

The London School of Economics and Political Science

*Ethno-Embedded Institutionalism:
The Impact of Institutional Repertoires on Ethnic Violence*

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*A thesis submitted to the Department of Government of the London School of
Economics and Political Science for the degree of Doctor of Philosophy,
London, October 2012.*

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Abstract

Hitherto, the relationships between political institutions and ethno-political (in)stability typically have been analysed by investigating the effects of single, formal political institutions such as electoral systems or state structures (see e.g. Reynolds 2002; Roeder and Rothchild 2005). My doctoral thesis criticises this research focus on two different yet equally relevant accounts: First, the tendency to single out the effects of individual institutions is based on the implicit – and as I claim: wrong – assumption that political institutions can be treated as separate entities and that it is only of secondary relevance of which broader set of institutions they form part. Second, despite studies which highlight the relevance of informal political institutions (see e.g. Sisk and Stefes 2005; Varshney 2002), they have received far less attention in the academic debate so far.

‘Ethno-Embedded Institutionalism’ describes a new approach to the study of institutional incentives for ethnic violence which goes beyond the mere focus on single, formal political institutions by highlighting the effects of both institutional combinations and informal political institutions on the risk of ethnic civil war. To test the relevance of ‘Ethno-Embedded Institutionalism’, I use a grievance-based explanation of intrastate violence and binary time-series-cross-section analysis based on a personally designed dataset that covers 174 countries between 1955 and 2007. I present statistical evidence that high levels of corruption on the one hand, and institutional combinations of presidentialism, a majoritarian electoral system for the legislature and a unitary state structure on the other increase the risk of large-scale ethnic violence.

Overall, my thesis contributes to the academic debate in three relevant regards: i) by conceptualising and testing Ethno-Embedded Institutionalism; ii) by describing a grievance-based explanation of large-scale ethnic violence which clearly identifies the key values of political representation; and iii) by presenting the EEI Dataset as the first comprehensive data source for the systematic statistical analysis of institutional incentives for ethnic civil war.

Acknowledgments

The completion of this thesis would not have been possible without the personal and academic support of a number of different people.

First and foremost, I would like to thank my parents, Gisela and Ulrich Theuerkauf, for their unwavering love, care and belief in me. I also would like to thank my brothers Sven and Nils, for always checking how I am and trying to remember what my thesis is actually about; Fernando Morett, for having greater trust in my skills than I often do; my friends who not only helped me greatly by discussing the topics of my thesis, but also by assuring me that I will one day complete it (even when I thought I would be writing it forever): Helen Addison, Johannes Altmeyer, Gabriele Birnberg, Michael Blauburger, Susana Carvalho, Farimah Daftary, Anna E. Frazier, Annette Hausdörfer, Cecile Hoareau, Sasha Janovskaia, Robert Jäger, Mick Lane, Trupati Patel, Mike Seiferling and Markus Wagner. A special thank you goes to Natascha Neudorfer, who is not only one of the kindest persons I know but who also helped me to understand statistics more than any book or course ever did, and to Matthew Whiting, for being a wonderful colleague in our teaching job. Although they are very sadly no longer with us, I also would like to thank my grandfather, Paul Hahnwald, whose life story inspired my interest in Political Science; my former Latin teacher Hans-Christian Kunz, whose dedication to teaching continues to shape the way I study until today; and Dr. Emil Hübner, for raising my interest in Comparative Politics and encouraging all his students to do the very best they can.

Academically, I will always be indebted to my supervisors, Paul Mitchell and Simon Hix, whose comments on my thesis, and invaluable advice and support for pursuing an academic career pushed me (in a nice way!) to be a much better researcher than I otherwise would have been. I also would like to thank the editors and anonymous referees of 'Civil Wars', 'Ethnopolitics' and 'Studies in Terrorism and Conflict' as well as the participants of the various conferences I attended over the years, for giving me truly invaluable feedback on my work; my former and current colleagues at SEN and ASEN, for keeping me in the loop about what is going on in nationalism and ethnicity studies; all the students I ever taught and the people who allowed me to teach them, for helping me to practise critical thinking skills in real life; my former professors, colleagues and friends at the Ludwig-Maximilians-Universität München, without whom I never would have ended up at the LSE; Professor Sabine Riedel and Professor Subrata K. Mitra, whose excellent supervision and feedback on my Masters thesis inspired me to pursue a PhD; Professor Uwe Wagschal, Dr. Martin Brusis and Dr. Peter Thiery, for having been wonderful bosses and awakening my interest in developing datasets; the Studienstiftung des deutschen Volkes, without whose generous financial support I would not have been able to pursue my studies; and the entire staff in the Government Department as well as the LSE as a whole, for their constant support and giving me the opportunity to actually write this thesis.

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Chapter 1: Ethno-Embedded Institutionalism

1.1. Introduction: A New Approach to the Study of Ethnic Violence

This is a thesis about the impact of political institutions on the risk of large-scale ethnic violence. It contributes to the existing debate on the relationships between institutional design and violent ethnic conflict by highlighting the need to pay greater attention to both institutional combinations and informal political institutions when analysing the causes of ethnic civil wars. As the first, introductory chapter, the following sections will

- describe the relevance of studying ethnic violence and present the central claims of this thesis (section 1.2.);
- define crucial concepts including institutions, ethnic violence and ethnic groups (section 1.3.);
- briefly outline key theories on ethnopolitical mobilisation and ethnic violence (section 1.4.), including the institutionalist tradition of inquiry (section 1.5.); and
- review some well-known studies from the institutional incentives approach to ethnic violence to illustrate the academic debate's lack of attention to institutional combinations (section 1.6.) and informal political institutions (section 1.7.).
- Section 1.8. will conclude this chapter by summarising its central points.

1.2. The Central Claims of this Thesis

Large-scale ethnic violence can be hugely destructive. In addition to the immanent human and material losses incurred during episodes of ethnic civil war, armed confrontations between different ethnic groups can also lead to more far-reaching consequences, such as setbacks in the affected country's political and economic development, or threats to the security and stability of entire regions due to possible spill-over effects (Lake and Rothchild 1998; Wolff 2007). Large-scale ethnic

violence moreover poses a clear challenge to the system of global governance, for instance by undermining the development aid efforts of international organisations or by raising questions on whether or how to intervene (Addison and Murshed 2003; Lake and Rothchild 1996).

The destructive potential of large-scale ethnic violence is particularly concerning, as violent ethnic conflict is not a rare phenomenon: Since the early 1960s, the number of violent intrastate conflicts vastly outweighs the frequency of war between sovereign states (Hewitt 2007; see also Figure 1 for a map on the number of major violent international and internal conflicts between 1990 and 2003). Within the last two decades of the 20th century, nearly two-thirds of these violent intrastate disputes were ethnic conflicts (Scherrer 1999).¹

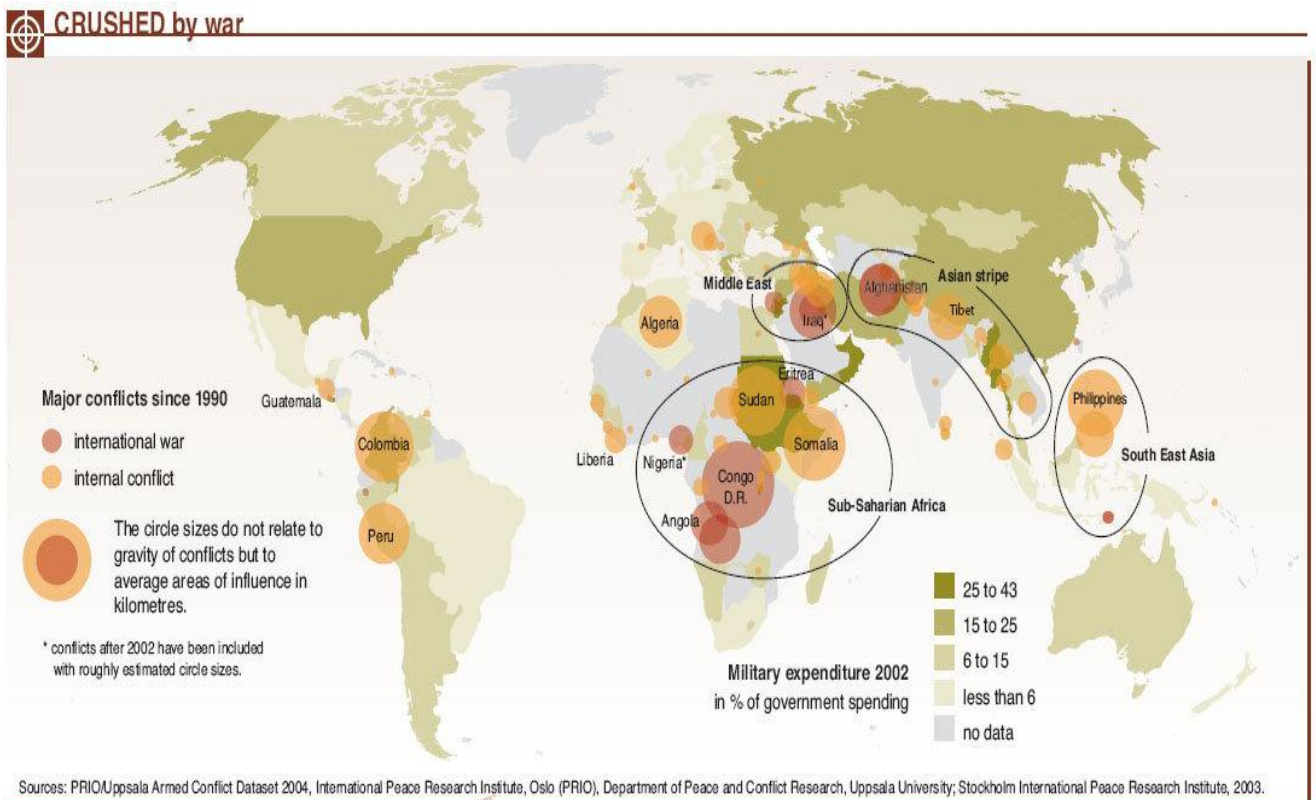


Figure 1: Crushed by War – World Conflicts. *Source:* Bournay (2005).

¹ To be precise, Scherrer (1999) finds that 64.7% of all violent conflicts between 1985 and 1994 had a dominant ethnic-induced or ethnicised character.

In this context, it is important to point out that it would be erroneous to assume that the number of ethnic conflicts increased drastically only with the end of the Cold War (cf. e.g. Brown 1993). As research by Gurr based on the Minorities at Risk project shows, the frequency of ethnopolitical disputes² has increased steadily since the 1950s, accelerated sharply in the 1970s and – after reaching its height in the early 1990s – levelled off after 1994 (Gurr 2000).

Using data by the Political Instability Task Force (PITF)³ and looking exclusively at large-scale ethnic violence, we can confirm Gurr's essential observation of a long-term increase in the number of ethnic conflicts between the 1950s and early 1990s. In this context, 'large-scale ethnic violence' is used synonymously with the PITF's definition of 'ethnic wars', i.e. 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 one year and during which each party has mobilised at least 1,000 people, including armed agents, demonstrators and troops (Marshall, Gurr and Harff 2009). As Figure 2 shows, the number of ethnic wars has followed a general upward trend from only one episode of large-scale ethnic violence in 1955 to a climax of 32 episodes in 1992, before decreasing steadily to 15 episodes in 2001 to 2003 and reaching another peak of 20 episodes in 2005. Studying the causes of violent ethnic conflicts thus remains an important task for social scientists, as ethnic violence continues to represent one of the biggest challenges to the stability of states and international security.

² 'Ethnopolitical disputes' refers here to Gurr's definition of ethnopolitical rebellion (i.e. the use of coercive power by ethnopolitical groups to compel governments either to fight or to negotiate change), although quite similar long-term trends can be observed for ethnopolitical protest as well (i.e. the strategy by ethnopolitical groups to mobilise a show of support, for instance in form of marches or demonstrations, that prompts officials to take favourable action for these groups) (Gurr 2000).

³ The Political Instability Task Force (PITF) is 'a panel of scholars and methodologists ... [that *inter alia* provides data on] onsets of general political instability defined by outbreaks of revolutionary or ethnic war, adverse regime change, and genocide.' (PITF 2012) The stated central objective of the PITF, 'using open-source data, ...[is] to develop statistical models that can accurately assess countries' prospects for major political change and can identify key risk factors of interest to US policymakers.' (ibid.) The datasets by the Political Instability Task Force are available online at <http://globalpolicy.gmu.edu/pitf/pitfpset.htm> .

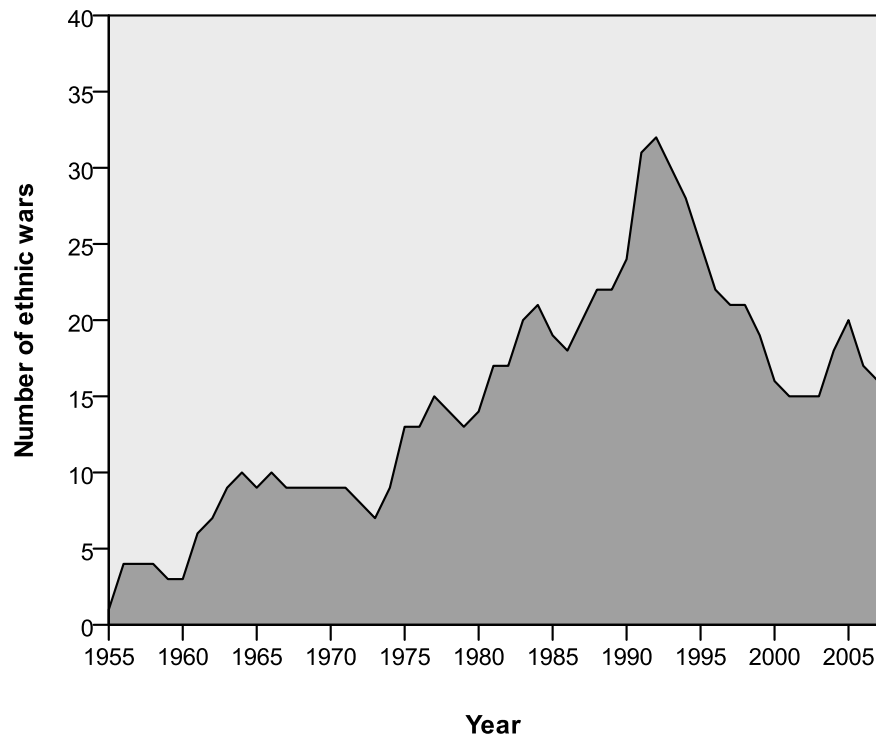


Figure 2: Number of Ethnic Wars between 1955 and 2007. *Data source:* PITF (2009).

From the vast number of theories to explain the causes of violent ethnic conflict (see also section 1.4.), the arguments set out in this thesis follow the institutionalist tradition of inquiry or, as I call it, the ‘institutional incentives approach to ethnic violence’.⁴ This school of thought argues that political institutions are a pivotal factor influencing the prospects of ethnopolitical (in)stability, as the risk of ethnic violence is likely to increase under political institutions that are not suitable for the degree of ethnic diversity in a given society (see section 1.5. for more details). The features and makeup of political institutions deserve particular attention when investigating incentives for ethnic violence because they set the rules under which political competition is to take place, shape human behaviour and, unlike other factors such as the availability of natural resources or the degree of ethnic diversity in a society, are

⁴ Institutionalism is a wide field of research that analyses the effects of institutions on a variety of political, social and economic phenomena (see e.g. Peters 2001). The label ‘institutional incentives approach to ethnic violence’ is more precise in the sense that it refers only to those scholarly writings that deal with the impact of institutional design specifically on the risk of violent ethnic conflict.

comparatively easy to manipulate (cf. Hartzell and Hoddie 2007; Lecours 2005). Presumably for these reasons, also policy-makers have long recognised institutional design⁵ as one of the best-suited approaches to ethnic conflict resolution (see e.g. Reynolds 2002).

A closer look at the institutional incentives approach to ethnic violence (see also sections 1.6. and 1.7.) reveals that, hitherto, the relationships between political institutions and ethnopolitical (in)stability typically have been analysed by investigating the effects of single,⁶ formal political institutions, such as electoral systems or state structures (see e.g. Reilly 2001; Reynolds 2002; Suberu 2001). This research focus is deeply flawed in two different yet equally relevant regards: First, the tendency to single out the effects of individual institutions is based on the implicit – and as I claim: wrong – assumption that political institutions can be treated as separate entities and that it is only of secondary relevance of which broader set of institutions they form part. Second, despite studies which highlight the relevance of informal political institutions (see e.g. Varshney 2001, 2002), they have received far less attention in the academic debate so far.

My thesis addresses both these shortcomings with the theoretical conceptualisation and large-N testing of Ethno-Embedded Institutionalism, using data from the ‘Ethno-Embedded Institutionalism (EEI) Dataset’ that has been created specifically for the purpose of this thesis. Ethno-Embedded Institutionalism describes a new approach to the study of institutional incentives for ethnic violence which goes beyond the mere

⁵ The term ‘institutional design’ is rather ambiguous, as it can be understood as either the intentional shaping and reshaping (cf. Goodin 1998) or the general features of political institutions (see e.g. Lijphart 2002). This analysis adopts the latter understanding by using ‘institutional design’ synonymously with ‘the characteristics and makeup of (both formal and informal) political institutions’.

⁶ As will be elaborated in more detail below, ‘single political institutions’ is not meant to imply that scholars belonging to the institutional incentives approach to ethnic violence typically consider only one institution in their analyses. On the contrary, authors such as e.g. Cohen (1997), Hartzell and Hoddie (2007), Horowitz (1985) or Lijphart (1977) investigate a number of different institutions in their writings. However, the point I am highlighting is that these scholars treat political institutions as discrete, separable entities in the sense that they do not ask for the interaction effects between different institutions. Put differently, they might consider within the same piece of research which form of government and which electoral system are ‘best’ for ethnically diverse societies, but they do not ask how relevant it is that for instance a presidential form of government is either combined with a proportional or a majoritarian or a mixed electoral system for the legislature (see below and section 1.6.).

focus on single, formal political institutions. It aims to expand the current academic debate by highlighting the relevance of both institutional combinations and informal political institutions for the risk of large-scale ethnic violence. More specifically, Ethno-Embedded Institutionalism is based on the explicit acknowledgement that political institutions are ‘embedded entities’ in at least two regards: First, political institutions are embedded entities in the sense that they never exist on their own but always form part of a wider institutional arrangement. Hence, the effects of political institutions such as electoral systems or state structures do not occur as isolated phenomena, but necessarily depend on the broader set of political institutions that are joint within a political system. Second, political institutions can be socially embedded entities in the sense that they can affect the prospects of ethno-political (in)stability due to persisting patterns in human behaviour and despite their lack of open codification. Therefore, greater attention needs to be paid to the role of informal in addition to formal political institutions when analysing the causes of large-scale ethnic violence (see section 1.3. for relevant definitions).

To illustrate the relevance of Ethno-Embedded Institutionalism, this thesis is structured as follows: As mentioned in section 1.1., this chapter lays the groundwork for the subsequent analysis by defining crucial concepts and outlining key arguments in the academic debate on the causes of violent ethnic conflict. Chapter 2 describes the causal mechanisms which, arguably, link political institutions to the risk of ethnic violence, using a grievance-based explanation of violent intrastate conflict. In a nutshell, the theoretical framework outlined in chapter 2 states that political institutions which are associated with comparatively high levels of political exclusiveness are likely to increase the risk of ethnic violence. This is because they contribute to perceived or objective asymmetries between ethnic groups in terms of their political and socioeconomic standing, and arguably give rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation (relating to their political recognition, the likelihood with which resources and powers are distributed in their favour, and their perceptions of political, physical and economic security) to be comparatively low.

Chapter 3 will outline the relevance of the first dimension of Ethno-Embedded Institutionalism by focusing on combinations of different types of form of government (i.e. presidential, parliamentary or mixed), electoral system for the legislature (i.e. majoritarian, proportional or mixed) and state structure (i.e. unitary, federal or mixed). I focus on combinations of these specific formal political institutions, as previous research has identified them as being of particular relevance for the prospects of ethnopolitical (in)stability (Belmont, Mainwaring and Reynolds 2002). The central argument presented in chapter 3 states that the lower the number of possible political winners provided by a given institutional combination, the more likely it is that this combination will increase the risk of large-scale ethnic violence. Consequently, in particular the combination of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure is expected to heighten the risk of ethnic civil war. This is because it provides the lowest overall number of possible political winners compared to any other combination of presidential, parliamentary or mixed form of government, majoritarian, proportional or mixed electoral system for the legislature, and unitary, federal or mixed state structure. Political winners thereby are defined as those ethnic groups whose representatives are able to participate – and hence have the opportunity to promote the interests of the ethnic group they belong to or wish to represent – in the political decision-making process through official positions of political power, for instance as members of parliament or state ministers (see also section 2.4.). From this follows that the lower the number of possible political winners provided by an institutional combination, the lower is the number of ethnic groups in a given society who can obtain the values of political representation outlined in chapter 2. A low number of possible political winners is expected to increase the risk of large-scale ethnic violence, as it is likely to give rise to grievances among those ethnic groups who feel that the design of formal political institutions systematically prevents them from fulfilling their value expectations.

Chapter 4 will highlight the relevance of the second dimension of Ethno-Embedded Institutionalism by using corruption as a prime example of an informal political institution. The central argument presented in chapter 4 states that corrupt dealings

are likely to increase the risk of ethnic civil war, as networks of corruption – given their ethnically exclusionary tendencies – can be assumed to affect the *modus operandi* of formal political institutions in such a way that those ethnic groups who stand outside of these networks have lower chances to obtain the values of political representation. The ‘ethnically exclusionary tendencies of corrupt dealings’ thereby refer to the tendency of networks of corruption to form along ethnic lines and benefit certain ethnic groups over others (see section 4.6.). The four scenarios by which networks of corruption can affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner include the creation of direct incentives for political officeholders (e.g. through bribery or the sustenance of patronage networks) to manipulate the political decision-making process in favour of specific ethnic groups; the generation of distortions and ethnic bias in the political decision-making agenda; the establishment of a culture of selfish value-accumulation; and the undermining of the quality or prospects of democracy. All four scenarios clearly violate the ideal of representational justice (Wimmer 2002) and result in some ethnic groups having greater influence over the political decision-making process than others. Consequently, grievances are expected to rise among those ethnic groups who cannot reap the benefits of corruption, and ethnicity to become a likely fault line of violent confrontation.

Chapters 5 and 6 together form the empirical part of this analysis. Chapter 5 contains information on the ‘Ethno-Embedded Institutionalism (EEI) Dataset’ that has been developed specifically for the purpose of this thesis. The EEI Dataset provides an unprecedented compilation of quantitative data on different types of political institutions, the incidence of large-scale ethnic violence and further variables such as regime type or level of economic development that are commonly controlled for in the civil wars literature. As the first dataset of its kind, the EEI Dataset fills the need for a comprehensive data source which facilitates the systematic statistical analysis of the relationships between institutional design and ethnic civil wars. In total, the EEI Dataset contains 103 variables that provide information on 174 countries between 1955 and 2007.

Finally, chapter 6 will present the results from testing the impact of individual formal political institutions, institutional combinations and corruption on the risk of ethnic civil war, using binary time-series-cross-section analysis and building on arguments presented in chapters 2 to 4. Specifically, I will test the following key hypotheses:

Hypothesis 1: Individual formal political institutions that rely on winner-takes-all principles increase the risk of large-scale ethnic violence compared to individual formal political institutions that seek to disperse political gains.

Hypothesis 2: Institutional combinations which provide a relatively low number of possible political winners increase the risk of large-scale ethnic violence compared to institutional combinations that provide a higher number of possible political winners.

Hypothesis 3: The higher the level of corruption, the higher is the risk of large-scale ethnic violence.

The statistical results presented in chapter 6 provide empirical support for the theoretical propositions outlined in chapters 3 and 4, that a) institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure, and b) corruption increase the risk of large-scale ethnic violence, while holding common control variables in civil war research such as regime type or level of economic development constant. The statistically significant positive effects of corruption and institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure on the risk of ethnic civil war are robust to various model specifications, and thus demonstrate the relevance of Ethno-Embedded Institutionalism empirically.

At first glance, the aforementioned arguments about institutional combinations and informal political institutions might sound deceptively simplistic. However, a closer examination of the institutional incentives approach to ethnic violence reveals that,

so far, it has neglected the combined effects of specific institutional arrangements (see section 1.6.). This is not to say that scholars belonging to this school of thought typically focus just on one institution in their analyses (see also footnote 6). However, even if they do take the relevance of a variety of institutions into account (see e.g. Cohen 1997; Hartzell and Hoddie 2007; Reynolds 2002; Roeder and Rothchild 2005), they do not ask how the effects of political institutions might vary depending on the manner in which they are combined with each other. Put differently, even if they do consider within the same analysis, say, which form of government and which electoral system might be ‘best’ for ethnically diverse societies (see e.g. Horowitz 1985; Lijphart 1977), they typically fail to ask how relevant it is that for instance a presidential form of government is either combined with a proportional or a majoritarian or a mixed electoral system for the legislature (see section 1.6.). In this manner, scholars belonging to the institutional incentives approach to ethnic violence have tended to treat political institutions as discrete, separable entities and neglected the relevance of interaction effects between different institutions.

A closer examination of the institutional incentives approach to ethnic violence also reveals that it has predominantly dealt with formal (i.e. openly codified) in contrast to informal political institutions. This research asymmetry is surprising, given that there is a small but nonetheless relevant pool of political science writings (e.g. Sisk and Stefe 2005; Varshney 2001, 2002) which has clearly highlighted the relevance of non-codified institutions for the prospects of ethnopolitical (in)stability (see section 1.7.). To illustrate the possible effects of informal political institutions on the risk of ethnic civil war, I focus on the role of corruption in chapters 4 and 6. I chose this particular informal political institution, because many seminal texts on the causes of violent intrastate conflict have alluded to the relevance of corruption before (e.g. Brass 1997; Collier and Hoeffler 2004; Fearon and Laitin 2003), however – so far – there has been no large-N analysis that actually tests its impact on the risk of ethnic civil war.

Overall, my thesis contributes to the institutional incentives approach to ethnic violence in three relevant regards: First, my main contribution to the academic debate are the theoretical conceptualisation and large-N testing of Ethno-Embedded Institutionalism, in order to highlight the aforementioned need for further investigations into the effects of institutional combinations and informal political institutions. Second, I present a grievance-based explanation of large-scale ethnic violence which, unlike previous analyses such as by Gurr (1993) or Dudley and Miller (1998), focuses exclusively on (and clearly identifies) the key values of political representation (see sections 2.5. to 2.7.). Finally, I fill an evident ‘data gap’ within the academic debate, as the EEI Dataset is the first comprehensive data source that is specifically intended for the systematic statistical analysis of institutional incentives for ethnic civil war (see chapter 5). Taken together, these three elements – i.e. the theoretical conceptualisation and large-N testing of Ethno-Embedded Institutionalism, the development of a grievance-based argument that clearly identifies the core values of political representation, and the creation of the EEI Dataset – constitute this thesis’s main claim to originality.

At the same time, it is important to highlight a few qualifications regarding the scope of subsequent arguments: First, institutional design might not only contribute to the risk of ethnic civil war, but ethnic civil wars can equally lead to changes in political institutions, especially if these are intended to manage or settle violent ethnic conflicts. This feeds into the broader argument that political institutions – like arguably most phenomena in the social sciences – equally can be thought of as dependent and independent variables (Grofman and Stockwell 2003). As I am more interested in what Elster (1997) describes as the ‘downstream’ analysis of the effects of political institutions rather than the ‘upstream’ study of how they come into being, I choose to treat political institutions as independent variables without further consideration of the factors that lead to their establishment.

Second, ethnic identity formation and ethnopolitical mobilisation (defined as the process by which ethnic groups are recruited into political movements (Gurr 2000)) necessarily precede the engagement of ethnic contenders in large-scale violent action

(cf. *ibid.*). Yet, unless one would adopt the rather controversial view that ethnic identities are intrinsically politically salient and conflictual (see e.g. Smith 1993), these three processes do not need to have the same causes, and therefore ought to be distinguished very clearly from each other (cf. also Fearon and Laitin 2000). Hence, as it would go beyond the scope of this thesis to analyse possible explanatory factors for ethnic identity formation, ethno-political mobilisation *and* ethnic civil war, I solely address the latter.

Third, and closely related to the previous point, it has to be emphasised that it is the aim of this thesis to put Ethno-Embedded Institutionalism on the academic map, not to advance a complete theory of ethno-political mobilisation and ethnic violence. Consequently, I do not address questions such as why grievances ‘seem to be much more prevalent’ (Kalyvas 2007:422) than episodes of civil war or how ethnic groups overcome collective action problems. Instead, I propose a ‘basic incentives model’ of large-scale ethnic violence in the sense that I present a (possible) explanation for the *underlying motivations* of violent ethnic conflict, not for the *proximate causes or contextual factors* (such as group capacity levels, political or economic opportunity structures) that affect the particular timing and type of ethno-political action (cf. Gurr 2000; Wolff 2007). It is in this light of an exploratory, ‘basic incentives’ analysis of ethnic civil war that subsequent arguments have to be read.

Finally, I explicitly refer to the *chances* for the different ethnic groups in a given society to obtain the values of political representation, and, in the case of formal political institutions, the number of *possible* political winners. I do not consider the actual degree to which the interests of different ethnic groups are in fact considered in the political decision-making process, the number and type of political offices which their representatives hold, or the distance between the policy preferences of different ethnic groups and an actually implemented policy. This distinction of research foci is similar to the difference between asking whether there is a democratic framework in place that allows citizens to cast their votes in free and fair elections, or whether citizens decide to exercise this right once democracy has been established and what the outcomes of these elections are. While the first type of

question asks for the general openness of the political system and the possibilities it provides for citizens to influence the political decision-making process, the second and third type of question explore why and how citizens make actual use of these possibilities.

By explicitly referring to the *chances* provided by institutional design to be represented politically, not the actual degree to which different ethnic groups are indeed represented within a political system, the analysis at hand belongs to the first category of questions. This research focus is based on the recognition that there are circumstances beyond the features of political institutions that might influence whether an ethnic group's interests are indeed included in a given decision-making process, or whether the final political output corresponds to the ethnic group's goals. These circumstances include for instance logrolling between political officeholders or the salience of ethnopolitical issues in the first place, which – due to problems of data availability – have to be taken into account in a case-by-case analysis, but cannot be considered any further in the statistical part of this thesis.

In this context, it should be noted that grievances which could motivate large-scale ethnic violence are not expected to arise each time the interests of a specific ethnic group are not included in the political agenda or do not correspond to a specific political output. Instead, such grievances are only expected to arise if institutional design systematically reduces the number of ethnic groups that can obtain the values of political representation outlined in chapter 2. Put differently, grievances are expected to arise not just from single political events such as one specific policy choice or the outcome of an individual election, but if the members of an ethnic group feel that the rules of the political game systematically prevent them from fulfilling their value expectations. Such grievances can be assumed to be particularly daunting when ethnic groups who feel politically excluded recognise that they are confronted with a catch-22: In order to be able to change the rules of the political game so that they can reap the benefits of political representation, they need to have high leverage over the political decision-making process already. This means that they are only likely to be able to increase their chances to obtain the values of

political representation if they already have high chances to obtain them anyway. Political exclusion or marginalisation⁷ are thus likely to perpetuate themselves, since those who are excluded from or marginalised in the political decision-making process are unlikely to affect its outcomes, and hence unlikely to be able to improve their situation (cf. Bashir and Kymlicka 2008).

Following this outline of central claims and some crucial qualifications regarding the scope of this thesis, it is necessary to clarify the meaning of key terms such as ‘institution’, ‘ethnic violence’ and ‘ethnic group’.

1.3. Defining Institutions, Ethnic Violence and Ethnic Groups

The ‘old institutionalism’ in political science which preceded the behavioural revolution of the 1950s and 1960s focused mainly on the study of different administrative, legal and political configurations (Thelen and Steinmo 1992). Accordingly, ‘institutions’ typically referred to material structures or, more precisely, material elements of state and government such as bureaucracies, constitutions, cabinets or parliaments (Lecours 2005). New institutionalism – itself a direct response to behaviouralism’s analytical limitations (see Immergut 1998) – significantly expands this definition, as reflected for instance in the research by North, Crawford and Ostrom. North (1990) famously describes institutions as ‘the rules of the game in a society or, more formally, ... the humanly devised constraints that shape human interaction’ (ibid.:3), while Crawford and Ostrom define institutions as ‘enduring regularities of human action in situations structured by rules, norms, and shared strategies, as well as by the physical world. The rules, norms, and shared strategies are constituted and reconstituted by human interaction in frequently occurring or repetitive situations.’ (Crawford and Ostrom 1995:582) Unlike the

⁷ It is important to note the way in which this argument is phrased, as grievances might rise among the members of an ethnic groups not only if they are outright excluded from the political decision-making process, but also if they feel that the degree of political representation which they are able to obtain still marginalises them within a given political system (Gurr 2000). As indicated in chapters 3 and 4, political institutions which systematically reduce the number of ethnic groups who can obtain the values of political representation might lead to both the outright exclusion or marginalisation of certain ethnic groups.

rather restrictive conceptualisation by old institutionalists, both these definitions leave ample scope as to what an institution could be, and include formal as well as informal institutions.

Following Lauth (2000), formal institutions – such as electoral systems or federal arrangements – are openly codified, i.e. laid down in writing and guaranteed through the sanctioning mechanisms of state agencies. Informal institutions, on the other hand, such as corruption, clientelism and forms of civil disobedience, are known publicly and safeguarded through entrenched social mechanisms, but neither laid down in writing nor guaranteed by the state (*ibid.*). Building on North (1990), Crawford and Ostrom (1995) and Lauth (2000), I define political institutions as enduring structures which shape political interactions, and whose properties are in turn based on repetitive or frequently occurring human interactions. Formal political institutions, whose different combinations stand at the centre of chapter 3, are laid down in writing and guaranteed by the state. Informal political institutions, whose relevance will be highlighted with the example of corruption in chapter 4, are socially entrenched structures of political interactions which endure over time due to persisting patterns in human behaviour, but which are not laid down in writing nor guaranteed by the sanctioning mechanisms of state agencies.

While the aforementioned definition of formal and informal political institutions seems relatively straightforward, there is greater ambiguity surrounding the concepts of ‘ethnic group’ and ‘ethnic violence’. The ambiguity regarding the former concept arises from the hitherto inconclusive debate concerning ethnic identity formation and salience. Depending on one’s broader theoretical framework, the defining features of ethnic groups can range from an emphasis on biological traits (see e.g. van den Berghe 1987) to a description of ethnic ties and consciousness as consisting primarily of a network of customs, norms and cultural codes which are themselves constructs of the modern epoch (see e.g. Anderson 1983).

Here, ethnic groups are defined in relatively broad terms (closer to the constructivist end of the spectrum)⁸ as ‘people who share a distinctive and enduring collective identity based on common descent, shared experiences, and cultural traits.’ (Gurr 2000:4) Among the cultural traits which define group membership are language, religious beliefs, customary behaviour and region of residence (*ibid.*). This conceptualisation is broader than for instance the one offered by van den Berghe (1987) who restricts his argument to purely biological traits and stipulates that the core of ethnic groups typically consists of people ‘who know themselves to be related to each other by a double network of ties of descent and marriage.’ (*ibid.*:24) Due to its breadth, national, religious and other communal groups equally fall under Gurr’s definition of ethnic groups (Gurr 2000). This could be contested on the grounds that there are significant differences between for instance ethnic and national groups, as, when politically mobilised, the latter typically strive for political self-determination or at least some form of politically separate existence, while the former do not necessarily aspire to political autonomy (*ibid.*; Kaufman 2001). The benefit of using Gurr’s (2000) definition, however, is that its breadth complies with the PITF’s operationalisation of ethnic challengers as any politically mobilised national, ethnic, religious or other communal minorities which challenge the government in order to bring about major changes in their status (Marshall, Gurr and Harff 2009). This consistency of concepts is an important consideration, as the statistical findings presented in chapter 6 are based on PITF data as dependent variable.

The ambiguity regarding the concept of ethnic violence relates to the impetus behind armed confrontations, i.e. how one can know whether they are indeed ethnopolitically motivated. Having defined ethnic groups, it seems deceptively easy to describe a violent ethnic conflict simply as ‘a[n armed] dispute about important political, economic, social, cultural, or territorial issues between two or more ethnic communities.’ (Brown 1993:5) However, civil wars are typically based on a variety

⁸ I adopt a definition of ethnic groups that is closer to the constructivist end of spectrum, as there is a large amount of evidence which supports the idea that ethnicity is somehow socially constructed (see e.g. Fearon and Laitin 2000; Varshney 2007). For a brief definition of constructivism, see section 1.4..

of ‘inextricably fused motives’ (Collier, Hoeffler and Sambanis 2005:2) in which different cleavages, such as ideological, economic or ethnic, might overlap, so that it can be difficult to categorise them clearly as either ‘ethnic’ or ‘non-ethnic’. While some might take this as support for the use of a generic category of ‘civil wars’ without further subtypes, there nonetheless are some very good reasons to distinguish ethnic from other types of violent intrastate conflicts.⁹ 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).¹⁰ It would neglect the very prominent ethnic element in conflicts such as those in Northern Ireland, Kosovo, Rwanda and Sri Lanka (see e.g. Wolff 2007). And it would disregard research findings which indicate that ethnic and non-ethnic civil wars do have different causes (Sambanis 2001).

Admittedly, identifying ethnic conflicts in some cases might not be as easy as ‘one knows them when one sees them’ (Wolff 2007:2), due to the aforementioned potential overlap of different cleavages and motives in civil wars. However, I agree with the judgement of scholars such as for instance Gurr (2000), Sambanis (2001) and Wolff (2007) that there are nonetheless certain criteria with which one can make an educated judgement about the relevance of ethnicity within armed disputes, as in episodes of violent ethnic in contrast to non-ethnic conflict ‘the goals of at least one conflict party are defined in (exclusively) ethnic terms, and ... the primary fault line of confrontation is one of ethnic distinctions.’ (Wolff 2007:2) Accordingly, ethnic as opposed to other forms of intrastate violence are here defined as armed disputes in which ethnic cleavages are the central lines along which mobilisation for violent

⁹ Conflicts between ethnic groups are not by definition violent. The word ‘conflict’ merely describes a situation in which two or more parties have different objectives and try to change their opponent’s behaviour by inflicting costs through the direct exchange of sanctions (Ackerman and Kruegler 1994). In general, the term ‘ethnic conflict’ can thus equally refer to ethnic violence as well as institutionalised forms of ethnic protest (e.g. in the context of electoral politics) or non-violent actions outside of (formally) institutionalised political channels (e.g. in the form of boycotts or sit-ins). As indicated in the preceding paragraphs, I focus here on ethnic civil wars, i.e. episodes of violent ethnic conflict.

¹⁰ It might be worth noting that this reference is not to imply general agreement with the primordialist undertones of Kaufmann’s (1996) analysis; as elaborated in more detail in section 1.4., primordialism is too problematic an approach to ethnic conflict studies. This reference instead primarily alludes to Kaufmann’s point about the hardening of ethnic identities during violent ethnic conflicts which arguably has validity beyond the primordialist framework.

action takes place.¹¹ Examples include for instance the repeated outbreak of large-scale ethnic violence between Hutus and Tutsis in Rwanda (1963-66, 1990-98 and 2001) and the Tamil-Sinhalese conflict in Sri Lanka (which took on the form of an ethnic war between 1983 and 2009) (see PITF 2010).

Two further details about the term ‘ethnic violence’ ought to be clarified at this point. First, in line with the PITF’s ethnic war data used in the empirical part of this thesis (see chapters 5 and 6), my main focus is on episodes of large-scale ethnic violence between the government and armed ethnic challengers. This excludes all those types of ethnic conflict that do not involve the government as one of the conflicting parties, that are non-violent or that manifest themselves in non-war types of action in which armed perpetrators attack unarmed civilians (see also section 5.3.). Second, unlike studies such as by Fearon and Laitin (2003a) or Fjelde (2009), my research focus is not on the onset but rather on the incidence of intrastate violence. In other words, I seek to explain the incidence of violent ethnic conflict in any given year, no matter whether it is the first conflict year or a continuation year. This focus on the incidence rather than the onset of ethnic civil war can be justified from both a theoretical and empirical point of view (see section 5.3.).

On a final note, it might be worth pointing out that I use the term ‘ethnically diverse society’ synonymously with the concepts of ‘plural’ or ‘divided societies’ in the sense that it refers to societies which are not only multiethnic but where ethnicity also represents a politically salient cleavage (cf. Lijphart 1977; Rabushka and Shepsle 1972; Reilly 2001).¹² I thereby use the term ‘ethnically diverse society’ as a catch-all phrase for all types of multiethnic societies in which ethnicity represents a

¹¹ In other words, ethnic conflicts are cases in which ‘support [is drawn] from and appeals to the interests of African Americans or Albanians or Amazonian peoples rather than the working class or the disenfranchised or the victims of environmental degradation.’ (Gurr 2000:6)

¹² It is worth noting that, unfortunately, I won’t be able to test the political salience of ethnicity and its effects on the risk of ethnic civil war empirically, due to the still limited scope of both ethnic fractionalisation (as chosen in this thesis) and polarisation indices. Polarisation indices focus on the distribution of ethnic groups in a country and are typically highest when there are two groups of equal size. Fractionalisation indices are given by the likelihood that two randomly selected individuals from a population will belong to different ethnic groups and increase the more small groups there are (Alesina et al. 2003; Reynal-Querol 2002). Neither of them, however, measure the degree to which interests are politically organised along ethnic cleavages.

politically salient cleavage, no matter how prominent this cleavage is within a country's political life *vis-à-vis* other conflict lines or political identities.¹³

Having laid the definitional groundwork for crucial terms including 'institution', 'ethnic group' and 'ethnic violence', it is now possible to turn to a brief overview of central theories on ethnopolitical mobilisation and ethnic violence.

