

Buying War Not Peace: The Influence of Corruption on the Risk of Ethnic War

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Abstract

This article presents robust findings for the positive effect of corruption on the risk of ethnic civil war, using binary time-series-cross-section data that cover 87 to 121 countries (per year) between 1984 and 2007. Following a grievance-based explanation of violent intrastate conflict, we argue that corruption increases the risk of large-scale ethnic violence, as it creates distortions in the political decision-making process which lead to a deepening of political and economic inequalities between different ethnic groups. The positive effect of corruption on the risk of ethnic civil war is robust to various model specifications, including the interaction between corruption and natural resource wealth.

Keywords

corruption, informal political institutions, political exclusion, civil wars, ethnic violence

Introduction

Many seminal writings on the causes of violent intrastate conflict have alluded to the relevance of corruption before (to name a few, Brown, 1996;

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Collier & Hoeffler, 2004; Fearon & Laitin, 2003). It is, however, a fairly recent development that the effects of corrupt practices are put at the center of peace and conflict studies, and dealt with in a more systematic fashion (see, for example, Galtung & Tisné, 2009; Le Billon, 2003; Philp, 2008). Our research contributes both theoretically and empirically to this newly emerging debate, as there have been very few large-*N* studies that examine the impact of corruption on the risk of civil war more generally, and no systematic statistical attempts to analyze the effects of corrupt practices on ethnic violence in particular.

While controlling for common explanatory variables in the civil wars literature (such as level of economic development, degree of democratization or level of ethnic fractionalization), we find robust empirical support for our proposed hypothesis that corruption increases the likelihood of the incidence of large-scale ethnic violence. Using a grievance-based explanation of violent intrastate conflict, we argue that this is likely to be the case due to the ethnically exclusionary tendencies of corrupt practices, which affect the *modus operandi* of formal political institutions in such a way that those ethnic groups which stand outside of networks of corruption have lower chances to obtain the values of political representation, relating to their political recognition, access to resources and promises of political, economic and physical security. The effect of corruption on the risk of ethnic civil wars is robust to various model specifications, including the interaction between corruption and natural resource wealth.

Corruption and Ethnic Conflict

By asking for the effects of corrupt practices on the prospects of violent ethnic conflict, we are dealing with two famously ambiguous concepts at the same time. For the purpose of this analysis, we adopt the commonly used definition of corruption as the misuse of public authority for private gain (e.g., Gillespie & Okruhlik, 1991), and define ethnic conflicts as violent confrontations “in which the goals of at least one conflict party are defined in (exclusively) ethnic terms, and in which the primary fault line of confrontation is one of ethnic distinctions” (Wolff, 2007, p. 2). We are here solely interested in episodes of large-scale ethnic violence in which the government appears as one of the conflicting parties and use the term *ethnic* as a catch-all phrase for a variety of national, ethnic, religious, or other communal characteristics. This is consistent with our choice of data, that is, the “ethnic war” variable by the Political Instability Task Force (PITF), outlined in more detail in the empirical section of our analysis.

Civil wars are typically based on a variety of “inextricably fused motives” (Collier, Hoeffler, & Sambanis, 2005, p. 2) in which different cleavages, such as ideological, economic, or ethnic ones, might overlap, so that it can be difficult to categorize them clearly as “ethnic” or “nonethnic.” While some might take this as support for the use of a generic category of “civil wars” without further subtypes, it is suffice to say that we believe there are very good reasons to distinguish ethnic from other types of violent intrastate conflicts.¹ These reasons include that a generic category of “civil wars” would ignore the intransigent ferocity with which specifically identity-based conflicts are often fought (Kaufmann, 1996); neglect the very prominent ethnic element in conflicts such as those in Northern Ireland, Kosovo, Rwanda, and Sri Lanka (see Wolff, 2007); and disregard those research findings which highlight that ethnic and nonethnic civil wars do have different causes (Sambanis, 2001).

Our analysis proposes a “basic incentives model” of ethnopolitical action in the sense that we provide a grievance-based explanation for the *underlying motivations* of violent action, not the *proximate causes* (such as group capacity levels, political or economic opportunity structures) that affect the particular type of ethnopolitical action (cf. Gurr, 2000; Wolff, 2007). Put differently, the focus of our analysis does not lie on *contextual factors* that influence *how or when* ethnic groups might resort to violent means to express their social, economic, or political demands, but rather on the *fundamental reasons why* such demands arise in the first place and ethnicity might become the primary fault line of violent confrontation (cf. Wolff, 2007). Specifically, we suggest that corruption and the risk of large-scale ethnic violence are likely to be causally linked, due to the tendency of networks of corruption to form along ethnic lines and benefit some ethnic groups over others. While there are currently no quantitative data that would allow us to measure and compare the relevance of ethnic cleavages in corrupt dealings between countries and over time, the ethnically exclusionary tendencies of networks of corruption have been indicated by numerous analyses (see, for instance, Chandler, 2002; Cramer & Goodhand, 2002; Diamond, 1988; Easterly & Levine, 1997; Gillespie, 2006; Mauro, 1995; Wimmer, 2002), thus lending valuable support to our claims. We argue that corruption deserves particular attention in our research on the causes of large-scale ethnic violence due to its impact on levels of political inclusiveness. Of course, this is not to say that corruption is the only factor influencing the risk of ethnic war in a given country. On the contrary, we fully acknowledge the *ceteris paribus* nature of our claims, because ethnic violence is a complex and multicausal phenomenon. We do, however, believe that—from the number of different factors that might influence the risk of ethnic war, and for reasons which we outline in

more detail below—corruption deserves much more attention within the academic debate than it currently receives.

The Impact of Corruption on the *Modus Operandi* of Formal Political Institutions

It is a well-established argument in the civil wars literature that there seems to be a causal link between ethnic civil wars and the systematic political exclusion or marginalization of certain ethnic groups. For instance, Bertrand (2004) argues that the causes of ethnic violence in Indonesia in the late 1990s and early 2000s lie in low levels of political inclusiveness, as “most obviously, when groups are excluded from representation or the ability to pursue their interests within given institutions, they may become increasingly alienated from the state” (Bertrand, 2004, p. 4). Similarly, DeVotta (2005) highlights with reference to Sri Lanka’s ethnic civil war between 1983 and 2009 that high levels of political exclusiveness are likely to increase the risk of violent ethnic conflict, because “a system of rules designed to marginalise, subjugate and humiliate minorities could unleash reactive nationalism and undermine polyethnic coexistence” (DeVotta, 2005, p. 146). Although they come to partly very different conclusions about which type of institutional design may be most suitable for ethnically diverse societies, Horowitz (1985) and Lijphart (2004) also agree that “civil violence, military coups . . . can all be traced to this problem of inclusion-exclusion” (Horowitz, 1985, p. 629), as “it is naïve to expect minorities condemned to permanent opposition to remain loyal, moderate, and constructive” (Lijphart, 2004, p. 98).

