0.20)	0.63** (0.25)	-0.11 (0.61)
Coup in the past 5 years	-0.30** (0.13)	1.29*** (0.16)	0.59* (0.30)	-0.33** (0.13)	1.24*** (0.16)	0.57* (0.30)	-0.32** (0.13)	1.26*** (0.16)	0.58* (0.30)
Number of years with riots in the past 5 years	0.58*** (0.03)	0.36*** (0.06)	0.33*** (0.09)	0.57*** (0.03)	0.35*** (0.06)	0.34*** (0.09)	0.58*** (0.03)	0.35*** (0.06)	0.33*** (0.09)
Civil war ongoing in the past year	-0.20 (0.13)	0.19 (0.20)	-0.80** (0.36)	-0.16 (0.13)	0.32 (0.20)	-0.71** (0.36)	-0.15 (0.13)	0.28 (0.19)	-0.87** (0.40)
Ethnic fractionalization	0.23 (0.18)	0.48 (0.31)	1.03* (0.54)						
Ethnic dominance	-0.07 (0.10)	-0.03 (0.18)	-0.01 (0.25)						
Religious fractionalization				-0.41* (0.23)	-0.48 (0.38)	0.62 (0.69)			
Religious dominance				-0.03 (0.10)	-0.22 (0.17)	-0.03 (0.31)			
Number of languages							-0.01 (0.01)	-0.01 (0.01)	0.03* (0.02)
Constant	-5.12*** (0.59)	-1.74* (1.00)	-4.43*** (1.61)	-4.56*** (0.57)	0.04 (0.99)	-3.68** (1.65)	-4.66*** (0.58)	-0.44 (1.01)	-3.68** (1.56)
Number of events in the sample	844	211	67	844	217	68	844	217	68
Observations	4231			4274			4274		
Log Likelihood	-2734			-2758			-2760		

Note: The samples have 125 countries and go from 1951 to 1999. * significant at 10%; ** significant at 5%; *** significant at 1%. The reference category for regime dummy variables are full autocracies.

Table 5. Predicted probability of civil war
Model: Ethnic fractionalization and its interactions with partial factional and non-factional democracy

Predicted probability of civil war			
	Ef=0.21	Ef=0.5	Ef=0.7
Partial non-factional democracy	0.019	0.014	0.013
Partial factional democracy	0.023	0.033	0.046

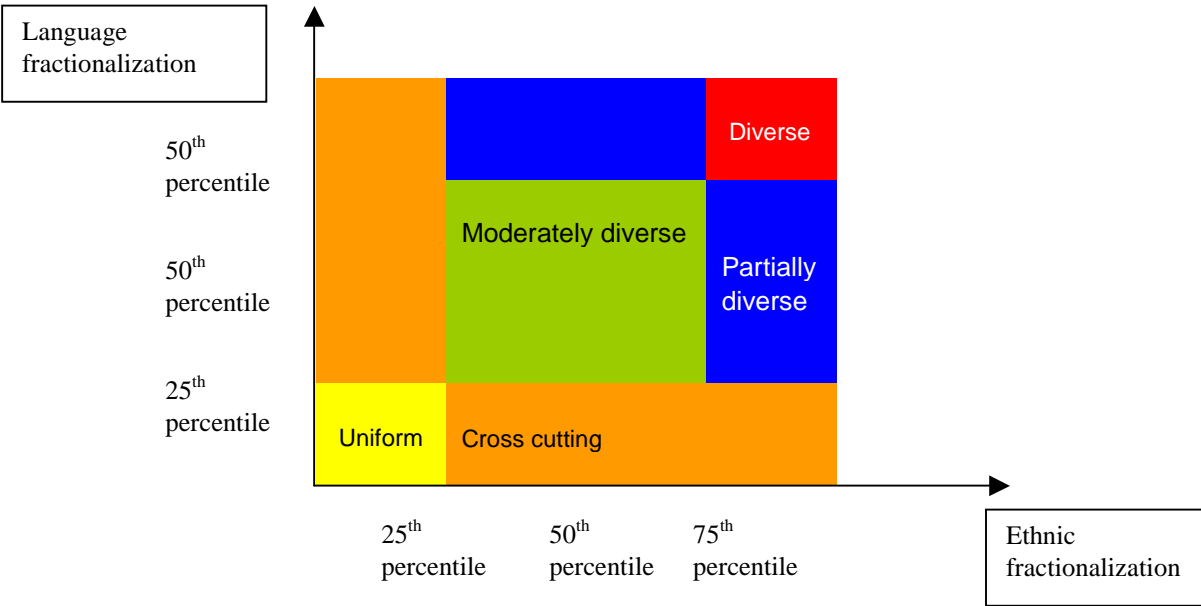
Note: Ef takes values for the 25th percentile, median and, respectively, the 75th percentile.

Figure 1. Democracy; Anocracy; Autocracy

	<i>Competitiveness of Political Participation</i>					
<i>Executive Recruitment</i>	Repressed (1)	Suppressed (2)	Unregulated (0)	Factional (3)	Transitional (4)	Competitive (5)
(1) Ascription	Autocracy		Partial Autocracy			
(2) Ascription + Designation						
(3) Designation						
(4) Self-Selection						
(5) Transition from Self-Select.						
(6) Ascription + Election	Partial Autocracy		Non-Factional Partial Democracy	Factional Partial Democracy	Non-Factional Partial Democracy	Democracy
(7) Transitional or Restricted Elec.						
(8) Competitive Election						

Note: Dark orange = full autocracy; Red = partial autocracy; Light blue = factional partial democracy; Green= Non-factional partial democracy; Dark blue = full democracy. Based on Executive Recruitment (EXREC) and Competitiveness of Political Participation (PARCOMP) variables in the Polity IV data set. Table is from Goldstone et al. 2005. Source: Goldstone et al. 2005. Full democracies make 22% of observation in the sample. Factional partial democracies make 11% of observations and non-factional partial democracies about 9 %. Partial autocracies are about 6% of the sample. Autocracies make about 48% of the observations in the sample. Transitional regimes and irregular transfers make a little more than 3% of the sample.

Figure 2. Social diversity: Ethnicity and religion



Note: The figure shows the partition we use for capturing diversity along both ethnic and language lines.