1.4. Theories on Ethnopolitical Mobilisation and Ethnic Violence

In the attempt to explain the causes of ethnopolitical mobilisation and ethnic violence, the social sciences have generated numerous theories during the last decades. They include biosocial theories, modernisation theories, Marxist/Leninist theories, internal colonialism, ethnic pluralism, micro-social theories, system theories and multivariate models (Richmond 1987). Following Lake and Rothchild (1998), this multitude of approaches can be classified into three traditions of inquiry:¹⁴ primordialism, instrumentalism and constructivism. Primordialism argues that ethnic violence is rooted in tensions between different communities that result from fixed, 'naturally' predisposed group identities, i.e. traits that are either biological or deeply entrenched due to centuries of past practices (see e.g. Geertz 1973; Smith 1986; van den Berghe 1987). Instrumentalism regards ethnic conflict as contingent upon the behaviour of political elites who instrumentalise ethnic features for their own material interests – often office-seeking purposes – and intentionally foster ethnic tensions (see e.g. Brass 1991; Cohen 1969; Snyder 2000). Finally, constructivism describes both feelings of ethnic belonging and ethnic violence as the outcome of social interactions and depending on the wider societal, political and economic circumstances (see e.g. Anderson 1983; Eriksen 2002; Mamdani 2001).

¹³ In the words of Grofman and Stockwell (2003), this implies that the term 'ethnically diverse societies' equally subsumes plural and pluralistic societies, i.e. societies in which 'politics is organized largely or entirely along ethnic lines, and two or more ethnic groups compete for power at the center of the political system' (Grofman and Stockwell 2003:102) as well as those 'which are multiethnic in character but in which ethnic differences have been minimized in [political] importance.' (ibid.)

¹⁴ This, of course, is an idealtypical distinction, as not each study on ethnopolitical mobilisation and ethnic conflict will fit neatly into this classification.

All three theories have distinct flaws. Lending itself to essentialist conclusions that ethnic divisions and conflict are a ‘natural’ given (Lake and Rothchild 1998), primordialism cannot explain why some identity groups – such as Croats and Serbs, Tutsis and Hutus – have experienced violent confrontations, while others – such as the Swiss – have remained peaceful (Hardin 1995). The thesis that only some groups would be naturally predisposed to be hostile while others would be naturally pacific, cannot be sustained, not only because it is implausible that interethnic hostilities are somehow programmed into individuals (*ibid.*) but also because it cannot explain variations in ethnic peace and violence over time (Varshney 2007). Instrumentalist explanations provide relevant insights into the contribution of political elites to the salience of ethnic tensions and outbreak of ethnic conflict, but fail to account for the question ‘why ethnic publics follow leaders down paths that seem to serve elite power interests most of all’ (Fearon and Laitin 2000:846; cf. also Kasfir 1979). Finally, constructivists have provided a considerable amount of evidence that ethnicity – contrary to primordialist claims – is not naturally predisposed but that ethnic identities are social phenomena which can change over time (Fearon and Laitin 2000; Lake and Rothchild 1998). However, they can be criticised for not adequately explaining the causes of ethnic violence, as the same set of circumstances – such as the historical process of economic modernisation and its impact on forms of social interaction – has led to the violent outbreak of ethno-political disputes in some places but not in others (Fearon and Laitin 2000; Varshney 2002).

1.5. The Institutional Incentives Approach to Ethnic Violence

A fourth tradition of inquiry that has been omitted by Lake and Rothchild (1998) despite its popularity in political science, and which stands at the core of this thesis, is the institutional incentives approach to ethnic violence. This approach is not affected by the aforementioned criticisms, as it does not focus on enduring traits of ethnic identity, the rational behaviour of political elites or narratives and webs of social interactions as the main explanatory factor. Rather, the institutional incentives approach to ethnic violence is based on the claim that there is a clearly identifiable

relationship between institutional design and ethnopolitical (in)stability, and that ethnically diverse societies require different political institutions than comparatively homogeneous ones (Varshney 2002). According to this approach, ethnic violence is thus an outcome of the establishment of institutions that are not suitable for the degree of ethnic diversity in a society. Studies that follow this tradition of inquiry can be divided into those that deal with institutional incentives that cause ethnic violence to break out (e.g. Wilkinson 2004), and those that analyse institutional incentives to guarantee sustainable peace and political stability after the occurrence of civil wars (e.g. Hartzell and Hoddie 2007).

The argument that political institutions affect ethnic violence is not new. Already John Stuart Mill recognised the relevance of institutional design for political stability and concluded that ethnically diverse societies require different political institutions than comparatively homogeneous ones. In ‘Considerations on Representative Government’ ([1861] 1975) he argues that democratic institutions are not suitable for societies in which several ethnic or national groups co-exist, as they would deepen tensions among the different parts of the population. For Mill, the free choice of representatives in a country made up of different nationalities not only causes the people to support policies on purely ethnic grounds, but also creates incentives for the government to foster antipathies between its people in order to instrumentalise them for its own interests. Mill concludes that, rather than democratic institutions, such countries require a despotic government which ‘chooses its instruments indifferently from all’ (Mill 1975:388) in order to prevent conflict.

Possibly the most prominent debate within the institutional incentives approach to ethnic violence is that between Arend Lijphart and Donald Horowitz. According to Lijphart (1977, 1987, 2002), political stability – that is both stable democratic rule and sustainable peace – in ethnically diverse societies can be promoted through the establishment of consociational institutions which guarantee the participation of representatives of all significant parts of the population in the political decision-making process. These institutions include: the sharing of executive power between political representatives of all relevant groups in society; a high degree of autonomy

for these groups to run their own internal affairs; proportionality of political representation as realised in particular through an electoral system of proportional representation (PR) for the legislature; and veto power for minorities (Lijphart 1977, 2002).

Horowitz (1985, 1991, 2002) on the other hand criticises consociationalism as cementing cleavages between different groups through their assured position within the political system, resonating Mill's earlier claims that the choice of representatives for conflicting ethnicities might deepen tensions between them. As an alternative to consociationalism, Horowitz recommends in particular the implementation of institutions that create incentives for pre-electoral interethnic coalition by means of vote pooling, such as for instance the alternative vote (AV) system that was adopted in Fiji in 1997 (Horowitz 2002). According to Horowitz, the need for political actors to moderate their views on ethnopolitically controversial issues and to seek interethnic compromises in order to win elections serves more to reduce ethnic tensions than the political security offered to ethnic minorities in consociational power-sharing¹⁵ arrangements.¹⁶

The institutional incentives approach to ethnic violence has not been without its critics. Varshney (2002), for instance, argues that it can neither explain regional or local variations of ethnic violence by typically focusing on national-level institutions, nor why episodes of ethnic conflict vary over time even if institutions rarely change due to their inherent inertia. Both these criticisms, however, can be easily dismissed,

¹⁵ It is important to note that the terms 'consociationalism' and 'power-sharing' should not be used synonymously, as consociations are only one particular type of power-sharing arrangements (e.g. Horowitz 2002). 'Narrowly' defined, strategies of power-sharing are all those methods which aim to ensure that the representatives of all major ethnic groups are included in the political decision-making process (cf. Rothchild and Roeder 2005a). More broadly, power-sharing includes all practices 'that promote meaningful inclusivity and balanced influence for all major groups in a multiethnic society' (Sisk 1996:9).

¹⁶ A more thorough analysis of the Lijphart/Horowitz debate would have to take a number of further aspects into account. They include, for instance, the reliance of Lijphart's early consociational writings on a primordial view of ethnicity (Lijphart 2001), arguments about the arguably undemocratic (cf. Lijphart 2002) or overly elite-centred (Barry 1975; Horowitz 2002) nature of consociationalism, and the performance of consociational power-sharing arrangements compared to other methods of managing ethnic diversity (see McGarry and O'Leary 1993; Sisk 1996). However, although the Lijphart/Horowitz debate fills a major part in the academic debate on institutional incentives to ethnic violence, it would go beyond the scope of this thesis to elaborate these different issues in more detail.

as institutional analyses do not claim that institutions are the sole cause of political events or outcomes (Thelen and Steinmo 1992). Rather, they recognise that institutions influence political processes by structuring other factors – such as class struggles, the behaviour of political actors or the salience of ethnic cleavages – which equally have to be taken into account in order to explain political outcomes and, in this context, variations in ethnic violence (ibid.; see also Birnir 2007; Lecours 2005; Posner 2005; Sisk 1996).

Ethno-Embedded Institutionalism responds to a different shortcoming of the institutional incentives approach to ethnic violence in political science which cannot be that easily dismissed: namely that, typically, the relationships between political institutions and ethnic violence have been analysed by merely investigating the effects of single, formal political institutions such as electoral systems or state structures. As aforementioned (see section 1.2.), this shortcoming can be translated into two different yet equally relevant criticisms: that a) the institutional incentives approach to ethnic violence has neglected the relevance of institutional combinations (see section 1.6.), and b) there is a significant research asymmetry in favour of openly codified institutions (see section 1.7.).

1.6. Literature Review on the Neglect of Institutional Combinations

So far, there is no well-known study within the institutional incentives approach to ethnic violence that explicitly asks for the interaction effects of political institutions on the risk of ethnic civil war.¹⁷ Put differently, scholars belonging to this school of

¹⁷ A 2011 conference paper by Lee and Lin asks for the interaction effects of form of government, electoral system for the legislature and the number and spatial distribution of ethnic groups on the probability of different types of ethnopolitical rebellion. I do not count this conference paper as a well-known publication, as it is a relatively recent study that lacks clear theoretical grounding and has yet to be disseminated to a larger academic audience. It also should be noted that there are several significant differences between the conference paper by Lee and Lin (2011) and this thesis. The most relevant differences include: First, the lack of a clear theoretical explanation in Lee and Lin's (2011) analysis why certain institutional combinations should increase or decrease the risk of violent ethnic conflict. Instead, these authors seem to assume that ethnic groups are somewhat inevitably more prone to engage in violent conflict if they are spatially concentrated or if ethnic minority groups face an ethnic majority group (see Lee and Lin 2011:6). Second, Lee and Lin's analysis only focuses on combinations of different forms of government and electoral systems for

thought have tended to focus on single political institutions in the sense that they have failed to ask how relevant it is for the prospects of ethnopolitical (in)stability that certain institutions (such as a specific form of government and a specific type of electoral system and state structure) are combined with each other in a given political system. This tendency within the institutional incentives approach to ethnic violence to single out the effects of individual institutions is based on the implicit assumption that political institutions can be treated as separate entities and that it is only of secondary relevance of which broader set of institutions they form part. As I will elaborate in more detail in chapters 3 and 6, this assumption is a fallacy, as the effects of electoral systems, forms of government and any other type of political institution do not occur as isolated phenomena, but necessarily depend on the broader set of political institutions that are joint within a political system.

A brief examination of the analyses by Cohen (1997), Hartzell and Hoddie (2007), Reilly (2001), Roeder and Rothchild (2005), Reynolds (2002), Suberu (2001) and Wilkinson (2004) reveals the failure of the institutional incentives approach to ethnic violence to investigate how the effects of political institutions might vary depending on the manner in which they are combined with each other. These analyses have been chosen on the basis that they have been published fairly recently, but are already established enough to have been quoted widely in the literature on the relationships between institutional design and ethnopolitical (in)stability. As the literature review in this section will highlight, none of the aforementioned studies asks for the combined effects of a given set of political institutions.

The assumption that political institutions can be treated as discrete, separable entities becomes particularly apparent in the research by Reilly (2001), Suberu (2001) and Wilkinson (2004) whose very premise is the focus on a single, formal political institution each.

the legislature, while I focus on combinations of different forms of government, electoral systems for the legislature and state structures. Finally, unlike Lee and Lin (2011), I do not consider interaction effects between institutional combinations and the number and spatial distribution of ethnic groups. This is because, unlike Lee and Lin (2011) and for reasons outlined in section 2.2., I prefer not to use the MAR data on ethnic group features.

According to Reilly (2001), centripetal institutions which create incentives for rational political actors to cooperate, moderate and accommodate between themselves and their rivals, are most suitable for the democratic management of ethnic disputes. In order to support this claim, he identifies the design of electoral systems as key institutional choice in ethnically diverse societies, and investigates the effects of preferential voting in Australia, Estonia, Fiji, Northern Ireland, Papua New Guinea and Sri Lanka. In doing so, Reilly provides empirical evidence which confirms Horowitz's arguments about the conflict-mitigating benefits of vote-pooling.

Suberu (2001) highlights the conflictual nature of federalism in Nigeria. On the one hand, he acknowledges that Nigeria's federal structure has been essential to the country's survival as a single political entity through the mitigation of ethnic violence in five ways: by localising ethnic disputes in individual states; by fragmenting and crosscutting ethnic identities; by protecting ethnic minorities from the direct hegemony of larger ethnic groups; by promoting state-based identities as a cleavage that is independent of and competitive with ethnic identities; and by devolving federally controlled resources to territorial constituencies. On the other hand, however, he also demonstrates how federalism has increased interethnic tensions through competition over power and resources in four distributive arenas: revenue allocation, territorial reorganisations, intersegmental relations (or what Suberu calls 'the federal character principle') and population censuses.

In his study of Hindu-Muslim riots in India, Wilkinson (2004) argues that town-level and state-level electoral incentives account for where violence breaks out, and where and when police forces are deployed to prevent riots. Using a combination of qualitative and quantitative evidence, he claims that the likelihood with which democratic states will protect their minorities depends on their governments' electoral interests to do so. According to Wilkinson, politicians in government will increase the supply of protection for minorities when these are an important part of their own party's or coalition partner's support base, or when a high degree of party

fractionalisation heightens the probability that the governing party will have to enter a coalition with minority-supported parties in the future.

At first sight, each of these three authors makes a compelling case about what seems to be a crucial variable influencing the chances of ethnopolitical stability. A closer examination, however, shows that the exclusive focus on a single, formal political institution might be rather problematic: Although Wilkinson (2004) explicitly analyses the actions of state governments, he does not take into account how the specific features of India's federal design have shaped the party systems on the subnational level (which are central to his analysis), and how this interplay between federalism and party system features might have affected the risk of ethnic violence (see Mitra 2000). Wilkinson's rather restricted research focus thus ignores relevant findings by other authors according to which the many variations in federal design (both between countries and over time) and the chances of political representation they provide are a crucial factor influencing the balance of power between political actors and the likelihood of ethnopolitical stability (see e.g. Watts 1998).

Suberu (2001) seems to recognise the relevance of institutional combinations when he acknowledges that federal principles have played a critical role in the discussions surrounding the adoption and design of presidentialism in Nigeria's Second and Third¹⁸ Republic (1979-1983 and 1999-today). However, he does not investigate any further whether Nigeria's presidential form of government, despite its reliance on a broad-based electoral formula,¹⁹ has in fact contributed to interethnic disputes over powers and resources, or whether these conflicts would have been likely to occur under any other type of executive combined with Nigeria's federal structure. In other words, Suberu seems to be aware that the effects of Nigeria's state structure and form of government on the risk of ethnic violence are intimately intertwined. But

¹⁸ Contrary to its official label as Fourth Republic, I intentionally refer to the republic declared in 1999 as the Third Nigerian Republic. This is because the intended Third Republic, whose constitution was promulgated in 1989, was aborted even before its formal inauguration (cf. Suberu and Diamond 2002).

¹⁹ According to the 1979 Constitution, the successful presidential candidate had to win a least 25 percent of the votes in thirteen of Nigeria's nineteen states in addition to a plurality of votes nationwide. Similarly, the 1999 Constitution requires the successful presidential candidate to win at least 25 percent of the votes in twenty-four of Nigeria's thirty-six states and the Federal Capital Territory Abuja in addition to a nationwide plurality of votes.

nonetheless, he shies away from discussing whether presidentialism – through its reliance on winner-takes-all principles (Linz 1990a; see also section 3.4.) – has reinforced the negative effects of federalism on ethnopolitical stability, or whether it has helped to protect ethnic minorities together with the dispersion of power under federal principles, thanks to its strict separation of legislative and executive powers (cf. Horowitz 1991; see also section 3.4.).

Similarly, Reilly (2001) mentions several times in his book that rather than the electoral system for the legislature alone, it might be its interplay with a specific type of executive that influences the prospects of ethnopolitical stability. But despite this acknowledgment, he does not elaborate these arguments any further. Instead, he treats electoral rules as separate entities and pays little to no attention with which other institutions (such as forms of government or state structures) they are combined. This is even more surprising, as Reilly in fact cites the literature outside of the institutional incentives approach to ethnic violence (specifically: Mainwaring 1993) that has highlighted the interaction effects between types of executives and electoral systems for the legislature, and thus demonstrated the relevance of analysing institutional combinations (see section 3.7. for further details).

Unlike Reilly (2001), Suberu (2001) and Wilkinson (2004), the volumes by Hartzell and Hoddie (2007), Roeder and Rothchild (2005) and Reynolds (2002) explicitly set out to analyse several political institutions that have an impact on ethnopolitical (in)stability. Both Hartzell and Hoddie (2007) and Roeder and Rothchild (2005) ask for the viability of power-sharing institutions to secure sustainable peace in post-civil war societies, but come to different conclusions. While Hartzell and Hoddie (2007) argue that power-sharing institutions greatly enhance the chances for enduring peace by providing political security to former wartime opponents, Roeder and Rothchild (2005) call for caution, as they find only few examples of long-term successes with power-sharing. To reach these conclusions, Hartzell and Hoddie (2007) analyse the effects of political, military, territorial and economic power-sharing or power-

dividing²⁰ institutions as guaranteed by civil war settlements. Among these institutions are for instance electoral proportional representation, the integration of the state and rebel security forces, federalism and preferential policies to distribute economic resources among rival groups. The political institutions considered in Roeder and Rothchild's (2005) edited volume include *inter alia* federalism, parliamentarism and electoral systems of proportional representation.

Although both works by Hartzell and Hoddie (2007) and Roeder and Rothchild (2005) investigate a number of different political institutions, they still suffer from the same one-dimensionality as those studies that explicitly focus on just a single, formal political institution. This is because the contributors to these two volumes single out each institution they consider one by one – be they party systems, electoral systems, military, economic or federal arrangements – instead of investigating the interplay between different political institutions. Hartzell and Hoddie (2007) seem to emphasise the relevance of interaction effects between institutions by arguing that different dimensions of institutional design – political, military, economic and territorial – can reinforce each other. However, just like Reilly (2001), Roeder and Rothchild (2005), Suberu (2001) and Wilkinson (2004), they only analyse the individual (i.e. non-interacted) effects of single political institutions and fail to ask how the effects of these institutions might vary depending on the manner in which they are combined with each other.

The same criticism holds for Reynolds's (2002) edited volume on the interrelationship between institutional design, conflict management and democratic

²⁰ It should be noted that, while 'power-dividing' is a crucial term in both the volumes by Hartzell and Hoddie (2007) and Roeder and Rothchild (2005), their analyses understand it very differently: Hartzell and Hoddie define power-dividing institutions as institutions that – in contrast to power-sharing measures which bring antagonistic groups together and foster increased contact between them – help separate or buffer groups from one another; for these authors, power-sharing and power-dividing measures are inextricably linked which is why they treat them as one category of institutions. Roeder and Rothchild, on the other hand, are careful to distinguish power-sharing clearly from power-dividing measures and, in contrast to Hartzell and Hoddie, define the latter as those strategies which expand civil liberties at the expense of government, empower different majorities in independent organs of government and balance decision-making centres against each other in order to check each majority (Rothchild and Roeder 2005b); for these authors, power-dividing measures are better suited than power-sharing institutions to help consolidate peace after civil wars beyond short-term transitional arrangements (*ibid.*).

development. This is surprising, as Belmont, Mainwaring and Reynolds explicitly acknowledge in the volume's introduction that political institutions need to be treated as 'a holistic package ...[as they] interact in complex ways' (Belmont, Mainwaring and Reynolds 2002:4). But despite this explicit acknowledgment, none of the volume's subsequent chapters investigates how relevant it might be for the prospects of ethnopolitical (in)stability that specific political institutions are combined with each other (such as whether a presidential form of government and a unitary state structure are combined with a majoritarian as opposed to a proportional or mixed electoral system for the legislature). In this manner, also the volume by Reynolds treats political institutions as discrete, separable entities and fails to consider their interaction effects on the risk of ethnic civil war.

To describe the institutional incentives approach to ethnic violence as predominantly focusing on the individual effects of single political institutions thus is not to say that scholars belonging to this school of thought tend to focus just on one institution in their analyses. On the contrary, the Hartzell and Hoddie (2007), Reynolds (2002) and Roeder and Rothchild (2005) volumes identify a number of different political institutions that have a relevant impact on ethnopolitical stability. What this review criticises is rather that none of these studies goes beyond one-dimensional comparisons of, for instance, the advantages of one type of electoral system over the other: Even if these analyses take the relevance of a variety of institutions into account, they do not ask how the effects of political institutions might vary depending on the manner in which they are combined with each other.

This focus on individual rather than combined effects of political institutions can also be recognised in the Lijphart/Horowitz debate which is resumed in the Reynolds volume. Both authors consider several formal political institutions, including electoral systems, forms of government, federalism and regional autonomy. As alluded to earlier (see section 1.5.), Lijphart indeed refers to a specific set of political institutions with his model of consociational democracy, in which he puts particular emphasis on the sharing of executive power and group autonomy while identifying proportionality and mutual veto as secondary characteristics (Lijphart 2002).

Nevertheless, neither Lijphart nor Horowitz investigate the joint effects of these institutions, i.e. how institutional design influences the prospects of ethno-political (in)stability depending on which political institutions are combined with each other. Rather, their debate has mainly revolved around individual effects of single formal institutions by tending to emphasise the benefits and perils of individual institutions instead of their interaction. In this sense, the Lijphart/Horowitz debate – just like the remainder of the book by Reynolds (2002) and the volumes by Hartzell and Hoddie (2007) and Roeder and Rothchild (2005) – has revolved around a specific list of individual institutions rather than an investigation of how important it is that particular institutions are combined in a certain way. This becomes especially evident in their famous recommendations for the South African electoral system for the legislature (Lijphart 1987; Horowitz 1991), in which the relevance of other institutions – such as whether list PR is combined with parliamentarism (Lijphart 1987) or an AV system with presidentialism (Horowitz 1991) – is mentioned but not treated as crucial to their analyses.

That not even the academic debate surrounding the model of consociational democracy considers the joint effects of institutional combinations can be further illustrated with reference to the 1997 article by Frank Cohen. Although he does not apply the term ‘consociationalism’, Cohen explicitly refers to Lijphart’s work as a guideline in his attempt to analyse whether proportional or majoritarian democratic institutions manage ethnic strife more effectively. Using linear regression analysis for a dataset that contains information on 830 ethnic minorities subject to democratic rule between 1945 and 1989, he finds statistical support for the Lijphart-inspired claim that proportional institutions which give ethnic minorities ‘a realistic chance of explicit representation in the institutions of power’ (Cohen 1997:627) are better suited to reduce ethnic tensions than majoritarian ones. But although Cohen tests various elements that he identifies as crucial for proportional ethnic conflict management, such as a PR electoral system for the legislature and multipartism, his hypotheses nonetheless remain one-dimensional in the sense that they merely refer to the individual effects of single institutions: None of his 13 hypotheses (seven of

which relate to his control variables) investigates the joint effects of specific institutional combinations.

As the above selection of authors has shown, the institutional incentives approach to ethnic violence has remained one-dimensional in scope by neglecting the relevance of institutional combinations and restricting itself to pairwise comparisons of individual institutions. This lack of studies that investigate the effects of institutional combinations on the prospects of ethnopolitical (in)stability has resulted in a significant gap in the academic debate which completely omits findings by authors such as Tsebelis (1995), Mainwaring and Shugart (1997a), Lijphart (1999) and Kunicová and Rose-Ackerman (2005). Their studies, whose central claims will be outlined in section 3.7., demonstrate that it is not just of secondary but of crucial relevance for political outcomes how institutions are combined with each other. Hence, even though these studies do not focus on questions of ethnopolitical stability themselves, they indicate how the first dimension of Ethno-Embedded Institutionalism might lead to new insights about the impact of institutional design on the prospects for ethnopolitical (in)stability (see also section 3.7.). Accordingly, the theoretical considerations and empirical findings presented in chapters 3 and 6 will highlight the need for a new research agenda that explicitly asks for the effects of institutional combinations.

1.7. Literature Review on the Neglect of Informal Political Institutions

My second criticism against the institutional incentives approach to ethnic violence states that there is a pronounced research asymmetry in favour of formal political institutions such as electoral rules and state structures (see e.g. the readings presented in section 1.6.), i.e. political institutions that are laid down in writing and guaranteed by the sanctioning mechanisms of the state (see section 1.3.). Informal political institutions, on the other hand, which are neither laid down in writing nor guaranteed

by the state but endure over time due to persisting patterns in human behaviour (cf. Lauth 2000), are relatively neglected.²¹

To illustrate this point briefly, one can look for instance at the volume by Roeder and Rothchild (2005) presented in section 1.6., which asks for the viability of power-sharing institutions to secure sustainable peace in post-civil war societies. Both the introduction by Roeder and Rothchild and the chapter by Hoddie and Hartzell contain an explicit – yet no further elaborated – acknowledgment that power-sharing arrangements need not be openly codified. But despite this acknowledgement, only the essay by Sisk and Stefes assesses in detail the relevance of informal political institutions for the prospects of ethnopolitical (in)stability. Specifically, Sisk and Stefes’s analysis of South Africa’s power-sharing experience illustrates how informal political institutions can serve as essential supplement to formal power-sharing arrangements in ethnically diverse societies. According to these authors, the implementation of formal power-sharing institutions during the early stages of the transition from apartheid to full democracy helped guarantee short-term peace and facilitated democracy-building. Socially entrenched patterns of interethnic cooperation and moderation – or, as Sisk and Stefes call it, practices of ‘informal power-sharing’ – on the other hand have been crucial to sustain peace in the longer term and after the end of formal power-sharing. The fact that out of the 13 chapters in Roeder and Rothchild’s (2005) volume only the essay by Sisk and Stefes deals with the role of informal political institutions, is symptomatic for a more general tendency within the institutional incentives to ethnic violence to pay far greater attention to formal than to informal political institutions (see also Cohen 1997; Hartzell and Hoddie 2007; Reilly 2001; Reynolds 2002; Suberu 2001; Wilkinson 2004 presented in section 1.6.).

In addition to the essay by Sisk and Stefes, the relevance of analysing informal political institutions is further confirmed by Varshney’s (2001, 2002) investigation of civil society structures as explanatory factors for Hindu-Muslim riots in India.

²¹ Interestingly enough, this criticism not only holds for the institutional incentives approach to ethnic violence, but also for comparative research on political institutions more generally (Helmke and Levitsky 2004).

Seeking a theory that can explain local or regional variations in ethnopolitical (in)stability, Varshney finds that the type of civic engagement – that is interethnic or intraethnic, associational or everyday interactions – has a significant impact on the likelihood that violent ethnic conflict will occur. Associational forms of civic engagement include, among others, business associations, sports clubs or trade unions, whereas everyday forms of civic engagement are routine interactions of life such as, for instance, family visits, joint meals or children playing together. Through a combination of quantitative and qualitative research, drawing on a variety of materials (such as archival resources, interviews and newspaper surveys) and considering both the national and local level of analysis, Varshney concludes that forms of civic engagement which are interethnic and associational are particularly conducive to ethnic peace. This is because they create and represent social ties which can countervail the impact of events or political strategies that would otherwise lead to the polarisation of ethnic groups (e.g. partitions, civil wars, the defeat of an ethnic party in elections or the attempts by politicians to exacerbate interethnic tensions for their own office-seeking purposes). Whereas both everyday and associational forms of civic engagement promote peace if they are interethnic and robust, Varshney points out that the latter have a substantially greater capacity to withstand potentially polarising events or strategies, as the utility of everyday engagement declines with the size of the locality (i.e. it is higher in villages or small towns than in cities or metropolises).

Apart from Sisk and Stefes (2005) and Varshney (2001, 2002), also Lijphart explicitly acknowledges that it is only of secondary relevance for their impact on political stability in ethnically diverse societies whether political institutions are openly codified or not. Although the aforementioned Lijphart/Horowitz debate has primarily centred on the design of formal political institutions such as electoral systems or state structures, Lijphart writes in ‘Democracy in Plural Societies’ (1977) that some consociational institutions, such as the veto power of minorities, ‘can be an informal and unwritten understanding *or* a rule that is formally agreed on and possibly anchored in the constitution’ (ibid.:38, italics added). He reinforces this argument in his 1996 article on ‘The Puzzle of Indian Democracy’ in which he

explicitly states that the ‘minority veto in power-sharing democracies usually consists of merely an informal understanding’ (Lijphart 1996:261). These arguments imply that the effects of formal and informal political institutions are of equal significance and should therefore be given similar consideration.

If authors such as Lijphart (1977, 1996), Sisk and Stefes (2005) and Varshney (2001, 2002) already highlighted the relevance of informal political institutions, why, then, do they nonetheless remain almost completely neglected within the institutional incentives approach to ethnic violence? A possible explanation why the institutionalist tradition of inquiry tends to favour the study of formal political institutions is that the more restricted understanding of institutions as openly codified entities has the advantage of analytical clarity (cf. Helmke and Levitsky 2004; Thelen and Steinmo 1992). In other words, formal political institutions make easier objects of study as they are easier to identify (cf. Immergut 1998). Nevertheless, the almost complete neglect of informal political institutions cannot be justified for at least two reasons.

First, restricting research to purely formal notions of what constitutes an institution is based on the misinterpretation that it is their materiality which makes political institutions ‘real’, i.e. allows them to affect political outcomes (cf. Giddens 1984). In other words, it neglects what has been identified as one of new institutionalism’s seminal departures from old institutionalism, namely the insight that political interactions are not only shaped by openly codified structures such as forms of government or electoral systems, but also by norms, values and socially entrenched (but not openly codified) patterns of behaviour (cf. Lecours 2005). Precisely this point becomes apparent in the aforementioned analyses by Lijphart (1977, 1996), Sisk and Stefes (2005) and Varshney (2001, 2002), which clearly demonstrate that informal political institutions are as relevant for the prospects of ethnopolitical stability as formal political institutions.

Second, the research asymmetry in favour of formal political institutions also neglects the often significant interaction effects between formal and informal

political institutions, and the fact that issues of political representation are not confined to the electoral or, for that matter, formal institutional context (Saward 2005). As will be elaborated in more detail in chapter 4, informal political institutions such as corruption do not change the actual *form* of formal political institutions (Lauth 2000). However, they do affect their *modus operandi* which in turn has an impact on the chances of different ethnic groups to obtain the values of political representation outlined in chapter 2.

In response to the research asymmetry in favour of formal political institutions, the theoretical considerations in chapter 4 and empirical findings in chapter 6 will highlight the need for a more balanced research agenda within the institutional incentives approach to ethnic violence that takes greater account of the impact of informal political institutions on the risk of ethnic civil war.

1.8. Conclusion: The Purpose of this Thesis

The relationships between political institutions and ethno-political (in)stability typically have been analysed by putting predominant emphasis on the effects of single, formal political institutions such as electoral systems, forms of government or state structures (see e.g. Reilly 2001; Reynolds 2002; Roeder and Rothchild 2005; Suberu 2001; Wilkinson 2004). I criticise this research focus in two different yet equally relevant regards: First, the tendency to single out the effects of individual institutions is based on the implicit – and as I claim: wrong – assumption that political institutions can be treated as separate entities and that it is only of secondary relevance of which broader set of institutions they form part. Consequently, there is currently no well-known study that explicitly asks for the impact of specific institutional combinations on the risk of ethnic civil war. I thus address a clear gap in the academic debate by investigating how relevant it is for the prospects of ethno-political (in)stability that certain institutions (i.e. certain forms of government, electoral systems for the legislature and state structures) are combined with each other in a given political system (see chapters 3 and 6). Second, despite studies

which highlight the relevance of informal political institutions for the risk of violent ethnic conflict (see e.g. Lijphart 1977, 1996; Sisk and Stefes 2005; Varshney 2001, 2002), they have been largely neglected in the academic debate so far. I therefore seek to move beyond the mere focus on formal political institutions that is typical for the institutionalist tradition of inquiry by further illustrating the effects of socially entrenched (but not openly codified) structures of political interactions on the prospects of ethnopolitical (in)stability. The theoretical assumptions outlined in chapter 4 and the statistical results presented in chapter 6 will use corruption as a prime example of an informal political institution and demonstrate its impact on the risk of large-scale ethnic violence.

Taken together, these two aims (i.e. to highlight the relevance of institutional combinations and of informal political institutions for the risk of large-scale ethnic violence) make up Ethno-Embedded Institutionalism. This new approach to the study of institutional incentives for ethnic violence centres on the explicit acknowledgement that political institutions are ‘embedded entities’ in the sense that a) they never exist on their own but always form part of a wider institutional arrangement and b) they can affect the prospects of ethnopolitical (in)stability even if they are not openly codified but exist over time due to persisting patterns in human behaviour.

In order to clarify the causal relationship between institutional design and the risk of ethnic civil war in general, and substantiate the relevance of institutional combinations and informal political institutions for the prospects of ethnopolitical (in)stability in particular, this analysis uses a grievance-based explanation of violent intrastate conflict. The central tenets of this theoretical framework will be outlined in the next chapter.

Chapter 2: Institutional Incentives for Ethnic Violence

2.1. Introduction: Political Institutions and the Risk of Ethnic Civil War

The institutional incentives approach to ethnic violence contains a vast number of possible explanations how different political institutions may causally affect the risk of ethnic civil war (see e.g. sections 1.6. and 1.7.). In this thesis, I use a grievance-based explanation of violent intrastate conflict which centres on the identification of three key reasons why being represented politically is so valuable to ethnic groups. These key values of political representation refer to the political recognition of ethnic groups, the likelihood with which resources and powers are distributed in their favour, and their perceptions of political, physical and economic security. To present the theoretical framework for my analysis, the following sections will

- outline the central tenets (section 2.2.), strengths and weaknesses (section 2.3.) of grievance-based arguments;
- highlight the relevance of high levels of political inclusiveness (section 2.4.); and
- describe the intrinsic and instrumental values of political representation (sections 2.5. to 2.7.).
- Section 2.8. will conclude this chapter by summarising its central points.

2.2. Grievance-Based Explanations of Violent Intrastate Conflict

Numerous studies within the institutional incentives approach to ethnic violence have pointed to the apparent link between ethnic civil wars and the systematic political exclusion or marginalisation 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

2004:4) 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 2005:146) Although they come to partly very different conclusions about which type of institutional design may be most suitable for ethnically diverse societies (see section 1.5.), also Horowitz and Lijphart agree that 'civil violence, military coups ... can all be traced to this problem of inclusion-exclusion' (Horowitz 1985:629), as 'it is naïve to expect minorities condemned to permanent opposition to remain loyal, moderate, and constructive.' (Lijphart 2004:98) To explain this apparent link between levels of political inclusiveness provided by institutional design and the risk of large-scale ethnic violence, I use a grievance-based explanation of violent intrastate conflict.

According to grievance-based explanations of violent intrastate conflict such as relative deprivation theory, ethnic violence is a concrete expression of accumulated grievances about the non-fulfilment of certain value expectations. Derived from the frustration-aggression theory formulated in the late 1930s, relative deprivation theory argues that ethno-political instability originates from a discrepancy between 'the goods and conditions of life to which people believe they are rightfully entitled' (Gurr 1970:24), and 'the goods and conditions they think they are capable of getting and keeping.' (ibid.) Ethnic groups who perceive that they cannot get the values they feel entitled to, are expected to develop emotions of anger and resentment which – taking additional factors such as levels of group cohesions or state strength into account (see below) – can translate into violent action (Gurr 2000; Harff and Gurr 2003).

According to the relative deprivation model, 'values' are all 'desired events, objects, and conditions for which men strive.' (Gurr 1970:25) Gurr classifies these into three categories: welfare values, which contribute directly to physical well-being and self-realisation; power values, which determine the extent to which men can influence the actions of others and reversely can avoid unwanted interference by others in their

own actions; and interpersonal values, which represent psychological satisfactions sought in nonauthoritative interactions with other individuals and groups (ibid.). Feelings of entitlement to a given value and grievances about the non-fulfillment of certain value expectations thereby must rely on a reference category in the sense that members of an ethnic group are only expected to grow resentful if they have a standard of what they should have in comparison to someone or something else (ibid.). Possible reference categories include for instance other ethnic groups (in the same or a neighbouring country), a different sector of society or one's own ethnic group in the recent past (Soeters 2005).

Relative deprivation theory has been modified repeatedly since the publication of Gurr's seminal volume 'Why Men Rebel' in 1970. Particularly noteworthy is the increase in attention paid to structural conditions which, given the relative deprivation of one or more ethnic groups, make the incidence of violent intrastate conflict more likely (Brush 1996). These conditions include, for instance, the territorial concentration of ethnic groups or high levels of group cohesion which help overcome collective action problems, and a weak state or authoritarian norms that encourage strategies of ethno-political rebellion rather than protest (Gurr 2000).²²

The increased interest in conditions that make the translation of grievances into violent action more likely is a reaction *inter alia* to criticisms against early versions of the relative deprivation model that it cannot explain why relative deprivation does not always lead to armed disputes (Brush 1996). This insight that grievances do not inevitably lead to ethnic violence is illustrated in Figure 3: If ethnic groups are not able to overcome collective action problems – for instance due to low group cohesion (Gurr 2000) – they will not mobilise for any form of large-scale ethno-political action and grievances among these groups remain latent (Outcome 1). Ethnic groups who do overcome collective action problems need not necessarily resort to violent means either, but might pursue their goals through non-violent strategies (cf. Varshney 2007). These in turn can be distinguished into non-violent action that takes place within formally institutionalised political channels, such as debates in parliament or

²² See footnote 2 for the definition of ethno-political rebellion and protest according to Gurr (2000).

electoral politics in ethnically diverse democracies (Outcome 2), and non-violent action that takes place outside of these formally institutionalised channels, such as protests, boycotts or strikes (Outcome 3). Of course, Outcomes 2 to 4 in Figure 3 need not exclude each other, as members of an ethnic group may change or combine different strategies to achieve their goals (cf. Schock 2005).

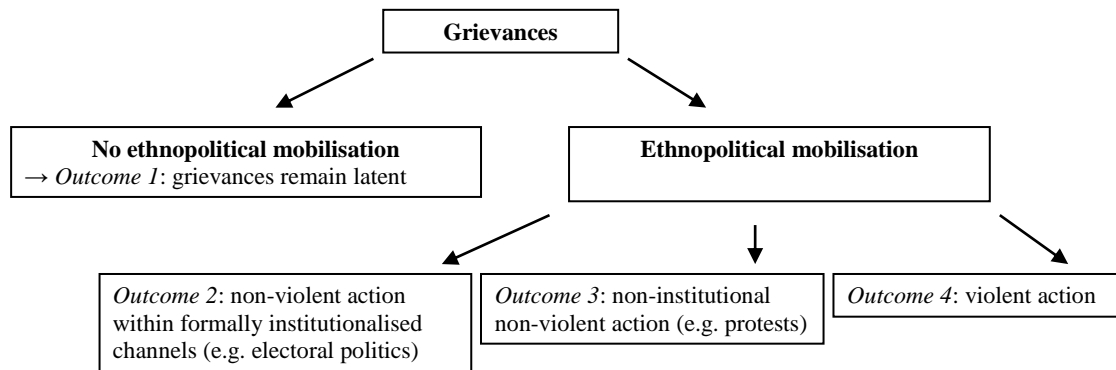


Figure 3: The Four Possible Outcomes of Grievances.

In this context, it is important to point out again (see section 1.2.) that I propose a ‘basic incentives model’ of large-scale ethnic violence in the sense that I focus on the *underlying motivations* of violent ethnic conflict, not the *proximate causes or contextual factors* that affect the particular timing and type of ethno-political action (cf. Gurr 2000; Wolff 2007). Put differently, it goes beyond both the theoretical interest and the practical scope of this thesis to analyse the trigger events, capacity or opportunity factors that facilitate the translation of grievances into violent action. As there is no easily available quantitative data²³ e.g. on levels of ethnic group cohesion or state strength that would be suitable for the empirical part of this thesis (see chapters 5 and 6), such contextual factors that affect the particular timing and type of ethno-political action ought to be investigated in separate case studies.

²³ The seminal Minorities at Risk (MAR) dataset is not suitable for the binary time-series-cross-section analysis presented in chapter 6 for a variety of reasons. First, it is not advisable to pool the data provided in the different phases of the MAR project, as some variables have been altered and are thus not strictly comparable over time (Saideman and Ayres 2000; see also CIDCM 2007; Davenport 2003). Second, the MAR dataset has been criticised for neglecting ethnic groups in power (Cederman, Wimmer and Min 2010). Finally, the MAR project’s lack of testing for inter-coder reliability (CIDCM 2007; Davenport 2003) leads to concerns about data quality.

2.3. Strengths and Weaknesses of the Grievance-Based Approach

The main benefit of using a grievance-based explanation of violent intrastate conflict lies in the fact that it shifts the analytical focus from political elites to the perceptions and impact of institutional design among ethnic masses. Unlike research by authors such as Lijphart, Horowitz and Reilly (who focus on the motivations of political leaders to assess the suitability of different institutions for ethnically diverse societies), grievance-based explanations of violent intrastate conflict thus help to explain institutional incentives for ethnic violence among ethnic publics and not just their leaders.