A closer look at the research by the aforementioned authors reveals that, typically, they have focused on levels of political inclusiveness provided by *formal* political institutions such as electoral systems or state structures, that is, by political institutions that are laid down in writing and that are guaranteed by the sanctioning mechanisms of the state (Lauth, 2000). By contrast, corruption is an *informal* political institution that is neither laid down in writing nor guaranteed by the sanctioning mechanisms of the state, but which persists over time due to socially entrenched patterns of human behavior (Lauth, 2000). We argue that, despite its lack of open codification, corruption has a relevant impact on a country’s level of political inclusiveness because it affects the *modus operandi* of formal political institutions by penetrating them and creating an alternative set of rules and structures that shape the behavior of political actors and open up sources of influence beyond the formal competences of political office (cf. Lauth, 2000). To be clear, we do not seek to dismiss the relevance of formal institutional design for the risk of

ethnic war, nor do we attempt (at this point) to assess whether exclusion created by formal or informal political institutions matters more for the risk of large-scale ethnic violence. Instead, we seek to highlight the relevance of corruption as a prime example of an informal political institution and thus demonstrate that it is not enough to look just at formal political institutions when trying to understand the causes of ethnic war.

Building on this point, we identify four different scenarios in which corruption (as a prime example of an informal political institution) can affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner:²

Corruption, first, has a direct impact on the *modus operandi* of formal political institutions if political officeholders are either bribed to manipulate the political decision-making process in favor of a specific ethnic group or do so in exchange for political support from their ethnic kin, that is, to sustain networks of patronage. Ultimately, this can lead to a state capture-like situation where members of a specific ethnic group, through informal means (i.e., corrupt channels), have more forceful voice in the political decision-making process, as they are able to exercise more influence over the formulation of public policies than members of another ethnic group.

Second, corruption can distort the political decision-making agenda, not only through direct manipulation incentives for political officeholders such as bribes or patronage but also because the necessary secrecy of corruption implies that those policy areas which offer better opportunities for secret dealings can gain disproportionate relevance (Shleifer & Vishny, 1993). For instance, demands for secrecy might shift a country's investment and policy-making priorities from valuable health and education projects that might benefit certain ethnic groups into potentially useless defense and infrastructure ones, if the latter promise to ease corrupt transactions (cf. Shleifer & Vishny, 1993).

Third, the secrecy, deceit, and self-interested motives behind corruption are likely to undermine practices of consultation and consensus-building between political actors (Chandler, 2002). Consequently, political processes can become atomized in the sense that there is little concern among public officials and their ethnic supporters about the effects of their actions on other ethnic groups (cf. Easterly & Levine, 1997). Under these circumstances, members of those ethnic groups who have access to state resources and powers will try to maximize their benefits from corrupt dealings, possibly until they exhausted the pool of possible gains (Easterly & Levine, 1997), while neglecting the interests of all other ethnic groups (cf. Nyamnjoh, 1999). This culture of selfish value-accumulation is likely to foster asymmetries between ethnic groups, not only because it might affect the political consideration of

some ethnic groups more negatively than others but also because it is likely to motivate if not even legitimize strives for state capture.

Fourth, on the whole, corruption can be expected to have negative effects on the quality or prospects of democracy, because—“by breaking the logic of formal rules in various places” (Lauth, 2000, p. 35)—it *inter alia* undermines political and administrative processes, and leads to an increasing lack of transparency and accountability (Lauth, 2000). This lack of transparency and accountability in turn implies that it is easier for some groups or individuals to monopolize state power to the detriment of others (cf. Fearon & Laitin, 2003), and to use corrupt means to secure their political survival (cf. Bueno de Mesquita, Smith, Siverson, & Morrow, 2003).

All four scenarios clearly violate the ideal of representational justice (Wimmer, 2002) and weaken the social contract “that would otherwise have provided the rules of the game to govern the distribution of the social pie” (Murshed, 2002, p. 390), as they result in some ethnic groups having greater influence over the political-decision making process than others. In this manner, ethnicity can “serve as a formidable instrument of social and political exclusion” (Cederman & Girardin, 2007, p. 175), and might help to explain the arguable link between corruption and the risk of large-scale ethnic violence.

In this context, it is important to note that the “benefits of corruption” we seek to emphasize go far beyond the immediate financial and status gains of corrupt officials. Instead, they center on the ability of some ethnic groups to enhance their own position in the political decision-making process. We focus on the impact of corruption on levels of political inclusiveness, as we recognize that having “fair”—that is, nonexclusionary—access to political representation is valuable to ethnic groups in at least three regards (Theuerkauf, 2010): because it affirms the status of ethnic groups as recognized members of a political community (Kymlicka & Norman, 1994), because it gives ethnic groups the opportunity to try and affect the distribution of resources and powers in their own interest (March & Olsen, 1989), and because it makes ethnic groups feel politically, physically and economically more secure (Saideman, 1998). Consequently, if corrupt dealings unduly enhance the informal influence of some ethnic groups over the political decision-making process, this is likely to deepen political and economic inequalities between those who are “in” and those who are “out” of ethnically exclusionary networks of corruption. We therefore expect grievances to rise among those ethnic groups who cannot reap the benefits of corruption, and ethnicity to become a likely fault line of violent confrontation.³

Our theoretical considerations lead to the following first hypothesis:

Hypothesis 1: The higher the level of corruption, the higher is the probability of large-scale ethnic violence.

Admittedly, our arguments give rise to questions of possible reverse causality when considering that corruption might not only increase the risk of ethnic civil wars but that, conversely, the context of war might also provide a fertile ground for corrupt dealings, for example, through defense-related contracts, licensed looting or wages of ghost soldiers (cf. Le Billon, 2003). However, the relevance of such questions should not be overstated, as they need not weaken the arguments presented in this article: Even if the context of war might lead to rises in corruption, this does not preclude the argument that corruption, due to its ethnically exclusionary tendencies, can also give rise to grievances which are likely to increase the risk of violent ethnic conflict. Empirically, we will account for potential reverse causality between corruption and ethnic war by using an instrumental variable (IV) probit estimation (see also the “Research Design and Analysis—Data and Method” section below).

Corruption, Natural Resource Wealth, and Ethnic War

Before turning to the empirical part of our analysis, we would like to address briefly a possible counterargument to our assumptions which results from the likely interaction effects between corruption and natural resource wealth. Of particular interest for our analysis is the argument by Fjelde (2009) according to who the use of oil rents through corrupt channels can help to accommodate opposition and “placate restive groups” (Fjelde, 2009, p. 199). Contrary to these findings, we expect the potentially stabilizing effects of corruption in resource-rich countries to be negligible, as the gains from natural resource wealth—in line with the aforementioned assumptions about the ethnically exclusionary tendencies of corruption—are likely to accrue exclusively to certain ethnic groups, while others might carry a disproportionate burden from the extraction process (cf. for example, Aspinall, 2007; Humphreys, 2005). Rather than seeking interethnic accommodation, we propose that corrupt governments in resource-rich countries are more likely to use their wealth to buy the loyalty of their supporters (cf. Bueno de Mesquita et al., 2003) and reinforce grievances along ethnic lines. This is because governments that derive a substantial share of their revenue from natural resources tend to foster a so-called vertical relationship with their people, as—compared with resource-poor countries—they are less reliant on taxation as a source of budget revenue and hence may have less incentives to distribute

wealth in their people's interest (Shaxson, 2007). Political officeholders in resource-rich countries thus can decide more freely how to spend their budget than political officeholders in resource-poor countries (Shaxson, 2007), and, consequently, face fewer constraints to spend their budget in an ethnically exclusionary manner.

These expectations translate into our second hypothesis:

Hypothesis 2: Corruption increases the risk of ethnic war also in resource-rich countries.

As it is more appropriate for our theoretical assumptions, we differ from Fjelde's (2009) analysis in two relevant regards: First, for our dependent variable, we do not use a generic category of civil wars but of ethnic wars as a particular type of intrastate violence. Second, as we are interested in the effects of corruption on the risk of ethnic war in resource-rich countries more generally (not just oil-rich ones), we quantify natural resource wealth with variables on mineral depletion, diamonds, and energy depletion (see Models 2-4 in Table 1).

Overcoming Collective Action Problems

As we stated at the beginning of our analysis, we here only propose a "basic incentives model" of ethnopolitical action in the sense that we provide a grievance-based explanation for the *underlying motivations* of violent action, not the *proximate causes* that affect the particular type or timing of ethnopolitical action (such as access to arms, levels of group cohesion etc., see also, for example, Gurr, 2000 and Wolff, 2007). Nonetheless, the inevitable question arises how grievances about the inequality-producing effects of corruption can translate into violent action at all (see, for example, de Soysa, 2011; Hoeffler, 2011). Indeed, it remains one of the great unanswered questions in the civil wars literature how participants in large-scale violence manage to overcome arguably pervasive collective action problems (Blattman & Miguel, 2010). Seeing that there are many weaknesses to purely rational theories of (civil) warfare (see Blattman & Miguel, 2010), we build on arguments by de Soysa (2011), Fearon (2007) and Varshney (2003) to find a more differentiated explanation for the translation of grievances into large-scale ethnic violence. It should be noted that this is only a tentative explanation, as it is impossible to answer comprehensively in just a few paragraphs how rebel groups overcome collective action problems.

We begin our tentative explanation with Fearon's insight (2007) that "economic inequality provides a possible motive for conflict to the extent that

seizure of the state brings material gains to the victors” (Blattman & Miguel, 2010, p. 14)—an insight which corresponds well to our argument that corruption is likely to increase the risk of ethnic war, as it may lead to a deepening of political and economic inequalities between different ethnic groups. At the same time, however, we are cautious to qualify the implications of Fearon’s argument that violent conflicts are based on a strict cost-benefit calculation. After all, if they were, it would be difficult to explain how (especially economically) marginalized groups manage to organize costly conflict.⁴ Thus, in line with de Soysa (2011), we assume that rebellion-specific capital does not just depend on finance, and that the payoffs for investing in violent rather than nonviolent behavior go beyond mere expectations of lootable income. Instead, we draw on Varshney’s (2003) attempt to “pluralize the concept of rationality” (p. 95) by distinguishing instrumental from value rationality. According to the former, collective action problems cannot be overcome if reaching certain goals is deemed too costly; according to the latter, collective action problems can be overcome as long as there is strong belief that the goals in question are highly valuable and thus worth achieving “however costly the pursuit of their realization might be” (Varshney, 2003, p. 86). As Varshney illustrates, instrumental rationality may help to explain the sustenance of ethnic mobilization once it has reached a critical point, but value rationality is better suited to explain how ethnic mobilization originates in the first place. We build on this insight by assuming that even marginalized groups are able to overcome collective action problems as long as political and economic equality are seen as sufficiently valuable goals (see Varshney, 2003). Of course, selective incentives can play an important role in explaining how rebel groups might overcome collective action problems, too (see Hoeffler, 2011). But we believe that the identification of value rationality nonetheless provides important clues about the link between corruption and ethnic war, not least as it implicitly resonates also in more recent research on the likely relationships between (ethnic) inequality/exclusion, grievances and collective action/civil war (Buhaug, Cederman, & Gleditsch, 2013; Cederman, Wimmer, & Min, 2010).

Research Design and Analysis—Data and Method

As we seek to analyze the relationship between corruption and the likelihood of large-scale ethnic violence throughout space and time (without making particular predictions for specific countries), we are using a time-series-cross-sectional data set which comprises information on all internationally recognized independent states between 1955 and 2007 with a population greater than 500,000 in 2008 according to the Polity IV Project version

p4v2008 (Marshall & Jagers, 2009). Due to the availability of our corruption variable, we only include years between 1984 and 2007 in our analysis. Depending on the year and availability of control variables, we include between 87 and 121 countries (per year) in our estimations.

For the purpose of this analysis, large-scale ethnic violence, the dependent variable, takes on the value “0” for all country-years in which there is no ethnic war and “1” when ethnic war occurs. As noted in a previous section of this article, we deal with potential reverse causality between corruption and ethnic war by using an IV probit estimation with maximum likelihood estimator.⁵ We use this estimation for all our models apart from Model 5 in Table 1, which reports the results from rerunning Model 1 with an ordinary probit estimation and lags for all explanatory variables except ethnic fractionalization and its square, peace years and the splines. We include these results in Table 1, as lags are an alternative, also commonly used but arguably somewhat less effective way of dealing with potential endogeneity problems (cf. Ross, 2004). For the IV probit estimation, we use the “Law and Order” variable from the International Country Risk Guide (ICRG) data set (The PRS Group, Inc., 2009) as instrument for corruption, as it is highly correlated with our corruption variable ($-.543$) but substantially less with our dependent variable ($-.303$).⁶

Like violent intrastate conflict in general, the occurrence of ethnic war is likely to be influenced by a country’s conflict history, and to depend on earlier episodes of large-scale ethnic violence (see Hegre, Ellingsen, Gates, & Gleditsch, 2001) in the sense that “the longer a country is at peace, the lower should be the risk of (another) war as conflict-specific capital remains unused and peace-specific capital is accumulated” (Hegre & Sambanis, 2006, p. 515). Following Beck, Katz, and Tucker’s (1998) procedure for binary time-series-cross-section (BTSCS) analysis, we control for temporal dependence by using splines and a variable which—based on information from the PITF Ethnic War Problem Set, 1955-2007 (PITF, 2009)—denotes the duration of peace prior to the current observation. This variable starts at 0 for each country in 1984 or, where applicable, in the first year of its internationally recognized independence, and is then calculated as the number of years prior to the current observation in which there was no incidence of ethnic war. Accounting for temporal dependence is crucial for our analysis, as failing to do so would lead to incorrect standard errors and overly optimistic inferences due to inflated t values (cf. Beck et al., 1998).