However, despite this considerable benefit, my choice of a grievance-based explanation of large-scale ethnic violence nonetheless could be contested on at least three grounds. First, it could be questioned in light of analyses which argue that grievances have little explanatory power for violent intrastate conflicts, especially when compared to economic conditions or opportunities. Of particular relevance in this context is the so-called greed *versus* grievance debate that has dominated the civil wars literature since the late 1990s (see e.g. Bodea and Elbadawi 2007; Collier, Hoeffler and Rohner 2009; Regan and Norton 2005), following statistical findings by Collier and Hoeffler (1998, 2004) which indicate that civil wars are not the consequence of accumulated grievances. According to these authors, the risk of violent intrastate conflict instead increases depending on financial opportunities (Collier and Hoeffler 2004) and expected gains conditional upon victory that outweigh the costs of violent action (Collier and Hoeffler 1998). Early versions of the greed argument (e.g. Collier and Hoeffler 1998; Collier 2000) thereby have focused on ‘greed’ literally in the sense of the self-enrichment, profiteering and rapacity of rebel groups (Aspinall 2007), while later versions have become more differentiated by arguing that ‘what counts is ... “feasibility” (Collier and Hoeffler 2005, 629) or “opportunity” (Collier, Hoeffler, and Sambanis 2005, 3), insofar that insurgent movements can only emerge and be sustained when resources are available to finance them.’ (Aspinall 2007:951)

In recent years, an increasing number of scholars, including Collier and Hoeffler themselves, have come to recognise that explanations for civil wars are typically not that clear-cut and that the greatest value might lie with theoretical accounts which mix greed and grievance factors (e.g. Collier, Hoeffler and Sambanis 2005; Korf 2005; Murshed and Tadjoeddin 2009; see also sections 2.6. and 2.7. on the overlap of greed and grievance factors in this thesis). Nevertheless, there are two crucial reasons why I pay rather little attention to possible greed factors in subsequent arguments. These reasons are a) that most greed-based analyses of intrastate violence are bordering 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 and Tadjoeddin 2009); and b) that the expected gains and financial opportunities highlighted by greed-based explanations should not be seen as either intrinsically ‘good’ or ‘bad’ for the risk of ethnic violence, but rather that their precise effects are highly context-dependent (Berdal 2005).

Of course, none of this is to say that grievance-based models of intrastate violence are faultless, which leads to the second potential criticism against my theoretical framework: namely, that I will not be able to actually test my arguments on the causal links between political institutions and the risk of large-scale ethnic violence. This is a limitation not specific to this thesis, but to any analysis using the relative deprivation model or another grievance-based framework: Since both relative deprivation and grievances are inherently subjective concepts which refer to the perceptions and emotions of people, they are very hard, if not even impossible, to measure directly (Dudley and Miller 1998; Kalyvas 2007).²⁴ Studies which use the grievance concept therefore typically rely on so-called ‘objective measures of grievances’ (Collier and Hoeffler 2004; Dudley and Miller 1998; Gurr and Moore 1997). This means that, instead of trying to quantify the perceptions or emotions of people, grievances are measured indirectly by reference to variables that are assumed to cause grievances, such as for instance high levels of economic inequality (Collier

²⁴ The Minorities at Risk project quantifies ethnic group grievances by relying on ‘statements and actions by group leaders and members or observations of grievances by third parties.’ (CIDCM 2007:14) It could, however, be questioned how representative these statements, actions or observations really are, i.e. how far they truly reflect the sentiments of the members of an entire ethnic group about certain political, economic or cultural issues.

and Hoeffler 2004) or political institutions that provide low levels of political inclusiveness (see this thesis). Grievance-based analyses of intrastate conflict thus rely on proxies of the grievance concept without being able to operationalise it properly.

Ultimately, the lack of direct grievance measures implies that social scientists cannot provide any direct empirical evidence to support grievance-based arguments. Nonetheless, this is far from saying that grievance-based explanations of violent intrastate conflict ought to be dismissed altogether. On the contrary, despite its apparent empirical limitations, the grievance concept possesses considerable staying power, as it has remained a prominent social science tool for more than 40 years. Like many other social science concepts, grievance-based explanations of violent intrastate conflict represent an ‘inference to the best explanation’ (cf. Lipton 2004) and as such, despite being imperfect, have intuitive appeal to guide academic analyses (cf. Regan and Norton 2005).

The final criticism that could be raised against my theoretical framework refers to the fact that subsequent arguments rest on the implicit assumption that ethnic groups are at least to a certain degree internally homogeneous entities. To be more precise, subsequent arguments rest on the implicit assumption that the members of an ethnic group have common value expectations and share certain opinions or interests which can be represented politically. This assumption could be criticised on the grounds that ethnic groups might consist of factions with different political agendas (see e.g. Alonso and Ruiz 2005), which in turn leads to questions about the conditions under which a value may be called a value for an entire ethnic group and among whom exactly grievances are likely to arise if certain value expectations are not fulfilled.

But while these are interesting questions to raise, there is little benefit in distinguishing here the values, opinions and interests of ethnic subgroups, as it could lead to both theoretical and statistical confusion concerning issues such as comparability with other studies or criteria for subgroup selection (cf. Vega 1992). Just like the research by scholars such as Wimmer (2002) and Cederman and

Girardin (2007), I therefore treat ethnic groups as homogeneous entities within my grievance-based explanation, although I am aware that there can be relevant subdivisions.

2.4. Why Political Inclusiveness Matters

My thesis differs from previous grievance-based analyses e.g. by Gurr (1970, 1993) or Dudley and Miller (1998) in that I focus on value expectations and – in case of their non-fulfilment – grievances relating specifically to the design of political institutions. The reasoning behind this research focus becomes apparent in the causal mechanisms²⁵ elaborated in sections 2.5., 2.6. and 2.7.. They serve to illustrate that institutional design which provides low levels of political inclusiveness can give rise to a variety of social, political or economic grievances. These different kinds of grievances are likely to arise because political representation helps to obtain welfare, power and interpersonal values alike (cf. Gurr 1970; see also section 2.2.). In other words, being represented politically contributes directly to the physical well-being and self-realisation of ethnic groups (see sections 2.6. and 2.7.); their ability to influence potentially harmful actions against them (see section 2.7.); and the psychological satisfaction they might get from the knowledge that they are recognised members of the political community (see section 2.5.). Consequently, political institutions which are associated with low levels of political inclusiveness contribute to perceived or objective asymmetries between ethnic groups in terms of their political as well as socioeconomic standing, and arguably give rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low. The relevance of grievances relating to levels of political inclusiveness can be illustrated with a brief reference to the episodes of ethnic war in Burundi (1972, 1988-2005) and Sri Lanka (1983-2009) (PITF 2010):

²⁵ At the risk of stating the obvious, but bearing in mind the ‘good deal of confusion’ (Mahoney 2001:578) about what constitutes a ‘causal mechanism’ (see *ibid.* and e.g. Hedström and Swedberg 1998), this analysis defines it simply as the hypothetical connection that explains the causal effect of one variable on the other.

During German as well as Belgian colonial rule and much of the post-independence period, the power distribution between ethnic groups in Burundi had favoured the Tutsi minority over the Hutu majority (Dravis 2000; Ndikumana 1998). In line with their doctrine of *'divide et impera'*, the colonial administrations had privileged the Tutsis, who represent approximately 14% of the population, over the Hutus, who make up about 85% of society (CIA 2009). Following independence in 1962, state bureaucracies remained firmly under Tutsi control until well into the 1990s, despite the initiation of reforms by President Pierre Buyoya in 1989 to open the political system to greater Hutu participation (Dravis 2000). Instead, the effective privatisation of state institutions through clientelism, patronage and rent seeking helped the Tutsi elites to further consolidate their power and marginalise the Hutus also after independence (Ndikumana 1998). The resulting grievances among Hutus about low levels of political inclusiveness can be seen as a pivotal motivation for the incidence of large-scale ethnic violence in Burundi, as demands for fairer treatment repeatedly degenerated into forceful confrontations between Hutu challengers and Tutsi-dominated government authorities (cf. Ngaruko and Nkurunziza 2005).

Also in Sri Lanka, grievances relating to levels of political inclusiveness seem to have contributed to the violent ethnic conflict between Tamil insurgents and the Sinhalese-dominated government authorities. Formerly Ceylon, Sri Lanka gained independence from British colonial rule in 1948. The Sinhalese represent the country's largest ethnic group with approximately 74% of the population, followed by 18% Tamils – consisting of 6% Indian Tamils and 12% Sri Lankan Tamils – and 7% Muslims; Tamils are the majority in Sri Lanka's north and east where the number of conflict-related fatalities has been highest, while there is significant ethnic intermixing in Colombo and parts of the south (Bloom 2003; ICG 2006a). Under British colonial rule, the Tamils had experienced preferential treatment in terms of educational, economic and employment opportunities, including the state as well as the private sector (Bloom 2003). Following independence, the passage of the Sinhala Only Act in 1956, besides ending the status of English as official language, altered this power imbalance by placing the Tamils at disadvantage in obtaining civil service employment. At the same time, in response to violent protests surrounding the

Sinhala Only Act, Prime Minister Solomon Bandaranaike abandoned earlier promises to give Tamils federal autonomy in the Tamil-majority areas (Rudolph 2003). This lack of federal autonomy, together with the first-past-the-post electoral system used for all parliamentary elections before 1989, reduced incentives for interethnic coalitions and contributed to the political marginalisation of the Tamil minority (DeVotta 2005). The resulting grievances among the Tamils about low levels of political inclusiveness are frequently cited as a key motivation for the separatist ethnic civil war in Sri Lanka (see e.g. *ibid.*; ICG 2006a; Rudolph 2003).

Far from being elaborate case studies, the references to Burundi and Sri Lanka nonetheless illustrate the (arguable) relevance of levels of political inclusiveness for the prospects of ethnopolitical (in)stability. ‘Levels of political inclusiveness’ thereby refer to the likelihood with which the opinions and interests of the different ethnic groups in a given society are represented politically, i.e. the likelihood with which they are ‘made present’ in the political decision-making process (cf. Pitkin 1967; Stanford Encyclopedia of Philosophy 2006). Demands for greater political inclusion are thus nothing else than demands for greater political representation in the sense that the voices and interests of all ethnic groups in a society are recognised as politically relevant (cf. Kymlicka 1996). At the core of such demands stands the ideal of ‘representational justice’ where the state responds to all its people and where the interests of no ethnic group are systematically excluded from the political decision-making process (Wimmer 2002).

As illustrated in the Sri Lankan example, levels of political inclusiveness on the one hand depend on the manner in which certain political institutions have been openly codified, i.e. on the design of formal political institutions such as electoral systems or state structures. This is the case because the features of formal political institutions affect the number of possible political winners, i.e. the number of ethnic groups whose representatives²⁶ can hold political offices such as member of parliament or

²⁶ These ethnic group representatives need not belong to an ethnic political party, but can also belong to a non-ethnic political party or run as independent candidates (cf. Birnir 2007). I do not make any further distinction between these different types of ethnic group representation, because it is a) neither practically feasible due to issues of data availability, nor b) theoretically relevant, as one

state minister (see chapter 3 for further details). From this follows that the lower the number of possible political winners provided by the design of formal political institutions, the lower is the number of ethnic groups who can obtain the values of political representation outlined in sections 2.5. to 2.7..

At the same time, it would be erroneous to argue that chances to obtain the values of political representation only depend on the design of formal political institutions. Rather, as the aforementioned role of clientelism and patronage in Burundi has shown, socially entrenched structures of political interactions equally influence levels of political inclusiveness and thereby can contribute to asymmetries between ethnic groups in terms of their political and socioeconomic standing (see chapter 4 for further details).²⁷ This substantiates Lijphart's (1977), Sisk and Stefes's (2005) and Varshney's (2001, 2002) recognition that both types of institution deserve equal attention (see section 1.7.), as grievances relating to levels of political inclusiveness can arise from the design of formal and informal political institutions alike.

2.5. The Intrinsic Value of Political Representation

Previous analyses of institutional incentives for ethnic violence have provided comparatively few insights why giving greater political representation to ethnic groups should have conflict-reducing effects. For example, neither Cohen (1997) nor Reilly (2001) (see section 1.6.) present a substantive explanation why being represented politically might be such a desirable goal for ethnic groups. Instead, Cohen (1997) relies on the simple acknowledgement that political representation increases the likelihood with which ethnic groups can alter the ethnic status quo

can assume that levels of political inclusiveness equally affect all of the aforementioned types of ethnic group representative.

²⁷ Of course the design of formal and informal political institutions inevitably affects the political inclusion of a variety of social groups, not only ethnic ones. While it would thus be interesting to ask whether the impact of institutional design on levels of political inclusiveness might lead to grievances and possibly violent conflict also along e.g. socioeconomic or gender lines, these questions go beyond the scope of this thesis. Instead, I focus solely on institutional design and the political representation of *ethnic* (as opposed to any other type of social) groups, since ethnicity in particular can 'serve as a formidable instrument of social and political exclusion.' (Cederman and Girardin 2007:175; see also e.g. the analyses by Bertrand 2004, DeVotta 2005, Horowitz 1985, Lijphart 2004 and Wimmer 2002 for further illustration of this point).

through formally institutionalised channels, while Reilly (2001) merely states in a few minor side-comments that the electoral victory of political candidates grants them access to state resources. Both studies thus border on the atheoretical in the sense that they take the desirability of political representation as a given, without elaborating the concrete benefits of political inclusion any further.

To take greater account of the reasons *why* levels of political inclusiveness might be so important, my grievance-based explanation of large-scale ethnic violence clearly identifies three key values of political representation. These values refer to the political recognition of ethnic groups (see this section), the likelihood with which resources and powers are distributed in their favour (section 2.6.), and their perceptions of political, physical and economic security (section 2.7.). Building on core assumptions of the relative deprivation model (see section 2.2.), I will outline in the following paragraphs why political institutions that provide low levels of political inclusiveness – and, as such, reduce the number of ethnic groups that can obtain the values of political representation – are likely to lead to grievances that increase the risk of ethnic civil war.²⁸

To identify the main benefits of political inclusion, it makes sense to distinguish between the intrinsic and instrumental values of political representation. Objects or practices have instrumental value if they help achieve relevant extrinsic ends, i.e. objectives that are important independently of the objects or practices that helped achieve them (Réaume 2000). According to this definition, both sections 2.6. and 2.7. will present instrumental values, as they argue that political representation is valuable to ethnic groups because it helps to affect the distribution of resources and powers, and perceptions of security respectively. Intrinsic values, on the other hand, relate to the worth of objects and practices by themselves. Hence, objects and

²⁸ Two important qualifications ought to be noted briefly: First, for the sake of simplicity, I implicitly assume that the values of political representation outlined below are universally held among all ethnic groups. This assumption is based on purely practical reasons, as it would be impossible for the scope of this thesis to investigate for which ethnic groups it reasonably could be argued that, by and large, political recognition, influence over the distribution of resources and powers, and perceptions of security are no desirable objectives. Second, it would be equally unfeasible to identify precise reference categories for feelings of relative deprivation for particular cases. Hence, I take the existence of such reference categories as a given and will not mention them any further.

practices are intrinsically valuable if they do not merely help to achieve other objectives but if they are considered a relevant good *per se* (ibid.).

The argument that political representation is intrinsically valuable is based on the normative assumption that having ‘voice’ (in the sense of one’s interests being considered in the political decision-making process) is a desirable because intrinsically rewarding experience for all ethnic groups (Bashir and Kymlicka 2008): According to arguments by political philosophers such as Mansbridge (2000) and Kymlicka and Norman (1994), ethnic groups want to make their interests heard and government to respond to them, as it affirms their status as recognised members of a political community. In this view, national unity, widespread understanding of policy implications for different segments of society and enhanced legitimacy of political decisions are constituent parts of the intrinsic value of political representation, as they cannot be achieved independently from the political recognition of the different ethnic groups in a given society (cf. ibid.; Mansbridge 2000; Réaume 2000).

Presumably, political representation is an intrinsic value for all ethnic groups, as quests for political recognition and participation in politically relevant debates have spanned both countries and centuries. They include comparatively recent democracy movements in South Africa, Indonesia, Burma and Zimbabwe as well as longstanding practices of public political discourse in India, China, Japan, the Arab world and different communities in Africa (Sen 2003). Likewise, social movements that invoke the intrinsic value of political representation by equating ‘just’ political representation with the ‘treatment [of all ethnic groups in society] as equally valuable and dignified parts of “the people”’ (Wimmer 2002:4) have emerged as accompaniment of political modernity in a range of societies from Iraq to Mexico and Switzerland (ibid.). The notion that it is an intrinsic value for all ethnic groups in a society to be considered in the political decision-making process is also reflected in the increasing concern of ethnically diverse liberal democracies to grant ethnic minorities special representation rights in order to affirm their political standing (see Kymlicka 1996).

The combination of the two arguments that political representation has intrinsic value for ethnic groups and that the non-fulfilment of certain value expectations gives rise to grievances which – under the ‘right’ set of circumstances (see section 2.2.) – might lead to ethnic violence, results in the first causal mechanism linking political institutions to the prospects of ethnopolitical (in)stability. It states that political representation is intrinsically valuable for ethnic groups, as being ‘made present’ in the political decision-making process is an intrinsically rewarding experience which affirms their status as recognised members of a political community. If formal or informal institutional design systematically reduces the number of ethnic groups who can obtain the values of political representation, grievances are expected to arise among those ethnic groups who feel that their voices and interests are not likely to be considered in the political decision-making process, and who thus perceive a discrepancy between the degree of political recognition they feel entitled to and their political recognition currently guaranteed through political institutions. As a consequence of these grievances, the risk of ethnic violence can be expected to increase.

2.6. The First Instrumental Value of Political Representation

The second causal mechanism linking institutional design to the risk of ethnic violence centres on the first instrumental value of political representation. This value follows from the insight that the features of political institutions and the actions taken within them affect the distribution of resources such as economic wealth or access to information (March and Olsen 1989). These resources in turn contribute to the powers of different political actors, both in terms of the degree to which they can influence political decisions and the extent to which they can induce others to act in a way that benefits the powerholder (*ibid.*).

The likelihood with which the different ethnic groups in a given society can influence the distribution of resources and powers depends on the levels of political inclusiveness provided by both formal and informal political institutions. For

instance, as Pande's (2003) analysis of political reservation in Indian states shows, the (mandated) political representation of minority groups in state legislatures – i.e. in formal political institutions – is positively correlated with improvements in their economic status. This is because group representatives can use their positions within these institutions to influence policy decisions about government spending and resource redistribution in the minority groups' interests (ibid.). Likewise, Fung (2003) points out that the involvement of civil society – an informal political institution – in the political decision-making process contributes directly to the diffusion of policy beneficiaries, as it can give previously underrepresented groups (i.e. groups that might be marginalised within formal political institutions) the opportunity to promote a more equitable distribution of resources and powers. Political representation through either formal or informal political institutions thus helps to achieve tangible gains, as the likelihood that the distribution of resources and powers benefits a given ethnic group is directly linked to the likelihood with which its interests are brought to the political decision-making table.

From this follows that normative claims about representational justice and the desirability of political representation may go beyond the merely intrinsic value of being 'made present' as a recognised member of the political community. Rather, whether a group's interests are considered in the political decision-making process becomes a question about principles of equality and justice also in more pragmatic terms: Giving ethnic groups a recognised voice in politics not only affirms their membership in a political community. It also gives them the opportunity to affect the distribution of resources and powers in their favour.

The combination of this insight about the first instrumental value of political representation with the argument that the non-fulfilment of certain value expectations gives rise to grievances which – under the 'right' set of circumstances (see section 2.2.) – might lead to ethnic violence, results in the second causal mechanism linking political institutions to the prospects of ethnopolitical (in)stability. It states that political representation has instrumental value for ethnic groups, as it increases the likelihood with which they can affect the distribution of resources and powers in

their favour. If formal or informal institutional design systematically reduces the number of ethnic groups who can obtain the values of political representation, grievances are expected to arise among those ethnic groups who feel that they have comparatively few chances to influence policy decisions which affect their socioeconomic standing, and who thus perceive a discrepancy between the influence over the distribution of resources and powers they feel entitled to and the degree of influence currently guaranteed through political institutions. As a consequence of these grievances, the risk of ethnic violence can be expected to increase. These arguments illustrate the potential overlap of greed and grievance factors (see also section 2.3.), as – following the first instrumental value of political representation – grievances relating to low levels of political inclusiveness can be seen as a product of the strife for resource access. This point will be elaborated in more detail in the following section which presents the second instrumental value of political representation.

2.7. The Second Instrumental Value of Political Representation

The third and final causal mechanism linking political institutions to the risk of ethnic violence is based on the implications of the ethnic security dilemma as described by Saideman (1998) and Saideman et al. (2002). It identifies a second instrumental value of political representation which centres on the recognition that having voice in the political decision-making process (and thus a possible say over its outcomes) has a direct impact on the perceptions of security among ethnic groups (Saideman 1998).

The security dilemma has been a central concept in international relations theory for more than 50 years (Roe 2005). It is based on the realist assumption that the condition of anarchy in the international system leads to a competition for power between states that are trying to increase their security (Posen 1993). The main tenets of the security dilemma can be summarised as follows: Where there is no international sovereign to protect it, State A will take measures to strengthen its

position within the international system in order to remain secure and autonomous. However, as it may be difficult, if not even impossible, for other states to distinguish whether State A's actions are offensive or defensive, State B is likely to perceive State A's measures as threatening, even if there are no expansionist inclinations (Jervis 1978). State B therefore will respond by building up its own strength, leading to a spiral of action and reaction in which the behaviour of each side is seen as threatening (Roe 2005). The security dilemma describes this spiral where 'many of the means by which a state tries to increase its security decrease the security of others' (Jervis 1978:169), so that 'what one does to enhance one's own security causes reactions that, in the end, can make one less secure.' (Posen 1993:104)

Posen (1993) has famously taken the security dilemma from international relations theory and applied it to the study of ethnic conflict. His concept of an ethnic security dilemma states that the aforementioned spiral of action and reaction does not just affect relations between states, but equally occurs between proximate ethnic groups when central authority collapses in multiethnic empires. It occurs, according to Posen, because the process of imperial collapse produces a situation of emerging anarchy, where the absence of a sovereign (i.e. the absence of an effective, common central government) compels the groups that used to constitute the multiethnic empire to provide for their own security (ibid.; Roe 2005). The three elements on which Posen puts particular emphasis are: a) the fact that the newly independent groups won't be able to distinguish clearly between offensive and defensive capabilities of neighbouring groups, and are likely to perceive them as a threat; b) conditions such as the existence of 'ethnic islands' (i.e. isolated ethnic groups that are surrounded by another group's people) which might create incentives for a preventive war; and c) windows of vulnerability and opportunity that originate from the uneven progress of state formation among the newly independent ethnic groups (Posen 1993). Overall, Posen's model of an ethnic security dilemma is best suited to explain incentives for preventive ethnic wars against what is perceived to be a threatening neighbour (Roe 2005). Although path-breaking in introducing the security dilemma to the study of ethnic conflict, there are, however, several shortcomings in Posen's (1993) argument.

First, Posen's (1993) example of the Croat-Serb conflict following Yugoslavia's disintegration fails to arrive at any explicit conclusion regarding the intentionality of the conflicting parties (Roe 2005): Posen does not offer any substantive evidence whether Croats and Serbs were indeed security-seekers or whether their perceptions of threatening behaviour were based on incorrect assumptions (*ibid.*). Second, Posen fails to consider that anarchy might be a consequence rather than a cause of the run-up to war, and that the build-up of arms by the Yugoslav republics might have been a factor which contributed to the collapse of the federal government rather than a reaction to it (Kaufman 2001). Finally, and most importantly, Posen's arguments apply to a rather limited number of cases: As he focuses explicitly on the process of imperial collapse, he completely omits the state and existing authority from his considerations, rendering his approach less useful for the analysis of existing states or of empires before they disintegrate (Saideman 1998).

Saideman (1998) and Saideman et al. (2002) respond to this latter criticism by offering a modified version of the ethnic security dilemma. According to these authors, the ethnic security dilemma can emerge in ethnically diverse societies even if there is an effective, common central government in place. Their argument starts with the idea that the greatest potential threat to ethnic groups is the government of the country they reside in, as the state's resources can be used to inflict serious harm on any given ethnic group, going as far as genocide (Saideman 1998; Saideman et al. 2002). As the state may be biased toward or against them, and following the logic of 'if my group does not capture the state, someone else's will' (Saideman 1998:135), the different ethnic groups in society will aim to make the state their ally: In the search for security, they will either engage in a competition for control of the existing state, or try to secede to control their own state. But because one group's attempts to control the state will be perceived as threatening by others, they will equally compete to influence or even control the government, leading to a spiral of action and reaction which causes all to be worse off, as it 'creates the risk that a relatively neutral or harmless government will fall into the hands of one group that could dominate the others.' (Saideman et al. 2002:107)

Saideman's (1998) and Saideman et al.'s (2002) version of the ethnic security dilemma is of much greater use for this thesis than Posen's (1993) original model, as it takes the relevance of the existing state into account. The key insight that derives from Saideman's (1998) and Saideman et al.'s (2002) analyses is that perceptions of security among ethnic groups depend on their access to the state, i.e. whether they have 'some level of representation' (Saideman et al. 2002:107) in the political decision-making process. According to Saideman (1998), political representation makes ethnic groups feel more secure in the political, physical and economic dimension: Political representation provides ethnic groups with feelings of enhanced political security, as it improves their ability to influence policy decisions, including those that might be potentially harmful to them. Consequently, ethnic groups whose interests are excluded from the political decision-making process are likely to feel less politically secure, as they have no say over government policies that the ethnic groups in power might use against them (*ibid.*).

Having political security, in turn, directly affects how physically secure (relating to a group's survival) and economically secure ethnic groups feel (*ibid.*): Because political representation increases the likelihood with which ethnic groups can influence government policies,²⁹ it increases their chances to avert or attenuate decisions that might threaten their physical security. Political representation also contributes to perceptions of economic security, as it increases the likelihood with which an ethnic group can influence economic policies and the distribution of resources in its favour (see also section 2.6.).

In sum, political representation derives its second instrumental value from the fact that it helps ethnic groups feel politically, physically and economically more secure. The third and final causal mechanism linking political institutions to the risk of ethnic violence combines this insight with the argument that the non-fulfilment of certain value expectations gives rise to grievances which – under the 'right' set of circumstances (see section 2.2.) – might lead to ethnic violence. It states that political

²⁹ How high exactly this likelihood is, depends on a variety of additional factors, such as the number of representatives acting on behalf of an ethnic group or the types of resources at their disposal. For reasons outlined in section 1.2., I will not consider these additional factors any further.

representation has instrumental value for ethnic groups, as it increases the likelihood with which they can influence potentially harmful government policies and, in doing so, makes them feel more secure. If formal or informal institutional design systematically reduces the number of ethnic groups who can obtain the values of political representation, grievances are expected to arise among those ethnic groups who feel that their chances to shape state decisions are comparatively low, and who thus sense a discrepancy between the degree of political, physical and economic security they feel entitled to, and the degree of (perceived) security currently guaranteed through political institutions. As a consequence of these grievances, the risk of ethnic violence can be expected to increase.

Just like the first, also the second instrumental value of political representation illustrates the potential overlap of greed and grievance factors: According to the arguments outlined in this and the preceding section, grievances relating to low levels of political inclusiveness are at least partly a product of the strife for resource access (see section 2.6.) and economic security (see this section). At the same time, this is far from saying that ethnic contenders are mainly driven by greed: As has been highlighted in the preceding sections, political representation is a valuable good for ethnic groups beyond the purely economic dimension, as it equally affirms their status as recognised members of a political community (see section 2.5.), and affects their perceptions of physical and political security alike (see this section). Together with the general shortcomings of theoretical frameworks that focus primarily on greed factors to explain violent intrastate conflicts (see section 2.3.), the recognition that a greed-based model would not be able to grasp all the values of political representation further supports my choice of a grievance-based explanation.

2.8. Conclusion: Institutional Incentives for Ethnic Violence

My grievance-based explanation of large-scale ethnic violence centres on the identification of three key values of political representation. They relate to the political recognition of ethnic groups (see section 2.5.), their likely influence over the

distribution of resources and powers (see section 2.6.), and their perceptions of political, economic and physical security (see section 2.7.). I thus argue that political representation provides welfare, power and interpersonal values alike (see section 2.4.), as it contributes directly to the physical well-being and self-realisation of ethnic groups, their ability to influence potentially harmful actions against them and their psychological satisfactions as recognised members of a political community.

Formal or informal political institutions which provide comparatively low levels of political inclusiveness systematically reduce the number of ethnic groups who can obtain the values of political representation. In doing so, they contribute to perceived or real asymmetries between ethnic groups in terms of their political and socioeconomic standing, and can be the source of a variety of social, political or economic grievances. Consequently, emotions of anger and resentment are expected to arise among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low, and who thus perceive a discrepancy between the degree of political recognition, likely influence over the distribution of resources and powers, and promise of political, physical and economic security they feel entitled to, and the degree of these conditions currently guaranteed through their country's institutional design. As a consequence of these grievances, the risk of ethnic violence can be expected to increase.

Chapters 3 and 4 will build on the causal mechanisms outlined in this chapter in order to highlight the relevance of Ethno-Embedded Institutionalism (see chapter 1). Specifically, Chapter 3 will focus on the first dimension of Ethno-Embedded Institutionalism by highlighting the relevance of institutional combinations for the risk of large-scale ethnic violence (see also section 1.6.). Chapter 4, on the other hand, will refer to the second dimension of Ethno-Embedded Institutionalism by using corruption as a prime example of an informal political institution that can be expected to affect the prospects of ethnopolitical (in)stability (see also section 1.7.).

Chapter 3: The Relevance of Institutional Combinations

3.1. Introduction: The First Dimension of Ethno-Embedded Institutionalism

So far, there is no well-known study within the institutional incentives approach to ethnic violence which explicitly asks for the interaction effects of political institutions on the prospects of ethno-political (in)stability (see section 1.6.). In response to this gap in the academic debate, this chapter presents the first dimension of Ethno-Embedded Institutionalism which highlights the relevance of institutional combinations for the risk of ethnic civil war. In contrast to chapter 4, the following sections thereby deal exclusively with formal political institutions, i.e. political institutions that are laid down in writing and guaranteed through the sanctioning mechanisms of the state (Lauth 2000; see also section 1.3.). Specifically, this chapter focuses on different types and combinations of form of government, electoral system for the legislature and state structure. I focus on these specific institutions, as previous research has identified them as being of particular relevance for the prospects of ethno-political (in)stability (Belmont, Mainwaring and Reynolds 2002).

My central argument in this chapter states that the lower the number of possible political winners provided by a given institutional combination, the more likely it is that this combination will increase the risk of ethnic violence (see section 3.7.). Consequently, in particular the combination of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure can be expected to heighten the risk of ethnic civil war (see *ibid.*). To illustrate the relevance of this argument and present the first dimension of Ethno-Embedded Institutionalism, the following sections will

- summarise the main assumptions that underlie this chapter (section 3.2.);
- explain why I mainly focus on formal political institutions and their combinations in ‘basically open’ regimes (section 3.3.);
- outline the expected impact of presidentialism (section 3.4.), majoritarian electoral systems for the legislature (section 3.5.) and unitary state structures

(section 3.6.) – when treated as separate entities – on the risk of ethnic civil war; and

- highlight the relevance of institutional combinations for the prospects of ethnopolitical (in)stability (section 3.7.).
- Section 3.8. will conclude this chapter by summarising its central points.

3.2. The Theoretical Underpinnings of this Chapter

Building on the grievance-based explanation of violent ethnic conflict outlined in chapter 2, I put particular emphasis on formal political institutions which are based on winner-takes-all principles, i.e. presidential forms of government, majoritarian electoral systems for the legislature and unitary state structures. These institutions systematically reduce the number of ethnic groups who can obtain the values of political representation and therefore can be expected to give rise to grievances which are likely to increase the risk of large-scale ethnic violence.³⁰

Political institutions that rely on winner-takes-all principles tend to concentrate gains from the electoral competition for a political office, and lead to a clear juxtaposition of those who are included and those who are excluded from the political decision-making process. In the case of presidentialism and a majoritarian electoral system for the legislature, political competitors need to win a plurality or majority (however specified)³¹ of votes in order to win a political office. In the case of a unitary state structure, whoever wins control over the central government automatically wins

³⁰ To avoid any of the misunderstandings which are likely to arise when one makes more general arguments about the effects of institutional design (cf. Linz 1990b), it should be noted that none of this is to say that certain types or combinations of political institutions *ipso facto* increase the risk of ethnic violence. Due to nuances in the design of forms of government, electoral systems for the legislature and state structures which cannot be addressed in more detail in this analysis (see below) and the relevance of factors aside from institutional design to explain the incidence of ethnic wars (see section 2.2.), there are bound to be exceptions to the arguments presented in this chapter. It is thus important to point out that I seek to identify *general trends* regarding the effects of institutional combinations on the prospects of ethnopolitical (in)stability. The relevance of further, more nuanced factors ought to be investigated in separate case study analyses.

³¹ Different plurality or majority specifications include for instance absolute or qualified majority systems, majoritarian preferential systems and plurality or majority systems with vote distribution requirements.

control over all noncentral governments (Lijphart 1999). Those groups who overcome these thresholds will gain political representation; those who don't remain unrepresented (see e.g. Cohen 1997; Lijphart 1999; Przeworski 1991). In this manner, political gains and losses become absolute, and turn political competition into a zero-sum game (cf. Linz 1990a). Due to these high thresholds for political gains, political institutions that rely on winner-takes-all principles decrease levels of political inclusiveness and heighten the stakes of political competition (cf. Cohen 1997).

Parliamentary and mixed forms of government, proportional and mixed electoral systems, and federal and mixed state structures, on the other hand, are institutions which disperse political gains. In contrast to institutions that are based on winner-takes-all rules, they offer multiple points of political victory and decrease thresholds for political representation (cf. *ibid.*; Lijphart 2004). They achieve this by establishing multiple levels of government (in the case of federalism and mixed state structures), distributing political offices by proportion (in the case of proportional and, at least partly, mixed electoral systems for the legislature) and overcoming the concentration of political power in a one-(wo)man-executive (in the case of parliamentary and mixed forms of government). Hence, unlike winner-takes-all rules, gain-dispersing³² institutions structure political competition in such a way that political gains become relative, as they encourage these gains to be distributed among multiple competitors. This increases the number of possible political winners, thus heightens levels of political inclusiveness and decreases the stakes of political competition (cf. Cohen 1997).

The comparison of winner-takes-all and gain-dispersing institutions is not meant to imply that the latter *guarantee* that the interests of all ethnic groups within a given

³² It may be worth emphasising that I use the term 'gain-dispersing institutions' (i.e. political institutions that disperse political gains and power) to describe all formal political institutions that are not based on winner-takes-all rules. This includes both proportional institutions (i.e. parliamentary forms of government, proportional electoral systems for the legislature and federal state structures) which are sensitive to proportions and 'distribute policy-making power relative to some demographic or political principle' (Cohen 1997:610), and mixed institutions (i.e. mixed forms of government, mixed electoral systems for the legislature and mixed state structures) which combine majoritarian and proportional elements.

society will be represented politically. Also under gain-dispersing institutions, certain ethnic groups may experience political exclusion or marginalisation. This might for instance be the case for groups whose representatives are unable to overcome the effective electoral thresholds under proportional electoral systems for the legislature (cf. Boix 1999; Lijphart 1999) or for minorities within a federal unit who lack the numerical strength to be represented within the federal unit's formal political institutions (cf. Horowitz 1985; Sisk 1996). The important point, however, remains that gain-dispersing institutions, compared to winner-takes-all institutions, nonetheless decrease the number of possible political losers, as they lower the thresholds for political representation and encourage the distribution of political gains among multiple competitors (see also sections 3.4. to 3.6.).³³

A few qualifications regarding this chapter's analytical scope ought to be highlighted at this point. As becomes evident in the subsequent paragraphs, most of these qualifications are based on questions of data availability, and therefore should not be seen as theoretical weakness of Ethno-Embedded Institutionalism. Instead, they point to wider methodological issues that go beyond the aims of this thesis.

First, I do not differentiate in this chapter how the effects of institutional design might vary depending on the cleavage structure, the political salience of ethnicity or the degree of ethnic diversity within a given society. A number of criticisms could be raised against this lack of differentiation. They include for instance: a) that the conflict-mitigating effects of certain types of political institutions might be enhanced if ethnic and other cleavages crosscut (see Lijphart 1977); b) that it is methodologically questionable to assess the effects of institutional design on the prospects of ethnopolitical (in)stability in countries where ethnicity hardly plays a role in politics anyway (see Reilly 2001); and c) that the establishment of majoritarian political institutions is more likely to lead to the permanent exclusion of

³³ I intentionally do not argue that the main alternative to winner-takes-all institutions are power-sharing arrangements which mandate a predetermined number of ethnic group representatives for specific offices. Such types of assured representation should not be seen as 'one-size-fits-all' solution to lower the risk of ethnopolitical instability, as – depending on a country's political context – they might provide little incentives for political moderation and interethnic cooperation (Rothchild and Roeder 2005b; Sisk 1996).

certain ethnic groups if one ethnic group represents a clear majority within a given society, rather than if there are many groups of which none makes up more than 50% of the electorate (see Horowitz 1985, 2002).

While these may be valid criticisms to raise, I unfortunately cannot address them any further, for purely practical reasons: So far, there is no data suitable for the statistical part of this analysis which measures either cleavage structure³⁴ or political salience of ethnicity in different countries and across time.³⁵ Moreover, I intentionally do not test the possible interaction effects between degrees of ethnic diversity and political institutions in my statistical analysis, as ethnic fractionalisation as well as ethnic polarisation indices (in their current format) are rather limited in scope and hence might lead to unreliable results. Their main limitations include the fact that neither ethnic fractionalisation nor ethnic polarisation indices measure the political salience of ethnicity (see footnotes 12 and 35) and that, so far, there is no comprehensive ethnic fractionalisation or ethnic polarisation index which is sensitive to time (i.e. that depicts changes in the ethnic composition of different societies over a certain number of years).

The second qualification regarding this chapter's analytical scope is that I can consider only a limited number of factors that may counterbalance or reinforce the gain-dispersing or winner-takes-all principles on which different political institutions are based. Factors which I will consider further in my analysis include the use of communal rolls, seat reservations (see section 6.4.) and broad-based electoral formulas for the presidency (see section 3.4.), as data on these institutions are relatively easy to obtain. Seat reservations and communal rolls may help to countervail the winner-takes-all principles on which majoritarian electoral systems for the legislature are based (cf. Norris 2008; Reynolds 2005), while a broad-based

³⁴ Notably, Selway (2011) created a new dataset which contains information on the 'crosscuttingness' of cleavages in 128 current countries (plus some selected provinces and former countries). While this unprecedented attempt to capture cleavage structures is in itself impressive, it is, however, unsuitable for this thesis due to certain questionable assumptions that underlie Selway's (2011) dataset. They include for instance the assumptions that group categories within cleavages are mutually exclusive and that all cleavages are of equal political salience (ibid.).

³⁵ As mentioned in footnote 12, ethnic fractionalisation or polarisation indices do not measure the degree to which political interests are organised along ethnic cleavages.

electoral formula for the presidency arguably can counterbalance the winner-takes-all principles that underlie presidential forms of government (Horowitz 1991). An example for such a broad-based electoral formula for the presidency is the requirement of Nigeria's 1979 Constitution that the successful presidential candidate had to win at least 25 per cent of the votes in thirteen of Nigeria's nineteen states in addition to a plurality – or, should there be only two presidential candidates, a majority – of votes nationwide (*ibid.*).

At the same time, however, there are a number of additional factors that may counterbalance or reinforce gain-dispersing or winner-takes-all principles which I cannot consider any further in this analysis. For instance, the fact that proportional electoral systems tend to lower electoral thresholds compared to majoritarian and mixed electoral systems, might become irrelevant if the representatives of certain ethnic groups are disadvantaged at the party and candidate registration, recruitment or campaigning stages (Norris 2008). Likewise, the degree of proportionality of any type of electoral system is influenced by factors such as electoral district magnitude or the size and spatial distribution of voters for different parties (Rose 1984).

Unfortunately, however, I cannot take these factors into greater account, as there is no easily available data for my large-N analysis (see chapters 5 and 6) which would depict advantages or disadvantages for ethnic group representatives at the party and candidate registration, recruitment or campaigning stages. Likewise, I do not pay any further attention to electoral district magnitude or the size and spatial distribution of the voters for different parties, as it can be difficult to find data for the latter (*cf.* Rose 1984) and challenging to calculate district magnitude in systems with two or more tiers (see Gallagher and Mitchell 2008). Also on a theoretical level, similarly to authors such as Golder (2005), Massicotte and Blais (1999) and Norris (2008), I am more interested in the underlying (winner-takes-all or gain-dispersing) mechanics on which formal political institutions are based, and less in contextual factors (such as district magnitude) which influence their outcomes. Hence, although I explicitly acknowledge that the precise number of political winners and losers under any institutional design ultimately depends on a variety of additional factors apart from

whether political institutions are based on winner-takes-all or gain-dispersing principles, I will not consider these contextual factors any further.

The third qualification regarding this chapter's analytical scope refers to the fact that I distinguish forms of government, electoral systems for the legislature and state structures into three subtypes each without making further differentiations (cf. also e.g. Przeworski 1991). This necessarily neglects finer details, such as for instance the difference between polycommunal, non-communal and mixed federalism (see Sisk 1996)³⁶ or the numerous variations among presidential, parliamentary and mixed systems (see Elgie 1997; Shugart and Carey 1992).³⁷ Thus, while I am fully aware that there is a vivid academic debate about the potential benefits and perils of different types of federal design (see e.g. Erk and Anderson 2009; Roeder 2009; Sisk 1996), I do not consider the effects of these different types of federalism any further, due to the lack of easily available, suitable data for the statistical part of this thesis which would distinguish polycommunal, non-communal and mixed federal structures. Instead, I use the broader assumption shared by authors such as Bermeo (2002), Cohen (1997) and Saideman et al. (2002), that the precise type of federal structure is secondary to the fact that federations, however designed, increase opportunities of political representation (and thus the number of possible political winners) by establishing multiple levels of government. Moreover, using a relatively parsimonious typology of forms of government (as well as electoral systems and state structures), with only three subtypes each, is preferable over using one with further differentiations, as it provides for greater analytical clarity and 'attract[s] greater consensus in the research literature.' (Norris 2008:148)

³⁶ Territorial divisions in polycommunal (aka ethnofederal) state structures closely correspond to ethnic groups, i.e. federal units are understood to represent geographically concentrated communities (Bunce and Watts 2005). Territorial divisions in non-communal federal countries, on the other hand, have no ethnic base (Duchacek 1973 cited in Sisk 1996). Mixed federal structures combine some territorial units that have an ethnic base with others that do not (ibid.).