Our dependent variable denotes the incidence of ethnic war according to data by the PITF who define ethnic wars as armed disputes between governments and ethnic challengers which result in at least 1,000 direct fatalities over the full course of the armed conflict, exceed 100 conflict-related deaths in at least 1 year and during which each party has mobilized at least 1,000

people, including armed agents, demonstrators, and troops (Marshall, Gurr, & Harff, 2009). Although they apply a lower conflict intensity threshold than the PITF, we intentionally do not use data from the seminal UCDP/PRIO Armed Conflict Data Sets, as they do not distinguish between ethnic and nonethnic civil wars and are thus not suitable for our aforementioned research interest in ethnic conflicts as a particular type of intrastate violence.

In our data set, the ethnic war variable takes on the value “1” for all country-years in which one—or, in rare cases, more than one—ethnic war occurred according to the PITF. It should be noted that, when referring to “the likelihood of ethnic violence,” we are referring to the likelihood of it occurring in any given year, no matter whether it is the first conflict year or a continuation year. We can justify this focus on the incidence rather than onset of large-scale ethnic violence with reference to statistical findings which indicate that there are no important changes if either the onset or incidence of ethnic war are used as dependent variable (Reynal-Querol, 2002) and following the recognition that it is equally important to explain why there is ethnic war at any given time as it is to find out how conflicts start or how they end (Elbadawi & Sambanis, 2002).

The explanatory variable of central interest for this analysis describes the level of public-official-centered corruption within a given country. We use the commonly used ICRG Corruption Index (The PRS Group, Inc., 2009; see also, for example, Wright, 2010; Yadav, 2012) which assesses the extent of a variety of corrupt dealings, including

demands for special payments and bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans . . . [as well as] actual or potential corruption in the form of excessive patronage, nepotism, job reservations, “favor-for-favors,” secret party funding, and suspiciously close ties between politics and business. (The PRS Group, Inc., 2010)

We chose this particular corruption index rather than data by Transparency International or the World Bank, as, strictly speaking, neither the Transparency International nor the World Bank data on corruption are suitable for use in time-series-cross-section analysis (Treisman, 2007), and because the ICRG covers the largest number of countries and years.

The ICRG index usually ranges from 0 to 6 where 0 denotes high levels of corruption and 6 low levels of corruption. We reversed the notation so that a positive coefficient of the ICRG index in the model means an increase in large-scale ethnic violence. We also changed the ICRG’s 0.5 middle categories into integers as there were only very few of those values in the data set,

and squared all scores for the analysis. There are two reasons for subsummarizing the categories into fewer categories: a more evenly distribution of the variable for the statistical analysis and fewer categories for the already difficult interpretation of the results. The transformation is useful for the statistical analysis as it changes the distribution of the independent variable into a single peaked and nearly normal distribution. We additionally squared the variable to get better values for the kurtosis. An important note here is that our results stay robust also for the nonsquared values of corruption, as its effect remains positive and statistically significant at the 99% level (see Table A1 in the online appendix). Hence, our findings are not caused by squaring the corruption variable.

To test the effect of corruption on the risk of ethnic war in resource-rich countries, we use continuous variables on mineral depletion (based on data from The World Bank, 2008a) and energy depletion (based on data from The World Bank, 2008b) and a dummy variable that denotes the presence of diamonds in a country (based on data from Gilmore, Gleditsch, Lujala, & Rød, 2005). As they are more readily available, we use data on natural resource extraction rather than stock.⁷

We included the following further explanatory variables in our statistical models:

- the Revised Combined Polity Score from the Polity IV Project version p4v2008 to control for the effects of political regime type on the likelihood of ethnic war; we also include its square, based on evidence of a U-Curve relationship between the level of democracy and risk of violent intrastate conflict (see Hegre et al., 2001);
- a variable on economic development as measured through levels of GDP per capita in US\$, based on data by the World Bank (The World Bank, 2008c); we used the lagged natural log of the variable to account for potential reverse causality between levels of economic development and the incidence of ethnic war; as we struggled to find an instrument for GDP per capita for our IV probit estimation (i.e., a variable that correlates highly with GDP per capita but little with the incidence of ethnic war), we lag the GDP per capita by 1 year in all our models;⁸
- a variable controlling for population size, using data on total population in millions by the UN 2008 Revision Population Database, median variant (United Nations Population Division, 2009), or, where data were missing in this source, based on information from the UN Statistics Division, the Penn World Table 6.3 (Heston, Summers, & Aten, 2009) or Gleditsch (2002);

- the ethnic fractionalization index according to Alesina, Devleeschauwer, Easterly, Kurlat, and Wacziarg (2003) to control for the effects which different degrees of ethnic heterogeneity might have on the occurrence of civil war (see, for example, Collier & Hoeffler, 1998); the ethnic fractionalization index ranges from 0 (complete ethnic homogeneity) to 1 (complete ethnic heterogeneity); following evidence of a curvilinear relationship between the level of ethnic fractionalization and the risk of violent intrastate conflict (de Soysa & Fjelde, 2010), we also add the quadratic term of this variable.

The descriptive statistics for the variables in Models 1 and 2 can be found in the online appendix (Table A2).

We intentionally do not include fixed effects in our models, even though they can help to deal with unobserved unit heterogeneity. We prefer not to include them, as the use of fixed effects in BTSCS analysis leads to a loss of information from those countries in which the response variable for a given country takes on the value “0” or the value “1” for all years covered by our data set. Indeed, if we were to use fixed effects in our models, the number of observations included in our analysis would drop sharply (e.g., from 2,511 observations in Model 1 without fixed effects to 431 observations with fixed effects). Thus, we believe that the costs of using fixed effects in our models are ultimately greater than the benefits (see also Beck, 2001; Beck & Katz, 2001).

Empirical Results

Table 1 reports the empirical results for the testing of our two hypotheses. In Model 1, we estimate the effect of corruption without the interaction with natural resources. It predicts the incidence of ethnic war correctly in 95.31% of the cases. Models 2 to 5 show our results for the effect of corruption on the probability of violent ethnic conflict conditional on the level of resource richness. Generally speaking, all models predict the incidence of ethnic war correctly in between 91% and 96% of the cases.

There are few surprises regarding our control variables: As other studies have shown and elaborated before (see, for example, Fearon & Laitin, 2003; Hegre & Sambanis, 2006), population size (its rather small magnitude of effect notwithstanding) has a statistically significant positive effect on ethnic war in all models, while the duration of peace prior to the current observation has a statistically significant negative effect on ethnic war in all models. The biggest potential surprise in our results is that levels of economic development (measured in GDP per capita), levels of democracy and its square, and

Table 1. The Effect of Corruption on Ethnic War.

	Model 1	Model 2	Model 3	Model 4	Model 5
Corruption (ICRG)	0.108*** (0.018)	0.122*** (0.018)	0.120*** (0.018)	0.119*** (0.018)	0.024* (0.013)
Mineral depletion as percentage of GNI	-0.010 (0.022)	0.136*** (0.036)			0.014 (0.022)
Interaction corruption and mineral depletion		-0.011*** (0.003)			
Diamonds			2.047*** (0.616)		
Interaction corruption and diamonds			-0.642*** (0.164)		
Energy depletion as percentage of GNI				0.023 (0.014)	
Interaction corruption and energy depletion				-0.003*** (0.001)	
Lag ln GDP per capita	0.106 (0.107)	0.137 (0.105)	0.155 (0.107)	0.177 (0.118)	-0.035 (0.111)
Population	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Democracy	0.114 (0.159)	0.085 (0.154)	0.124 (0.137)	0.189 (0.144)	0.030 (0.164)
Democracy squared	-0.003 (0.015)	-0.000 (0.015)	-0.003 (0.013)	-0.011 (0.014)	0.001 (0.016)
Ethnic fractionalization	1.431 (1.586)	1.415 (1.675)	1.450 (1.529)	1.212 (1.569)	1.692 (1.399)
Ethnic fractionalization squared	-0.850 (1.655)	-0.754 (1.725)	-0.711 (1.578)	-0.415 (1.597)	-1.033 (1.462)
Peace years	-0.858*** (0.127)	-0.823*** (0.132)	-0.849*** (0.115)	-0.865*** (0.120)	-0.998*** (0.133)
_spline1	-0.009*** (0.002)	-0.008*** (0.002)	-0.009*** (0.002)	-0.009*** (0.002)	-0.010*** (0.002)
_spline2	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.004*** (0.001)	0.005*** (0.001)
_spline3	-0.000* (0.000)	-0.000** (0.000)	-0.000* (0.000)	-0.000* (0.000)	0.001*** (0.000)
Constant	-2.181** (1.064)	-2.587** (1.054)	-2.752*** (1.011)	-2.822** (1.134)	0.279 (0.994)
n	2,511	2,511	2,669	2,511	2,518
Correctly predicted cases	95.31%	91.25%	93.64%	95.00%	95.54%

Robust standard errors are in parentheses. All variables in Model 5 are lagged by 1 year except for ethnic fractionalization and its square, peace years, and the splines. ICRG = International Country Risk Guide; GNI = gross national income.

*Significant at 10%. **significant at 5%. ***significant at 1%.

degree of ethnic fractionalization and its square are not statistically significant in any of our models.⁹

Corruption is significant at the 1% level in Models 1 to 4, and only drops to the 10% significance level in Model 5. We are, however, not too concerned

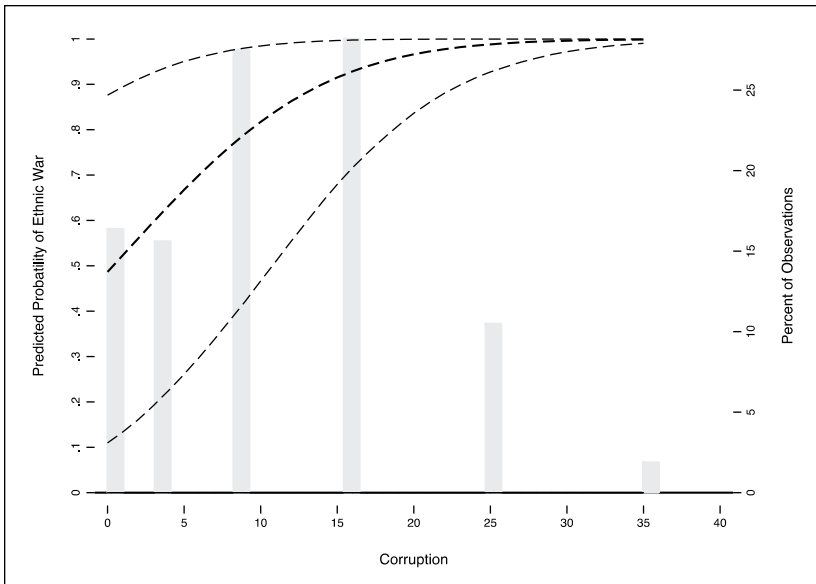


Figure 1. Prediction of the effect of corruption on ethnic war for Model 1 of Table 1.

about this drop, as, arguably, the ordinary probit model with lags deals less well with issues of potential endogeneity than the IV probit estimations anyway (cf. Ross, 2004).

Results from probit and logit models are more difficult to interpret than those from ordinary least squares (OLS) regressions, as the size and sign of the coefficients depend on the values of all explanatory variables (Long & Freese, 2006). We provide two ways to make the effect of corruption on ethnic war explicit (for Model 1). First, we present an overview over marginal effects (see Table A3 in the online appendix), which supports a continuous positive effect of corruption on violent ethnic conflict. Second, in Figure 1, we estimate the predicted probabilities for violent ethnic conflict with increasing levels of corruption.

As our results show, rising levels of corruption lead to continuously increasing levels of ethnic war (Figure 1)¹⁰. For instance, if we look at specific examples in Figure 1, a country that has a very low level of corruption (e.g., 0), and holding all other variables constant at their medians, the predicted probability for large-scale ethnic violence is .4866. For countries with a corruption level of 25 or 36, and holding all other variables constant, the

probability for ethnic war is .9882 and .9991, respectively. These findings give empirical support for our hypothesis that corruption increases the prospects of violent ethnic conflict.

The statistical significance of our interaction terms in Models 2, 3 and 4 in Table 1 supports a conditional effect of natural resource richness (operationalized as either mineral depletion, diamonds or energy depletion) on the risk of ethnic war dependent on the level of corruption. It is, however, important to note that the effect of the interaction on ethnic war in probit or logit models changes depending on the values of all explanatory variables. Ai and Norton (2003) therefore suggest looking at the changes in changes of predicted probabilities to understand the interaction term. To illustrate the interaction, we hold first mineral depletion, then diamonds (0 and 1) and then energy depletion fixed at meaningful values (the 25th, 75th, and 90th percentile) and vary the level of corruption, while keeping the control variables at their medians (see Figures 2-6). We always compare a pair of two levels while corruption increases by one unit at a time.

We know that the difference between the two levels of our resource variables, for example, between the 25th and 75th percentile, is significantly different from zero if the confidence interval in our figures does not include the zero line. As Figures 2 to 6 illustrate, the predicted probability of ethnic war in resource-rich countries increases more slowly with increasing levels of corruption than in resource-poor countries, no matter whether we operationalize natural resource wealth with a variable on mineral depletion (Figures 2 and 3), diamonds (Figure 4) or energy depletion (Figures 5 and 6). Because corruption by itself has a robust positive effect on ethnic war, these results seem to indicate that—while the aforementioned grievances resulting from ethnically exclusionary networks of corruption are clearly detrimental to the prospects of ethno-political stability—they can be co-opted. At first sight, our findings from Models 2, 3 and 4 thus lend support to Fjelde's (2009) argument that corruption in resource-rich countries can serve as a means to buy peace from otherwise antagonistic groups. A closer look, however, reveals that the effects of the interactions between corruption and our different resource variables are overall rather small, as only around 13% of observations (per model) reach predicted probability values larger than $-.00123$ (see Figure 2) and $-.0098$ (see Figure 3) in Model 2; larger than $-.4018$ (see Figure 4) in Model 3; and larger than $-.0492$ (see Figure 5) and $-.3017$ (see Figure 6) in Model 4. Thus, even though Fjelde is right in pointing out that the interaction between corruption and natural resource wealth can reduce the risk of ethnic war, the magnitude of these interaction effects is rather low in most observations (especially when operationalizing resource wealth as mineral depletion [Model 2]), so that their relevance should not be overstated. In