³⁷ Shugart and Carey (1992) emphasise the partly significant differences between popularly elected presidents in terms of their legislative and nonlegislative powers, e.g. regarding their decree and budgetary powers or authority over the cabinet. Elgie (1997) highlights the great diversity of parliamentary and semi-presidential regimes by distinguishing them into six overarching models based on power relations within the executive branch. These models include monocratic government, collective government, ministerial government, bureaucratic government, shared government and segmented government.

The final qualification regarding this chapter's analytical scope is that my classification of forms of government, electoral systems for the legislature and state structures is based exclusively on the manner in which they have been openly codified in 'constitutional clauses and laws, but also standing orders and norms actionable at law.' (Lauth 2000:24; see also the EEI Dataset Codebook in Appendix III) Of course, actual political practices may deviate from formal regulations and hence put codification-based typologies of political institutions into doubt (cf. Elster 1997). However, due to issues of both data availability and comparability with other studies, there would be little benefit in coding variables on the *de facto* rather than the *de iure* workings of formal political institutions.

3.3. Institutional Design in 'Basically Open' Regimes

Following on the previous point, there is, however, one important exception to the lack of a distinction between the *de iure* and *de facto* workings of formal political institutions: Both the classification of presidential, parliamentary and mixed forms of government, and of majoritarian, proportional and mixed electoral systems for the legislature presuppose the democratic character of a political system. These categories become meaningless under an autocratic framework, as it constrains the legitimate and lawful functioning of these institutions (cf. Diamond and Morlino 2004), and hence impedes an adequate assessment of their effects on the risk of ethnic civil war. For instance, even though North Korea employs a majoritarian electoral system for the legislature according to its 2006 Electoral Law (IPU 2011), the lack of free and fair electoral competition between political candidates implies that the formal definition of the electoral system has no real bearing on the composition of the Supreme People's Assembly (cf. Freedom House 2011). Likewise, Rwanda qualifies as a mixed form of government according to its 2003 Constitution.³⁸ Yet, due to a ban on the main opposition party and deficiencies in horizontal accountability, political power has been clearly concentrated in the hands of the president (Polity IV Project 2009).

³⁸ See section 3.4. for the definition of mixed forms of government.

For these reasons, it is necessary to distinguish between the *de iure* establishment of a presidential, parliamentary or mixed form of government and a majoritarian, proportional or mixed electoral system for the legislature on the one hand, and whether the operation of these institutions is *de facto* constraint by an autocratic framework on the other. Consequently, my arguments about the likely effects of these institutions on the risk of ethnic violence are conditional on these institutions' existence in a 'basically open' political setting. This qualification does not apply to the distinction of different types of state structure, as all of its categories (i.e. federal, unitary and mixed) can exist under both a democratic and autocratic framework (cf. Saideman et al. 2002). Examples of autocratic regimes in which power has been formally and practically divided between different levels of government include, amongst others, federalism in the former Yugoslavia and the United Arab Emirates (ibid.; Elazar 1991).³⁹

As will be elaborated in more detail in section 5.4., I use the term 'democracy' as synonym for political regimes which are 'basically open' in the sense that their democratic features outweigh their autocratic ones (cf. Kurtz 2004). Conversely, I classify political regimes as autocratic if they are 'basically closed' in the sense that their autocratic features prevail over their democratic ones. My dichotomous use of the terms 'democracy' and 'autocracy' admittedly could be criticised on the grounds that it 'lumps together countries with very different degrees of democracy [or autocracy]' (Bollen and Jackman 1989:612) and takes little account of the prevalence of so-called hybrid regimes or anocracies which combine both democratic and

³⁹ Of course it could be questioned how far any non-democracy may be described as politically decentralised, since autocracies might 'assign decision-making powers to regional legislatures in principle, [but] in practice ... infringe on the jurisdiction of these legislatures, flout the legislation they produce, and install regional politicians that do not challenge the national government's authority.' (Brancati 2006:652) In response to this point, it is important to recognise that the association between democracy and political decentralisation (specifically in the form of federalism) is a common, but not an essential one (Saunders 1995). For instance, the federal state structure of the former Soviet Union created meaningful opportunities for specific minorities to realise their political aspirations (Roeder 1991), while several autocratic regimes in Latin America prior to the third wave of democratisation strengthened subnational governments clearly beyond mere window-dressing (Eaton 2006). I therefore assume that federal and, to a lesser degree, mixed state structures in both democratic *and* autocratic settings can increase the number of possible political winners compared to unitary state structures. To address potential criticisms against this assumption, I will include a brief test in chapter 6 to see whether the effects of different state structures on the risk of large-scale ethnic violence change if they are only identified in countries whose political regimes are 'basically open' (cf. Kurtz 2004).

autocratic features (see e.g. Carothers 2002; Diamond 2002; Mansfield and Snyder 1995). Ultimately, however, it remains an inconclusive debate whether it is more appropriate to regard political regimes as being located on a continuous scale of democracy (see e.g. Bollen and Jackman 1989), or as bounded wholes which can be meaningfully classified into ‘either-or’ categories (see e.g. Alvarez et al. 1996; Sartori 1987, 1991). In a sense, it therefore falls to the judgement of the individual researcher and her specific analytical aims to choose whether a dichotomous or graded distinction of political regime types may be more suitable (cf. Collier and Adcock 1999). For the sake of simplicity, I prefer a dichotomous distinction.

On the basis of these specifications, the following sections will outline the features and expected effects of different formal political institutions and their combinations on the risk of large-scale ethnic violence. For reasons outlined in section 3.2., I thereby will pay particular attention to those institutions which rely on winner-takes-all principles, i.e. presidential forms of government (section 3.4.), majoritarian electoral systems for the legislature (section 3.5.) and unitary state structures (section 3.6.).

3.4. Presidentialism and the Risk of Ethnic Violence

The merits and perils of presidential forms of government have been studied extensively concerning their impact on the prospects to establish and maintain stable democracy (see e.g. Cheibub 2007; Linz and Valenzuela 1994; Mainwaring and Shugart 1997b; Norris 2008; Przeworski 2000). At the same time, however, surprisingly little has been written on how presidentialism might affect the risk of ethnic violence (Belmont, Mainwaring and Reynolds 2002). Exemplary for this predominant focus on questions of democratic rather than ethnopolitical stability is the seminal debate that has followed Linz’s (1990a, 1994) identification of six main perils of presidentialism. These perils include: a) the potential personalisation of political power in a president who, without being dependent upon parliamentary confidence, not only holds executive power but also serves as symbolic head of state;

b) the democratic legitimacy of both the president and the legislature through independent elections, which might complicate the solution of conflicts between the two institutions; c) the temporal rigidity of the presidential office which makes adjustments to unexpected political developments difficult; d) the zero-sum character of presidential elections which is likely to lead to the spread of a political winner-takes-all mentality; e) the risk of political polarisation among politicians as well as the electorate that follows from this winner-takes-all mentality; and f) the weakening of political parties, as presidents in presidential forms of government, unlike prime ministers in parliamentary ones, do not depend on the allegiance of their party or majority coalition to stay in power (ibid.).

Although several statistical analyses support Linz's (1990a, 1994) core argument that presidential systems, on balance, tend to be more unstable democracies than parliamentary ones (see e.g. Cheibub 2007; Przeworski 2000), his reasoning remains contested to date. Among the earliest and most pronounced critics of Linz's arguments is Horowitz (1990) who *inter alia* points out that also in parliamentary systems political power might become personalised, and that the possibility to remove the government in the middle of its term need not be an inherent advantage of parliamentary systems but, especially when coalitions are unstable, can itself foster political crises (ibid.).

While it would go beyond the scope of this thesis to explore the Linz/Horowitz debate in more detail, it is interesting to note that both authors recognise the impact presidentialism may have in fostering (Linz 1994) or mitigating (Horowitz 1990) interethnic tensions. Neither of these two authors, however, puts issues of ethno-political (in)stability at the centre of their analyses. As aforementioned, this is indicative of a broader tendency within the academic debate to pay greater attention to the effects of different forms of government on the prospects of democracy rather than on the risk of ethnic violence. By highlighting the often understated relevance of forms of government for the risk of ethnic civil war, my arguments in this section

thus address a further weakness of the institutional incentives approach to ethnic violence.⁴⁰

Before outlining the arguable effects of presidentialism on the prospects of ethnopolitical (in)stability in more detail, it should be noted that there is a variety of competing proposals about how to define presidential, parliamentary and mixed forms of government (see e.g. Linz 1994; Sartori 1997; Stepan and Skach 1994). For the purpose of this thesis, I rely on the relatively unambiguous classification by Cheibub (2007) which builds on the question ‘whether the government can be removed by the assembly in the course of its constitutional term in office’ (Cheibub 2007:15): Systems in which the government cannot be removed by the legislature are presidential. Systems in which the government can only be removed by the legislature are parliamentary. And systems in which either the legislature or the independently (i.e. directly or indirectly) elected president can remove the government are mixed (ibid.).⁴¹ Distinguishing different forms of government in this manner avoids the potential pitfalls of alternative conceptualisations, such as the ambiguities that can arise when defining presidential forms of government with a reference to the popular election of the head of government (e.g. Shugart and Carey 1992) or the extent of the president’s political powers (e.g. Sartori 1997). Cheibub’s (2007) classification criteria for instance make clear that Israel had a parliamentary form of government between 1996 and 2001 (as the entire government could be removed by the legislature) even though the prime minister as head of government was popularly elected, and that Venezuela prior to 1999 had a presidential form of

⁴⁰ If one were to rank-order forms of government, electoral systems for the legislature and state structures according to the attention they have received in the academic debate on institutional incentives for ethnic violence, electoral systems for the legislature easily would take first place, as they are frequently referred to as key institutional choice in ethnically diverse societies (see e.g. Horowitz 2002; Lijphart 2004; Reilly 2001). State structures would follow comfortably on second place, as academics and policy-makers have paid ‘surprisingly favourable attention’ (Roeder 2009:203) to federal and other territorial autonomy arrangements as a means to reduce the risk of violent ethnic conflict (see e.g. Bermeo 2002; Horowitz 1991; Wolff 2009). Forms of government, however, would lag behind on third place, as – despite some relevant insights into the effects of parliamentarism, presidentialism and mixed forms of government on the prospects of ethnopolitical (in)stability (see e.g. Alonso and Ruiz 2005; Lijphart 2004; Suberu and Diamond 2002) – they are rarely treated as a pivotal factor in the constitutional setup of ethnically diverse societies.

⁴¹ Mixed forms of government include, without further distinction, semi-presidential (Elgie 1999), semi-parliamentary (Linz 1994), premier-presidential and president-parliamentary (Shugart and Carey 1992) forms of government (cf. also Cheibub 2007).

government (as the government could not be removed by the legislature) even though the president had no constitutionally mandated legislative powers (Cheibub 2007).

Although the institutional incentives approach to ethnic violence has paid comparatively little attention to the role of forms of government (see footnote 40), there is a small but nonetheless relevant pool of insights regarding the possible effects of presidentialism on the risk of ethnic violence. From this pool of insights, five arguments about the presumed merits of presidentialism in ethnically diverse societies stand out in particular: First, an independently – and, specifically: directly – elected presidency is said to enable ethnic groups to gain access to executive power even if they do not hold a majority in parliament (Horowitz 1991), and hence to reduce ‘the stakes of control for any particular institution or office’ (Sisk 1996:54). Put differently, while the likelihood for the different ethnic groups in a given society to obtain executive power under parliamentary forms of government is determined by the number of seats they obtain in parliamentary elections, the independent elections of president and legislature under presidential forms of government arguably offers more chances to be represented politically. According to this argument, not presidentialism but rather parliamentary forms of government with a majoritarian electoral system for the legislature and disciplined parties are based on winner-takes-all principles (Mainwaring and Shugart 1997b).

Second, combined with a broad-based electoral system for the presidency, presidential systems arguably encourage pre-electoral interethnic coalitions, and thus foster norms of negotiation and inclusion (Horowitz 1991). The example which Horowitz applauds in particular is the presidential form of government and broad-based electoral system for the presidency established in the 1979 Constitution of Nigeria (see section 3.2.) which, in his view, has been more conducive to lowering the risk of ethnic civil war than the parliamentary form of government that Nigeria had inherited at independence (Horowitz 1991).

Third, the separation of powers between president and legislature under presidential forms of government presumably ‘allows each to serve as a check on the other, even when the same party dominates both branches’ (Saideman et al. 2002:110), so that ethnic groups have ‘more points within the [political] system to block unfavorable actions.’ (ibid.:111) According to Saideman et al. (2002), the mutual independence of executive and legislature under presidentialism is thus likely to improve perceptions of security specifically among ethnic minorities and hence to reduce the risks for ethnic violence described by the ethnic security dilemma (see section 2.7.), as at least ‘in principle ... only presidentialism allows the parliament to be autonomous from the executive, and even to legislate against the executive’s (the President’s) will.’ (Alonso and Ruiz 2005:5)

Fourth, proponents of presidentialism in ethnically diverse societies have argued that a president, elected by the entire electorate voting as one constituency and in her constitutional status as chief executive, may reduce the risk of violent ethnic conflict by serving as a symbol of national unity (cf. Suberu and Diamond 2002). Finally, a powerful president is said to reduce the risk of ethnopolitical instability, as she may overcome potential political confrontations or deadlocks between representatives of different ethnic groups (see Horowitz 1991).

At first sight, the aforementioned five arguments about the presumed merits of presidential forms of government in ethnically diverse societies might seem relatively convincing. A closer look, however, reveals that each of the aforementioned points is ultimately flawed. To respond to each of the arguable virtues of presidentialism outlined above in reverse order, it is important to note, first, that numerous scholars such as Jones (1995), Mainwaring (1993) and Valenzuela (2004) have highlighted the rather high risk of political deadlocks in presidential forms of government (cf. Cheibub 2007). This clearly puts into doubt Horowitz’s (1991) assumptions about the effectiveness of presidentialism to overcome possible political impasses or gridlocked confrontations between representatives of different ethnic groups. Second, the argument about the president’s function as a symbol of national unity is rather brittle, as it is contingent on the

behaviour of political actors and specifically the president's statesmanship (Sisk 1996). As Suberu and Diamond (2002) point out with reference to the presidential form of government in Nigeria's Second and Third Republic, there is little indication of presidentialism helping to bring members of different ethnic groups closer together, not least due to widespread suspicions among the Nigerian population that whoever becomes president is likely to use their office mainly to the advantage of their own ethnic group.

Third, while the mutual independence between the executive and the legislature under presidentialism in theory might help to improve perceptions of security specifically among ethnic minorities, this argument is flawed, as in practice not all presidential forms of government are based on a clear separation of powers (Alonso and Ruiz 2005). Fourth, as Figure 10 in Appendix I illustrates, Horowitz's (1991) appraisal of presidential forms of government that rely on a broad-based electoral system for the presidency only applies to a rather small number of cases: The two most commonly used types of electoral system for the presidency in countries with a presidential form of government between 1955 and 2007 have been plurality and absolute majority systems (see Figure 10 in Appendix I). Conversely, electoral systems with a vote distribution requirement (as established for instance by Nigeria's 1979 Constitution) have been among the least commonly used presidential electoral systems during the same period of time (*ibid.*). Thus, despite Horowitz's (1991) appraisal of presidential forms of government that rely on a broad-based electoral system for the presidency, attempts to 'soften' the zero-sum character of presidential elections through the use of vote distribution requirements have been very rare indeed. Moreover, even where a broad-based presidential election formula is in place, it may fail to 'de-ethnicise' the presidency, as arguably is the case in Nigeria where presidents continue to be seen as acting mainly in the interests of their own ethnic group (Suberu and Diamond 2002).

Finally, the argument that the independent election of the president under presidential forms of government enhances the chances for the different ethnic groups in a given society to be represented politically is highly questionable, as it

neglects other crucial elements of presidentialism which clearly reflect its reliance on winner-takes-all principles. These elements include the zero-sum character of presidential elections, the temporal rigidity of the presidential office, the non-collegial nature of the executive and the comparatively low frequency of coalition-building.

Both the zero-sum game between the candidates in presidential elections and the temporal rigidity of the presidential office are among the perils of presidentialism highlighted by Linz (1990a, 1994) and listed earlier in this section. The identification of a zero-sum game between presidential candidates refers to the fact that there is only one winner for the presidency in presidential elections and no form of compensation for the losing candidates (*ibid.*; see also e.g. Przeworski 1991). Following the ‘Linzian view’ (Cheibub 2007:7) of presidentialism, the zero-sum character of political competition for executive power in presidential systems is inevitable, as ‘the presidency is occupied by a single person ... [and hence] not divisible for the purposes of coalition formation.’ (*ibid.*:9) The winner-takes-all outcome of presidential elections is thereby exacerbated by the temporal rigidity of the president’s term in office: As the president, once elected, cannot be removed from her office bar through an impeachment, those groups who consider themselves winners and losers of presidential elections are defined for the entire presidential mandate (Linz 1990a, 1994).

Closely related to this is the third reason why presidentialism is evidently based on winner-takes-all principles, namely the non-collegial nature of the executive, i.e. the reliance of presidential forms of government – leaving aside the exceptional case of Switzerland (cf. Norris 2008) – on a one-(wo)man-executive with a purely advisory cabinet (Lijphart 2004). This concentration of executive branch authority in the hands of one individual (the president) creates unfavourable conditions for the formation of broad, meaningful power-sharing executives and further highlights the exclusionary tendencies of presidentialism (Lijphart 2002; Norris 2008; Sisk 1996).

Finally, presidential forms of government are associated with a lower frequency of coalition formation than parliamentary or mixed forms of government (see e.g. Riggs 1997; Stepan and Skach 1994; Valenzuela 2004). Presidentialism has been argued to lack incentives for coalitional cooperation due to the mutual independence of the executive and the legislature, the president's sense of a popular mandate and the aforementioned zero-sum character of presidential elections (cf. Cheibub 2007): The mutual independence of executive and legislature implies that the president does not have to seek support from political parties other than her own while, conversely, political parties are not committed to cooperating with the government even if they join it (cf. *ibid.*). Likewise, the president's independence from the legislature combined with her sense of a popular mandate (due to the nationwide character of presidential elections) might lead her to avoid seeking cooperation and overestimate her ability to govern alone (cf. *ibid.*). Lastly, the zero-sum character of presidential elections is unlikely to foster a climate of (coalitional) cooperation, but on the contrary may intensify competitiveness among political actors (cf. *ibid.*; see also Cohen 1997). Cheibub (2007) challenges these arguments by highlighting that coalition-building in presidential democracies is not generally rare; however, importantly for my argument – and irrespective of what the reasons for this phenomenon might be – also his data analysis shows that coalition-building is indeed less frequent under presidential than under parliamentary or mixed forms of government (see *ibid.*).

In sum, these four elements (i.e. the zero-sum character of presidential elections, the temporal rigidity of the presidential office, the non-collegial nature of the executive and the comparatively low frequency of coalition-building) illustrate that presidential forms of government are clearly based on winner-takes-all principles. According to the grievance-based explanation of ethnic violence outlined in chapter 2, this reliance on winner-takes-all rules can be assumed to be detrimental to the prospects of ethno-political stability, as it systematically reduces the number of possible political winners and hence the number of ethnic groups who can obtain the values of political representation.

By comparison, parliamentary forms of government provide a higher number of possible political winners, as, first, the losing candidates in the competition for executive power are compensated by their role as opposition leaders in parliament (Przeworski 1991). Second, the winner from the competition for executive power can only govern as long as she receives sufficient support from the legislature (*ibid.*). And, third, the cabinet is a collegial decision-making body which provides a more favourable setting for power-sharing executives and coalition-building (Lijphart 2002, 2004). Thus, even where parliamentary forms of government are combined with a majoritarian electoral system for the legislature and disciplined parties (*cf.* Mainwaring and Shugart 1997b), they still create a positive-sum game – and hence stand in contrast to presidentialism’s reliance on winner-takes-all principles – due to the political compensation for losing candidates in the competition for executive power, the temporal flexibility of the government’s term in office and the divisibility of executive power (*cf.* Cheibub 2007; Linz 1990a; Przeworski 1991).

Also mixed forms of government provide a greater number of possible political winners than presidentialism. This is because the government’s responsibility to both the legislature and an independently elected president in mixed forms of government creates less temporal rigidity and greater incentives for coalition-building (*cf.* Cheibub 2007; Shugart and Carey 1992), while there can also be substantial sharing of executive power between the president, prime minister and cabinet (*cf.* Lijphart 2004).

For these reasons, when treated as separate entities (*i.e.* considered outside of specific institutional combinations), presidential forms of government can be expected to increase the risk of ethnic violence compared to both parliamentary and mixed systems.

3.5. Majoritarian Electoral Systems and the Risk of Ethnic Violence

The design of electoral systems for the legislature is frequently referred to as key institutional choice in ethnically diverse societies (see e.g. Horowitz 2002; Lijphart 2004; Reilly 2001). This emphasis on the role of electoral systems for the legislature, although rarely explained in much detail (see *ibid.*), presumably stems from the recognition that the main purpose of legislatures under any democratic form of government – and whatever constitutionally granted functions they might have – is to give ‘voice ... to the diversity of ideological or other partisan divisions in the polity and society.’ (Shugart and Carey 1992:4) From this purpose follows that the electoral rules for the national legislature (i.e. the rules according to which votes are translated into seats) are a basic yet crucial indicator for the representativeness of any political system (cf. *ibid.*; Norris 1997).

Unlike the distinction of forms of government, the definition of different types of electoral system has attracted far less controversy in the academic debate (Sartori 1997). For the purpose of this analysis, I classify electoral systems for the legislature into three main types: majoritarian, proportional and mixed. By moving beyond the traditionally used simple dichotomy of proportional *versus* majoritarian electoral systems, this threefold categorisation allows to account easily also for those countries which employ a combination of majoritarian and proportional electoral formulas (cf. Golder 2005).⁴² Following Golder (2005), I define majoritarian electoral systems as systems that require the winning candidate to obtain either a plurality or majority of the vote. Proportional electoral systems, on the other hand, allocate seats in proportion to a party’s (or candidates’) share of the vote (*ibid.*), while mixed systems employ a mixture of majoritarian and proportional electoral rules (*ibid.*). Unlike Golder (2005), and for the sake of simplicity, I do not classify electoral systems with multiple tiers into a separate category. Instead, following the example of authors such as Massicotte and Blais (1999), I identify these systems as majoritarian, proportional or mixed, depending on the electoral formula(s) used to translate votes

⁴² In line with Golder (2005), my definition of electoral systems for the legislature centres on the type of electoral formula used to translate votes into seats. For reasons outlined in section 3.2., I do not consider other electoral system features such as district magnitude or formal thresholds.

into seats in the different electoral tiers (see also section 5.5.). According to these definitions, majoritarian electoral systems include those that employ either plurality, absolute or qualified majority requirements, such as for instance the first-past-the-post, limited vote and alternative vote (AV) systems (Golder 2004). Proportional electoral systems, on the other hand, include quota and highest average systems using party lists, as well as the single transferable vote (STV) (*ibid.*).⁴³

Following Norris (1997) and Reilly (2002), one can identify two core debates about the effects of electoral system design which are of particular relevance for this thesis. The first debate asks whether majoritarian electoral systems are superior to proportional ones (Norris 1997). The second whether list proportional representation (PR) or preferential electoral systems (such as AV and STV) are more suitable for ethnically diverse societies (Reilly 2002). For reasons outlined below, my main focus will be on the first of these two debates.

Discussions about whether list PR or preferential electoral systems are more suitable for ethnically diverse societies centre on questions whether pre-electoral cooperation or post-election bargains are more likely to encourage interethnic accommodation (Mitchell 2008). In particular consociationalists recommend list PR (typically based

⁴³ Both AV and STV are so-called ‘preferential’ electoral systems. As both systems have been criticised as being ‘confusing’ (Threlfall 2011) or complicated (see Lijphart 2004), it is worth outlining their main features briefly (see Golder 2005; Norris 1997; Reilly 2001, 2002; Reynolds, Reilly and Ellis 2008 for the following points): Under AV systems, candidates are presented in single-member districts. Voters rank candidates in order of their preference on the ballot paper. The candidate who has won an absolute majority of first preference votes in her district is elected, with no form of compensation for the losing candidates. If no candidate wins an absolute majority, the candidate with the lowest number of first preferences is eliminated from the count. The second and later preferences on the ballots of the eliminated candidate are then assigned to the remaining candidates in the order in which they have been marked on the ballot papers. This process is repeated until one candidate has an absolute majority. Under STV systems, on the other hand, candidates are presented in multi-member districts. Voters rank candidates in order of their preference on the ballot paper. The total number of votes is counted then divided by the number of seats in the district plus one, and any candidate who has received one or more first preference votes than this number is immediately elected. If no candidate has received the amount of first preference votes necessary to be elected, the candidate with the lowest number of first preferences is eliminated from the count. The second and later preferences on her ballots are then allocated to the remaining candidates in the order in which they have been marked on the ballot papers. At the same time, the surplus votes of an elected candidate (i.e. those above the number of votes necessary to be elected) are redistributed according to the second and later preferences on the elected candidate’s ballots, so that the total redistributed vote equals the candidate’s surplus. This process continues until all seats for the district are filled.

on closed lists)⁴⁴ as best choice for ethnically diverse societies, because they arguably increase the likelihood that a broadly representative legislature will be elected, encourage post-electoral coalition-building, are simple to operate, and foster the establishment and maintenance of strong, cohesive parties (cf. *ibid.*; Lijphart 1991, 2004). Preferential electoral systems, on the other hand, are expected to promote pre-electoral interethnic alliances and to create incentives for political moderation, as they encourage politicians to campaign not just for first-preference votes from their own community, but also for second-preference votes from other groups (see e.g. Horowitz 1991; Mitchell 2008; Reilly 2001, 2002). In this manner, preferential electoral systems such as AV and STV are said to give political systems a ‘centripetal spin’ and – in contrast to list PR systems – arguably reduce the risk of cementing ethnic cleavages (Reilly 2001, 2002).

While I thus fully acknowledge that there is a relevant academic debate on the strengths and weaknesses of list PR *versus* preferential electoral systems in ethnically diverse societies, I cannot consider this debate any further. This is mainly due to practical reasons, as relatively few countries employed a preferential electoral system for the legislature during the time period considered in my statistical analysis (see chapters 5 and 6; cf. also Reilly 2002). Hence, it would be of little benefit for my data analysis to classify preferential electoral systems for the legislature into a separate category. Instead, I include AV systems in my majoritarian electoral system category and STV systems in my proportional one (see section 5.5.), since AV ‘systematically discriminates against those at the bottom of the poll in order to promote effective government for the winner’ (Norris, 1997: 302), while STV follows the inclusionary logic of a proportional electoral system (Mitchell, 2008). For these reasons, it also makes little sense to consider the list PR *versus* preferential electoral systems debate any further at this point. As aforementioned, my main focus instead lies on the academic debate surrounding the strengths and weaknesses of proportional *versus* majoritarian electoral systems.

⁴⁴ Under closed list PR systems, each party presents a list of candidates to the electorate in multi-member electoral districts. Voters vote for a party and parties receive seats in proportion to their share of the vote. These seats are then allocated to political candidates in order of their position on the party list (Norris 1997; Reynolds, Reilly and Ellis 2008).

Discussions regarding the choice between majoritarian and proportional electoral systems typically address the former's emphasis on government effectiveness and accountability, and the latter's aim to give political voice to a diversity of social groups and promote greater fairness for minority parties (Norris 1997). The central tenets of these discussions can be summarised as follows: Majoritarian electoral systems are based on winner-takes-all principles whereby the candidate – or, in majoritarian electoral systems using multi-member districts such as the limited vote, the candidates – supported by a plurality or majority of the vote are elected, while all other voters remain unrepresented (cf. Golder 2005; Lijphart 1999). In legislative elections, this tends to lead to an exaggeration of parliamentary seats for the party in first place (even if it only holds a plurality of votes nationwide), with the aim to produce a decisive parliamentary majority (Lijphart 1999; Norris 1997, 2002). Under parliamentary forms of government, this in turn facilitates the establishment of a strong (i.e. single-party) government and thus reduces the likelihood that coalition governments need to be formed (cf. *ibid.*). In this manner, majoritarian electoral systems for the legislature are said to enhance both government effectiveness and accountability, as single-party executives arguably will find it easier to implement their manifesto promises compared to coalition executives (Norris 2004), and voters will have less difficulties 'to assign blame or praise for the government's performance and to reward or punish parties accordingly' (*ibid.*:70). Moreover, office-seeking politicians specifically under majoritarian electoral systems with single-member districts and candidate-ballots are expected to feel individually more accountable and build relatively strong links with their voters, in order to secure their support in future elections (cf. *ibid.*).

On the other hand, however, the reliance of majoritarian electoral systems for the legislature on winner-takes-all principles implies that the trade-offs for achieving decisive majorities, government effectiveness and accountability are significant. As only those candidates are elected to parliament who win a plurality or majority of the vote within their electoral districts while the losing candidates receive nothing,

majoritarian electoral systems tend to increase the hurdles for smaller parties⁴⁵ and heighten the stakes of political competition (Cohen 1997; Norris 1997, 2002). Due to this tendency to concentrate political gains from the electoral competition for a political office (see also section 3.2.), majoritarian electoral systems for the legislature are frequently associated with the political exclusion or marginalisation of certain ethnic groups (see e.g. DeVotta 2005; Saideman et al. 2002). A case in point is Northern Ireland where – not least thanks to the reintroduction of the first-past-the-post electoral system in 1929 – the Unionists representing the Protestant majority (approximately two-thirds of the population) were able to form a one-party government for the entire period from 1921 to 1972, while excluding representatives of the Catholic minority from executive power (Lijphart 1977). Moreover, as for instance DeVotta (2005) highlights with reference to Sri Lanka's plurality system that was employed for the country's parliamentary elections before 1989, majoritarian electoral systems such as first-past-the-post are unlikely to create incentives for interethnic cooperation but on the contrary might encourage strategies of ethnic outbidding.

Therefore, following the grievance-based explanation of ethnic violence outlined in chapter 2, the reliance of majoritarian electoral systems for the legislature on winner-takes-all rules can be assumed to be detrimental to the prospects of ethno-political stability, as it systematically reduces the number of possible political winners and hence the number of ethnic groups who can obtain the values of political representation.

By comparison, proportional electoral systems provide a higher number of possible political winners, as they stand in contrast to the winner-takes-all logic on which majoritarian electoral systems are based: By aiming to ensure the proportional translation of a party's (or candidates') share of votes into the number of seats in parliament, proportional electoral systems tend to lower the hurdles for smaller parties, increase the effective number of parliamentary parties and heighten the likelihood of coalition executives under parliamentary forms of government (Cohen

⁴⁵ This is in particular the case if the support for smaller parties is spatially dispersed (see Norris 1997).

1997; Lijphart 1999; Norris 1997, 2002, 2004). Unlike majoritarian electoral systems, proportional ones thus disperse political gains and increase levels of political inclusiveness. Moreover, in particular list PR can encourage the creation of ethnically diverse party lists and, consequently, lower incentives for ethnically exclusive platforms, as political parties, ‘both large and small, ... need to appeal to a wide spectrum of society to maximize their overall national vote.’ (Reynolds 1999:97)⁴⁶

Finally, also mixed electoral systems for the legislature⁴⁷ provide a greater number of possible political winners than majoritarian ones. This is because they allocate a certain amount of parliamentary seats through a proportional formula (Golder 2005) and – compared to majoritarian electoral systems – heighten the number of parliamentary parties as well as the likelihood of coalition executives under parliamentary forms of government (Norris 1997, 2004).

For these reasons, when treated as separate entities (i.e. considered outside of specific institutional combinations), majoritarian electoral systems for the legislature can be expected to increase the risk of ethnic violence compared to proportional and mixed systems.

⁴⁶ It is important to note that there is a variety of criticisms against proportional electoral systems which I do not consider any further. These criticisms include *inter alia* that proportional electoral systems arguably bear the danger of excessive party fragmentation which may lead to policy stalemates, ineffective governing coalitions and an overall climate of political instability (cf. Ishiyama 2009; Norris 2004). I do not consider these or other criticisms against proportional electoral systems any further, as my main focus – following the grievance-based explanation outlined in chapter 2 – is solely on the number of possible political winners provided by formal political institutions. With this research focus in mind, proportional electoral systems as well as mixed electoral systems should be associated with a lower risk of ethnic civil war than majoritarian electoral systems (see above).

⁴⁷ I do not make any distinction between different forms of mixed electoral systems, such as whether they use the majoritarian and proportional electoral formulas dependently or independently, or whether – if they belong to the latter category – they can be described as coexistence, superposition or fusion types (see Golder 2005 for more details). Overall, I have hardly written about mixed electoral systems in this section, as they are rarely given much relevance in the two core debates mentioned above, and because – with the exception of e.g. Carey and Hix (2009) – there has been relatively little empirical investigation into the effects of mixed electoral systems on the proportionality of electoral outcomes (cf. Golder 2005).

3.6. Unitary State Structures and the Risk of Ethnic Violence

Although the institutional incentives approach to ethnic violence contains few *comparative* studies on the effects of federal and unitary state structures (cf. Bermeo 2002), academics and policy-makers have paid ‘surprisingly favourable attention’ (Roeder 2009:203) to federal arrangements as a means to reduce the risk of violent ethnic conflict.⁴⁸ This ‘favourable attention’ (ibid.) has been shared by proponents of consociationalism, integrative power-sharing and power-dividing alike: According to proponents of consociationalism, in particular polycommunal federalism⁴⁹ reduces the risk of ethnopolitical instability, as it allows ethnic groups who might represent a minority nationwide, but a majority within a given federal unit, to rule over themselves in certain areas of exclusive concern (see e.g. Lijphart 1977). Following the integrative power-sharing model based on Horowitz (1985),⁵⁰ federal arrangements increase the prospects of ethnopolitical stability, as they disperse

⁴⁸ It is worth pointing out that the effects of different types of state structure are often analysed with particular regard to their impact on separatist or secessionist movements (see e.e.g. Bunce and Watts 2005; Roeder 2009), i.e. movements whose protagonists seek to establish either an autonomous region within an existing state or a separate, independent state (Horowitz 1985). Due to issues of data availability, I do not distinguish between secessionist and non-secessionist ethnic wars in my statistical analysis (see also section 5.3.).

⁴⁹ See footnote 36 for the definition of polycommunal, non-communal and mixed federalism. For reasons outlined in section 3.2., I do not distinguish any further between different types of federal arrangement, such as whether they are based on polycommunal, non-communal or mixed principles (see Sisk 1996), or whether they are symmetric or asymmetric (see Watts 1998). Instead, I use the broader assumption that the precise type of federalism is secondary to the fact that federal state structures, however designed, increase opportunities of political representation (and thus the number of possible political winners) by establishing multiple levels of government (see also Bermeo 2002; Cohen 1997; Saideman et al. 2002). Likewise, it would go beyond the scope of this thesis to investigate the precise set of circumstances under which ‘federalism can either exacerbate or mitigate ethnic conflict’ (Horowitz 1985:603): According to previous studies within the institutional incentives approach to ethnic violence, the effects of federal arrangements on the risk of violent ethnic conflict ultimately might depend on factors such as e.g. the behaviour of political elites and their desire for interethnic compromise (Malešević 2000); the settlement patterns and internal divisions of ethnic groups (Horowitz 1985); or the distribution of force between disputing parties (Meadwell 2009). I will not consider these factors any further, as they are difficult if not impossible to quantify for the statistical part of this analysis. Instead, their relevance for the impact of federalism on the risk of ethnic violence ought to be investigated in more detail in separate case study analyses.

⁵⁰ The integrative power-sharing model consists of five elements (Sisk 1996): 1. the dispersion of power ‘to take the heat off of a single focal point’ (Horowitz 1985:598), e.g. by dividing power among institutions at the centre or by creating lower-level units with important policy functions; 2. territorial devolution or reserved offices to emphasise intraethnic competition; 3. institutions that create incentives for interethnic cooperation, such as electoral laws that create incentives for pre-electoral alliances by means of vote pooling; 4. policies that encourage alignments based on non-ethnic cleavages; and 5. the managed redistribution of resources to reduce disparities between ethnic groups.

political power through the creation of multiple levels of government and, where federal units are controlled by ethnic groups with prominent subdivisions, encourage intra- rather than interethnic competition (ibid.; Sisk 1996). Finally, proponents of the power-dividing approach⁵¹ favour in particular non-communal federalism, as it promotes a horizontal and vertical division of powers (i.e. among different branches of the central government as well as between the central and federal governments), and increases opportunities of political representation without privileging certain ethnic groups over others (Roeder 2005).

Before elaborating the likely effects of different state structures on the risk of ethnic civil war in more detail, the defining features of unitary, federal and mixed state structures ought to be clarified briefly. It thereby is important to note that – similarly to the conceptualisation of different forms of government (see section 3.4.) – the definition of both federal and mixed state structures is highly contested. This is due to a variety of reasons, ranging from ambiguities in some countries' constitutions regarding their state structures (cf. Watts 1998), through discussions about whether federalism ought to be defined from a formal institutional or behavioural perspective (Zheng 2007), to the fact that both 'federalism' and 'autonomy' can have a variety of different meanings (see Ackrén 2009; Watts 1998).

For the purpose of this analysis, I identify state structures exclusively on the basis of their open codification (see also sections 3.2. and 5.6.) and define them as follows: Federal state structures combine principles of shared rule and self-rule (Watts 1998) by featuring 'a layer of institutions between a state's center and its localities ... [which has] its own leaders and representative bodies ... [who also] share decision-making power with the center.' (Bermeo 2002:98) The centre and territorially defined subunits of the state thereby possess their own formally guaranteed spheres of responsibility (cf. Bunce and Watts 2005), with most federal systems relying on an autonomous constitutional, supreme or high court to deal with potential disputes between the central and federal state governments (He 2007; Watts 1998). Shared institutions at the centre typically include a bicameral national legislature where the

⁵¹ See footnote 20 for a brief outline of the power-dividing approach. Roeder (2005) uses the term 'power-dividing' in accordance with Rothchild and Roeder (2005b).

representatives in the second chamber are drawn from the federal units (Norris 2008).

In unitary state structures, on the other hand, the central government controls all noncentral governments, and there is no formally guaranteed division of power among multiple levels of government with distinct spheres of responsibility (cf. Lijphart 1999). Correspondingly, the relationship between a state's centre and its subunits or localities is one of subordination rather than autonomy and coordination (Bunce and Watts 2005).

Finally, I use the term 'mixed state structures' to describe non-federal states with at least one autonomous region, i.e. at least one territorial subunit whose executive, legislative and judicial institutions have the formally guaranteed power to exercise public policy functions in at least one cultural, economic or political sphere independently of other sources of authority in the state (cf. Ackrén 2009; Wolff 2009). Like federal systems, countries with a mixed state structure are thus politically decentralised in the sense that 'there is a vertical division of power among multiple levels of government that have independent decision-making power over at least one issue area.' (Brancati 2006:654) Mixed state structures are, however, distinct from federal ones, as territorial subdivisions need not extend across the entire state territory (Wolff 2009), nor is there necessarily a formal guarantee that representatives of the autonomous region(s) can share political power at the centre (cf. *ibid.*). Examples of non-federal states with at least one autonomous region include China, France, Italy and Indonesia.

As 'comparative studies of federalism and unitarism are surprisingly rare' (Bermeo 2002:98), it is difficult to find analyses which explicitly outline arguable benefits of unitary state structures for the prospects of ethnopolitical stability. Instead, the academic debate has tended to focus on the effects of different types of federal and mixed state structures, and whether they should be seen as a conflict deterrent or a conflict agent (Brancati 2009). According to the latter side of the academic debate, there are at least four key reasons why federal and mixed state structures might

heighten rather than reduce the risk of violent ethnic conflict: First, federal and mixed state structures might lead to a fierce competition over powers and resources between the centre and territorial subunits of the state as well as among different subunits, and thus foster conflict instead of helping to diffuse it (cf. Suberu 2001). Second, in particular when federal or mixed state structures grant autonomy to certain ethnic groups, this might reinforce ethnic cleavages and, by privileging some ethnic groups over others in a given federal state or autonomous region, encourage secessionism rather than create incentives for interethnic compromise (see e.g. Roeder 2009). Third, problems of minority exclusion can also develop within federal units or autonomous regions, so that the establishment of federal or mixed state structures might simply defer the risk of ethnopolitical instability to the subnational level instead of being able to solve it conclusively (cf. Sisk 1996). Finally, depending on issues such as the number of regional legislatures or the timing of national and regional elections, there is a risk of regional parties gaining strength under federal or mixed state structures which might reinforce ethnic identities, foster interethnic tensions and seek to mobilise ethnic groups for violent conflict (Brancati 2006, 2009). Using these arguments about the potential risks of federal and mixed state structures in ethnically diverse societies *e contrario*, one could thus assume that unitary state structures should decrease the risk of ethnic violence, as they do not divide power among multiple levels of government and, hence, are arguably free of the risks associated with territorial autonomy arrangements.

At the same time, however, the aforementioned points about the possible perils of federal and mixed state structures are challenged by arguments about the often stability-enhancing effects of political decentralisation (cf. Bermeo 2002; Brancati 2009). Leaving aside the arguable benefits of federalism mentioned at the beginning of this section (see Horowitz 1985; Lijphart 1977; Roeder 2005), there are at least six key reasons why federal and mixed state structures might reduce rather than heighten the risk of violent ethnic conflict: First, the creation of territorially defined subunits of the state can serve to localise ethnic conflicts in these subunits, lessen the likelihood that they will spread across the entire state territory and thus reduce the risk of major disruptions of the national government (cf. Suberu 2001). Second, in

particular federal arrangements might help to foster interethnic accommodation by promoting state-based identities as a cleavage that is independent of and competitive with ethnic identities (ibid.). Third, the establishment of multiple levels of government under federal and mixed state structures may reduce the risk of ethnopolitical instability, as it increases the number of settings for peaceful bargaining (cf. Bermeo 2002) and creates a type of ‘subnational training ground’ for politicians to learn how to seek interethnic compromise over certain issue areas (cf. Horowitz 1991). Fourth, the establishment of multiple levels of government presumably brings the government ‘closer to the people’ (Brancati 2009:8), thereby making citizens more aware of government activities and creating incentives for them ‘to work from within the government to achieve their goals’ (ibid.) rather than resorting to violent action strategies. Fifth, federal and mixed state structures might help to promote ‘the best of both worlds’ in the sense that ethnic groups who control certain federal units or autonomous regions can ‘realize their aspirations for self-determination while simultaneously preserving the overall social and territorial integrity of existing states.’ (Wolff 2009:28) Finally, non-unitary state structures arguably lower the stakes of competition for the central government, as ethnic groups can seek to gain political representation also in the political institutions of the federal units or, under mixed state structures, in the autonomous region(s) (cf. Cohen 1997). Federal arrangements thereby offer even more possibilities of political representation than mixed state structures, as federalism’s principle of shared rule – which does not necessarily exist under mixed state structures (cf. Wolff 2009) – gives ethnic group representatives from different federal units the opportunity to influence also the national decision-making process through shared political institutions at the centre (cf. Kymlicka 2007). In this manner, federalism’s principles of self-rule *and* shared rule clearly provide ethnic group representatives with more opportunities to exercise formal political power than they would have under any other type of state structure.

Following the grievance-based explanation of violent ethnic conflict outlined in chapter 2, the most relevant aspect from the aforementioned merits and perils of different state structures is their impact on the number of possible political winners. As has been indicated in the preceding paragraphs, unitary state structures

systematically reduce the number of possible political winners compared to federal and mixed state structures due to their reliance on winner-takes-all rules: Unitary state structures decrease the chances for the different ethnic groups in a given society to obtain the values of political representation compared to federal and mixed state structures, as there is no formally guaranteed division of power among multiple levels of government with distinct spheres of responsibility. Instead, unitary state structures rely on winner-takes-all principles in the sense that whoever controls the central government also controls all noncentral governments, due to the strict subordination of the latter to the former (Bunce and Watts 2005; Lijphart 1999).

In contrast to this, federal systems systematically increase the number of possible political winners compared to both unitary and mixed state structures: Unlike unitary state structures, federalism creates opportunities for ethnic group representatives to gain political office within territorially defined subunits of the state that have their own formally guaranteed spheres of responsibility (cf. Bunce and Watts 2005). Moreover, unlike mixed state structures, federalism also creates opportunities for ethnic group representatives to influence the national decision-making process through shared political institutions at the centre (cf. Kymlicka 2007).

Mixed state structures, too, provide a higher number of possible political winners than unitary ones, as – just like federal state structures – they create opportunities of political representation within territorially defined subunits of the state and thus lower the stakes of competition for the central government (cf. Cohen 1997).

For these reasons, when treated as separate entities (i.e. considered outside of specific institutional combinations), unitary state structures can be expected to increase the risk of ethnic violence compared to federal and mixed state structures.

3.7. Institutional Combinations and the Risk of Ethnic Violence

Based on the arguments outlined in sections 3.4. to 3.6., we can categorise the aforementioned forms of government, electoral systems for the legislature and state structures into those which provide a comparatively low, high or medium number of possible political winners (see Table 1).

	Category A: low number of possible political winners	Category B: high number of possible political winners	Category C: medium number of possible political winners
Form of government	presidential	parliamentary	mixed
Electoral system	majoritarian	proportional	mixed
State structure	unitary	federal	mixed

Table 1: Categorisation of Formal Political Institutions according to the Number of Possible Political Winners They Provide.

Compared to their counterparts in categories B and C, the formal political institutions included in category A of Table 1 provide a relatively low number of possible political winners due to their reliance on winner-takes-all principles. These institutions thus systematically reduce the number of ethnic groups that can obtain the values of political representation outlined in chapter 2. They include a presidential form of government (see section 3.4.), a majoritarian electoral system for the legislature (see section 3.5.) and a unitary state structure (see section 3.6.). Conversely, the institutions listed in category B of Table 1 offer a relatively high number of possible political winners, as they increase opportunities for political representation and disperse points of political victory the most compared to their counterparts in categories A and C. They include a parliamentary form of government, a proportional electoral system for the legislature and a federal state structure. Finally, category C of Table 1 contains those formal political institutions which provide a medium number of possible political winners. This is to say that the

institutions in category C offer greater chances to be represented politically and hence to obtain the values of political representation compared to their counterparts in category A, but lower chances than their counterparts in category B (cf. Kymlicka 2007; Lijphart 2004; Norris 1997; Wolff 2009). They include a mixed form of government, a mixed electoral system for the legislature and a mixed state structure. Before using this categorisation in Table 1 to deduce the likely effects of different institutional combinations on the risk of violent ethnic conflict, it is worth recalling the aim of the first dimension of Ethno-Embedded Institutionalism.

As has been elaborated in more detail in section 1.6., previous studies within the institutional incentives approach to ethnic violence have typically ignored the possible interaction effects between different political institutions, and instead tended to single out the effects of individual political institutions such as electoral systems and state structures. By neglecting the relevance of institutional combinations, i.e. failing to ask how the effects of political institutions might vary depending on the manner in which they are combined with each other, the analysis of institutional incentives for violent ethnic conflict has remained one-dimensional in scope. This one-dimensionality of the institutional incentives approach to ethnic violence is based on the implicit assumption that political institutions can be treated as separate entities and that it is only of secondary relevance of which broader set of institutions they form part. This is not to say that scholars within the institutional incentives to ethnic violence have tended to focus just on one institution in their analyses; however, even if they take the relevance of a variety of institutions into account, they typically treat them as a list of individual institutions instead of asking how important it is that particular institutions are combined in a certain way (see section 1.6.).

The one-dimensionality of the institutional incentives approach to ethnic violence is particularly surprising, as there are several studies outside of this approach (i.e. which do not deal with questions of ethnopolitical (in)stability) that have already highlighted the relevance of interaction effects between different political institutions. Granted, these studies still represent an overall comparatively small because newly emerging area of research, as up to the mid-1990s institutional

debates in general focused mainly on individual institutions (such as forms of government) and restricted themselves to pairwise comparisons of their subtypes (such as parliamentarism *versus* presidentialism) (Tsebelis 1995). But nonetheless, analyses by authors such as Tsebelis (1995), Mainwaring and Shugart (1997a), Lijphart (1999) and Kunicová and Rose-Ackerman (2005) have provided important insights regarding the fact that the effects of political institutions do not occur as isolated phenomena, but necessarily depend on the broader set of political institutions that are joint within a political system.

Tsebelis (1995) was among the first scholars who highlighted the need to analyse not just single, formal political institutions, but to examine the effects of specific institutional combinations: In order to assess the impact of veto players on a political system's capacity to produce policy change, Tsebelis (1995) determines the number of veto players by looking at entire sets of political institutions, i.e. by asking *inter alia* which form of government and state structure are combined with each other in a given political system.

Mainwaring and Shugart (1997a) highlight the interaction effects between presidentialism and the type of electoral system used for congressional and presidential elections. According to these authors, variations in the performance of presidentialism are best understood by examining the institutional arrangement of form of government and electoral system combined, as electoral rules and sequences affect the number of parties and the nature of party discipline which in turn condition executive-legislative relations.

Also Lijphart's (1999) 'Patterns of Democracy' illustrates that institutional combinations matter and that political institutions should not be treated as discrete, separable entities. In this analysis, Lijphart distinguishes between the consensus and majoritarian model of democracy, and contrasts these models using ten variables on two different dimensions.⁵² Examining altogether 36 democracies between 1945 and

⁵² The first dimension is the executives-parties dimension which includes five variables on the arrangement of executive power, the party and electoral system, and interest groups: concentration of executive power in cabinets, executive-legislative relations, type of party system, type of

1996, he demonstrates statistically significant correlations among certain variables along these two dimensions – hence highlighting the relevance of institutional combinations – and analyses the combined effects of the consensus and majoritarian model of democracy on macro-economic management, control of violence and democratic quality (measured *inter alia* through accountability and electoral participation).

Finally, Kunicová and Rose-Ackerman (2005) explicitly acknowledge that levels of corruption are not just influenced by individual political institutions, but by the broader set of institutions that are joint within a political system. Specifically, Kunicová and Rose-Ackerman argue that the combination of presidentialism and a PR electoral system for the legislature might be especially detrimental, as it ‘produce[s] a particularly corruption-prone political system.’ (Kunicová and Rose-Ackerman 2005:594)

The aforementioned studies by Tsebelis, Mainwaring and Shugart, Lijphart, and Kunicová and Rose-Ackerman highlight that it is not just of secondary but in fact of crucial relevance how different political institutions are combined with each other in a given political system. By moving beyond pairwise comparisons of individual political institutions, these authors challenge the notion that political institutions can be treated as discrete, separable entities. Instead, they demonstrate how the analysis of specific institutional combinations can broaden our understanding about the impact of institutional design on political outcomes. This insight has yet to enter the research agenda of the institutional incentives approach to ethnic violence, as so far there is no well-known analysis which explicitly asks how important it is for the prospects of ethnopolitical (in)stability that particular institutions are combined in a certain way. The first dimension of Ethno-Embedded Institutionalism addresses this gap within the institutional incentives approach to ethnic violence by highlighting the likely effects of specific institutional combinations on the risk of ethnic civil war (see

electoral system and interest group system. The second dimension (i.e. the federal-unitary dimension) contains five variables to distinguish federalism and unitary government. These variables include division of power between different levels of government, concentration of legislative power, flexibility of constitutions, judicial review and dependency of central banks (Lijphart 1999).

also section 1.2.). To illustrate the relevance of the first dimension of Ethno-Embedded Institutionalism, I use the following assumptions:

According to the grievance-based explanation of violent ethnic conflict outlined in chapter 2, we can assume that the lower the number of possible political winners provided by a given institutional combination, the more likely it is that this combination will increase the risk of large-scale ethnic violence. Put differently, we can assume that the lower the level of political inclusiveness provided by a specific combination of form of government, electoral system for the legislature and state structure, the more likely it is that this combination will heighten the prospects of large-scale ethnic violence. This is because political institutions which are associated with low levels of political inclusiveness can be expected to contribute to perceived or objective asymmetries between ethnic groups in terms of their political as well as socioeconomic standing, and to give rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low (see also section 2.4.). In this context, there is no reason to believe that the apparent link between ethnic civil wars and levels of political inclusiveness (see section 2.2.) should only hold for individual institutions such as electoral systems or state structures when analysed as discrete, separable entities. Instead, following previous research into the relevance of institutional combinations (see Kunicová and Rose-Ackerman 2005; Lijphart 1999; Mainwaring and Shugart 1997a; Tsebelis 1995), we can assume that it is the level of political inclusiveness provided by the *combination of different institutions in a given political system*, and not just by individual political institutions treated in isolation, that influences the prospects of ethnopolitical (in)stability.

Building on the arguments outlined in sections 3.4. to 3.6., and using the categorisation of different forms of government, electoral systems for the legislature and state structures presented in Table 1, we therefore can assume that in particular the combination of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure is likely to heighten the risk of large-scale ethnic violence. This is because this particular combination of political

institutions provides the lowest overall number of possible political winners compared to any other combination of presidential, parliamentary or mixed form of government, majoritarian, proportional or mixed electoral system for the legislature, and unitary, federal or mixed state structure (cf. Table 1). Political systems which include a presidential form of government, majoritarian electoral system for the legislature and unitary state structure thus systematically reduce the number of ethnic groups who can obtain the values of political representation outlined in chapter 2, compared to any other possible combination of the different forms of government, electoral systems for the legislature and state structures listed in Table 1.

At first glance, this argument about the relevance of institutional combinations for the prospects of ethnopolitical (in)stability (due to their impact on the overall number of possible political winners within a political system) might sound deceptively simplistic. Yet, as there is currently no well-known study which explicitly asks how relevant it is for the risk of violent ethnic conflict that particular institutions are combined in a certain way, this thesis proposes a relevant, new research agenda to overcome the one-dimensionality of the institutional incentives approach to ethnic violence.⁵³

⁵³ As becomes evident in the preceding paragraphs, my expectations regarding the likely impact of specific institutional combinations on the risk of ethnic civil war are based on the (implicit) assumption that forms of government, electoral systems for the legislature and state structures are of equal relevance in their impact on the prospects of ethnopolitical (in)stability. Unlike authors such as Horowitz (2002), Lijphart (2004) or Reilly (2001) who describe in particular electoral systems for the legislature as key institutional choice in ethnically diverse societies, I thus intentionally abstain from presenting certain political institutions as being more important than others. Instead, I assume that forms of government, electoral systems for the legislature and state structures each provide distinct political gains for which there is no clear rank order in terms of their relevance. Specifically, forms of government influence the chances for ethnic groups to hold executive power and thus to have a say over the articulation and implementation of national policies (Shugart and Carey 1992). Electoral systems for the legislature affect the chances for ethnic group representatives to hold executive power specifically under parliamentary forms of government (see e.g. Horowitz 1991), and – more importantly – serve as a key indicator of the representativeness of any political system, whatever form of government it may have (cf. Shugart and Carey 1992; Norris 1997; see also section 3.5.). State structures determine the amount of vertical power-sharing in a political system and the degree to which the competition for control over the central government ‘has nationally comprehensive consequences.’ (Cohen 1997:610) As there is no plausible reason to argue that some of these institutions should be inherently more important than others, I do not rank them in terms of their relevance when considering them either on their own or as part of a specific institutional arrangement.

3.8. Conclusion: Why Institutional Combinations Matter

Hitherto, the institutional incentives approach to ethnic violence has remained one-dimensional in scope, as there is currently no well-known study which explicitly asks how important it is for the prospects of ethnopolitical (in)stability that particular institutions are combined in a certain way. I seek to overcome this apparent gap in the academic debate through the presentation of the first dimension of Ethno-Embedded Institutionalism, i.e. by highlighting the relevance of institutional combinations for the risk of large-scale ethnic violence.

Building on the grievance-based explanation of violent ethnic conflict outlined in chapter 2, the central argument presented in this chapter states that the lower the number of possible political winners provided by a given institutional combination, the more likely it is that this combination will increase the risk of ethnic violence (section 3.7.). Hence, from all possible combinations of the formal political institutions presented in sections 3.4. to 3.6., in particular the combination of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure is expected to heighten the prospects of ethnopolitical instability, as it provides the lowest overall number of possible political winners. This particular institutional combination thus systematically reduces the number of ethnic groups who can obtain the values of political representation outlined in chapter 2, compared to any other combination of the forms of government, electoral systems for the legislature and state structures included in this analysis. This can be expected to increase the risk of large-scale ethnic violence, as political institutions that provide low levels of political inclusiveness arguably contribute to perceived or real asymmetries between ethnic groups in terms of their political and socioeconomic standing, and therefore can be the source of a variety of social, political or economic grievances (see chapter 2).

The main aim of the first dimension of Ethno-Embedded Institutionalism as presented in this chapter is thus to highlight the need for scholars belonging to the institutional incentives approach to ethnic violence to pay greater attention to the

specific *combination* of formal political institutions in a given political system and the *overall* number of possible political winners it provides. The following chapter will outline the second dimension of Ethno-Embedded Institutionalism by illustrating the relevance of informal political institutions for the prospects of ethno-political (in)stability. It will do so by using corruption as a prime example of an informal political institution that can be expected to affect the prospects of ethno-political (in)stability (see also section 1.7.).

Chapter 4: Corruption and the Risk of Ethnic Civil War

4.1. Introduction: The Second Dimension of Ethno-Embedded Institutionalism

Research on the relationships between institutional design and the prospects of ethnopolitical (in)stability hitherto has tended to favour the study of formal political institutions over that of informal ones (see section 1.7.). In response to this pronounced research asymmetry within the institutional incentives approach to ethnic violence, this chapter presents the second dimension of Ethno-Embedded Institutionalism which highlights the relevance of non-codified institutions for the risk of ethnic civil war. In contrast to chapter 3, the following sections thus deal exclusively with structures of political interactions that are neither laid down in writing nor guaranteed by the sanctioning mechanisms of the state, but which endure over time due to persisting patterns in human behaviour (Lauth 2000; see also section 1.3.). Specifically, this chapter focuses on corruption as a prime example of an informal political institution that arguably affects the risk of large-scale ethnic violence.

My central argument in this chapter states that networks of corruption – given their tendency to form along ethnic lines and benefit certain ethnic groups over others – are likely to affect the *modus operandi* of formal political institutions in such a way that those ethnic groups who stand outside of these networks have comparatively low chances to obtain the values of political representation outlined in chapter 2. This is likely to give rise to grievances among those ethnic groups who stand outside of ethnically exclusionary networks of corruption, and to increase the risk of large-scale ethnic violence. To illustrate the relevance of this argument and present the second dimension of Ethno-Embedded Institutionalism, the following sections will

- highlight the role of informal political institutions for the risk of ethnic violence (section 4.2.);
- define corruption (section 4.3.) and illustrate its apparent relevance for the prospects of ethnopolitical (in)stability (section 4.4.);
- present the main assumptions that underlie this chapter (section 4.5.);

- outline the ethnically exclusionary tendencies of corruption (section 4.6.); and
- describe the expected impact of corruption on the risk of ethnic civil war, using the grievance-based explanation of violent ethnic conflict presented in chapter 2 (section 4.7.).
- Section 4.8. will conclude this chapter by summarising its central points.

4.2. Informal Political Institutions and the Risk of Ethnic Violence

The mere focus on formal political institutions when trying to understand institutional incentives for large-scale ethnic violence is too narrow for two key reasons (see section 1.7.): a) because political institutions need not be openly codified in order to affect the prospects of ethnopolitical (in)stability, but can themselves be socially embedded entities (see e.g. Lijphart 1977, 1996; Sisk and Stefes 2005; Varshney 2001, 2002); and b) because there are often significant interaction effects between formal and informal political institutions.

Following on the latter point, and as will be outlined in more detail in section 4.7., informal political institutions such as corruption do not change the actual *form* of formal political institutions (Lauth 2000). For instance, unless there is an actual constitutional change, a presidential form of government remains codified as a presidential form of government, no matter how high the levels of corruption within a given country. However, informal political institutions can affect the *modus operandi* of formal political institutions by penetrating them and creating an alternative set of rules and structures that shape the behaviour of political actors and open up sources of influence beyond the formal competences of political office (cf. *ibid.*).

At first glance, this could be seen as something positive in the sense that informal political institutions may offer alternative forms of political influence to ethnic groups who feel disadvantaged by the design of formal political institutions, e.g. if a majoritarian electoral system for the legislature (Norris 2002) or a presidential form of government lower the chances for their representatives to hold political office

(Linz 1990a). However, a closer look at corruption as a prime example of an informal political institution reveals that its risks for the prospects of ethnopolitical stability are much higher than its potential merits:⁵⁴ Due to its tendency to form along ethnic lines and benefit⁵⁵ some ethnic groups over others (see section 4.6.), corruption is likely to contribute to perceived or real asymmetries between ethnic groups in terms of their political and socioeconomic standing, and thus to increase rather than reduce the risk of large-scale ethnic violence (see section 4.7.).

It is precisely for this reason (i.e. its tendency to form along ethnic lines and benefit certain ethnic groups over others) why I have chosen corruption as a prime example of an informal political institution in this analysis. As will be elaborated in more detail in section 4.7., I identify four possible scenarios in which networks of corruption may affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner: by creating direct incentives for political officeholders (e.g. through bribery or the sustenance of patronage networks) to manipulate the political decision-making process in favour of specific ethnic groups; by biasing the political decision-making agenda; by leading to a culture of selfish value-accumulation; and by undermining the quality or prospects of democracy. All four scenarios clearly violate the ideal of representational justice (Wimmer 2002) and result in some ethnic groups having greater influence over the political decision-making process than others. In this manner, socially entrenched practices of corruption systematically reduce the number of ethnic groups who can obtain the values of political representation outlined in chapter 2, thus contribute to the aforementioned perceived or objective asymmetries between ethnic groups in terms of their political and socioeconomic standing, and arguably give rise to emotions of

⁵⁴ Of course, this is far from saying that all informal political institutions are likely to increase the risk of large-scale ethnic violence. For instance, certain types of civil society structures might improve the prospects of ethnopolitical stability (Varshney 2001, 2002; see also section 1.7.). It is thus important to emphasise that my arguments here deal specifically with corruption and should not be generalised for all types of non-codified institution.

⁵⁵ ‘Benefits of corruption’ here do not merely refer to the immediate status, financial or other material gains from corrupt dealings to which especially greed-based explanations of intrastate violence might wish to pay closer attention. Instead, the gains from corruption on which I focus in particular are the more profound, structural benefits for ethnic groups who can obtain the values of political representation outlined in chapter 2, i.e. benefits in terms of their political recognition, likely influence over the distribution of resources and powers, and perceptions of political, economic and physical security (see also section 4.7.).

anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low. These grievances in turn are expected to increase the risk of ethnic violence.

Before elaborating the likely impact of corruption on the risk of ethnic violence in more detail, it is necessary to define clearly what ‘corruption’ actually means.

4.3. Defining Corruption

Any study dealing with the issue of corruption needs to begin by considering two closely related problems: how to define corruption and how to measure it. At the bottom of both problems stands the fact that corruption is an inherently context- and perception-dependent phenomenon. Referring to the old question of the tree falling in the forest, this is not to say that it only makes a sound if someone is around to hear it, i.e. corruption can and does exist even if people do not know about it. Rather, corruption depends upon people’s perceptions and their generational and cultural context in the sense that what might be identified as corruption in one cultural circle or at a specific point in time, need not be perceived as such in another (Chabal and Daloz 1999; Heidenheimer and Johnston 2002).⁵⁶

On the one hand, this implies that any definition of corruption bears an inherent danger of containing not only normative but also ethno-centric connotations (ibid.; Nye 1967). On the other, this also contributes to the problem of how to measure corruption: Since corruption is an informal practice that is largely hidden from public view and where there are few incentives for its participants to be open about their dealings (Galtung 2006), hard data about the precise extent of corrupt practices within any given country are very difficult to come by.

⁵⁶ My aim in this thesis is to identify general trends regarding the impact of corruption on the prospects of ethnopolitical (in)stability using large-N analysis (see chapters 5 and 6). Although I am fully aware that the precise definitions as well as forms and effects of corrupt practices are highly context-dependent (see e.g. Williams 1999), it therefore is a methodological issue rather than a shortcoming of my general research agenda that I cannot take further account of country-specific nuances in the definition or measurement of corrupt practices.

Problems regarding the measurement of corruption and the use of so-called subjective data in this analysis (i.e. the International Country Risk Guide's [ICRG] Corruption Index that is based on the subjective assessment of country experts) will be discussed in more detail in section 5.7.. It is, however, worth highlighting at this point that the difficulties one encounters when trying to define and measure corruption are nothing extraordinary in the social sciences, as concepts such as 'class', 'democracy' or indeed 'ethnic conflict' are similarly contested in their meaning and possible operationalisation for quantitative research. It is thus important to be aware that – by asking for the effects of corruption on the risk of ethnic violence – one is dealing with two famously ambiguous concepts at the same time. However, as it would go beyond the scope of this thesis – and possibly of any single analysis – to overcome the contested definitions and measurements of 'corruption' and 'ethnic violence', these ambiguities have to be accepted as an unavoidable aspect of the academic debate.

Leaving the aforementioned issues of context- and perception-dependence aside, I rely on the commonly used (even though admittedly rather broad) definition of corruption as the misuse of public authority for private gain (e.g. Gillespie and Okruhlik 1991). Issues such as whether corrupt practices are organised or disorganised, predictable or unpredictable (Kaufmann 1998), or to which degree corrupt dealings benefit an officeholder either personally as a private individual or in her capacity as a public official (Philp 2002; Thompson 1995) are of little relevance for the purpose of this thesis and will hence not be considered any further.

The use of a rather broad definition of corruption on the one hand has the advantage of what Sartori (1970, 1984) describes as the benefits of a relatively high location on the ladder of abstraction, namely that it avoids conceptual stretching and allows to analyse a greater number of cases than if a more detailed and hence more restrictive conceptualisation was used (see also Sartori 1970 cited in Collier and Levitsky 1997). On the other hand, however, such a relatively high location on the ladder of abstraction does not tell us anything about further specifications regarding the participants in corrupt dealings, their determinants, the goods involved and the level

on which corruption takes place within a political system. Since the corruption literature has provided numerous and partly very detailed typologies of corrupt practices over the decades, it therefore needs to be highlighted briefly how – by reference to the broad definition of corruption as the misuse of public authority for private gain – I address the aforementioned specifications within this analysis:

First, the most frequently investigated type of corruption is that involving public officials (Gardiner 1993). However, corrupt practices can equally take place between people of whom no one holds a public office, such as when a sales representative offers an extra payment to a prospective buyer if their product is selected (*ibid.*) or if a representative of the FIFA (Fédération Internationale de Football Association) accepts money from (people posing as) private businessmen for helping a particular country's bid to host the 2018 World Cup (BBC Online 2010a). These types of business or, more generally, non-public-official-centred corruption are not considered in this analysis, as they are neither theoretically relevant for the arguments outlined below nor are they measured by the ICRG Corruption Index used in the statistical part of this thesis (see also section 5.7.).

Second, when defining corruption as the misuse of public authority for private gain, the question arises how to determine whether a public official has indeed misused her authority. According to Gardiner (1993), the three sources of criteria to define standards of official integrity are legal (i.e. has the public official violated the legal codes regulating her behaviour in office),⁵⁷ public-interest-centred (i.e. has the public official harmed the public interest) and public-opinion-centred (i.e. how the people within a given country define corrupt behaviour, possibly in contrast to their laws).⁵⁸

⁵⁷ When talking about legal standards, it is worth noting that even though corruption might go hand in hand with other criminal offences such as fraud and money laundering, or might even be part of organised crime, they nonetheless should be seen as distinct phenomena: Corruption, as understood in this analysis, by definition centres on public officials, whereas fraud, money laundering and organised crime can but by no means have to involve public officeholders (Gardiner 1993). Put differently, and as stated earlier in this section, corruption necessarily involves the (mis)use of public power, while the other types of criminal offence do not (Jain 2001).

⁵⁸ As Gardiner (1993) and other authors such as Gillespie and Okruhlik (1991) acknowledge, these are commonly used but not necessarily ideal standards, as they all lend themselves to further questions that are not easily answered, such as how to define 'the public interest' or how to deal with a possible incongruence between legal codes and societal norms. Precisely because these are

Guided by the choice of the ICRG corruption data (see also section 5.7.), I rely on a conception of ‘misuse of public authority’ and, conversely, official integrity which does not fit neatly into any of the categories outlined by Gardiner (1993). Instead, the expert analyses on which the country ratings of the ICRG Corruption Index are based assess the extent of illegal activities (Akçay 2006) such as ‘demands for special payments and bribes connected with import and export licenses, ... tax assessments, [or] police protection’ (The PRS Group, Inc. 2010) as well as the prevalence of more ambiguous behaviour such as ‘suspiciously close ties between politics and business.’ (The PRS Group, Inc. 2010) They – and, by extension, this thesis – thus use a definition of official integrity which mixes legal standards and subjective judgements.

Third, corrupt dealings can be distinguished according to the goods involved, both in terms of the type of private gain for the corrupt official, and the ‘good’ or ‘service’ corrupt officials might provide (if any) in exchange for such gains. To elaborate this point further, it is useful to take a step back and consider Nye’s (1967) famous distinction of corrupt behaviour into ‘bribery (use of a reward to pervert the judgment of a person in a position of trust); nepotism (bestowal of patronage by reason of ascriptive relationship rather than merit); and misappropriation (illegal appropriation of public resources for private-regarding uses).’ (ibid.:419)⁵⁹ These types of corrupt dealings can differ substantially regarding the ‘service’ or ‘good’ a corrupt official might provide in exchange for a private gain, ranging e.g. from no service or good at all in case she merely embezzles public funds (i.e. misappropriates them for her own benefit), through legislative favours in exchange for a bribe, to nepotist job reservations. At the same time, the ‘private gains’ public officials make out of corruption need not be pecuniary but can also relate for instance to the status of the public official, such as by securing political support through patronage (Nye

difficult-to-answer questions that are of little relevance for my actual research topic, I do not consider them any further.

⁵⁹ This list easily could be expanded by adding further categories such as special interest capture that is neither bribe- nor nepotism-based (i.e. where some groups might use other unusual forms of influence over policy-makers to receive preferential treatment), or by identifying more precise subcategories such as vote-buying (i.e. a special interest group trying to influence the voting behaviour of legislators in order to enact certain legislation) as a special form of bribery (cf. Gardiner 1993; Jain 2001).

1967; Stokes 2007). These private gains do not have to go, so to speak, right into the corrupt official's pocket either, but might equally be used to benefit for instance the official's family, close private clique or political party (Nye 1967; Gardiner 1993). Again guided by the choice of the ICRG Corruption Index which does not distinguish between different types of corrupt dealings nor between different gains for corrupt officials, these nuances regarding corrupt practices and the precise goods involved cannot be considered any further. Instead, they are all subsumed indistinctly under the general heading of 'corruption'.

Finally, corrupt dealings can be distinguished according to the level on which corruption takes place within a political system, both in terms of the rank of the public official and, closely related to this, the size of the private gains involved. The two categories commonly used for this distinction are 'petty' and 'grand' corruption. In the latter type of corrupt practices, high government officials make major gains, while the former involves smaller gains for low-level officials (Goldsmith 1999; Lambsdorff 2005).⁶⁰ Contrary to the example given by Caiden (2007), 'petty' thereby should not be equated with 'trivial', and 'large' (or 'grand') with 'disruptive' corruption (ibid.:78), since (depending on their prevalence) both petty and grand corruption can have considerable negative effects on a country's economic and political performance (Doig and Riley 1998; Lambsdorff 2005). For this reason, I focus on the *overall* extent of corruption within a political system which includes, without further distinction, both petty and grand forms of corrupt dealings. This tallies yet again with the choice of data in the statistical part of this analysis, as the ICRG Corruption Index does not differentiate between petty and grand corruption either, but provides an assessment of the overall extent of corruption within a given political system, i.e. among high government officials as well as throughout lower levels of government (Gatti 2004; Tanzi and Davoodi 1997; The PRS Group, Inc. 2010).

⁶⁰ Interestingly enough, there is no standard threshold (regarding the size of gains or precise rank of officials involved) to distinguish petty from grand corruption. This might be not least due to the aforementioned difficulty to obtain hard data about corrupt dealings and hence to devise a meaningful classification scheme.

In sum, my use of the term ‘corruption’ as ‘the misuse of public authority for private gain’ thus by definition excludes all types of non-public-official-centred corruption; relies on a conception of official integrity that is based on both legal standards and subjective assessments; subsumes a variety of practices under the general heading of corruption, including for instance bribery, patronage and nepotism, no matter what type of private gains the corrupt official makes or what type of ‘good’ or ‘service’ she promises in exchange (if any); and includes both petty and grand corruption. All these specifications are in line with the description of the ICRG Corruption Index used in the statistical part of this thesis (see also section 5.7.).

On the basis of this definitional groundwork, we can illustrate the apparent relevance of corruption for the prospects of ethnopolitical (in)stability with reference to some brief country examples.

4.4. Why Corruption Matters

A vast majority of the literature on the effects of corruption hitherto has focused on the impact of corrupt practices on economic and political performance indicators, specifically in terms of economic growth and the quality or prospects of democracy (see e.g. Bertrand 2004; Huntington 1968; Leff 1964; Mauro 1995; Méndez and Sepúlveda 2006; Seligson 2002). Only in recent years, an increasing number of analyses has begun to ask for the impact of corruption also on the prospects of armed conflict and sustainable peace (see e.g. Cheng and Zaum 2008; Galtung and Tisné 2009; Le Billon 2003; Philp 2008). To be clear, many seminal texts on the causes of violent intrastate conflict have alluded to the relevance of corruption before (to name a few: Brass 1997; Brown 1996; Collier and Hoeffler 2004; Fearon and Laitin 2003a). It is, however, a fairly recent development that the effects of corrupt practices are put at the centre of civil war or peace studies, and dealt with in a more systematic fashion (cf. Fjelde 2009; Philp 2008).

The fact that corruption has only recently gained more systematic attention as a possible explanatory factor for the risk of intrastate violence is surprising, as there

are numerous country examples which seem to provide at least tentative evidence for the apparent relevance of corrupt dealings. For instance, the brief country reference to Burundi in section 2.4. has alluded to the negative impact of corruption on levels of political inclusiveness and hence the prospects of ethnopolitical stability: Here, Tutsi representatives (particularly those of the South) had been able to use socially entrenched networks of clientelism and patronage to undermine the political and economic standing of the Hutus (Ndikumana 1998). The Tutsi elite had effectively captured the state well into the 1990s by privatising certain aspects of public life, thereby bypassing official processes of political representation and creating an asymmetric access to political power (see *ibid.*). In this manner, persistent patterns of clientelism and patronage – which can be subsumed, among other things, under the term ‘corruption’ (see section 4.3.) – contributed to the political exclusion of the Hutus (Ndikumana 1998), and illustrate the potential relevance of corruption for the representation of different groups’ interests in the political decision-making process. A brief reference to Afghanistan and Nigeria similarly helps to illustrate how, under partly very different political, economic and social circumstances, networks of corruption have formed along ethnic lines and exercised relevant influence on the prospects of ethnopolitical (in)stability:

No matter how much this perception might need to be qualified (see Smith 2007), Nigeria is frequently associated with a ‘pandemic’ (Erero and Oladoyin 2000:280) of corruption which has affected all spheres of society and become increasingly institutionalised over the years (*ibid.*). The tendency of networks of corruption to form along ethnic lines and benefit some ethnic groups over others thereby can be traced back at least to colonial times (see Falola 1998). By 1966, six years after Nigeria’s independence, corruption was rampant (Spalding 2000), with the spoils of corrupt dealings clearly being distributed among ethnic lines, contributing to a fierce competition for state resources and the rise of interethnic tensions (Diamond 1988). In this strained environment, grievances among those ethnic groups who felt disadvantaged in their political and socioeconomic standing due to the ethnically exclusionary tendencies of corruption became a relevant motivating factor for the first, Eastern Ibo sponsored coup in January 1966 (see Clarno and Falola 1998) and

the subsequent outbreak of large-scale ethnic violence in the Biafran civil war (see *ibid.*). Likewise, corruption in the current Third Republic of Nigeria continues to fuel the grievance discourse among those ethnic groups who feel disadvantaged due to their lack of access to the gains from corruption (Smith 2007), and plays a relevant role in the political platform of ethnic militias in the Niger Delta (ICG 2006b).

Compared to Nigeria, the role of ethnicity in corrupt dealings in Afghanistan seems to be more difficult to identify due to the fact that ideological, ethnic and economic cleavages in the Afghan society have become deeply intertwined (cf. Cramer and Goodhand 2002; Rubin 2007). Nonetheless, recent analyses on the political development of Afghanistan have begun to unveil the relevance of ethnically exclusionary networks of corruption since the country's modern state-building efforts. According to these analyses, practices of ethnic favouritism in corrupt dealings in Afghanistan go back to at least the late 19th century (Asian Development Bank et al. 2007) and seem to persist until this day thanks to their self-perpetuating momentum (*ibid.*; Goodhand 2008). Even though support for the Taliban nowadays and in the 1990s can be explained partly by their anti-corruption discourse (Goodhand 2008), 'there are no signs that corruption did not exist under the Taliban as patron-client relationships continued to exist throughout the country' (IWA 2007:21) and which, due to widespread ethnic discrimination (*ibid.*), are likely to have benefited some ethnic groups over others. Also in contemporary Afghanistan, following the US-led intervention in 2001, there seems to be a tendency that the gains of corruption – both in terms of immediate financial and status gains, as well as the more profound structural benefits on which I focus in this analysis (see sections 2.5. to 2.7.; see also footnote 55) – are distributed along ethnic lines (cf. *ibid.*; Asian Development Bank et al. 2007). As Cramer and Goodhand (2002) highlight, the ethnic favouritism entrenched in corrupt dealings in Afghanistan thereby has contributed to 'a growing sense of grievance' (*ibid.*:900) which, following the theoretical assumptions outlined in section 4.7., is likely to have increased the odds of the country's violent conflict between ethnic Pashtuns, Tajiks, Uzbeks and Hazaris since 1992 (PITF 2009).

Admittedly, since all ethnic conflicts are multicausal phenomena, the origins of large-scale intrastate violence in Burundi, Nigeria and Afghanistan in reality are likely to be much more complex than could be presented above. For instance, the aforementioned country examples did not mention the relevance of international influences in Afghanistan (see e.g. Rubin 2007) or the role of political agency in Nigeria's conflict history (see e.g. Diamond 1988). However, although I fully acknowledge that there are a number of additional factors which might have influenced the prospects of ethno-political (in)stability in my country examples, I do not consider them any further, as I attach greater importance to corruption as a possible explanatory factor for the risk of ethnic violence. This is because I expect corruption to be a particularly relevant source of grievances that might translate into violent action, due to its impact on the *modus operandi* of formal political institutions and hence the levels of political inclusiveness in any given society (see also sections 4.2. and 4.7.).

4.5. The Theoretical Underpinnings of this Chapter

To explain the relevance of corruption for the prospects of ethno-political (in)stability, one could either use a greed- or grievance-based explanation of large-scale ethnic violence.⁶¹ For instance, as illustrated by Le Billon (2003), corruption fits the grievance perspective of violent intrastate conflict insofar as one could argue that the negative impact of corrupt dealings on a country's economic performance, levels of equality and government legitimacy might cause socioeconomic and political grievances that can translate into armed conflict (see *ibid.*). On the other hand, one could also use corruption as element of a greed-based explanation of intrastate violence, as, under relatively high levels of corruption, state resources might be perceived as a 'lootable commodity' by self-interested economic agents (see *ibid.*): If these self-interested economic agents currently control lucrative corrupt channels, they might be willing to defend them with violent means against potential threats, or – if they do not currently control corrupt channels – they might try to

⁶¹ See sections 2.2. and 2.3. for a brief summary of the greed and grievance perspectives.

capture the state in order to enrich themselves and the group they belong to (see *ibid.*).⁶² Finally, one could also argue that ‘grievances among marginalized groups and greed-driven jockeying within dominant ones’ (Le Billon 2003:417) are two sides of the same coin, as the potential grievances among those ethnic groups who do not benefit from the spoils of corruption, and the self-interested attempts by political powerholders to secure control over corrupt channels are inextricably linked phenomena (cf. *ibid.*; North et al. 2007).⁶³

However, in addition to the more general theoretical limitations of greed-based models of violent intrastate conflict (see section 2.3.), there are two more key reasons why I do not consider the role of greed factors any further when trying to explain the causal link between corruption and the risk of large-scale ethnic violence: First, as becomes evident in the aforementioned summary of greed-based arguments according to Le Billon (2003), greed-based explanations of violent intrastate conflict primarily focus on the motivations of self-interested economic agents. This research focus is ultimately too narrow, as it overemphasises the role of a select set of political actors (i.e. those actors controlling or seeking to control corrupt channels), while neglecting the relevance of the wider, structural effects of corruption on the *modus operandi* of formal political institutions. Second, the argument that ethnic contenders are primarily driven by economic self-interest is also too limited: As has been highlighted in chapter 2, ethnic groups might equally seek political recognition

⁶² It is worth pointing out that Le Billon (2003) implicitly refers to early versions of the greed argument which have focused on ‘greed’ literally in the sense of the self-enrichment, profiteering and rapacity of rebel groups (Aspinall 2007; see also section 2.3.), rather than later versions which have paid more attention to questions of feasibility and opportunity for insurgent movements (*ibid.*).

⁶³ There are at least three key weaknesses in Le Billon’s (2003) analysis which ought to be highlighted briefly at this point: First, Le Billon goes into hardly any detail regarding the causal assumptions on which greed- and grievance-based explanations of intrastate violence are based, and – as he does not establish explicit links between his own work and seminal arguments put forth e.g. by Collier and Hoeffler (1998, 2004) or Gurr (2000) – does little to locate his analysis within the broader greed *versus* grievance debate. Second, Le Billon concentrates on the role of corruption in armed conflicts more generally, and thus fails to identify ethnic civil wars as a distinct type of intrastate violence (see also section 1.3.). Third, Le Billon fails to highlight the ethnically exclusionary tendencies of corruption and its impact on the *modus operandi* of formal political institutions. My analysis overcomes these three weaknesses, as I clearly outline the causal assumptions of greed- and grievance-based arguments (see sections 2.2. and 2.3.), identify ethnic civil wars as a distinct type of intrastate violence (see section 1.3.) and highlight the ethnically exclusionary tendencies of corruption (see section 4.6.) as well as its interaction effects with formal political institutions (see section 4.7.).

(see section 2.5.), or political and physical security (see section 2.7.), and do not have to be purely driven by desires for self-enrichment. For these reasons, I prefer to focus on the relevance of grievance factors when analysing the (arguable) causal link between corruption and the prospects of ethnopolitical (in)stability, and do not consider greed-based explanations any further.

Three further qualifications regarding this chapter's analytical scope ought to be highlighted briefly at this point:

First, despite my negative expectations regarding the impact of corruption on the prospects of ethnopolitical stability, I do not make any recommendations for concrete anti-corruption measures. This lack of recommendations is based on the acknowledgment that anti-corruption measures might in fact further heighten the risk of intrastate violence, if they are not carefully tailored to each country in which they are applied or if they threaten the economic and political interests of powerful groups and individuals (cf. Le Billon 2003; North et al. 2007). I therefore leave it to future research to investigate the feasibility of different anti-corruption strategies, and to assess how far they might or might not give rise to new types of grievances, different from the ones outlined in section 4.7., which could jeopardise the prospects of (ethno)political stability.

Second, as mentioned in section 1.2., I am generally more interested in what Elster (1997) describes as the 'downstream' analysis of the effects of political institutions rather than the 'upstream' study of how they come into being. Hence, I do not address any further the plethora of possible factors that might influence the specific level of corruption in a given country.⁶⁴ In this context, it is worth mentioning that, since the 1990s, the design of formal political institutions has received increased attention in the academic debate on the causes of corruption (see Treisman 1998). For instance, Persson and Tabellini (2003) famously argue that electoral systems with large districts and those with voting over individuals under plurality rule both reduce the prevalence of corrupt practices, as there are arguably fewer free-rider

⁶⁴ See e.g. Shaxson (2007) and Treisman (1998, 2000) for an overview of such factors.

problems when voters directly choose individual incumbents, and a greater choice set available to voters in large districts.⁶⁵ Similarly, authors such as Heywood (1996) and Rose-Ackerman (1994) highlight the potential relevance of state structures for levels of corruption (see Treisman 1998). According to Heywood (1998), the establishment of multiple levels of government might increase the prevalence of corruption *inter alia* by offering opportunities for the development of new spoils systems. Following, on the other hand, Rose-Ackerman (1994), in particular federal state structures might help to reduce levels of corruption, *inter alia* thanks to additional levels of law enforcement agencies in federal states. In principle, it therefore might be interesting to ask for the possible causal links between levels of corruption and the formal political institutions presented in chapter 3. However, as this would lead me into the broader debate about possible causes of corrupt dealings, these questions simply go beyond the scope of this thesis. Instead, they ought to be addressed in more detail in separate analyses.