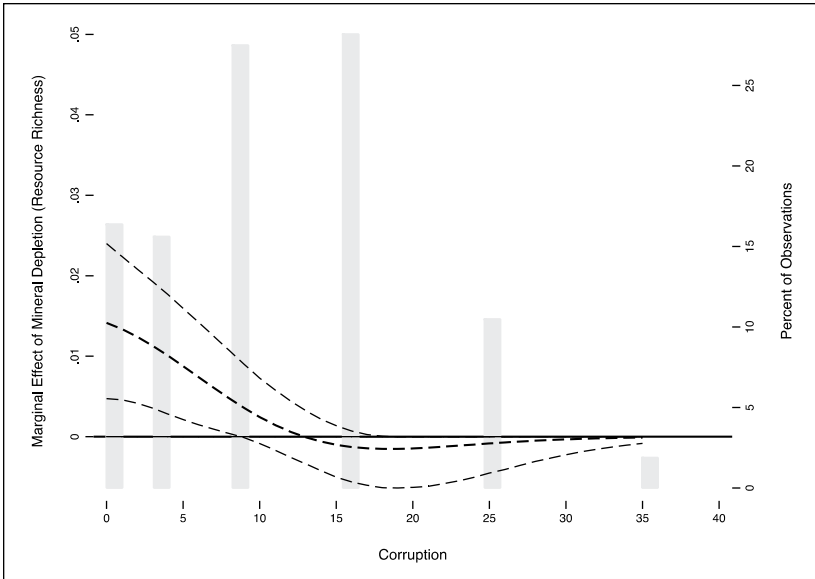


Figure 2. Marginal effect of mineral depletion (difference between 75th and 25th percentile) on ethnic war with increasing levels of corruption.

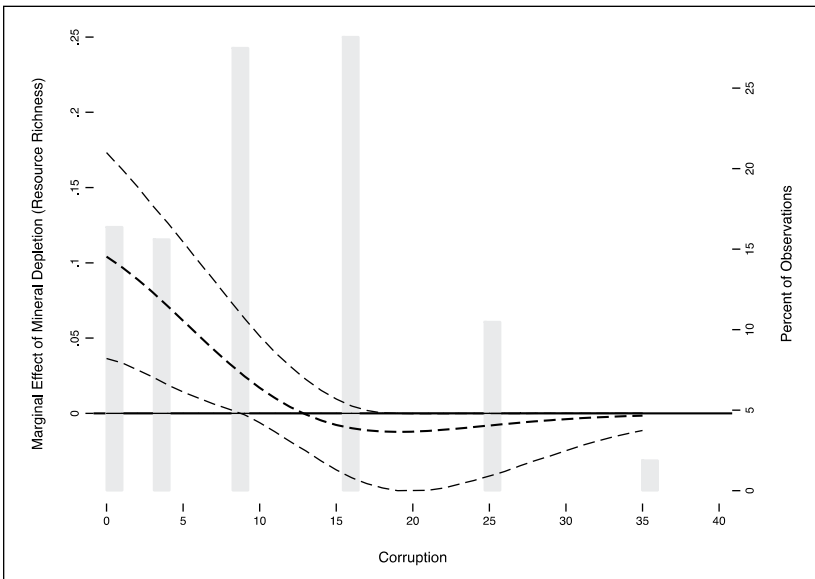


Figure 3. Marginal effect of mineral depletion (difference between 90th and 25th percentile) on ethnic war with increasing levels of corruption.

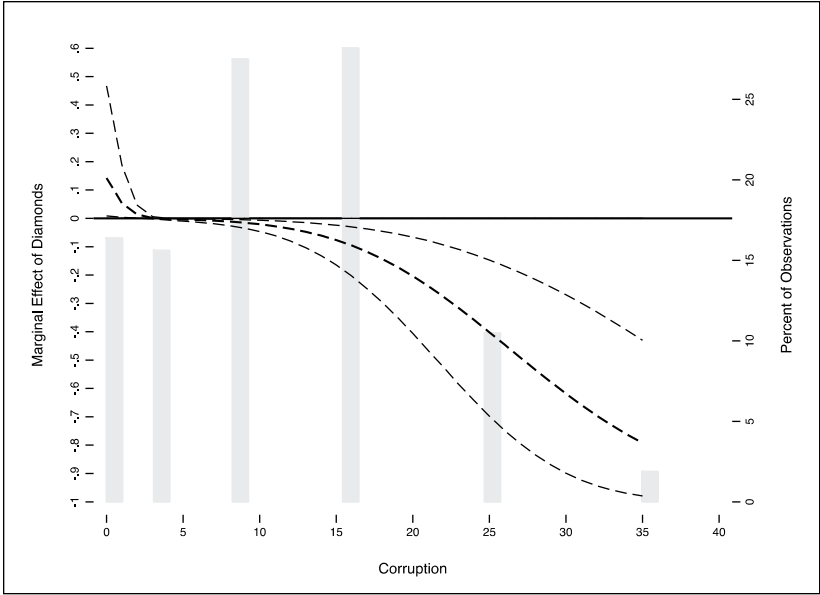


Figure 4. Marginal effect of diamonds (difference between 1 and 0) on ethnic war with increasing levels of corruption.

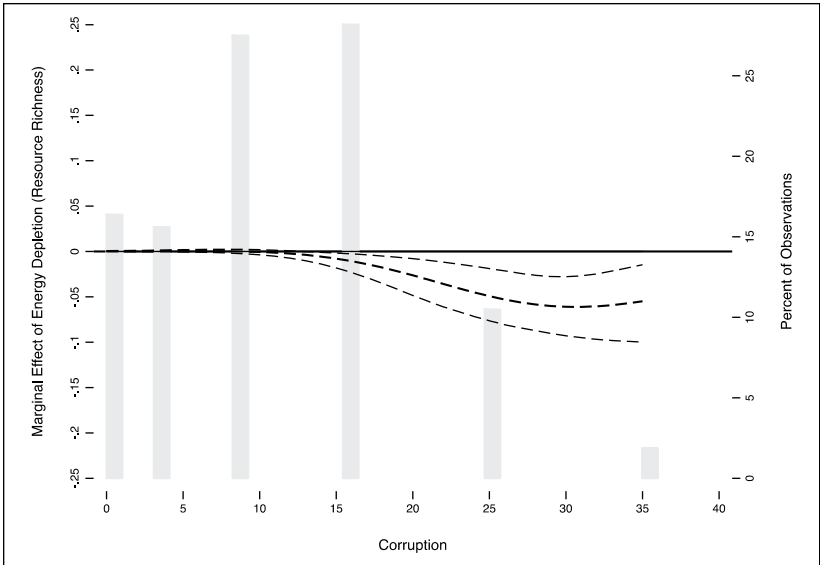


Figure 5. Marginal effect of energy depletion (difference between 75th and 25th percentile) on ethnic war with increasing levels of corruption.