Finally, my arguments inevitably 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 provide a fertile ground for corrupt dealings, e.g. through defence 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 chapter: 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. In other words, while concerns about reverse causality are very common in the social sciences, they should not be seen as reason to dismiss certain research questions altogether, as all phenomena such as corruption, ethnic conflict, democratisation, socioeconomic inequalities or levels of economic development are simultaneously the consequence and, conversely, the cause of a variety of different factors.

⁶⁵ Persson and Tabellini (2003) acknowledge that these two effects tend to offset one another, as proportional electoral systems typically combine large districts with party-list ballots, while majoritarian electoral systems typically combine small districts with voting over individual candidates. Hence, there is no simple answer to the question whether majoritarian or proportional electoral systems are more conducive to lowering levels of corruption (ibid.).

Ultimately, concerns about possible endogeneity are thus a ‘non-issue’ in the sense that they might be unavoidable in the (quantitative) analysis of social science phenomena more generally. Instead, greater emphasis should be laid on the actual contributions of my arguments to the newly emerging debate about the impact of corruption on the risk of intrastate violence mentioned in section 4.4.. Specifically, my thesis contributes to this debate on three different levels: by asking for the effects of corruption on the risk of *ethnic* (as opposed to any other type of) civil war;⁶⁶ by presenting new statistical evidence for the impact of corruption on the risk of large-scale ethnic violence (see chapter 6); and by highlighting the ethnically exclusionary tendencies of corruption and its impact on the *modus operandi* of formal political institutions. The latter point, i.e. the ethnically exclusionary tendencies of corruption, will be outlined in more detail in the following section.

4.6. The Ethnically Exclusionary Tendencies of Corruption

According to authors such as Le Billon (2003) and Fjelde (2009), corruption, functioning as an informal channel of wealth distribution, can help to ‘buy peace’ (i.e. lower the risk of civil wars) by giving material rewards to otherwise antagonistic groups in exchange for their political acquiescence. The potentially stability-enhancing effects of corruption thereby depend *inter alia* on how ‘politically savvy and economically benign’ (Le Billon 2003:424) the use of material inducements through corrupt channels is and whether it is based on ‘careful ethnic balancing’ (Fjelde 2009:203) and “”crosscutting” network[s] of clientelism’ (ibid.).

While I do not wish to deny the potential merits of corruption altogether, I am nonetheless skeptical towards the ‘corruption buys peace’ argument, as it seems to be based on rather questionable assumptions. In particular, it seems to me that the examples of ethnically balanced networks of corruption used by Fjelde (2009) – in

⁶⁶ As of now, several analyses in the newly emerging debate about the impact of corruption on the risk of violent intrastate conflict either do not acknowledge the difference between ethnic and non-ethnic civil wars, or fail to elaborate it sufficiently (see e.g. Fjelde 2009; Galtung and Tisné 2009; Le Billon 2003; Philp 2008).

oil-producing Cameroon and Gabon⁶⁷ – are exceptions to the rule rather than common occurrences. Unfortunately, there is currently no quantitative data that would allow me to substantiate this claim by measuring and comparing the role of ethnic cleavages in corrupt dealings between countries and across time. However, there are numerous analyses which allude to the tendency of networks of corruption to form along ethnic lines and benefit some ethnic groups over others. For instance, Mauro (1995) and Easterly and Levine (1997) find a significant and positive correlation between ethnolinguistic fractionalisation and corruption, which the former famously interprets as evidence that ‘bureaucrats may favor members of their same group.’ (Mauro 1995:693) Also Easterly (2001) (based on research by Svensson (1998)), Wimmer (2002) and Nye (1967) acknowledge the relevance of ethnic favouritism in corrupt dealings and anti-corruption policies respectively, while numerous case studies – such as on Bosnia and Herzegovina (Chandler 2002), Iraq (Gillespie 2006), Burundi, Nigeria and Afghanistan (see section 4.4.) – further illustrate that ethnic group belonging plays an important role in the way how corruption is conducted and, more importantly, whom it benefits. On the whole, these analyses present convincing, systematic evidence that corruption tends to be ethnically exclusionary in nature, and that it rarely contains an element of ‘careful ethnic balancing’ (Fjelde 2009:203).

In this context, particular emphasis needs to be put on the way in which my argument is phrased, i.e. that I refer to *tendencies, not necessities*, as I am cautious not to argue that corrupt dealings always contain an ethnic element. Put differently, the term ‘ethnically exclusionary’ does not preclude the existence of corrupt dealings along non-ethnic lines or between members of different ethnic groups altogether. However, following Wimmer’s (1997, 2002) institutionalist approach to nationalism and ethnic politics, there are grounds to assume that, when ethnicity is a politically salient cleavage, it is likely that ethnic identities will become the central focal point of networks of corruption. Following Wimmer (1997, 2002), this is likely to be the case because there are strong incentives in the modern nation-state, when rulers ‘are no

⁶⁷ In this context, it might be worth pointing out that Fjelde’s (2009) analysis centres on the effects of corruption in oil-rich states, i.e. she focuses in particular on the use of oil rents through corrupt channels to ‘placate restive groups’ (Fjelde 2009:199).

longer legitimized by the principles of dynastic succession, God's grace, or civilizational progress' (Cederman, Wimmer and Min 2010:94), for political officeholders to gain legitimacy by favouring co-ethnics over others (ibid.). In this manner, ethnicity can 'serve as a formidable instrument of social and political exclusion' (Cederman and Girardin 2007:175), and might help to explain the arguable link between corruption and the risk of large-scale ethnic violence.⁶⁸

At the same time, it should be clarified that my assumption regarding the relevance of ethnic cleavages in corrupt dealings does not imply that all corruption is ultimately based on ethnic nepotism. Building on the definition of nepotism as the 'propensity to favor kin over nonkin' (van den Berghe 1987:18) – 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 socio-biological conceptions of ethnicity according to which 'ethnic groups can be perceived as extended kin groups ... [who] tend to favour their group members over non-members because they are more related to their group members than to the remainder of the population.' (Vanhanen 1999:57) As mentioned in section 1.4., such primordialist understandings of ethnicity are highly problematic, not least due to their essentialist connotations about 'the nature' of ethnic group identities. Thus, even though nepotism is one of the practices subsumed under my definition of corruption in this analysis (see section 4.3.), corrupt dealings among members of the same ethnic group should not be reduced to an element of 'kin' in the sense of socio-biological relations. This tallies with the more constructivist understanding of ethnic group identities that underlies my analysis (see section 1.3.) as well as with the fact that the data used in the statistical part of this analysis do not allow us to distinguish nepotist from other types of corrupt dealings (see also section 4.3.).

⁶⁸ Due to the lack of quantitative data to measure and compare the role of ethnic cleavages in corrupt dealings between countries and across time, it is not possible to assess whether ethnically exclusionary networks of corruption are more likely to exist the more diverse or the more divided a society is. It might be reasonable to expect that ethnically exclusionary tendencies in corrupt dealings are particularly pronounced in deeply divided societies where 'separate organizations ... permeate and divide every aspect of society on the basis of identity.' (Sisk 1996:15) However, due to the lack of data to test this expectation, I am confined to the admittedly rather broad claim that networks of corruption tend to form along ethnic lines and benefit some ethnic groups over others, no matter how diverse or divided a society is.

The tendency of networks of corruption to form along ethnic lines and benefit some ethnic groups over others, as outlined in this section, builds the premise for the following identification of four possible scenarios in which networks of corruption may affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner (see section 4.7.).

4.7. Corruption and the Risk of Ethnic Violence

As mentioned in section 4.2., informal political institutions such as corruption do not change the actual *form* of formal political institutions, i.e. they do not alter the official terms in which formal political institutions have been codified (Lauth 2000). However, they can affect the manner in which formal political institutions operate, 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. *ibid.*). Before describing the different scenarios in which corruption may influence the *modus operandi* of formal political institutions in an ethnically exclusionary manner, it is worth recalling the aim of the second dimension of Ethno-Embedded Institutionalism.

As has been elaborated in more detail in section 1.7., a vast majority of studies within the institutional incentives approach to ethnic violence has focused on the role of formal political institutions when seeking to understand the causes of ethno-political (in)stability. By largely neglecting the role of informal political institutions, i.e. by failing to acknowledge the relevance of non-codified structures of political interactions, the analysis of institutional incentives for violent ethnic conflict has followed the misconception that it is their materiality which allows political institutions to influence political outcomes (cf. Giddens 1984). Put differently, proponents of the institutional incentives approach to ethnic violence have largely neglected the new institutionalist insight that political interactions are not only shaped by openly codified institutions such as forms of government or electoral

systems, but also by norms, values and socially entrenched patterns of human behaviour (cf. Lecours 2005).

In response to this pronounced research asymmetry in favour of formal political institutions, the second dimension of Ethno-Embedded Institutionalism highlights the relevance of corruption as a prime example of a socially embedded (i.e. informal) political institution. I expect corruption to affect the risk of large-scale ethnic violence due to its impact on the manner in which formal political institutions operate (cf. Lauth 2000). There are four different scenarios in which corruption can affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner:

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 favour of a specific ethnic group or do so in exchange for political support from their ethnic followers, i.e. in order 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 than others, as they are able to exercise more influence over the formulation of public policies than members of another ethnic group (cf. Ndikumana 1998). In this manner, high levels of corruption privatise certain aspects of public life, undermine official processes of political representation and create an asymmetric access to political power (see *ibid.*; see also Thompson 1993).

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 will gain disproportionate relevance (Shleifer and Vishny 1993). For instance, demands for secrecy might shift a country's investment and policy-making priorities from valuable health and education projects into potentially useless defense and infrastructure ones, if the

latter promise to ease corrupt transactions (ibid.). Following the ethnically exclusionary tendencies of corruption outlined in section 4.6., political officeholders are likely to try to maximise gains for their own ethnic group. Therefore, the aforementioned distortions of the political decision-making agenda may result in the neglect especially of those policy areas which are of particular interest to ethnic groups that stand outside of ethnically exclusionary networks of corruption.

Third, the secrecy, deceit and self-interested motives behind corruption are likely to undermine practices of consultation and consensus-building between political actors (see Chandler 2002). Consequently, political processes can become atomised 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 and Levine 1997). Under these circumstances, members of those ethnic groups who have access to state resources and powers will try to maximise their benefits from corrupt dealings, possibly until they exhausted the pool of possible gains (ibid.), 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 legitimise strives for state capture.

Fourth, on the whole, corruption can be expected to have negative effects on the quality or prospects of democracy,⁶⁹ because – ‘by breaking the logic of formal rules in various places’ (Lauth, 2000:35) – it *inter alia* undermines political and

⁶⁹ I will not test the impact of corruption on democracy and democratisation empirically, as it would require the collection and analysis of extensive data that are largely irrelevant for the main topic of this thesis. Instead, I refer to the findings by authors such as Lauth (2000), Seligson (2002) and Thompson (1993) which clearly support the negative effects of corrupt dealings on the quality of democracy. In this context, I also treat Bertrand’s (2004) argument with caution that corruption might be a potentially beneficial factor for democratisation if the public awareness of corruption contributes to the discontent with autocratic regimes and thus creates incentives among citizens to demand regime change (ibid.). Rather, I assume that the potential risks of corruption largely outweigh its potential benefits, as high levels of corruption – if they take lasting root during the transition process – might ultimately stifle democratisation and lead to the establishment of a hybrid regime rather than an institutionalised (i.e. consolidated liberal) democracy (cf. Huntington 1968; Seligson 2002). On the basis of these arguments, I expect corruption to have a detrimental effect on both the quality and prospects of democracy.

administrative processes, and leads to an increasing lack of transparency and accountability (ibid.). This lack of transparency and accountability in turn implies that it is easier for some groups or individuals to monopolise state power to the detriment of others (cf. Fearon and Laitin 2003), and to use corrupt means to secure their own political survival (cf. Bueno de Mesquita et al. 2003).

All four scenarios clearly violate the ideal of representational justice (Wimmer 2002) as the state no longer responds equally to the interests of all its citizens, and thus lower the level of political inclusiveness in a given political system. In this manner, the impact of corruption on the *modus operandi* of formal political institutions systematically reduces the number of ethnic groups who can obtain the values of political representation outlined in chapter 2, and can be expected to contribute to perceived or real asymmetries between ethnic groups in terms of their political and socioeconomic standing (see also section 4.4.).

Of particular concern in this context is the fact that the effects of corruption on the *modus operandi* of formal political institutions can gain self-perpetuating momentum in the sense that corruption might multiply its own negative effects through a vicious circle of corrupt dealings, government inefficiency and political pessimism (cf. Lauth 2000; see Figure 4 for illustration): By creating a set of informal rules and structures that offer political influence beyond the formal competences of political office, corruption can hollow out the functions of formal political institutions to such a degree that people are likely to lose trust in the broader political process and develop more general concerns over the representativeness of their political system (cf. Chandler 2002). This negative impact of corruption on the functions of formal political institutions in turn can lead to a further rise in corrupt dealings, as citizens might (rightly or wrongly) assume that corrupt dealings have become the most effective way to obtain government services (see Lauth 2000). Once this vicious circle begins, the disparities between different ethnic groups regarding their chances to obtain the values of political representation are likely to intensify, and to further increase grievances among those ethnic groups who stand outside of ethnically exclusionary networks of corruption.

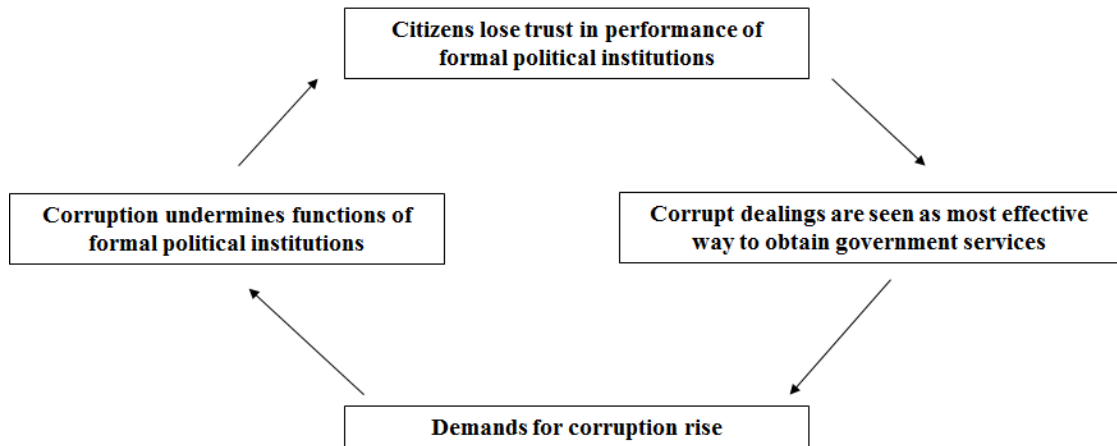


Figure 4: The Vicious Circle of Corruption.

In sum, there are four possible scenarios in which networks of corruption may affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner: by creating direct incentives for political officeholders (e.g. through bribery or the sustenance of patronage networks) to manipulate the political decision-making process in favour of specific ethnic groups; by biasing the political decision-making agenda; by leading to a culture of selfish value-accumulation; and by undermining the quality or prospects of democracy.⁷⁰ As they unduly enhance the influence of certain ethnic groups over the political decision-making process (and possibly worsen that of others) through informal means, all four scenarios lower the level of political inclusiveness in a given political system. Following the grievance-based explanation of ethnic violence outlined in chapter 2, the level of political inclusiveness in a given political system directly affects the ability of the different ethnic groups in a given society to obtain the values of political representation, relating to their political recognition, likely influence over the distribution of resources and powers, and perceptions of political, economic and physical security (see sections 2.5. to 2.7.). Consequently, by lowering the level of political

⁷⁰ Due to issues of data availability, it is not possible to assess the degree to which these four scenarios tend to occur individually or in combination with each other. Ultimately, however, the possible interaction effects between these four scenarios are of little relevance at this point, as they do not influence my central argument about the (expected) negative impact of corruption on the prospects of ethnopolitical stability.

inclusiveness, the aforementioned four scenarios are likely to deepen political and economic inequalities between those ethnic groups who are ‘in’ and those who are ‘out’ of ethnically exclusionary networks of corruption. These inequalities in turn can be expected to give rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low, which – following the theoretical framework outlined in chapter 2 – is likely to increase the risk of ethnic violence. As networks of corruption tend to form along ethnic lines and benefit certain ethnic groups over others (see section 4.6.), I thus 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.

4.8. Conclusion: The Likely Effects of Corruption

Hitherto, the institutional incentives approach to ethnic violence has largely neglected the relevance of informal political institutions for the prospects of ethno-political (in)stability, based on the apparent misconception that it is their materiality which allows political institutions to influence political outcomes (cf. Giddens 1984). The second dimension of Ethno-Embedded Institutionalism addresses this pronounced research asymmetry in favour of formal political institutions by highlighting the relevance of corruption (as a prime example of an informal political institution) for the risk of large-scale ethnic violence. The second dimension of Ethno-Embedded Institutionalism thus clearly builds on the new institutionalist insight that political interactions are not only shaped by openly codified institutions such as forms of government or electoral systems, but also by norms, values and socially entrenched patterns of human behaviour (cf. Lecours 2005).

Following the grievance-based explanation of violent ethnic conflict outlined in chapter 2, the central argument presented in this chapter states that corrupt dealings are likely to increase the risk of ethnic civil war, as networks of corruption – given

their ethnically exclusionary tendencies (see section 4.6.) – can be assumed to affect the *modus operandi* of formal political institutions in such a way that those ethnic groups who stand outside of these networks have lower chances to obtain the values of political representation than those ethnic groups who are included in these networks (see section 4.7.). In this manner, corruption is expected to have a negative impact on the prospects of ethnopolitical stability, as it systematically reduces the number of ethnic groups who can obtain the values of political representation outlined in chapter 2, contributes to perceived or objective asymmetries between ethnic groups in terms of their political and socioeconomic standing, and thus arguably gives rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low. The risk of corruption for the prospects of ethnopolitical stability is thereby exacerbated by the fact that the effects of corrupt dealings on the *modus operandi* of formal political institutions – and hence on the levels of political inclusiveness in a given political system – can gain self-perpetuating momentum (see *ibid.*). These assumptions about the likely impact of corruption on the risk of large-scale ethnic violence illustrate the relevance of the second dimension of Ethno-Embedded Institutionalism by highlighting the possible causal links between informal political institutions and the prospects of ethnopolitical (in)stability.

On the basis of the arguments outlined in chapters 1 to 4, the remainder of this thesis will turn to the quantitative analysis of Ethno-Embedded Institutionalism. Chapter 5 presents detailed information on the ‘Ethno-Embedded Institutionalism (EEI) Dataset’ that has been created specifically for the purpose of this thesis. Chapter 6 contains the results from testing the effects of both institutional combinations and corruption on the risk of large-scale ethnic violence, using binary time-series-cross-section analysis.

Chapter 5: The EEI Dataset

5.1. Introduction: A New Dataset on Institutions and Ethnic Civil War

Ethno-Embedded Institutionalism proposes a general explanation for the effects of institutional combinations and informal political institutions on the risk of violent ethnic conflict throughout space and time. Hence, it is most suitable to test its relevance with a large- N approach and time-series-cross-sectional dataset. Accordingly, this chapter contains key information on the ‘Ethno-Embedded Institutionalism Dataset’ (‘EEI Dataset’ for short) that has been compiled as a new dataset on institutions and ethnic civil war specifically for the purpose of this thesis. Further details on the variables in the EEI Dataset (including the data sources used for their coding) can be found in the EEI Dataset Codebook attached in Appendix III. To present key information on the EEI Dataset, the following sections will

- outline the general aims and scope of the EEI Dataset (section 5.2.); and
- present the variables it includes on:
 - large-scale ethnic violence (section 5.3.),
 - democratic forms of government (section 5.4.),
 - electoral systems for the presidency and legislature (section 5.5.),
 - state structures (section 5.6.),
 - institutional combinations (section 5.7.),
 - corruption (ibid.), and
 - commonly used control variables in the civil wars literature (section 5.8.).
- Section 5.9. will conclude this chapter by summarising its central points.

5.2. Filling the ‘Data Gap’ in the Academic Debate

Surprisingly, the institutional incentives approach to ethnic violence overall contains ‘relatively little large- N analysis of the relationships between political institutions

and ethnic conflict.’ (Saideman et al. 2002:105) Consequently, there is a pronounced lack of well-known or publicly available datasets that contain information on different types of political institutions, the incidence of large-scale ethnic violence and further variables such as regime type or level of economic development which are commonly controlled for in the civil wars literature. For instance, the seminal replication data for Fearon and Laitin’s (2003a) article on ‘Ethnicity, Insurgency, and Civil War’ which are frequently used (with certain modifications) in statistical analyses of violent intrastate conflict (see e.g. Cederman and Girardin 2007; Fjelde 2009; Humphreys 2005) do not provide any information on political institutions at all. Similarly, Cederman, Wimmer and Min’s (2010) ‘Ethnic Power Relations (EPR) Dataset’ contains extensive information on ethnic groups’ access to state power, but, interestingly, no variables on institutional design, such as whether a country has a unitary, federal or mixed state structure, or whether it uses a majoritarian, proportional or mixed electoral system for the legislature. Scholars such as Cheibub (2007) and Golder (2005) have previously published invaluable data on selected types of political institutions such as forms of government (Cheibub 2007) or electoral systems for the legislature and the presidency (Golder 2005). However, their datasets are not (and were not meant to be) suitable for the analysis of institutional incentives for ethnic violence. Even those datasets which were designed specifically to test the impact of (formal) institutional design on different types of ethnic conflict, such as by Roeder (2005) and Saideman et al. (2002), are rather limited in scope, as they cover relatively few countries, years and variables.⁷¹ There is thus a clear need for a comprehensive dataset which facilitates the systematic analysis of the relationships between institutional design and ethnic civil wars.

The EEI Dataset fills this apparent ‘data gap’ in the academic debate by providing an unprecedented amount of quantitative information for the statistical analysis of

⁷¹ The EEI Dataset is more extensive in scope than the datasets by Roeder (2005) and Saideman et al. (2002), *inter alia* as it provides more annual data than Saideman et al. (namely for all years between 1955 and 2007, rather than just the years between 1985 and 1998) and includes information on more countries than Roeder (namely by considering countries with a population of at least 500,000 in contrast to Roeder’s consideration of only those countries with a population of at least one million). Moreover, Roeder’s and Saideman et al.’s datasets seem to contain a far smaller range of control variables than the EEI Dataset, as they apparently lack relevant quantitative information for instance on different types of colonial legacies, population size or oil wealth.

institutional incentives for large-scale ethnic violence. In total, the EEI Dataset contains 103 variables which provide data on 174 countries between 1955 and 2007.⁷² In order to facilitate the analysis of regional trends (see also the graphs in Appendix I), all 174 countries have been identified as belonging to one of the following seven world regions: Africa (except North Africa); Central Asia and Eastern Europe; East Asia and Pacific; Europe (except Eastern Europe) and North America; Latin America and Caribbean; Middle East and North Africa; and South Asia.

It is worth pointing out that only 9 out of the 103 variables in the EEI Dataset have been merely copied from existing data sources.⁷³ The vast majority of information in the EEI Dataset draws on data provided by scholars such as Cheibub (2007), Fearon and Laitin (2003a), and Golder (2005), but extensively modifies these scholars' original variables by double-checking and correcting their values, extending their temporal and geographical scope, and adding new coding categories (see Appendix

⁷² Data on countries that became independent after 1955 or/and which ceased to exist before 2007 were added from the year of the countries' internationally recognised independence until the last year of their internationally recognised existence according to the COW Project State System Membership List version 2008.1 (COW 2008). In order for a country to be included in the EEI Dataset, it has to be listed as a member of the state system by the COW Project State System Membership List version 2008.1 (*ibid.*) and must have had a total population of greater than 500,000 in 2008 according to the Polity IV Project dataset version p4v2008 (Marshall and Jaggers 2009a). Countries that ceased to exist before 2008, such as Czechoslovakia or the German Democratic Republic, have been included if they are listed as former members of the state system by the COW Project and had a total population of greater than 500,000 in their last year of existence according to the population variable in the EEI Dataset (see section 5.8. and Appendix III). The EEI Dataset also contains information on six countries that are not listed by the COW Project State System Membership List version 2008.1: the Democratic Republic of Vietnam, the Federal Republic of Yugoslavia/Serbia and Montenegro, Serbia, the Soviet Union, Tanganyika and the United Arab Republic. These countries are either missing from the COW Project State System Membership List version 2008.1 (such as the United Arab Republic) or have been subsumed under the conventional short name of their successor entity (e.g. in the COW Project State System Membership List version 2008.1 'Vietnam [1954-2008]' refers to both the Democratic Republic of Vietnam [1954-1976] and the Socialist Republic of Vietnam [1976-today]). The aforementioned six countries have been included as internationally recognised independent countries in the EEI Dataset in addition to the ones listed by the COW Project (2008), as they are territorially and constitutionally different from their successor entities, and have been recognised as separate state system members by the United Nations (UN 2006) or at least two major powers.

⁷³ These copied variables include: the COW Project country codes; the ethnic war variable based on the PITF Ethnic War Problem Set, 1955-2007; the three variables on involvement in violent international conflict based on data by the UCDP/PRIO Armed Conflict Dataset version 4-2009; Vanhanen's Index of Power Resources and Index of Distribution of Economic Power Resources; the Revised Combined Polity Score from the Polity IV Project dataset version p4v2008; and the International Country Risk Guide (ICRG) Corruption Index by The PRS Group, Inc. (2009) (see the EEI Dataset Codebook in Appendix III for further details).

III for further details). To name just a few examples, e.g. Cheibub's (2007) data on forms of government have been significantly corrected and extended using constitutional texts, information from government and parliament websites, and relevant academic publications on individual countries.⁷⁴ Likewise, Golder's (2005) original variable on electoral systems for the presidency has been extended, corrected and modified with further coding categories, using information from the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe (Nohlen 2005a; Nohlen 2005b; Nohlen and Stöver 2010; Nohlen, Grotz and Hartmann 2001a; Nohlen, Grotz and Hartmann 2001b; Nohlen, Krennerich and Thibaut 1999), the ACE Electoral Knowledge Network (ACE Electoral Knowledge Network 2010), the Electoral Institute for the Sustainability of Democracy in Africa (EISA 2010), the Political Database of the Americas (PDBA 2010), constitutional texts, government and parliament websites, and relevant academic publications on individual countries. Finally, some variables in the EEI Dataset have been completely newly coded, such as those on colonial legacies, the incidence of ethnic war in a neighbouring country, different types of state structure and the use of communal rolls or seat reservations to enhance ethnic, national or religious minority representation in the national legislature (see Appendix III for further details).

The next sections will describe in more detail the data on large-scale ethnic violence (section 5.3.), formal political institutions and their combinations (sections 5.4., 5.5., 5.6. and 5.7.), corruption (section 5.7.) and control variables such as levels of economic development or a country's colonial legacies (section 5.8.) that have been included in the EEI Dataset.

5.3. Data on Large-Scale Ethnic Violence

The dependent variable to test the relevance of Ethno-Embedded Institutionalism denotes the incidence of ethnic civil war according to data by the Political Instability

⁷⁴ If no constitutional text was available and if different academic publications contradict each other on the form of government (or any other type of formal political institution) in a given country year, I chose the information on which two out of three sources agree.

Task Force (PITF) Ethnic War Problem Set, 1955-2007 (PITF 2009). According to the PITF, ethnic wars are ‘episodes of violent conflict between governments and national, ethnic, religious, or other communal minorities (ethnic challengers) in which the challengers seek major changes in their status.’ (Marshall, Gurr and Harff 2009:6) From this definition follow two relevant specifications: First, in line with its focus on ‘episodes of violent conflict *between governments and ... ethnic challengers*’ (ibid., italics added), the PITF does not provide information on ‘rioting and warfare between rival communal groups ... unless it involves conflict over political power or government policy’ (ibid.) as a proxy for fighting the government itself. Second, the PITF Ethnic War Problem Set explicitly focuses on ethnic wars⁷⁵ and thus generally does not provide information on non-war types of violent action.⁷⁶ The PITF only includes acts of mass murder by state agents against unarmed members of an ethnic group in the ‘ethnic war’ category if the victims of these acts were suspected of supporting armed ethnic challengers (ibid.).⁷⁷

Two minimum thresholds must be fulfilled in order for a violent ethnic conflict to be included in the PITF Ethnic War Problem Set (ibid.): First, each conflict party must mobilise at least 1,000 people, either as armed agents, demonstrators or troops (mobilisation threshold). Second, there must be 1,000 or more direct conflict-related deaths over the full course of the armed conflict,⁷⁸ and at least one year in which the annual conflict-related death toll exceeds 100 fatalities (conflict intensity threshold).

⁷⁵ The PITF defines wars as ‘unique political events that are characterized by the concerted (or major) tactical and strategic use of organized violence in an attempt by political and/or military leaders to gain a favorable outcome in an ongoing, [sic] group conflict interaction process.’ (Marshall, Gurr and Harff 2009:4)

⁷⁶ ‘Non-war types of violent action’ refer to episodes of violence in which armed perpetrators attack non-armed civilians (Scherrer 1999). A worst-case example of a non-war type of mass ethnic violence is the genocide in Rwanda in 1994. For further descriptions of non-war types of (mass) violent action, such as genocide, politicide and democide, see McGarry and O’Leary (1993), Harff (2003) and Rummel (1995) respectively.

⁷⁷ As the researchers behind the PITF admit themselves, the lines between war and non-war types of violence – just like the distinction between ethnic and non-ethnic wars – can become blurred in reality (see Marshall, Gurr and Harff 2009). This, however, raises more general methodological questions about data collection and data reliability in ethnic conflict studies which go beyond the scope of this thesis.

⁷⁸ The PITF defines the full course of an armed conflict as ‘a continual episode of armed conflict between agents of the state and agents of the opposition group during which there is no period greater than three years when annual conflict-related fatalities are fewer than 100 in each year’ (Marshall, Gurr and Harff 2009:6). Fatalities can either result from armed conflict, terrorism, rioting or government repression (ibid.).

The PITF data thus do not include information on smaller-scale acts of violence that fall below the aforementioned mobilisation and conflict intensity thresholds. Nor do they distinguish episodes of ethnic war in which ethnic challengers want to overthrow the existing government and replace it with a new regime from episodes of ethnic war in which ethnic challengers seek to create a new sovereign state (or achieve greater regional autonomy) out of some portion of the existing one (cf. Mason and Fett 1996).

As mentioned in section 1.3., the latter lack of differentiation between different types of ethnic war (i.e. whether they are based on strives for political self-determination or regime change) explains why I do not distinguish between different types of ethnic violence in my thesis either. It is, however, more problematic that the PITF employs a relatively high mobilisation and conflict intensity threshold, as this implies that potentially relevant smaller-scale episodes of ethnic civil war are automatically excluded from my data analysis (cf. Zartman 2011). I am willing to accept this arguable weakness of the PITF data, as the PITF Ethnic War Problem Set currently is the only major, publicly available dataset on large-scale ethnic violence that is suitable for the binary time-series-cross-section analysis presented in chapter 6. For instance, the seminal UCDP/PRIO Armed Conflict Datasets (see Gleditsch et al. 2002) apply a lower conflict intensity threshold than the PITF, as they provide information on armed interstate and intrastate conflicts that resulted in as few as 25 battle-related deaths in a given year (ibid.). However, as they do not distinguish between ethnic and non-ethnic civil wars, the UCDP/PRIO data are not an appropriate source for my dependent variable. Ultimately, there thus is no suitable, publicly available alternative to the PITF Ethnic War Problem Set.

As will be explained in more detail in section 6.3., the measurement level of the dependent variable plays a decisive role in choosing an appropriate estimation procedure for the large-N analysis. In the EEI Dataset, the ethnic war variable takes on the value ‘1’ for all country years in which one (or, in rare cases, more than one) episode of ethnic war occurred according to the PITF Ethnic War Problem Set, 1955-2007 (PITF 2009), and the value ‘0’ for all country years in which the PITF reports

no ethnic war (*ibid.*). It is worth pointing out that the precise day and month in which an ethnic war started or ended according to the PITF Ethnic War Problem Set, 1955-2007 are irrelevant for the coding of the ethnic war variable in the EEI Dataset. Hence, even if an episode of large-scale ethnic violence started relatively late (e.g. in December) or ended relatively early (e.g. in January) in a given year, the ethnic war variable in the EEI Dataset still identifies the relevant year as a conflict year.

Following on this last point, and as briefly mentioned in section 1.3., this thesis differs from other studies such as by Fearon and Laitin (2003a) or Fjelde (2009) in that I focus on the incidence, not the onset of large-scale intrastate violence. Accordingly, the ethnic war variable in the EEI Dataset indicates the incidence of large-scale ethnic violence in any given country year, no matter whether it is the first conflict year or a continuation year. This focus on the incidence rather than the onset of ethnic war can be justified with four relevant reasons: First, according to grievance-based explanations of ethnic violence, grievances are the underlying cause of violent action throughout entire episodes of conflict, not just for their onset (see Gurr 2000; Harff and Gurr 2003). Second, 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 and Sambanis 2002a). Third, the possible effects of time on the hazard of war are likely to cancel each other out and hence are not a major problem when analysing the incidence rather than the onset of ethnic war (cf. Elbadawi and Sambanis 2002b). For instance, the time spent fighting might intensify the hatred between conflicting parties, but can also increase the willingness to withdraw from battle due to the high costs of violence (*ibid.*). Finally, prior statistical findings indicate that there are no important changes if either the onset or incidence of ethnic war are used as dependent variable (Reynal-Querol 2002). Hence, for these theoretical and empirical reasons, I prefer to focus on the incidence rather than the onset of ethnic civil war in my thesis.

Having outlined the dependent variable for my data analysis, the following sections will describe my key independent variables.

5.4. Data on Democratic Forms of Government

The key independent variables to test the relevance of Ethno-Embedded Institutionalism describe the level of public-official-centred corruption (see chapter 4) and which form of government, type of electoral system for the legislature and state structure were combined (see chapter 3) in different country years. Before outlining the data on these formal and informal political institutions in the EEI Dataset in more detail, two relevant qualifications ought to be pointed out briefly: First, as has been mentioned in section 3.2., my classification of formal political institutions and their combinations is based exclusively on the manner in which they have been openly codified in national constitutions and constitutional amendments as well as any other laws or formal documents (such as peace treaties) which affect the form of government, electoral system for the legislature and state structure in a given country year. Second, since both the distinction of presidential, parliamentary and mixed forms of government on the one hand, and of majoritarian, proportional and mixed electoral systems for the legislature on the other become meaningless under an autocratic framework (see section 3.3.), the identification of these formal political institutions presupposes the democratic character of a political system.⁷⁹ Hence, the two variables in the EEI Dataset to identify democratic forms of government and electoral systems for the legislature automatically take on the value ‘0’ for all country years under an autocratic political regime.

For the purpose of this thesis, the terms ‘democracy’ and ‘autocracy’ are used rather broadly in the sense that they describe political regimes which are either ‘basically open’ or ‘basically closed’ (cf. Kurtz 2004). Political regimes are considered to be democratic or ‘basically open’ if their democratic features outweigh their autocratic ones according to the Polity IV Project dataset version p4v2008 (Marshall and Jaggers 2009a), i.e. if they have a Combined Polity Score > 0 (cf. Kurtz 2004). Conversely, political regimes are considered to be autocratic or ‘basically closed’ if their autocratic features outweigh their democratic ones, i.e. if they have a Combined

⁷⁹ As noted in section 3.3., this qualification does not apply to the distinction of different state structures, as all of its types (i.e. federal, unitary and mixed) can exist under both democratic and autocratic settings.

Polity Score ≤ 0 .⁸⁰ In line with these specifications, the two variables to distinguish presidential, parliamentary and mixed forms of government on the one hand, and majoritarian, proportional and mixed electoral systems for the legislature on the other automatically take on the value '0' for all years in which a country's Combined Polity Score according to the Polity IV Project dataset version p4v2008 is ≤ 0 . For those country years in which the Combined Polity Score takes on one of the so-called standardised authority scores to mark interruption periods (-66), interregnum periods (-77) or transition periods (-88), or in which no data are available from the Polity IV Project dataset version p4v2008, additional sources were consulted, including reports by Freedom House (Freedom House 2010), the Bertelsmann Transformation Index (Bertelsmann Stiftung 2010), the Inter-Parliamentary Union (IPU 2010), the ACE Electoral Knowledge Network (ACE Electoral Knowledge Network 2010), the U.S. Library of Congress Country Studies (United States Library of Congress 2010) and relevant academic publications on individual countries. These sources were used to gather as much information as possible for the country year in question on the key criteria on which the calculation of the Combined Polity Score is based, i.e. the competitiveness of executive recruitment, the openness of executive recruitment, constraints on the chief executive, the competitiveness of political participation and the regulation of participation (Marshall and Jagers 2009b). This information was then used to assess whether a country's political regime was basically open or basically closed during those years in which the Combined Polity Score provides no information on a political regime's democratic and/or autocratic qualities. As Table 2 illustrates, the number of independent countries with a population greater than 500,000 in 2008 (or their last year of existence, see section 5.2.) has grown from 82 in 1955 to 162 in 2007. However, from these countries, the number of basically open regimes outweighs that of basically closed regimes only since 1991.⁸¹

⁸⁰ It is worth pointing out that, unlike Kurtz (2004), I treat country years in which the Combined Polity Score takes on the value '0' as country years under a basically closed regime (see also Appendix III).

⁸¹ This growth in the number of independent countries with a population greater than 500,000 in 2008 (or their last year of existence) and of the proportion of basically open regimes is reflected in the graphs included in Appendix I, but will not be made explicit again.

Year	Number of independent countries	Number of basically open regimes	Number of basically closed regimes
1955	82	36	46
1956	85	38	47
1957	87	40	47
1958	87	38	49
1959	87	39	48
1960	105	42	63
1961	110	43	67
1962	115	46	69
1963	116	46	70
1964	119	46	73
1965	121	49	72
1966	124	50	74
1967	125	48	77
1968	128	49	79
1969	128	47	81
1970	129	46	83
1971	135	43	92
1972	135	42	93
1973	135	42	93
1974	136	42	94
1975	140	43	97
1976	140	41	99
1977	140	42	98
1978	141	44	97
1979	141	47	94
1980	141	47	94
1981	141	46	95
1982	141	48	93
1983	141	50	91
1984	141	50	91
1985	141	51	90
1986	141	54	87
1987	141	53	88
1988	141	54	87
1989	141	57	84
1990	144	70	74
1991	154	82	72
1992	158	88	70
1993	160	93	67
1994	160	97	63
1995	160	96	64
1996	160	96	64
1997	160	95	65
1998	160	98	62
1999	160	100	60
2000	160	103	57
2001	160	103	57

2002	161	105	56
2003	161	104	57
2004	161	104	57
2005	161	107	54
2006	163	110	53
2007	162	110	52

Table 2: Number of Independent Countries, Basically Open and Basically Closed Regimes between 1955 and 2007.

As Figure 1 in Appendix I illustrates, it is interesting to note that, among the basically closed regimes worldwide, the number of divided forms of government has been far greater than that of monolithic forms of government in the entire time period between 1955 and 2007, i.e. autocratic forms of government with a legislature or a political party in addition to the chief executive have been much more common than autocratic forms of government that have neither a legislature nor a political party (cf. Alvarez et al. 1996).

Among the basically open regimes worldwide, I use the definitions by Cheibub (2007) to distinguish presidential, parliamentary and mixed forms of government (see also section 3.4.). Hence, systems have been identified as presidential in the EEI Dataset if the government cannot be removed by the legislature; as parliamentary if the government can only be removed by the legislature; and as mixed if either the legislature or the independently (i.e. directly or indirectly) elected president can remove the government (ibid.). I use a residual category for those country years during which the democratic features of a country's political regime outweighed the autocratic ones, but none of these definitions can be usefully applied. This includes Albania in 1990, i.e. the country's last year under a Communist constitution; Niger between 1991 and 1992, i.e. the country's last two years under its 1989 one-party constitution; and Iran between 1997 and 2003, due to the uniqueness of the Islamic Republic's institutional arrangements.

Figure 2 in Appendix I illustrates the number of these different forms of government worldwide between 1955 and 2007. It clearly shows that parliamentarism has been the most common democratic form of government worldwide throughout this entire

time period, followed by presidentialism and mixed forms of government. While the number of presidential forms of government has been increasing steadily since 1976, the number of both parliamentary and mixed forms of government experienced a pronounced upward surge in the late 1980s/early 1990s. The number of parliamentary forms of government increased from 25 in 1955 to 43 in 2007; that of presidential forms of government from 9 in 1955 to 38 in 2007; and that of mixed forms of government from 2 in 1955 to 29 in 2007.

Figures 3 to 9 in Appendix I moreover confirm previous findings that democratic forms of government tend to cluster by region (see e.g. Norris 2008). Specifically, parliamentarism has been the most common democratic form of government throughout the entire time period of 1955 to 2007 in four out of seven regions: East Asia and the Pacific (Figure 5, Appendix I), Europe (except Eastern Europe) and North America (Figure 6, Appendix I), the Middle East and North Africa (Figure 8, Appendix I), and South Asia (Figure 9, Appendix I). Presidentialism, on the other hand, has been the most common democratic form of government in Latin America and the Caribbean (Figure 7, Appendix I) throughout the same time period. Mixed forms of government have become the most common democratic form of government in Central Asia and Eastern Europe since 2004 (Figure 4, Appendix I).

The following sections will present the EEI Dataset's variables on further formal political institutions besides forms of government, i.e. electoral systems for the presidency and legislature (section 5.5.), and state structures (section 5.6.).

5.5. Data on Electoral Systems for the Presidency and Legislature

The EEI Dataset contains information on both parliamentary and presidential electoral systems. The latter information was included following Horowitz's (1991) argument that the type of electoral system for the presidency plays an important role for the impact of presidentialism on the prospects of ethnopolitical (in)stability (see also section 3.4.). Hence, the variable on electoral systems for the presidency in the

EEI Dataset distinguishes different types of electoral systems for the presidency specifically in countries with a presidential form of government.⁸² Following, with minor alterations, the coding scheme by Golder (2004, 2005), this variable distinguishes between plurality, absolute majority, qualified majority, electoral college, preferential and vote distribution requirement systems. I also use a residual category for those country years under a presidential form of government in which none of the aforementioned electoral system categories can be usefully applied. This includes Burundi's transitional government between 2002 and 2004; Sri Lanka between 1977 and 1981, i.e. in the first years following the change from a parliamentary to a presidential form of government; and Switzerland between 1955 and 2007, due to the uniqueness of the rotation principle for the Swiss presidency.

As Figure 10 in Appendix I illustrates, the two most commonly used types of electoral system for the presidency in countries with a presidential form of government between 1955 and 2007 have been plurality and absolute majority systems. Conversely, electoral systems with a vote distribution requirement as well as preferential electoral systems have been among the least commonly used presidential electoral systems during the same period of time. Thus, despite Horowitz's (1991) appraisal of presidential forms of government that rely on a broad-based electoral system for the presidency, attempts to 'soften' the inevitable zero-sum character of presidential elections through the use of preferential voting or vote distribution requirements have been very rare indeed (see also section 3.4.).

Apart from presidential electoral systems, the EEI Dataset also includes information on parliamentary electoral systems.⁸³ The classification of different types of electoral system for the legislature in the EEI Dataset is based, with minor alterations, on the definitions by Golder (2005). According to Golder (2005), majoritarian electoral systems require the winning candidate to obtain either a plurality or majority of the

⁸² As noted in the EEI Dataset Codebook (Appendix III), the variable on electoral systems for the presidency automatically takes on the value '0' for all years in which a country's regime was either basically closed or in which a country employed a non-presidential (i.e. parliamentary or mixed) democratic form of government.

⁸³ The terms 'parliamentary electoral system' and 'electoral system for the legislature' refer to the type of electoral system used for a country's elections to the national legislature in unicameral systems, and to the lower house of the national legislature in bicameral systems.

vote, while proportional systems allocate seats in proportion to a party's (or candidates') share of the vote, and mixed systems employ a mixture of majoritarian and proportional electoral rules (see also section 3.5.). Unlike Golder (2005), electoral systems with multiple electoral tiers are not treated as a separate category in the EEI Dataset, but have been identified as majoritarian, proportional or mixed depending on the electoral formula(s) used in the different electoral tiers to translate votes into seats (see also section 3.5.). Following these definitions, majoritarian electoral systems are those that employ either plurality, absolute or qualified majority requirements (Golder 2004). Examples include for instance the first-past-the-post, limited vote and alternative vote systems (*ibid.*). The latter have been classified as majoritarian in the EEI Dataset without any further indication of the fact that they are based on preferential voting, since AV 'systematically discriminates against those at the bottom of the poll in order to promote effective government for the winner.' (Norris 1997:302; see also section 3.5.) Proportional electoral systems, on the other hand, include quota and highest average systems using party lists as well as the single transferable vote (Golder 2004). The latter type of electoral system has been classified as proportional in the EEI Dataset without any further indication of the fact that it is based on preferential voting, since STV follows the inclusionary logic of a proportional electoral system (Mitchell 2008; see also section 3.5.).

In line with the replication data for Golder's (2005) article, I classify electoral systems as mixed if more than 5% of deputies⁸⁴ have been elected by an electoral formula that is different from the one used to elect all other deputies. This includes electoral systems under which more than 5% of the seats in the national legislature were awarded as bonus seats to political parties that either won the highest number of votes at the electoral district level (such as in Sri Lanka since 1989) or countrywide (such as in Greece since 2007), while all other seats were awarded according to a proportional electoral formula. In contrast to Golder's replication data, I also take account of questions of district magnitude insofar as I code electoral systems as mixed if a country (such as Somalia between 1964 and 1968) officially employed a proportional electoral system countrywide, yet more than 5% of deputies were

⁸⁴ With '5% of deputies' I mean 5% of deputies in the national legislature in unicameral systems, and 5% of deputies in the lower house of the national legislature in bicameral systems.

elected in single-member districts, while all other deputies were elected in multi-member districts.⁸⁵

Figure 11 in Appendix I illustrates the number of different types of electoral system for the legislature in basically open regimes worldwide between 1955 and 2007. It clearly shows that proportional electoral systems for the legislature have increased steadily in number since 1980. Proportional electoral systems were the most common type of parliamentary electoral system worldwide between 1956 and 1961, and from 1983 onwards. The number of majoritarian electoral systems for the legislature, on the other hand, experienced a pronounced upward surge from 28 in 1990 to 36 in 1991 and 38 in 1992, before decreasing gradually to 27 in 2004. Mixed electoral systems for the legislature have grown steadily in number since 1986. The number of proportional electoral systems for the legislature increased from 16 in 1955 to 53 in 2007; that of majoritarian electoral systems for the legislature from 17 in 1955 to 31 in 2007; and that of mixed electoral systems for the legislature from 3 in 1955 to 26 in 2007.

Figures 12 to 18 in Appendix I demonstrate that electoral systems for the legislature, just like democratic forms of government (see section 5.4.), have a certain tendency to cluster by region. Specifically, proportional electoral systems have been the most common type of parliamentary electoral system in basically open regimes throughout the entire time period from 1955 to 2007 in two out of seven regions: Europe (except Eastern Europe) and North America (Figure 15, Appendix I), and Latin America and the Caribbean (Figure 16, Appendix I). Majoritarian electoral systems, on the other hand, have been the most common type of electoral system for the legislature in basically open regimes throughout the same time period in Africa (except North Africa) (Figure 12, Appendix I) and South Asia (Figure 18, Appendix I). Mixed electoral systems became the most common type of electoral system for the

⁸⁵ Issues such as whether mixed electoral systems are dependent or independent, potential restrictions on the number of freely contestable seats in parliament, the use of communal rolls or the employment of indirect election arrangements (such as the Basic Democrats system in Pakistan's 1962 and 1965 legislative elections) are irrelevant for the coding of the variable on parliamentary electoral systems.

legislature in basically open regimes in East Asia and the Pacific from 2001 onwards (Figure 14, Appendix I).

As indicated in section 3.2., positive action strategies such as communal rolls or seat reservations in parliament can serve as ‘backdoor mechanisms to ensure minority representation’ (Reynolds 2005:307) and may be used to countervail or at least attenuate the winner-takes-all principles on which majoritarian electoral systems for the legislature are based (cf. *ibid.*; Lijphart 1996; Norris 2008). The EEI Dataset therefore also contains a dummy variable which marks those years under a basically open political regime in which a country employed either seat reservations or communal rolls in order to ensure the political representation of certain ethnic, national or religious minorities in the national legislature in unicameral systems, or in the lower house of the national legislature in bicameral systems.⁸⁶ As Figure 19 in Appendix I illustrates, the number of countries with a basically open regime using communal rolls or seat reservations to enhance ethnic, national or religious minority representation in the national legislature has increased from 5 in 1955 to 18 in 2007, with a steady upward trend in the number of countries using such mechanisms beginning in 1987. A closer look at the EEI Dataset reveals that in 1955 ‘backdoor mechanisms to ensure minority representation’ (Reynolds 2005:307) were only used in basically open regimes in three regions: East Asia and the Pacific, the Middle East and North Africa, and South Asia. In 2007, such mechanisms were used in basically open regimes in six regions: the aforementioned three, Africa (except North Africa), Central Asia and Eastern Europe, and Latin America and the Caribbean. It is, however, important to emphasise that seat reservations and communal rolls to enhance ethnic, national or religious minority representation in the national legislature remain comparatively rarely employed measures, as only approximately 16% of basically open regimes (i.e. 18 out of 110) used them in 2007. Of the 24 democratic countries that have employed such mechanisms between 1955 and 2007 (see ‘MinRep’ in Appendix III for a complete list), the following 13 used them under a majoritarian electoral system for the legislature: Afghanistan 2005-07, Burma 1955-61, Cyprus 1960-1980, Ethiopia 1994-2007, Fiji 1970-86 and 1990-2005, India

⁸⁶ The precise number of reserved seats is thereby irrelevant for the coding of this variable (see also Appendix III).

1955-2007, Iran 1997-2003, Lebanon 1955-2007, Mauritius 1968-2007, New Zealand 1955-1995, Pakistan 1988-98 and 2007, Syria 1955-57 and Zambia 1964-67.

5.6. Data on State Structures

In addition to the aforementioned variables on forms of government (section 5.4.) and electoral systems for the presidency and legislature (section 5.5.), the EEI Dataset also contains information on different types of state structure as the final formal political institution that I consider in this analysis (see section 3.6.). The state structures variable distinguishes unitary, federal and mixed state structures based on the following definitions (see *ibid.*): State structures are unitary if there is no formally guaranteed division of power among multiple levels of government with distinct spheres of responsibility (cf. Lijphart 1999). State structures are federal if they feature a formally guaranteed ‘layer of institutions between a state’s center and its localities ... [which has] its own leaders and representative bodies ... [who also] share decision-making power with the center’ (Bermeo 2002:98), and where both the centre and territorially defined subunits of the state possess their own formally guaranteed spheres of responsibility (cf. Bunce and Watts 2005). State structures are mixed if otherwise unitary states contain at least one autonomous region, i.e. at least one territorially defined subunit whose executive, legislative and judicial institutions have the formally guaranteed power to exercise public policy functions in at least one cultural, economic or political sphere independently of other sources of authority in the state (cf. Ackrén 2009; Wolff 2009). Mixed state structures are thereby distinct from federal ones, as they do not ‘necessitate territorial subdivisions across the entire state territory’ (Wolff 2009:42-3), nor is there necessarily a formal guarantee that representatives of the autonomous region(s) can share political power at the centre (cf. *ibid.*).⁸⁷

⁸⁷ Issues such as the degree of power exercised by the representative bodies of federal state units or autonomous regions, or the formal conditions under which the autonomy status of a given region in mixed state structures may be revoked are irrelevant for the coding of the state structures variable. On the other hand, however, a region is only considered to be autonomous if its autonomy status has been formally recognised by the central government (see also Appendix III).

Figure 20 in Appendix I illustrates the number of different types of state structure worldwide between 1955 and 2007. It clearly shows that the number of unitary state structures has outweighed that of federal and mixed state structures worldwide by far within this entire time period. The number of federal state structures worldwide has hardly changed between 1955 and 2007, while the number of mixed state structures has followed a small but steady upward trend since 1971. The number of countries with a federal state structure increased from 16 in 1955 to 22 in 2007; that of countries with a unitary state structure from 57 in 1955 to 113 in 2007; and that of countries with a mixed state structure from 9 in 1955 to 27 in 2007.

Figures 21 to 27 in Appendix I indicate few but nonetheless relevant patterns in the geographical dispersion of different types of state structure. While unitary state structures, expectedly, have been the most common type of state structure in most regions for the entire time period from 1955 to 2007, one region deviates from this general trend: Europe (except Eastern Europe) and North America. Here, mixed state structures have been the most common type of state structure since 1999, while unitary state structures became the least common type of state structure in this region in the same year (Figure 24, Appendix I). Mixed state structures have been a more common type of state structure than federal state structures for prolonged periods of time in East Asia and the Pacific (Figure 23, Appendix I), and Europe (except Eastern Europe) and North America (Figure 24, Appendix I). While unitary and federal state structures have existed in each world region at one point between 1955 and 2007, there never was a country with a mixed state structure during this time period in South Asia (Figure 27, Appendix I). In this context, it is important to note that the relatively low levels of fluctuation in the numbers of different state structures compared to forms of government and electoral systems (see sections 5.4. and 5.5.) should not be seen as straightforward evidence that state structures tend to change less frequently than other types of formal political institutions. Rather, it has to be borne in mind that the coding of the state structures variable in the EEI Dataset, unlike the variables on forms of government and electoral systems, is not affected by regime changes, as it does not matter for its coding whether political regimes are basically open or basically closed (see also section 3.3.).

5.7. Data on Institutional Combinations and Corruption

The variables on democratic forms of government, electoral systems for the legislature and state structures (as outlined in the preceding sections) form the basis of the dummy variables used to test the relevance of the first dimension of Ethno-Embedded Institutionalism (see chapter 3). Specifically, the EEI Dataset includes 27 dummy variables that identify which democratic form of government, electoral system for the legislature and state structure were combined in a given country year. These 27 dummy variables correspond to the 27 possible institutional arrangements that result from combining either a presidential, parliamentary or mixed form of government with either a majoritarian, proportional or mixed electoral system for the legislature and either a unitary, federal or mixed state structure. To name just a few examples, these different dummy variables thus for instance mark those years in which a given country combined presidentialism, a majoritarian electoral system for the legislature and unitary state structure, or in which there was a combination of parliamentarism, a proportional electoral system for the legislature and federal state structure.

Tables 1 and 2 in Appendix I present an overview of all institutional combination variables in the EEI Dataset, ordered by type of institutional combination (Table 1) and frequency in country years (Table 2). Both tables include the 27 aforementioned institutional arrangements that result from combining either a presidential, parliamentary or mixed form of government with either a majoritarian, proportional or mixed electoral system for the legislature and either a unitary, federal or mixed state structure, as well as the three institutional arrangements that result from distinguishing autocracies according to their state structure (i.e. autocracies with either a unitary, federal or mixed state structure). As Table 2 in Appendix I illustrates, the four least common institutional combinations (by number of country years) have been a presidential form of government with a majoritarian electoral system for the legislature and mixed state structure (9 country years); a mixed form of government with a mixed electoral system for the legislature and mixed state structure (13 country years); a mixed form of government with a mixed electoral

system for the legislature and federal state structure (16 country years); and a mixed form of government with a majoritarian electoral system for the legislature and mixed state structure (also 16 country years). Conversely, autocracies with a unitary state structure have been by far the most common institutional arrangement (3349 country years), followed by parliamentary forms of government with a majoritarian electoral system for the legislature and unitary state structure (565 country years), and presidential forms of government with a proportional electoral system for the legislature and unitary state structure (471 country years). The type of institutional combination on which I put particular emphasis in chapter 3 – i.e. a presidential form of government with a majoritarian electoral system for the legislature and unitary state structure – has existed in 150 country years between 1955 and 2007 according to the EEI Dataset. It thus is the 10th most common institutional combination worldwide between 1955 and 2007 out of the 30 institutional arrangements included in Tables 1 and 2 in Appendix I.

Instead of using dummy variables, it could be argued that an alternative strategy to test the effects of different institutional combinations on the risk of large-scale ethnic violence would be to create interaction terms between the variables on formal political institutions in the EEI Dataset. Such an alternative strategy, however, would lead to significant practical difficulties. First, it would require estimating too many parameters at once, namely the institutional interactions as well as their constituent terms. Second, and more importantly, interaction effects in nonlinear models (such as those using binary time-series-cross-section analysis) are famously difficult to interpret, since they ‘cannot be evaluated simply by looking at the sign, magnitude, or statistical significance of the coefficient on the interaction term’ (Ai and Norton 2003:129), but instead require the computing of cross derivatives or cross differences (ibid.). This difficulty of interpretation is mainly due to the fact that the magnitude of the interaction effect in nonlinear models, just like the marginal effect of a single variable, depends on all covariates in the model and can have different signs for different observations (ibid.). The interpretation of interaction effects in nonlinear models thereby becomes even more difficult if, as would have to be the case in this thesis, one is interested in interactions between more than two variables (cf. Norton,

Wang and Ai 2004). For these reasons, the use of dummy variables to identify different types of institutional combinations and test their effects on the risk of large-scale ethnic violence is preferable over the alternative strategy of using interaction terms between the variables on formal political institutions in the EEI Dataset.

In order to test the second dimension of Ethno-Embedded Institutionalism, using corruption as a prime example of an informal political institution (see chapter 4), the EEI Dataset includes the International Country Risk Guide (ICRG) Corruption Index by The PRS Group, Inc. (2009). Starting with the year 1984, this index provides annual data on the level of corruption within a country's political system, based on assessments by country experts. It takes into account 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; see also section 4.3.) The ICRG Corruption Index ranges between 0 and 6, with low numbers indicating high levels of corruption and high numbers indicating low levels of corruption.

As mentioned in section 4.3., corruption is a phenomenon that is intrinsically difficult to measure. This difficulty arises, first, from the fact that the identification of corrupt practices is generally context- and perception-dependent in the sense that what might be identified as corruption in one cultural circle or at a specific point in time, need not be perceived as such in another (see section 4.3.). Second, hard data about the precise extent of corruption within any given country are not easy to obtain, as corruption is an informal practice that is largely hidden from public view, with few incentives for its participants to be open about their dealings (Galtung 2006). Supposedly objective data such as on the numbers of criminal convictions for corrupt practices can be contested on the grounds that a) they seem to measure the effectiveness of anti-corruption initiatives rather than the extent of corruption itself, and that b) they do not lend themselves to cross-national comparisons, not least since

the legal definitions of corruption differ between countries (Lambsdorff 2006).⁸⁸ As previously stated (see section 4.3.), the difficulties one encounters when trying to define and measure corruption are nothing extraordinary in the social sciences, as numerous concepts such as ‘class’, ‘democracy’ or ‘ethnic conflict’ are similarly contested in their meaning and possible operationalisation for quantitative research. Rather than questioning the attempt to measure corruption altogether, it is therefore more important to ask for the utility and limitations of specific corruption indices (cf. Galtung 2006).

Following on this last point, the ICRG Corruption Index’s main limitation derives from the fact that it is a subjective measure of corruption which is based on assessments by country experts. This reliance on expert evaluations is potentially problematic, as the experts’ perceptions of corruption might not only be culturally biased (Lambsdorff 2006; see also section 4.3.) but may also reflect the experts’ opinions about the causes of corruption rather than their observations of the frequency of corruption (Treisman 2007). In addition, The PRS Group, Inc. provides little directly available information on the precise manner in which the values of the ICRG Corruption Index are obtained. Consequently, questions such as on inter-coder reliability or why exactly corruption ratings might change over different country years are difficult to answer (cf. *ibid.*).

On the other hand, however, the reliance of the ICRG Corruption Index on expert evaluations should not be criticised too harshly: Given the aforementioned difficulty in obtaining hard data about the extent of corruption, perception-based indices currently provide the best available method for measuring corruption levels at all (Lambsdorff 2006). Moreover, the ICRG Corruption Index has several clear advantages over alternative measures of corruption including for instance the Corruption Perception Index by Transparency International (Transparency International 2010) or the World Bank’s Control of Corruption Index (Kaufmann, Kraay and Mastruzzi 2010). Three advantages of the ICRG Corruption Index over the latter two indices stand out in particular: First, strictly speaking, neither the

⁸⁸ This latter aspect, of course, links back to the aforementioned point about corruption’s general context- and perception-dependence.

Transparency International nor the World Bank data on corruption are suitable for use in time-series-cross-section analysis, *inter alia* as inter-year changes in the values of these indices might not only reflect changes in corruption perceptions but also the use of different sets of sources for the construction of these indices in successive years (Treisman 2007). Second, both the Transparency International and World Bank corruption indices (unlike the ICRG Corruption Index) are obtained by aggregating information from a variety of different sources which raises questions about how compatible these sources are and what exactly the indices are ultimately measuring (*ibid.*). Finally, one of the most widely-quoted reasons for the preferability of the ICRG Corruption Index over the corruption data by Transparency International and the World Bank is that it covers the largest number of countries and years (see e.g. *ibid.*; Alesina and Weder 1999; Méndez and Sepúlveda 2006). For all these reasons, I consider the ICRG Corruption Index as the most suitable source of corruption data for my binary time-series-cross-section analysis presented in chapter 6.

In order to ease the interpretation of my statistical results in chapter 6 and the description of (average) levels of corruption across countries and over time (see Figures 28 to 35, Appendix I), I invert the ICRG Corruption Index by subtracting its original values from 6. In this manner, high values of the inverted ICRG Corruption Index indicate high values of corruption and low values low levels of corruption. On the basis of this inversion, we can identify the following patterns of average levels of corruption: As Figure 28 in Appendix I illustrates, the average level of corruption worldwide decreased slowly but steadily between 1984 and 1993, and followed a general upward trend between 1994 and 2002. The average worldwide level of corruption increased from 2.806 in 1984 to 3.573 in 2007 according to the inverted ICRG Corruption Index.

Figures 29 to 35 in Appendix I, on the other hand, illustrate average levels of corruption between 1984 and 2007 by region. They show that the lowest average levels of corruption within this time period can be found in Europe (except Eastern Europe) and North America (Figure 32, Appendix I), while the highest average levels of corruption in the same time period have been observed in South Asia

(Figure 35, Appendix I). Central Asia and Eastern Europe (Figure 30, Appendix I) and Europe (except Eastern Europe) and North America (Figure 32, Appendix I) have experienced a clear upward trend in their average levels of corruption from the early 1990s to the early 2000s. Africa (except North Africa) (Figure 29, Appendix I), East Asia and the Pacific (Figure 31, Appendix I) and the Middle East and North Africa (Figure 34, Appendix I) have seen a steady increase in their average levels of corruption from the mid-1990s to the early 2000s (Figure 31, Appendix I) or mid-2000s (Figures 29 and 34, Appendix I) respectively. Both Latin America and the Caribbean (Figure 33, Appendix I) and South Asia (Figure 35, Appendix I) have experienced a pronounced upward surge in their average levels of corruption from 2001 to 2002.

Having thus outlined the key independent variables for my data analysis in the preceding sections, I can now turn to the description of my control variables.

5.8. Control Variables

The EEI Dataset contains an extensive number of variables which are commonly controlled for in the civil wars literature (see e.g. Collier and Hoeffler 2004; Fearon and Laitin 2003a; Hegre et al. 2001; Hegre and Sambanis 2006). These variables include:

- a) the number of years without large-scale ethnic violence,
- b) the incidence of ethnic war in a neighbouring country,
- c) the involvement in violent international conflicts,
- d) population size,
- e) level of economic development as measured in levels of GDP *per capita*,
- f) degree of socioeconomic inequalities as measured through Vanhanen's Index of Power Resources (Vanhanen 2003),
- g) status as oil exporter,
- h) per cent of mountainous terrain,

- i) noncontiguous country structure,
- j) colonial experiences,
- k) level of ethnic fractionalisation,
- l) level of democracy and
- m) recent experience of political instability.

I included this relatively long list of control variables in the EEI Dataset in line with the recognition that all ethnic conflicts are multicausal phenomena (see also section 4.4.), and that it is thus important to take the potential relevance of a variety of different political, social and economic factors into account. The following paragraphs will present key information on the aforementioned control variables in the EEI Dataset and present some brief arguments why they can be expected to affect the risk of violent intrastate conflict. It thereby is important to note that most of the following arguments are intentionally kept rather short and relatively ambiguous in the sense that I frequently avoid any explicit guesses whether a given control variable is more likely to have a positive or negative effect on the risk of large-scale ethnic violence, or whether it is likely to be statistically significant at all. This intentional ambiguity is based on the acknowledgement that it remains contested for most of the aforementioned control variables whether they have any impact on the risk of (ethnic) civil war at all, or what the precise causal mechanisms might be that link them to the occurrence of violent intrastate conflict.⁸⁹

- a) The incidence of large-scale ethnic violence is likely to be influenced by a country's conflict history (cf. Hegre et al. 2001), since it is reasonable to expect 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 and Sambanis 2006:515). In order to control for this temporal dependence and following Beck, Katz and Tucker (1998), I use splines and a variable – based on information from the PITF Ethnic War Problem Set, 1955-2007 (PITF 2009) – that

⁸⁹ See e.g. Fearon and Laitin (2003a) on the possible causal mechanisms linking income levels to the risk of civil war, and Hegre and Sambanis (2006) for a summary of different findings on the statistical significance *inter alia* of a country's per cent of mountainous terrain.

denotes the duration of peace prior to the current observation (see also section 6.3.). This latter variable starts at 0 for each country in 1955 or, where applicable, in the first year of its internationally recognised independence, and is then calculated as the number of years prior to the current observation in which there was no incidence of ethnic war. It is crucial to correct for temporal dependence in the statistical models presented in chapter 6, as failing to do so would lead to incorrect standard errors and overly optimistic inferences due to inflated t-values (cf. Beck, Katz and Tucker 1998).

- b) As highlighted for instance by Lake and Rothchild (1998), violent ethnic conflicts can spread across state borders and affect the stability of entire regions. This is *inter alia* the case because the incidence of ethnic violence in one country might lead to a re-evaluation of the costs and benefits of violent action among ethnopolitically mobilised groups in another country, and because ethnic civil wars can affect the balance of power between ethnic groups in an entire region (ibid.). In order to control for this spatial interdependence, the EEI Dataset contains two variables on the incidence of ethnic war in a neighbouring country. The first is a dummy variable which marks all years in which at least one neighbouring country experienced at least one episode of large-scale ethnic violence in the year coded, while the second variable provides the total number of ethnic wars that occurred in a country's neighbouring countries in the year coded, i.e. the sum of all episodes of ethnic war in all neighbouring countries in a given year. Both variables have been coded based on information provided by the PITF Ethnic War Problem Set, 1955-2007 (PITF 2009). It is important to consider spatial interdependence in the statistical models presented in chapter 6, as failing to do so could lead to over-confidence or inefficiency of the results in the binary time-series-cross-section analysis (cf. Franzese and Hays 2007). While the inclusion of a variable on the incidence of ethnic war in a neighbouring country is inevitably endogenous,⁹⁰ this is currently the best available method for dealing with spatial interdependence in binary time-series-cross-section analysis

⁹⁰ Specifically, the issue of endogeneity arises from the fact that, if large-scale ethnic violence is spatially interdependent, the incidence of ethnic war in one country might not only be influenced by the incidence of ethnic war in a neighbouring country, but conversely might influence the incidence of ethnic war in a neighbouring country as well.

which is neither highly computationally demanding nor difficult to interpret (cf. *ibid.*).

- c) There are two possible scenarios how a country's involvement in a violent interstate conflict might affect its prospects of intrastate violence (Hegre et al. 2001): On the one hand, it could unite the population against a common enemy and thereby lower the risk of civil war. On the other, it could also increase the risk of intrastate violence by creating an opportunity for domestic insurgents to attack the weakened regime, or for another country's government to incite a revolt (*ibid.*). The EEI Dataset therefore contains three variables to be able to test the effect of a country's involvement in violent international conflicts on the risk of ethnic civil war. All three variables are based on data by the UCDP/PRIO Armed Conflict Dataset version 4-2009 (Centre for the Study of Civil War at PRIO 2009; Gleditsch et al. 2002)⁹¹ and mark those years in which a country was involved in an extrasystemic armed conflict,⁹² interstate armed conflict,⁹³ and extrasystemic *or* interstate armed conflict respectively (see Appendix III for further details).
- d) Following robust empirical evidence that a large population increases the risk of civil war (Hegre and Sambanis 2006), the EEI Dataset also contains a variable on total population in millions, based on data by the Penn World Table version 6.3 (Heston, Summers and Aten 2009), Gleditsch (2002, 2008) and the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2007).⁹⁴ Possible explanations why larger populations should increase the risk of civil war include *inter alia* that larger country populations might heighten the number of potential recruits for rebellion (Fearon and Laitin 2003a) and that they aggregate more groups who are potentially hostile to one another (Collier and Hoeffler 2000 cited in Elbadawi and Sambanis 2002b).

⁹¹ The UCDP/PRIO define conflict as 'a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.' (UCDP and PRIO 2009a:1)

⁹² Extrasystemic armed conflicts are armed conflicts that occur 'between a state and a non-state group outside its own territory' (UCDP and PRIO 2009a:7).

⁹³ Interstate armed conflicts are armed conflicts that occur 'between two or more states.' (UCDP and PRIO 2009a:7).

⁹⁴ Using population data from different sources in order to complete missing values for different country years is not uncommon, see e.g. Fearon and Laitin (2003b) and Gleditsch (2002).

- e) The EEI Dataset contains a variable on economic development as measured in levels of GDP *per capita* in thousands U.S. dollar, based on data from Gleditsch (2002, 2008), and the Penn World Table version 6.3 (Heston, Summers and Aten 2009).⁹⁵ This variable has been included in the EEI Dataset following robust empirical evidence of a negative association between a country's GDP *per capita* levels and the risk of violent intrastate conflict (Hegre and Sambanis 2006). Possible explanations why low levels of GDP *per capita* should be associated with an increase in the risk of civil war include *inter alia* that low levels of GDP *per capita* indicate low levels of state strength and hence create opportunities for rebellion, and that it is easier to recruit individuals for rebel movements if they perceive that there are no better alternatives to make economic gains (Fearon and Laitin 2003a).
- f) The prospects of ethnopolitical (in)stability may also be influenced by a country's degree of socioeconomic inequalities, as tensions over resource access and socioeconomic redistribution can lead to violent confrontations between the haves and have-nots in a given society (cf. Collier and Hoeffler 2004; Lake and Rothchild 1996). The EEI Dataset therefore includes Vanhanen's Index of Power Resources⁹⁶ from his Democratization and Power Resources 1850-2000 dataset (Vanhanen 2003)

⁹⁵ For other datasets using GDP data from different sources in order to complete missing values for different country years, see e.g. Fearon and Laitin (2003b) and Gleditsch (2002).

⁹⁶ Vanhanen calculated the Index of Power Resources by multiplying the values of the Index of Occupational Diversification (i.e. the arithmetic mean of urban population and non-agricultural population) with the values of the Index of Knowledge Distribution (i.e. the arithmetic mean of students and literates) and the values of the Index of the Distribution of Economic Power Resources, and then dividing the product by 10,000 (FSD 2010). The Index of the Distribution of Economic Power Resources in turn is calculated as the sum of the two products that are obtained from multiplying the value of family farm area with the percentage of agricultural population, and the value of the degree of decentralisation of non-agricultural economic resources with the percentage of non-agricultural population (ibid.). It is important to note that Vanhanen only provides values for the Index of Power Resources in ten-year intervals (i.e. for 1948, 1958, 1968 etc.). However, they have been added in the EEI Dataset for entire time periods, so that for instance the value provided in Vanhanen's dataset for Belgium in 1948 ('22.2') has been added for this country for all years from 1955 (the start year of the EEI Dataset) to 1957; the value provided by Vanhanen for Belgium in 1958 ('35.6') then has been added for this country for all years from 1958 to 1967, the value for 1968 ('39.2') for this country for all years from 1968 to 1977 and so on. This strategy of adding values for entire time periods admittedly could be criticised on the grounds that it is based on the difficult-to-justify assumption that levels of socioeconomic inequality are relatively time persistent (cf. Deininger and Squire 1996). On the other hand, however, the alternative of adding the values of the Index of Power Resources only for the years provided by Vanhanen (i.e. 1948, 1958 etc.) would be impractical for my data analysis, as it would lead to the loss of too many observations once the index is included as control variable in my binary time-series-cross-section analysis.

as indicator of socioeconomic inequalities. According to Vanhanen, the higher the value of the Index of Power Resources, ‘the more widely politically relevant power resources are usually distributed among various sections of the population’ (Vanhanen 1997:56).⁹⁷ The EEI Dataset intentionally does not contain the Gini index as indicator of inequality, as it has several significant shortcomings, including *inter alia* widely differing data coverage across countries and over time, and often weak or absent documentation regarding the definitions of income or units of measurement used to calculate Gini coefficients (cf. Deininger and Squire 1996).

g) Although there is no clear or rigorously robust empirical evidence how a country’s dependence on oil exports affects the risk of civil war (Hegre and Sambanis 2006), there are two prominent lines of argumentation how a country’s oil wealth might affect the likelihood of violent intrastate conflict. Some researchers have argued that oil wealth should increase the risk of civil war, *inter alia* because it might help to finance rebel groups (Collier and Hoeffler 2004) and because it can create opportunities for rebellion, as oil-producing countries ‘tend to have weaker state apparatuses than one would expect ... because the rulers have less need for a socially intrusive and elaborate bureaucratic system to raise revenues’ (Fearon and Laitin 2003a:81). Others, however, challenge this view by highlighting that oil wealth – depending on issues such as state weakness, and the potential use of resource rents for patronage and a strengthening of the military – can, in fact, reduce the risk of civil war (see e.g. Bodea 2012). In order to identify a country’s status as oil exporter and following the example of Fearon and Laitin (2003b), the EEI Dataset contains a dummy variable that marks all years in which a country’s fuel exports as a percentage of merchandise exports exceeded 33%, using data from Fearon and Laitin (2003a), the World Bank’s World Development Indicators (The World Bank 2010), government websites, newspaper articles or reports by relevant organisations such as the International Energy Agency or the U.S. Energy Information Administration. No

⁹⁷ Given the type of data that underlie the calculation of the Index of Power Resources (see above), this index has been included in the EEI Dataset as a simple indicator of resource concentration. It is, however, important to note that Vanhanen (1997) assumes that higher values of the Index of Power Resources indicate more favourable social conditions for democratisation (*ibid.*). Table 1 in Appendix II therefore contains the result from testing possible multicollinearity between the Polity IV Revised Combined Polity Score (‘level of democracy’) and Vanhanen’s Index of Power Resources.

further natural resource variables have been added in the EEI Dataset following Hegre and Sambanis's (2006) finding that, from different measures of natural resource dependence, only a country's dependence on oil exports has a 'marginally robust' (Hegre and Sambanis 2006:531) impact on the risk of civil war.

- h) & i) Following the example of Fearon and Laitin (2003a), the EEI Dataset contains two variables on territorial conditions that might affect the risk of violent intrastate conflict. The first of these two variables denotes a country's per cent of mountainous terrain, based (with minor alterations, see Appendix III) on data by Fearon and Laitin (2003a). A high percentage of mountainous terrain arguably should increase the risk of civil war, as it creates natural sanctuaries for potential rebels which are difficult to reach by the state military and police (Fearon and Laitin 2003a; cf. Hegre and Sambanis 2006). The second variable on territorial conditions in the EEI Dataset is a dummy variable that marks all years in which a country can be described as noncontiguous in the sense that some of its territory holding at least 10,000 people is separated from the land area containing the capital city either by land or 100 km of water (Fearon and Laitin 2003a).⁹⁸ Also this variable is based (with minor alterations, see Appendix III) on data by Fearon and Laitin (2003a). A noncontiguous country structure may be expected to increase the risk of civil war, as insurgents who are based in an area that is territorially separate from the state's centre are arguably more difficult to control by agents of the central government and hence might find it easier to mobilise (ibid.).
- j) Countries that used to be under colonial rule may be expected to be at a higher risk of ethnic civil war than countries that did not use to be colonies, due to the socially and politically destabilising effects of certain colonial legacies. These legacies include *inter alia* the imposition of territorial borders that do not correspond to ethnic boundaries, the destruction of pre-colonial forms of social organisation and the systematic politicisation of ethnic distinctions due to colonial strategies of ethnic favouritism (Blanton, Mason and Athow 2001; DeVotta 2005; Wimmer 1997). As Blanton, Mason and Athow (2001) point out, patterns regarding the frequency and

⁹⁸ Colonial empires have been ignored for the coding of this variable (Fearon and Laitin 2003a).

intensity of ethnic conflict in post-colonial states thereby might depend on the identity of the former colonial power and their particular strategy of colonial administration. In line with these arguments, the EEI Dataset contains five different dummy variables to denote colonial experiences.

The first of these variables indicates whether a country used to be under colonial rule in the time period between the beginning of the 20th century and the end of the Second World War, and marks all years of those countries which, at any point between 1900 and 1945, either were ruled under a League of Nations mandate or used to be a colony, protectorate or UN trust territory. The second dummy variable indicates whether a country used to be under colonial rule in the time period between the end of the Second World War and the early 21st century, and marks all years of those countries which, at any point between 1946 and 2007, either were ruled under a League of Nations mandate or used to be a colony, protectorate or UN trust territory. While it is irrelevant for the coding of the aforementioned two dummy variables whether a country used to be ruled for instance by the French or British colonial power, the third, fourth and fifth variable on colonial experiences do take the identity of the former colonial power into account. Hence, the third variable on colonial experiences marks all years of those countries which, at any point between 1946 and 2007, either were ruled under a British League of Nations mandate or used to be a British colony, British protectorate or UN trust territory under British administration. The fourth variable marks all years of those countries which, at any point between 1946 and 2007, either were ruled under a French League of Nations mandate or used to be a French colony, French protectorate or UN trust territory under French administration. The fifth variable marks all years of those countries which, at any point between 1946 and 2007, either were ruled under a League of Nations mandate of any country other than France or the United Kingdom, or used to be a colony, protectorate or UN trust territory of any country other than France or the United Kingdom (such as, for instance, Belgium or Portugal).

It is important to emphasise that the latter three variables have been coded only for those countries that used to be under colonial rule at any point between 1946 and

2007, and that there is no dummy variable in the EEI Dataset which denotes colonial experiences prior to the 20th century. These coding decisions are based on the assumption that the impact of colonial experiences on the risk of ethnic civil war becomes less salient over time. Put differently, post-colonial states which gained their internationally recognised independence relatively recently are assumed to be particularly affected by the socially and politically destabilising effects of certain colonial legacies, since they had less time to build cohesive national identities and effective state structures than those post-colonial states which have been independent for longer (cf. Henderson and Singer 2000). Sources for the coding of all five variables include information from the United Nations (UN 2010), the CIA World Factbook (CIA 2010) and, where necessary (i.e. to confirm or clarify information from the previous two sources), relevant government websites as well as the BBC country profiles (BBC Online 2010b).

- k) In order to be able to control for the effects of a country's degree of ethnic diversity on the risk of ethnic civil war, the EEI Dataset includes the ethnic fractionalisation index according to Alesina et al. (2003). This index depicts 'the probability that two randomly drawn individuals from the population belong to two different [ethnic] groups' (Alesina et al. 2003:156), based on the formula

$$\text{FRACT}_j = 1 - \sum_{i=1}^N s_{ij}^2$$

where s_{ij} is the share of group i ($i = 1 \dots N$) in country j . To define ethnicity, Alesina et al. (2003) use a combination of racial and linguistic characteristics. The index ranges between 0 (complete ethnic homogeneity) and 1 (complete ethnic heterogeneity). As Alesina et al. (2003) do not provide data for all countries included in the EEI Dataset nor for Ethiopia following Eritrea's internationally recognised independence in 1993 and Pakistan prior to Bangladesh's internationally recognised independence in 1971, additional values have been calculated for selected country years using the aforementioned formula and ethnicity data from the CIA World Factbook 1980 and 2007 (CIA 1980, 2007), Wright (1991) and Anderson and Silver (1989) (see

Appendix III for more details). Arguments linking a country's degree of ethnic diversity to the risk of large-scale intrastate violence include *inter alia* that low levels of ethnic fractionalisation should be associated with an increase in the risk of civil war, as the fewer ethnic groups there are in a given society, the larger is the potential recruitment pool for rebel groups that consist of members of a single ethnic group (cf. Collier and Hoeffler 2004).⁹⁹ Conversely, it also could be argued that the risk of civil war should increase with high rather than low levels of ethnic diversity, since high levels of ethnic fractionalisation imply a high number of divisions in a given society and might make cooperation between different ethnic groups more difficult (cf. Elbadawi and Sambanis 2002b).

At this point, it is important to note that, even though ethnic fractionalisation indices have been widely used in civil war studies (Esteban and Ray 2008; Laitin and Posner 2001), they have also attracted widespread criticism. For instance, some authors such as Garcia-Montalvo and Reynal-Querol (2002) have argued that polarisation indices are empirically superior to fractionalisation indices, while others such as Laitin and Posner (2001) have highlighted significant theoretical problems regarding the current format of ethnic fractionalisation indices. These problems include, amongst other things, that ethnic fractionalisation indices cannot take multiple dimensions of ethnic identity into account, and that hitherto there is no fractionalisation (nor, for this matter, polarisation) index which is sensitive to time in the sense that it would depict changes in the ethnic composition of different societies over a consistent number of years (Laitin and Posner 2001; see also section 3.2.). This lack of a time-sensitive ethnic fractionalisation index is particularly problematic, as constructivist theories suggest that a country's level of ethnic fractionalisation is likely to change over time (Laitin and Posner 2001). Hence, even though I follow a common practice in

⁹⁹ As mentioned at the beginning of this section, the different arguments linking a given control variable to the risk of (ethnic) civil war are here only dealt with very briefly and hence presented without much critical assessment. It is, however, worth noting at this point that Collier and Hoeffler's (2004) argument is flawed in the sense that the recruitment pool from a specific ethnic group for a given rebel movement might depend less on the overall degree of ethnic diversity in a given society and more on the actual size (in total numbers) of the ethnic group in question. For instance, if a country has a population size of 500,000 and a relatively low level of ethnic fractionalisation because one ethnic group represents 90% of the population, another one 8% and a third one 2%, the latter group still has a smaller recruitment pool than an ethnic group which represents 2% of the population in a country with a population size of ten million and a relatively high level of ethnic fractionalisation with, say, twelve different ethnic groups.

econometric analyses by including ethnic fractionalisation values from specific years for entire time periods in the EEI Dataset (cf. *ibid.*),¹⁰⁰ the results presented in chapter 6 regarding the effects of levels of ethnic fractionalisation on the risk of ethnic civil war should not be overstated due to the inherent limitations of ethnic fractionalisation indices (see also section 3.2.). It is also worth pointing out that the EEI Dataset intentionally does not include an ethnic polarisation index, following empirical evidence that polarisation indices, at least when calculated according to the polarisation theory by Esteban and Ray (1994), tend to be highly correlated with Alesina et al.'s (2003) fractionalisation measures anyway (Alesina et al. 2003).