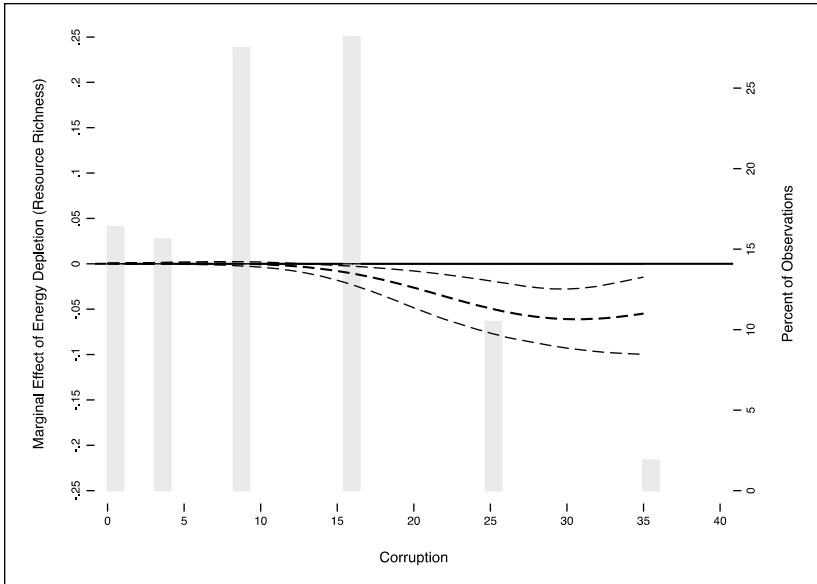


Figure 6. Marginal effect of energy depletion (difference between 90th and 25th percentile) on ethnic war with increasing levels of corruption.

other words, while we do find empirical support for Fjelde's argument on the potentially stabilizing effects of corruption in resource-rich countries, especially in Model 2 these effects are so small that they seem nearly negligible.

As stated in the theoretical part of our argument, we expect corruption to increase the risk of ethnic war due to its ethnically exclusionary tendencies. As aforementioned, there unfortunately is no quantitative data that would allow us to compare the relevance of ethnic cleavages in corrupt dealings between countries and over time, which means that we cannot test our causal assumptions directly. For lack of a better alternative, we therefore construct our own, admittedly rather crude measures of the inequality-producing effects of corruption, using data by Østby (2008) on horizontal economic and social inequality between the two largest ethnic groups in 39 developing countries between 1986 and 2004. It is important to note the tentative nature of the following findings, due to the relatively small size and potential selection bias of Østby's sample (which only covers developing countries) and the fact that the construction of our measures is intentionally rather simplistic.¹¹

To construct our measures of the inequality-producing effects of corruption, we run two regressions with corruption as explanatory variable and first

Table 2. Impact of the Inequality-Producing Effects of Corruption on Ethnic War for Model 1 of Table 1.

	Model 1	Model 2
Measure on the economic inequality-producing effects of corruption	6.316*** (1.509)	
Measure on the social inequality-producing effects of corruption		4.851*** (0.740)
Mineral depletion as percentage of GNI	-0.200** (0.097)	-0.077 (0.161)
Lag ln GDP per capita	-0.052 (0.156)	0.005 (0.195)
Population	0.000* (0.000)	0.000 (0.000)
Democracy	0.355 (0.302)	0.250 (0.261)
Democracy squared	-0.022 (0.026)	-0.014 (0.024)
Ethnic fractionalization	-10.154*** (3.658)	-2.623 (7.917)
Ethnic fractionalization squared	10.238*** (3.366)	3.739 (6.243)
Peace years	-0.779*** (0.205)	-0.382 (0.391)
_spline1	-0.008*** (0.003)	-0.004 (0.005)
_spline2	0.003** (0.001)	0.002 (0.002)
_spline3	-0.000 (0.000)	-0.000 (0.000)
Constant	0.015 (2.189)	-2.033 (3.054)
<i>n</i>	531	531
Correctly predicted cases	89.83%	55.08%

Robust standard errors are in parentheses. GNI = gross national income.

*Significant at 10%. **significant at 5%. ***significant at 1%.

Table 3. Impact of the Inequality-Producing Effects of Corruption on Ethnic War for Model 2 of Table 1.

	Model 1	Model 2
Mineral depletion as percentage of GNI	0.163 (0.116)	0.236*** (0.091)
Measure on the economic inequality-producing effects of corruption	8.064*** (1.589)	
Interaction economic inequality-producing effects and mineral depletion	-1.461*** (0.522)	
Measure on the social inequality-producing effects of corruption		5.372*** (0.682)
Interaction social inequality-producing effects and mineral depletion		-2.170 (2.584)
Lag ln GDP per capita	-0.020 (0.169)	-0.026 (0.203)
Population	0.000 (0.000)	0.000 (0.000)
Democracy	0.252 (0.279)	0.128 (0.205)
Democracy squared	-0.015 (0.025)	-0.004 (0.020)
Ethnic fractionalization	-10.092*** (3.913)	-1.752 (8.864)
Ethnic fractionalization squared	9.774*** (3.751)	2.637 (6.799)
Peace years	-0.653*** (0.210)	-0.204 (0.365)
_spline1	-0.007** (0.003)	-0.002 (0.004)
_spline2	0.002* (0.001)	0.001 (0.002)
_spline3	0.000 (0.000)	-0.000 (0.000)
Constant	-0.197 (1.829)	-1.969 (3.460)
<i>n</i>	462	462
Correctly predicted cases	77.97%	55.08%

Robust standard errors are in parentheses. GNI = gross national income.

*Significant at 10%. **significant at 5%. ***significant at 1%.

economic and then social inequality according to Østby (2008) as dependent variable. For these regressions, we use the Prais–Winsten transformation as well as panel correct standard errors with period and country dummies (see also Plümer, Troeger, & Manow, 2005). We also lag corruption by 4 years, as we assume that the full effects of corruption on structural inequalities develop over the course of several years. We use the predicted values of the dependent variable that we obtained from these regressions as our measures of the social and economic inequality-producing effects of corruption. In a next step, we include these measures as new key independent variables (replacing our previous corruption variable) in Models 1 and 2 from Table 1. As Tables 2 and 3 show, the results from our main models stay robust, as the measures of both social and economic inequality based on corruption have a statistically significant positive effect on the risk of ethnic war, holding all other variables constant. Although, as aforementioned, this is a very tentative finding, it nonetheless seems to support our claim that it is the inequality-producing effects of corruption which matter for the risk of ethnic war.

Robustness Tests

We perform several robustness checks for our main models (i.e., Models 1 and 2 from Table 1) to test for robustness in the sense of Sala-I-Martin (1997) who argues that robustness is achieved when the signs of the coefficients do not change when changing specifications in the model (e.g., adding control variables, taking out groups). Our robustness checks include the addition of further explanatory variables in our models (such as on ethnic war in a neighboring country, colonial history etc.), a group-wise jackknife test to see whether our results are driven by specific cases in our sample (see Plümer & Neumayer, 2006), an alternative method to deal with temporal dependence according to Carter and Signorino (2010) instead of splines, and the coding of a dependent variable that denotes only the onset (in contrast to the incidence) of ethnic civil wars. Due to space constraints, we do not report the results here but include them in our online appendix (see Tables A4–A10 in our online appendix). The results clearly show that our findings remain robust under different model and sample specifications.

An additional robustness test whose results deserve to be discussed in a bit more detail is based on the inclusion of interaction terms between corruption and GDP per capita as well as between corruption and GDP (absolute values) in Model 1 from Table 1. While we elaborate on the findings from this robustness test in the online appendix, it is interesting to note that corruption has a statistically significant negative effect on the risk of ethnic war also in these models (see Table A11 in the online appendix). Moreover, low levels of

corruption have a greater effect on the risk of ethnic war in rich compared to poor countries in all models (see Figures A1-A4 in the online appendix), whereas high levels of corruption seem to have the same effect in rich and poor countries in three out of four models (see Figures A1, A3, and A4 in the online appendix). Clearly, these results merit further analysis, as they shed an interesting light on previous research into the relevance of economic development for the risk of ethnic civil war.

In sum, we found our results to be robust, which gives us confidence in our conclusion that corruption plays an important role in determining the probability of violent ethnic conflict.

Conclusion

Does corruption lead to ethnopolitical stability or instability? So far, researchers have either argued (and tested) that corruption may help to “buy peace” (see, for example, Fjelde, 2009) or suspected (without testing this presumed relationship empirically) that corruption might augment the risk of violent ethnic conflict (see, for example, Brown, 1996; Collier & Hoeffler, 2004; Fearon & Laitin, 2003). Our contribution to this debate is both theoretical and empirical. We argue that corruption increases the risk of ethnic war, as networks of corruption tend to be ethnically exclusionary in nature, and are likely to deepen political and economic inequalities between different ethnic groups due to their impact on the *modus operandi* of formal political institutions. The scenarios in which corruption may affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner include immediate incentives for political officeholders (such as bribery or the sustenance of patronage networks) to manipulate the political decision-making process in favor of specific ethnic groups, the creation of distortions in the political decision-making agenda, the development of a culture of selfish value-accumulation, and negative effects on the quality or prospects of democracy. As all four scenarios result in some ethnic groups having greater influence over the political-decision making process than others, grievances are likely to rise among those ethnic groups who cannot reap the benefits of corruption, and ethnicity can become a fault line of violent confrontation.

Using a grievance-based explanation of violent intrastate conflict and BTSCS analysis for internationally recognized independent states between 1984 and 2007, we have found robust support for the positive effect of corruption on the risk of ethnic civil war. This effect is sustained throughout various model specifications and holds for most cases also when considering the interplay between corruption and natural resource wealth.

Overall, we thus contribute both theoretically and empirically to the newly emerging debate about the impact of corruption on the risk of violent intra-state conflict by putting ethnic civil wars as a distinct type of civil war at the center of our analysis; by challenging those authors who outline potential benefits of corrupt practices for political stability; and by using a large-*N* approach to analyze the effects of corrupt practices on ethnic violence. As we propose only a “basic incentives model” of ethnopolitical action to see whether—using BTSCS analysis—corruption matters at all for the risk of large-scale ethnic violence, future, more case-study-oriented research might wish to investigate the causal mechanisms that we propose in more detail, or see how a distinction of “new” ethnic wars as opposed to the recurrence of “old” ones (i.e., the breakdown of peace settlements) in the dependent variable would affect the predictions of our models. Thus far, however, we are confident of having discovered strong support for our proposed hypothesis about the increasing impact of corruption on the risk of ethnic war.

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Notes

1. On the relevance of this distinction, see also, for example, Cederman, Gleditsch, and Hug (2013).
2. At this point, it also should be clarified that despite the presumed relevance of ethnic cleavages in corrupt dealings, this is not to say that all corruption is

ultimately based on ethnic nepotism. Building on the definition of nepotism as the “propensity to favour kin over nonkin” (Van den Berghe, 1987, p. 15), for instance, by giving a position to a relative rather than a better-qualified applicant (Gardiner, 1993), the concept of ethnic nepotism is based on sociobiological conceptions of ethnicity according to which “ethnic groups can be perceived as extended kin group . . . [who] tend to favour their group member over non-members because they are more related to their group members than to the remainder of the population” (Vanhanen, 1999, p. 57). We reject such sociobiological primordialist understandings of ethnicity, not least due to their essentialist connotations about “the nature” of ethnic group identities.

3. The cautious reader, of course, might realize that greed, that is, “the desire to control resources and capture rents” (Murshed, 2002, p. 387), may be an intrinsic element of the grievance-mechanism outlined above—after all, “grievances among marginalised groups and greed-driven jockeying within dominant ones” (Le Billon, 2003, p. 417) are two sides of the same coin when analyzing the effects of corrupt practices. On the other hand, however, we choose to put greater emphasis on the relevance of grievance factors, as, first, it is more suitable for our aim to investigate how corruption affects the *modus operandi* of formal political institutions and interethnic relations within a given society more generally, instead of focusing on a select elite that controls or vies for control of corrupt channels; and, second, because analyses of intrastate violence that are solely focused on greed tend to border on the atheoretical, due to the difficulty of finding a proper explanation why self-interested economic agents would choose war over other alternatives to achieve their aims (Murshed & Tadjoeeddin, 2009).
4. We would like to thank an anonymous referee for this very important comment.
5. For other studies using IV probit to deal with potential endogeneity problems, see also, for example, Bertocchi and Guerzoni (2012) and Brunnschweiler and Bulte (2009).
6. To find a suitable instrument for corruption, we analyzed a number of variables that are commonly used in the corruption but not in the civil wars literature. Table A12 in our online appendix contains the results from these analyses. It clearly shows that the “Law and Order” variable is the best possible instrument for our purposes, as it has a higher correlation with corruption than any other variable in the table, while also correlating substantially less with ethnic war. The results from further analyses confirm the suitability of our choice, as the “Law and Order” variable is the only variable from Table A12 under which our endogeneity tests do not fail.
7. It is important to highlight the difference between natural resource extraction and natural resource stock (and our use of data on the former), as an economy that is resource-rich in terms of stock of resources need not be resource-dependent in terms of revenues from resource extraction as a share of national income (cf. also, for example, Dunning, 2008).
8. For other studies using lags to deal with potential endogeneity problems, see also, for example, Colgan (2010) or Humphreys (2005).
9. We checked for potential multicollinearity, but did not detect any problems for the estimations.

10. We use the Stata program by Brambor, Clark, and Golder (2006) and part of the updated version of Berry, Golder, and Milton (2012).
11. We intentionally do not model the interaction of corruption and inequality, as we argue that corruption leads to a deepening of inequalities, not that the two factors are conditional on one another.

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