- 1) Although most studies do not find a significant association between a country's level of democracy and the risk of large-scale intrastate violence (Hegre and Sambanis 2006), statistical models in the civil wars literature nonetheless frequently include a variable on the degree of democratisation (see e.g. Collier and Hoeffler 2004; Elbadawi and Sambanis 2002b; Fearon and Laitin 2003a). There are at least three relevant explanations how a country's political regime type might affect the risk of ethnic civil war: On the one hand, high levels of democracy can be expected to lower the risk of violent ethnic conflict, as institutionalised democracies empower their citizens politically and increase the responsiveness of the state to the interests of politicised ethnic groups (cf. Fearon and Laitin 2003a; Gurr 2000). Compared to autocratic regimes, institutionalised democracies thus generally offer more opportunities for ethnopolitical groups to influence the political decision-making process through non-violent means, and hence create fewer incentives for violent action (*ibid.*). On the other hand, however, it also could be argued that democracies are likely to experience more ethnic civil war than autocracies, as higher levels of repression under the latter regime type make it more difficult to organise rebellion and more costly to engage in violent action (Saideman et al. 2002). Finally, combining insights from the previous two arguments, neither high levels of democracy nor high levels of autocracy might be associated with an increase in the

¹⁰⁰ For instance, the ethnic fractionalisation value which Alesina et al. (2003) calculated for Sri Lanka based on ethnicity data from 2001 has been added in the EEI Dataset for this country for all years between 1955 and 2007; the ethnic fractionalisation value which they calculated for Thailand based on ethnicity data from 1983 has been added for this country for all years between 1955 and 2007; and so on.

risk of ethnic civil war, due to the latter regime type's ability to repress dissent and the former's incentives for non-violent action. Instead, the relationship between levels of democracy and the risk of violent intrastate conflict might be non-linear, since hybrid regimes which combine democratic and autocratic features 'are partly open yet somewhat repressive ... [whereby] repression leads to grievances that induce groups to take action, and openness allows for them to organize and engage in activities against the regime.' (Hegre et al. 2001:33)

In order to be able to control for the effects of a country's level of democracy, the EEI Dataset contains the Revised Combined Polity Score according to the Polity IV Project dataset version p4v2008 (Marshall and Jaggers 2009a; see Appendix III for further details). Following empirical evidence that the relationship between levels of democracy and the risk of violent intrastate conflict is not linear but rather follows an inverted-U shape (Hegre et al. 2001), the statistical models presented in chapter 6 will also include the quadratic term of the Revised Combined Polity Score.

- m) In line with Fearon and Laitin (2003a), the EEI Dataset also contains a dummy variable which denotes a country's recent experience of political instability. This dummy variable takes on the value '1' if a country's Combined Polity Score according to the Polity IV Project dataset version p4v2008 either took on the value of '-77' or '-88', or had a three-or-greater change in any of the three years prior to the current observation (cf. Fearon and Laitin 2003a). The coding of the political instability variable in the EEI Dataset differs from that in Fearon and Laitin's replication data, as the latter treat the year in which a three-or-greater change in the Combined Polity Score occurs as instance of political instability, rather than the last year before such a change. For instance, the change in El Salvador's Combined Polity Score from -3 in 1963 to 0 in 1964 leads Fearon and Laitin to code their political instability variable as '1' for El Salvador from 1965 to 1967, based on the assumption that 1964 was particularly affected by political instability as the year in which the Combined Polity Score changes. In contrast, the political instability variable in the EEI Dataset takes on the value '1' for El Salvador only from 1965 to 1966, based on the assumption that 1964 is the first year of a new period of political

stability (since the Combined Polity Score remains at ‘0’ from 1964 to 1971) and that 1963, as the last year before the change in the Combined Polity Score, is likely to have been more affected by political instability (see Appendix III for further details). According to Fearon and Laitin (2003a), a country’s recent experience of political instability increases the risk of civil war, as it can reduce the state’s counterinsurgent capabilities and ‘may indicate disorganization and weakness [at the centre] and thus an opportunity for a separatist or center-seeking rebellion.’ (Fearon and Laitin 2003a:81)

The tables in sections 6.4. to 6.6. provide further information on which of the aforementioned control variables are included in the different statistical models to test the relevance of Ethno-Embedded Institutionalism.

5.9. Conclusion: Aims of the EEI Dataset

The EEI Dataset clearly fills the need for a comprehensive dataset which facilitates the systematic statistical analysis of the relationships between institutional design and the risk of ethnic civil war across countries and over time. It provides an unprecedented compilation of quantitative information on different types of political institutions, the incidence of large-scale ethnic violence and further variables such as political regime type or level of economic development which are commonly controlled for in the civil wars literature. This chapter has presented details on the variables included in the EEI Dataset, and – with reference to the graphs included in Appendix I – briefly described the temporal and geographical dispersion of formal political institutions and their combinations between 1955 and 2007 (see sections 5.4. to 5.7.), and of levels of corruption between 1984 and 2007 (see section 5.7.). It thereby is important to note that the sole purpose of these descriptions is to identify broad trends in the dispersion of specific formal and informal political institutions across countries and over time. Since I focus on the ‘downstream’ rather than the ‘upstream’ analysis of political institutions in this thesis (see also section 1.2.), I

leave it to future research to investigate the manifold causes behind the patterns illustrated in Appendix I and outlined in sections 5.4. to 5.7..

The following chapter will present the results from testing the effects of both institutional combinations and corruption on the risk of large-scale ethnic violence, using binary time-series-cross-section analysis with data from the EEI Dataset.

Chapter 6: Testing Ethno-Embedded Institutionalism

6.1. Introduction: A Statistical Test of Ethno-Embedded Institutionalism

As Ethno-Embedded Institutionalism proposes a general explanation for the effects of institutional combinations and informal political institutions on the risk of violent ethnic conflict throughout space and time, it is most suitable to test its relevance with a large-N, time-series-cross-section analysis (see also section 5.1.). Accordingly, this chapter presents my approach to and results from testing the impact of both institutional combinations (see chapter 3) and corruption (see chapter 4) on the risk of ethnic civil war, using binary time-series-cross-section analysis and data from the EEI Dataset (see chapter 5). In order to put the relevance of Ethno-Embedded Institutionalism to the test, the following sections will

- describe the hypotheses to be tested (section 6.2.), linking back to arguments presented in chapters 3 and 4;
- outline the method used to test Ethno-Embedded Institutionalism (section 6.3.);
- present the results from testing the effects of individual formal political institutions (section 6.4.), institutional combinations (section 6.5.) and corruption (section 6.6.) on the risk of large-scale ethnic violence; and
- describe the findings from my robustness tests (section 6.7.).
- Section 6.8. will conclude this chapter by summarising its central points.

6.2. Hypotheses

As elaborated in chapters 3 and 4, Ethno-Embedded Institutionalism consists of two dimensions which derive from the recognition that political institutions are ‘embedded entities’ in at least two regards: First, whether they are openly codified or not, political institutions are embedded entities in the sense that they never exist on their own but always form part of a wider institutional arrangement. Accordingly, the

first dimension of Ethno-Embedded Institutionalism highlights the need to pay greater attention to the form of government, type of electoral system for the legislature and state structure that are combined with each other in a given political system (see chapter 3). Second, political institutions are embedded entities in the sense that informal political institutions such as corruption can exist over time and affect the prospects of ethnopolitical (in)stability due to persisting patterns in human behaviour and despite their lack of open codification. The second dimension of Ethno-Embedded Institutionalism therefore emphasises the need to pay greater attention also to the effects of informal political institutions when analysing institutional incentives for violent ethnic conflict (see chapter 4). Taken together, these two dimensions aim to expand the research agenda of the institutional incentives approach to ethnic violence and overcome its predominant focus on single, formal political institutions (see chapter 1).

The sets of expectations regarding the effects of certain types of institutional combinations and informal political institutions on the risk of large-scale ethnic violence that have been outlined in chapters 3 and 4 follow from the grievance-based explanation of violent intrastate conflict presented in chapter 2. In short, these expectations centre on the argument that political institutions which systematically reduce the number of ethnic groups who can obtain the intrinsic and instrumental values of political representation are likely to increase the risk of violent ethnic conflict. This is because political institutions which are associated with low levels of political inclusiveness can be expected to contribute to perceived or objective asymmetries between ethnic groups in terms of their political as well as socioeconomic standing, and arguably give rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation to be comparatively low (see also section 2.4.). Based on the arguments presented in chapters 2 to 4, there are three key hypotheses to be tested within the following sections. They relate to the likely effects of a) individual formal political institutions, b) institutional combinations and c) corruption on the risk of large-scale ethnic violence:

a) Before turning to the effects of institutional combinations, it makes sense to first look at formal political institutions as discrete, separable entities, as has been typical for the institutional incentives approach to ethnic violence (see section 1.6.). Following this perspective, we can expect institutions from category A of Table 1 (section 3.7.) to increase the risk of large-scale ethnic violence compared to institutions from category B and C, as they provide a relatively low number of possible political winners due to their reliance on winner-takes-all principles (see *ibid.*). Put differently, we can expect the risk of ethnic civil war to increase under a presidential as opposed to a parliamentary and mixed form of government; under a majoritarian as opposed to a PR and mixed electoral system; and under a unitary as opposed to a federal and mixed state structure, as the formal political institutions included in category A of Table 1 (section 3.7.) systematically reduce the number of ethnic groups that can obtain the values of political representation compared to their counterparts in categories B and C. These theoretical considerations lead to my first hypothesis:

Hypothesis 1: Individual formal political institutions that rely on winner-takes-all principles increase the risk of large-scale ethnic violence compared to individual formal political institutions that seek to disperse political gains.

Following the arguments outlined in sections 3.4. to 3.6., this hypothesis can be divided into three subhypotheses:

Hypothesis 1a: Presidential forms of government increase the risk of large-scale ethnic violence compared to parliamentary and mixed forms of government.

Hypothesis 1b: Majoritarian electoral systems for the legislature increase the risk of large-scale ethnic violence compared to proportional and mixed electoral systems for the legislature.

Hypothesis 1c: Unitary state structures increase the risk of large-scale ethnic violence compared to federal and mixed state structures.

b) After testing Hypothesis 1 and its subhypotheses, we move beyond the mere focus on single, formal political institutions by addressing the first dimension of Ethno-Embedded Institutionalism. As elaborated in chapter 3, this dimension highlights the need for scholars belonging to the institutional incentives approach to ethnic violence to pay greater attention to the specific *combination* of formal political institutions in a given political system and the *overall* number of possible political winners it provides. In line with the grievance-based explanation of violent ethnic conflict outlined in chapter 2, we can assume that the lower the number of possible political winners provided by a given institutional combination, the more likely it is that this combination will increase the risk of large-scale ethnic violence. Consequently, we can expect in particular the combination of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure to heighten the risk of large-scale ethnic violence, as it provides the lowest overall number of possible political winners compared to any other combination of presidential, parliamentary or mixed form of government, majoritarian, proportional or mixed electoral system for the legislature, and unitary, federal or mixed state structure (cf. Table 1, section 3.7.). Put differently, as they systematically reduce the number of ethnic groups who can obtain the values of political representation outlined in chapter 2, political systems which include a presidential form of government, majoritarian electoral system for the legislature and unitary state structure can be expected to increase the risk of large-scale ethnic violence compared to any other possible combination of the different forms of government, electoral systems for the legislature and state structures listed in Table 1 (section 3.7.). These arguments lead to my second hypothesis and its subhypothesis:

Hypothesis 2: Institutional combinations which provide a relatively low number of possible political winners increase the risk of large-scale ethnic violence compared to institutional combinations that provide a higher number of possible political winners.

Hypothesis 2a: Institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure increase the risk of large-scale ethnic violence compared to all other possible combinations of different forms of government, electoral systems for the legislature and state structures.

c) The previous arguments all refer to the effects of *formal* political institutions and their combinations on the prospects of ethnopolitical (in)stability. The second dimension of Ethno-Embedded Institutionalism moves beyond this focus on openly codified institutional design by highlighting the need to pay greater attention also to the relevance of *informal* political institutions for the risk of ethnic civil war. Specifically, I have argued in chapter 4 that corruption (a prime example of a non-codified political institution) can be expected to increase the risk of large-scale ethnic violence, as networks of corruption – given their tendency to form along ethnic lines and benefit certain ethnic groups over others – are likely to affect the *modus operandi* of formal political institutions in such a way that those ethnic groups who stand outside of these networks have comparatively low chances to obtain the values of political representation. This is likely to give rise to grievances among those ethnic groups who stand outside of ethnically exclusionary networks of corruption, and to heighten the risk of ethnic civil war. These theoretical considerations lead to my third key hypothesis:

Hypothesis 3: The higher the level of corruption, the higher is the risk of large-scale ethnic violence.

The following section will outline the method with which I seek to test my three key hypotheses and their subhypotheses.

6.3. Method

To test the relevance of Ethno-Embedded Institutionalism, I use a large-N, time-series-cross-section (TSCS) analysis. This type of analysis is most suitable for my aims, as I do not seek to make particular predictions for specific countries, but wish to draw general conclusions about the relationship between different institutional repertoires and the risk of large-scale ethnic violence throughout space and time. For my statistical models, I use the data included in the EEI Dataset, as presented in chapter 5. Depending on the precise statistical model, year and availability of control variables, I thus include between 73 and 161 countries per year in my analysis. Regarding the control variables in my statistical models, it should be noted that I log-transform both my population size and GDP *per capita* variables in most of my models¹⁰¹ in order to account for decreasing marginal effects (see also e.g. DeRouen and Sobek 2004; Hegre and Sambanis 2006). I also include the quadratic term of the Revised Combined Polity Score according to the Polity IV Project dataset version p4v2008 (Marshall and Jaggers 2009a) in my analysis, following empirical evidence for a curvilinear relationship between the level of democracy and the risk of violent intrastate conflict (Hegre et al. 2001; see also section 5.8.).

As briefly stated in section 5.3., the measurement level of the dependent variable plays a decisive role in choosing an appropriate estimation procedure for the large-N analysis. Since my dependent variable, ethnic civil war, takes on the value ‘0’ for all country years in which there is no large-scale ethnic violence and the value ‘1’ for all country years in which large-scale ethnic violence occurs (see section 5.3.), I use a binary choice rather than an ordinary least square (OLS) regression model. The two most commonly used regression models for analyses with a dichotomous dependent variable are binary logit and binary probit models (Long and Freese 2006). Following the example of authors such as Collier and Hoeffler (2004), Fearon (2005) and Fearon and Laitin (2003a), I report the results from using a logit model in sections 6.4. to 6.7.. It is, however, reasonable to assume that the use of a probit

¹⁰¹ As will be outlined in section 6.6., one of my statistical models on the effects of corruption contains a non-log-transformed version of my GDP *per capita* variable.

model would lead to fairly similar findings (cf. e.g. Liao 1994; Long and Freese 2006).

Like violent intrastate conflict in general, the occurrence of ethnic civil war is likely to be influenced by a country's conflict history, and to depend on earlier episodes of large-scale ethnic violence (cf. Hegre et al. 2001; see also section 5.8.). In order to control for this temporal dependence and following Beck, Katz and Tucker's (1998) procedure for binary time-series-cross-section (BTSCS) analysis, I use splines and a variable – based on information from the PITF Ethnic War Problem Set, 1955-2007 (PITF 2009) – that denotes the duration of peace prior to the current observation (see also section 5.8.). Specifically, the values of the three auxiliary variables 'Spline_1', 'Spline_2' and 'Spline_3' in my statistical models depict the coefficients of the cubic spline segments for the variable on the duration of peace prior to the current observation, which are used to delimit the path of duration dependence (Beck, Katz and Tucker 1998).¹⁰² As mentioned in section 5.8., I use a variable on the incidence of ethnic war in a neighbouring country in order to control for the likely spatial interdependence (in addition to temporal dependence) of episodes of large-scale ethnic violence.

A problem common to any TSCS analysis (including BTSCS) besides spatial interdependence and temporal dependence is the loss of efficiency if the statistical model does not deal with unit heterogeneity. In principle, this problem could be addressed by using either fixed or random effects. The use of these effects, however, implies certain trade-offs which ultimately render them inappropriate for BTSCS analysis: First, when applied to BTSCS analyses, fixed effects cause a loss of information from those cases for which the response variable takes on the value '0', as '*using fixed effects, these ... observations make no contribution to the statistical analysis (that is, the likelihood [of an event occurring]).*' (Beck and Katz 2001:489, italics in original) This loss of information is particularly severe for studies on rare

¹⁰² I am aware that Carter and Signorino (2010) recently offered an alternative method to Beck, Katz and Tucker (1998) to account for temporal dependence in BTSCS analysis. However, I prefer to use the procedure suggested by Beck, Katz and Tucker (1998), as it is – at least for now – a much more widely used method in the civil wars literature (see e.g. Cederman, Wimmer and Min 2010; Fjelde 2009; Thies 2010).

events such as for instance ethnic civil wars (cf. *ibid.*). Second, fixed effects are collinear with any independent variable that either changes slowly over time or that is entirely time-unvarying (Beck 2001). This would be a particularly acute problem for my analysis, as my key independent variables (i.e. formal political institutions and their combinations and, to a lesser degree, corruption) mainly change across units but relatively rarely over time. Third, random effects are not suitable for TSCS or BTSCS analysis either, as they are based on the assumption that the observed units are a sample from a larger population and that inferences are made about this larger population (*ibid.*). As the units in TSCS or BTSCS analysis are fixed and inferences are made about the observed units, not a larger, hypothetical population of similar countries, the use of random effects would contradict the very rationale behind TSCS or BTSCS analysis (see *ibid.*). I therefore include neither fixed nor random effects in my statistical models, as there are far more disadvantages than advantages to their use.

Finally, according to Kittel (1999), it needs to be carefully assessed when using TSCS analysis whether one's data should be divided into different subperiods, as the relationship between variables might change over time due to external shocks. For instance, following the assumption that the number of ethnic conflicts heightened drastically only with the end of the Cold War (cf. e.g. Brown 1993), it would make sense to distinguish between a pre- and post-1990s period in my dataset. On the other hand, however, e.g. the statistical research by Gurr (2000) or data by the PITF (2009) clearly show that the number of (violent) ethnic conflicts has increased steadily between the 1950s and early 1990s and did not just suddenly surge with the end of the Cold War (see also section 1.2.). Hence, as there is no relevant theoretical argument that makes the distinction of different subperiods in my data necessary, I treat all years between 1955 and 2007 (and, for the analysis of corruption, between 1984 and 2007 respectively, see section 6.6.) as one complete time period.

Before presenting the findings from my statistical models, two possible problems need to be addressed briefly: endogeneity and multicollinearity. Endogeneity might

affect my analysis for three key reasons (cf. Wooldridge 2002):¹⁰³ measurement error, simultaneity and omitted variable bias. While the issue of ‘measurement error’ is self-explanatory, it is worth clarifying that ‘simultaneity’ refers to the fact that a given independent variable (e.g. level of economic development) might not only affect the dependent variable (e.g. the incidence of ethnic civil war), but that the dependent variable (e.g. the incidence of ethnic civil war) conversely might also influence the independent variable (e.g. level of economic development) (cf. *ibid.*). Moreover, ‘omitted variable bias’ can be a source of endogeneity if any of the explanatory variables in one’s analysis are correlated with one of the unobserved variables that have been relegated to the error term (*ibid.*). In my own statistical models, the risk of omitted variable bias is magnified by the aforementioned lack of random or fixed effects to account for unit heterogeneity.¹⁰⁴

I will address the issue of endogeneity empirically by lagging my key independent variables (i.e. individual formal political institutions, institutional combinations and corruption) as well as my variables on GDP *per capita*, population size, degree of socioeconomic inequalities, level of democracy and recent experience of political instability. I lag these specific variables, as it is reasonable to expect that they are particularly affected by the issue of simultaneity, i.e. that they not only influence the risk of ethnic civil war but that their precise values are also likely to be affected by the incidence of large-scale ethnic violence (cf. also e.g. Fearon and Laitin 2003a).¹⁰⁵ Following the example of Fearon (2005) and Fearon and Laitin (2003a), I use one-year lags in my statistical models.

¹⁰³ As mentioned in section 5.8., there is an inevitable endogeneity problem with the use of a variable on the incidence of ethnic war in a neighbouring country (see footnote 90). As I acknowledged this problem earlier in my analysis, I will not elaborate it any further at this point.

¹⁰⁴ The issue of endogeneity is relevant, but in general should not be overstated, as its key sources (measurement error, simultaneity and omitted variable bias) are inevitable challenges for any quantitative analysis. While the risk of measurement error can be reduced by repeated checks of one’s data quality (as done for the EEI Dataset, see chapter 5), it is questionable how far omitted variable bias ever can be overcome without sacrificing the parsimony of one’s statistical models. Similarly, the risk of simultaneity seems ubiquitous especially in the analysis of political institutions, as they equally can be thought of as independent and dependent variables, i.e. as causes and consequences of a variety of social, economic and political phenomena (cf. Grofman and Stockwell 2003). Whether one is more interested in the effects of ethnic violence on political institutions or the impact of political institutions on ethnic violence thus ultimately depends on one’s personal preference without one type of research question being more valid than the other.

¹⁰⁵ For other studies using lags to deal with endogeneity problems, see also e.g. Gerring and Thacker (2004) or Dietz, Neumayer and de Soysa (2007).

In order to check for potential problems of multicollinearity, I regress several of my explanatory variables on each other and look out for their R-square values (see Kanazawa and Jackson 2005). If the R-square value from any regression between two explanatory variables is close to 1, a reason for concern about multicollinearity exists (*ibid.*; see also e.g. Slinker and Glantz 2008). I conducted this multicollinearity test among all those pairs of explanatory variables for which there are theoretical grounds to believe that they could be highly correlated, such as former colonial power and form of government (cf. Shugart and Mainwaring 1997) or status as oil exporter and level of democracy (cf. Ross 2001). As the results from my multicollinearity checks in Table 1 in Appendix II show, there does not seem to be a problem of first-order multicollinearity in my data, as none of the R-square values is close to 1.

As a final note in this section, it should be mentioned that the descriptives from the EEI Dataset confirm that we are dealing with rare events data in which the binary dependent variable takes on the value ‘1’ much less frequently than it takes on the value ‘0’ (cf. King and Zeng 2001): Out of 7266 country year observations, ethnic civil war is reported in only 766 cases, i.e. only in 10.5% of all observations of my dependent variable in the EEI Dataset. A problem that can result from such rare events data is the underestimation of event probabilities (*ibid.*). A possible solution to this problem, as suggested by King and Zeng (2001), is to collect data based on the dependent variable, i.e. to sample all available events (incidence of ethnic civil war) and only a very small fraction of nonevents (no incidence of ethnic civil war). Similar to the use of fixed effects in BTSCS analysis, this method would however imply a severe loss of information regarding those cases in which the response variable takes on the value ‘0’, and therefore has been dismissed for my statistical models.

6.4. The Effects of Individual Formal Political Institutions

According to Hypothesis 1, individual formal political institutions that rely on winner-takes-all principles are expected to increase the risk of large-scale ethnic violence compared to individual formal political institutions that seek to disperse political gains (see section 6.2.). Hence, presidential forms of government should increase the risk of large-scale ethnic violence compared to parliamentary and mixed forms of government (Hypothesis 1a); majoritarian electoral systems for the legislature should increase the risk of large-scale ethnic violence compared to proportional and mixed electoral systems for the legislature (Hypothesis 1b); and unitary state structures should increase the risk of large-ethnic violence compared to federal and mixed state structures (Hypothesis 1c). Before testing these hypotheses empirically, it is worth summarising some key descriptives of the formal political institutions under consideration (see Tables 3 to 8).

A brief look at the EEI Dataset shows that gain-dispersing forms of government and gain-dispersing electoral systems for the legislature are much more common in basically open regimes than winner-takes-all forms of government and winner-takes-all electoral systems: From a total of 7266 country year observations in the EEI Dataset, gain-dispersing (i.e. parliamentary and mixed) forms of government can be found in 2308 cases (31.8% of all observations), while winner-takes-all (i.e. presidential) forms of government can be found in only 1042 cases (14.3% of all observations) (see Table 3). Likewise, gain-dispersing (i.e. proportional and mixed) electoral systems for the legislature exist in 2033 out of 7266 country year observations (27.9% of all observations), compared to 1327 observations of winner-takes-all (i.e. majoritarian) electoral systems (18.3% of all observations) (see Table 4).

	Presidential form of government	Parliamentary form of government	Mixed form of government	Autocratic form of government	Residual category
Number of country year observations (Total)	1042 (14.3%)	1813 (25%)	495 (6.8%)	3906 (53.8%)	10 (0.1%)

Table 3: Total Number of Observations of Different Forms of Government in the EEI Dataset.

	Majoritarian electoral system	Proportional electoral system	Mixed electoral system	Electoral system under basically closed regime
Number of country year observations (Total)	1327 (18.3%)	1550 (21.3%)	483 (6.6%)	3906 (53.8%)

Table 4: Total Number of Observations of Different Electoral Systems in the EEI Dataset.

The picture is very different when looking at state structures in basically open regimes. Here – in contrast to the patterns of different forms of government and electoral systems for the legislature – winner-takes-all institutions are much more common than their gain-dispersing counterparts: As Table 5 illustrates, the EEI Dataset records 2112 country year observations of winner-takes-all (i.e. unitary) state structures under a basically open regime (29.1% of all observations), but only 1248 observations of gain-dispersing (i.e. federal and mixed) state structures (17.2% of all observations).¹⁰⁶

	Unitary state structure	Federal state structure	Mixed state structure	State structure under basically closed regime
Number of country year observations (Total)	2112 (29.1%)	683 (9.4%)	565 (7.8%)	3906 (53.8%)

Table 5: Total Number of Observations of Different State Structures in the EEI Dataset.

¹⁰⁶ See the graphs in Appendix I for a more detailed illustration of the number and dispersion of different forms of government, electoral systems for the legislature and state structures in the EEI Dataset. Please note that the graphs in Appendix I, unlike the numbers presented in Tables 5 and 8, do not distinguish between state structures under basically open and basically closed regimes.

Rather than looking at the total number of country year observations of gain-dispersing *versus* winner-takes-all institutions, one might also be interested to know how often specific forms of government, electoral systems for the legislature and state structures can be observed either during the incidence or absence of ethnic civil war. As Tables 6 and 8 illustrate, it is quite striking that the percentages of country year observations by incidence and absence of ethnic civil war are all fairly close to each other when comparing presidential, parliamentary and mixed forms of government as well as unitary, federal and mixed state structures in basically open regimes: Here, the proportion of country year observations under the incidence or absence of ethnic civil war varies only between 0.1¹⁰⁷ and 3.5¹⁰⁸ percentage points. This lack of a distinct pattern in Tables 6 and 8 stands in contrast to Table 7, which clearly shows that proportional electoral systems can be observed much less frequently under the incidence of ethnic civil war than majoritarian or mixed electoral systems for the legislature (i.e. only in 3.7% of all its country year observations, compared to 12.4% for majoritarian and 13% for mixed electoral systems).

	Presidential form of government	Parliamentary form of government	Mixed form of government	Autocratic form of government	Residual category
Number of country year observations (ethnic war)	80 (7.7%)	174 (9.6%)	30 (6.1%)	482 (12.3%)	0 (0%)
Number of country year observations (no ethnic war)	962 (92.3%)	1639 (90.4%)	465 (93.9%)	3424 (87.7%)	10 (100%)

Table 6: Number of Observations of Different Forms of Government in the EEI Dataset by Incidence and Absence of Ethnic War.

¹⁰⁷ See the percentages of country year observations of unitary and mixed state structures in Table 8.

¹⁰⁸ See the percentages of country year observations of parliamentary and mixed forms of government in Table 6.

	Majoritarian electoral system	Proportional electoral system	Mixed electoral system	Electoral system under basically closed regime
Number of country year observations (ethnic war)	164 (12.4%)	57 (3.7%)	63 (13%)	482 (12.3%)
Number of country year observations (no ethnic war)	1163 (87.6%)	1493 (96.3%)	420 (87%)	3424 (87.7%)

Table 7: Number of Observations of Different Electoral Systems in the EEI Dataset by Incidence and Absence of Ethnic War.

	Unitary state structure	Federal state structure	Mixed state structure	State structure under basically closed regime
Number of country year observations (ethnic war)	168 (8.0%)	70 (10.2%)	46 (8.1%)	482 (12.3%)
Number of country year observations (no ethnic war)	1944 (92.0%)	613 (89.8%)	519 (91.9%)	3424 (87.7%)

Table 8: Number of Observations of Different State Structures in the EEI Dataset by Incidence and Absence of Ethnic War.

As they are purely descriptive, Tables 6 to 8 do not allow us to draw any general conclusions about the (arguable) association between specific formal political institutions and the risk of large-scale ethnic violence. Hence, I now turn to my BTSCS analysis for a more substantive understanding of the relationship between institutional design and the odds of ethnic civil war:

To test Hypothesis 1 and its subhypotheses, I use eight statistical models per set of formal political institutions. As I employ dummy variables to check the effects of winner-takes-all institutions, I restrict my sample to basically open regimes when analysing forms of government and electoral systems for the legislature (see Tables 9, 10 and 11). By doing so, I ensure that my reference categories only include the gain-dispersing institutions discussed in sections 3.4. and 3.5., and do not contain other forms of government or electoral systems for the legislature that are used under an autocratic framework. As mentioned in section 3.3., I use a slightly different

approach when analysing different state structures, as their distinction and representation-enhancing (or -reducing) effects do not necessarily presuppose a democratic setting. Thus, when testing the effects of unitary state structures on the risk of ethnic civil war, I begin by including both basically open and basically closed regimes in my sample (see Table 12), and only later move to restrict my sample to basically open regimes (see Table 13; see also footnote 39).

In order to know how well my statistical models fit the data,¹⁰⁹ I look at the percentages of correctly predicted events (i.e. incidence of ethnic war) and nonevents (i.e. no incidence of ethnic war), and whether they lie below or above the threshold of 50%. Percentages above this cut value indicate a good model fit for the data, while percentages below indicate a bad model fit. The results from my SPSS outputs are as follows:

- The statistical models to test the effects of presidentialism (see Table 9) predict between 99% and 99.2% of nonevents, and between 91.3% and 93% of events correctly.
- The statistical models to test the effects of majoritarian electoral systems for the legislature (see Table 10) predict between 99% and 99.1% of nonevents, and between 91.8% and 93.4% of events correctly.
- The statistical models to test the effects of majoritarian electoral systems for the legislature without communal rolls or seat reservations (see Table 11) predict between 99% and 99.2% of nonevents, and between 91.8% and 93.1% of events correctly.
- The statistical models to test the effects of unitary state structures with basically closed regimes in the sample (see Table 12) predict between 98.7% and 98.8% of nonevents, and between 91.8% and 92.1% of events correctly.
- The statistical models to test the effects of unitary state structures without basically closed regimes in the sample (see Table 13) predict between 99.1% and 99.2% of nonevents, and between 91.3% and 93% of events correctly.

¹⁰⁹ Admittedly, ‘this is a rather crude measure’ (Kanazawa and Jackson 2005:51) of model fit, however, it suffices to get a general insight into my models’ performance.

All these percentages are reassuring, as they imply that my statistical models fit the data well.¹¹⁰

As mentioned in section 6.2., the purpose of testing Hypothesis 1 and its subhypotheses is to analyse formal political institutions as if they were discrete, separable entities, following common practice within the institutional incentives approach to ethnic violence (see also section 1.6.). Table 9 presents the results from testing the effects of presidentialism on the risk of ethnic civil war (Hypothesis 1a). Tables 10 and 11 present the results from testing the effects of majoritarian electoral systems for the legislature (Hypothesis 1b), both when considering all types of majoritarian electoral system (Table 10) and when considering only those majoritarian electoral systems that do not use seat reservations or communal rolls to enhance ethnic, national or religious minority representation (Table 11). Tables 12 and 13 present the results from testing the effects of unitary state structures (Hypothesis 1c), when either including (Table 12) or excluding (Table 13) basically closed regimes from the sample. As briefly mentioned before, my key independent variables in the following tables are all dummy variables, i.e. the ‘presidential form of government’ variable takes on the value ‘1’ for all years in which a country employed a presidential form of government, and the value ‘0’ for all years in which a country employed a different form of government; the ‘majoritarian electoral system’ variables takes on the value ‘1’ for all years in which a country employed a majoritarian electoral system for the legislature, and the value ‘0’ for all years in which a country employed a different electoral system for the legislature; and so forth.

¹¹⁰ When excluding the splines from the statistical models, the numbers of correctly predicted events and nonevents change as follows: The statistical models to test the effects of presidentialism then predict between 98.6% and 98.8% of nonevents, and between 81.9% and 84% of events correctly. The statistical models to test the effects of majoritarian electoral systems for the legislature predict between 98.6% and 98.8% of nonevents, and between 81.9% and 83.5% of events correctly. The statistical models to test the effects of majoritarian electoral systems for the legislature without communal rolls or seat reservations predict between 98.6% and 99% of nonevents, and between 81.4% and 83.1% of events correctly. The statistical models to test the effects of unitary state structures with basically closed regimes in the sample predict between 97.9% and 98% of nonevents, and between 78.3% and 83.5% of events correctly. And the statistical models to test the effects of unitary state structures without basically closed regimes in the sample predict between 98.6% and 98.9% of nonevents, and between 81.8% and 86.1% of events correctly.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Presidential form of government ^a	0.669* (0.370)	0.732** (0.371)	0.731** (0.371)	0.534 (0.387)	0.439 (0.395)	0.339 (0.439)	0.325 (0.443)	0.060 (0.472)
Ln GDP <i>per capita</i> ^a	0.553*** (0.157)	0.564*** (0.158)	0.566*** (0.158)	0.631*** (0.160)	0.704*** (0.168)	0.555*** (0.168)	0.563*** (0.171)	0.515*** (0.178)
Ln population size ^a	0.259** (0.104)	0.231** (0.106)	0.229** (0.106)	0.223** (0.107)	0.200* (0.108)	0.286** (0.116)	0.290** (0.117)	0.430*** (0.143)
Incidence of ethnic war in a neighbouring country	1.515*** (0.417)	1.542*** (0.421)	1.562*** (0.424)	1.337*** (0.427)	1.250*** (0.422)	1.375*** (0.457)	1.361*** (0.460)	1.094** (0.500)
Level of ethnic fractionalisation	0.414 (0.736)	0.499 (0.741)	0.504 (0.740)	0.633 (0.750)	0.813 (0.773)	0.009 (0.785)	-0.001 (0.786)	-0.440 (0.888)
Level of socioeconomic inequalities ^a	-0.011 (0.016)	-0.011 (0.016)	-0.012 (0.016)	-0.005 (0.016)	-0.004 (0.017)	0.025 (0.021)	0.024 (0.021)	0.034 (0.022)
Involvement in violent international conflict		1.323* (0.762)	1.327* (0.767)	1.434* (0.778)	1.477* (0.789)	1.706** (0.771)	1.697** (0.772)	1.816** (0.783)
Recent experience of political instability ^a			-0.187 (0.448)	-0.106 (0.454)	-0.029 (0.472)	-0.155 (0.452)	-0.158 (0.452)	-0.314 (0.458)
Experience of colonial rule ^b				0.782** (0.379)		0.738* (0.414)	0.734* (0.415)	0.987** (0.485)
Experience of colonial rule (British) ^b					1.302*** (0.437)			
Experience of colonial rule (Non-British, Non-French) ^b					0.903* (0.493)			
Level of democracy ^a						0.062 (0.082)	0.063 (0.083)	0.143 (0.104)
Level of democracy squared ^a						-0.022** (0.010)	-0.023** (0.010)	-0.033** (0.013)
Status as oil exporter							-0.226 (0.805)	-0.212 (0.792)
Per cent of mountainous terrain								0.003 (0.009)
Noncontiguous country structure								-0.671 (0.476)
Peace duration	-1.978*** (0.205)	-2.000*** (0.207)	-2.009*** (0.209)	-1.919*** (0.206)	-1.867*** (0.203)	-1.963*** (0.221)	-1.960*** (0.221)	-1.977*** (0.224)
Spline_1	-0.022*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)	-0.021*** (0.003)	-0.020*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)
Spline_2	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.263 (0.547)	-0.285 (0.548)	-0.245 (0.557)	-0.684 (0.612)	-0.847 (0.615)	-0.065 (0.673)	-0.044 (0.678)	-0.083 (0.802)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 9: Logit Analysis of the Effects of Presidentialism on the Risk of Ethnic Civil War, 1955-2007.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Majoritarian electoral system ^a	0.244 (0.326)	0.235 (0.324)	0.230 (0.324)	0.069 (0.337)	-0.004 (0.341)	0.066 (0.356)	0.064 (0.357)	0.347 (0.395)
Ln GDP <i>per capita</i> ^a	0.581*** (0.166)	0.589*** (0.167)	0.589*** (0.167)	0.639*** (0.166)	0.698*** (0.172)	0.553*** (0.175)	0.564*** (0.178)	0.574*** (0.192)
Ln population size ^a	0.260** (0.107)	0.239** (0.108)	0.237** (0.108)	0.230** (0.110)	0.208* (0.110)	0.296** (0.118)	0.301** (0.119)	0.435*** (0.141)
Incidence of ethnic war in a neighbouring country	1.160*** (0.372)	1.160*** (0.374)	1.179*** (0.378)	1.086*** (0.380)	1.062*** (0.382)	1.205*** (0.396)	1.195*** (0.398)	0.997** (0.428)
Level of ethnic fractionalisation	0.635 (0.727)	0.731 (0.734)	0.725 (0.733)	0.798 (0.743)	0.965 (0.766)	0.098 (0.779)	0.081 (0.782)	-0.462 (0.878)
Level of socioeconomic inequalities ^a	-0.017 (0.016)	-0.018 (0.016)	-0.019 (0.016)	-0.007 (0.017)	-0.005 (0.017)	0.027 (0.021)	0.026 (0.022)	0.031 (0.022)
Involvement in violent international conflict		1.171 (0.773)	1.172 (0.777)	1.359* (0.786)	1.423* (0.793)	1.684** (0.776)	1.673** (0.776)	1.835** (0.792)
Recent experience of political instability ^a			-0.176 (0.445)	-0.089 (0.451)	-0.011 (0.472)	-0.156 (0.450)	-0.158 (0.450)	-0.327 (0.459)
Experience of colonial rule ^b				0.886** (0.372)		0.810** (0.402)	0.801** (0.404)	1.021** (0.457)
Experience of colonial rule (British) ^b					1.367*** (0.440)			
Experience of colonial rule (Non-British, Non-French) ^b					1.053** (0.477)			
Level of democracy ^a						0.070 (0.083)	0.071 (0.083)	0.129 (0.101)
Level of democracy squared ^a						-0.024** (0.010)	-0.025** (0.010)	-0.031** (0.012)
Status as oil exporter							-0.300 (0.817)	-0.175 (0.771)
Per cent of mountainous terrain								0.004 (0.009)
Noncontiguous country structure								-0.828 (0.510)
Peace duration	-2.015*** (0.207)	-2.039*** (0.210)	-2.048*** (0.212)	-1.934*** (0.207)	-1.874*** (0.204)	-1.967*** (0.221)	-1.962*** (0.221)	-1.982*** (0.224)
Spline_1	-0.022*** (0.003)	-0.023*** (0.003)	-0.023*** (0.003)	-0.021*** (0.003)	-0.020*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)
Spline_2	0.010*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.098 (0.550)	-0.100 (0.552)	-0.054 (0.564)	-0.604 (0.626)	-0.781 (0.633)	-0.018 (0.680)	0.005 (0.684)	-0.236 (0.824)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 10: Logit Analysis of the Effects of Majoritarian Electoral Systems on the Risk of Ethnic Civil War, 1955-2007.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Majoritarian electoral system without communal rolls or seat reservations ^a	-0.204 (0.312)	-0.193 (0.311)	-0.187 (0.312)	-0.410 (0.327)	-0.453 (0.327)	-0.460 (0.334)	-0.476 (0.336)	-0.257 (0.378)
Ln GDP <i>per capita</i> ^a	0.543*** (0.160)	0.553*** (0.161)	0.554*** (0.161)	0.645*** (0.164)	0.713*** (0.172)	0.554*** (0.171)	0.568*** (0.173)	0.513*** (0.179)
Ln population size ^a	0.280*** (0.106)	0.258** (0.108)	0.256** (0.108)	0.246** (0.110)	0.220** (0.111)	0.314*** (0.118)	0.321*** (0.119)	0.425*** (0.141)
Incidence of ethnic war in a neighbouring country	1.173*** (0.371)	1.170*** (0.374)	1.191*** (0.377)	1.054*** (0.382)	1.033*** (0.385)	1.167*** (0.398)	1.153*** (0.401)	1.071** (0.424)
Level of ethnic fractionalisation	0.607 (0.726)	0.702 (0.732)	0.697 (0.732)	0.804 (0.744)	0.995 (0.770)	0.088 (0.780)	0.064 (0.782)	-0.393 (0.887)
Level of socioeconomic inequalities ^a	-0.017 (0.016)	-0.017 (0.016)	-0.018 (0.016)	-0.006 (0.017)	-0.005 (0.017)	0.030 (0.022)	0.028 (0.022)	0.036 (0.022)
Involvement in violent international conflict		1.162 (0.769)	1.165 (0.774)	1.388* (0.744)	1.449* (0.800)	1.743** (0.784)	1.730** (0.785)	1.819** (0.786)
Recent experience of political instability ^a			-0.174 (0.444)	-0.068 (0.450)	0.004 (0.472)	-0.118 (0.449)	-0.118 (0.449)	-0.269 (0.461)
Experience of colonial rule ^b				1.027*** (0.379)		0.948** (0.413)	0.942** (0.415)	1.014** (0.459)
Experience of colonial rule (British) ^b					1.463*** (0.436)			
Experience of colonial rule (Non-British, Non-French) ^b					1.189** (0.487)			
Level of democracy ^a						0.085 (0.084)	0.087 (0.084)	0.161 (0.103)
Level of democracy squared ^a						-0.026*** (0.010)	-0.027*** (0.010)	-0.036*** (0.013)
Status as oil exporter							-0.413 (0.829)	-0.320 (0.812)
Per cent of mountainous terrain								0.001 (0.009)
Noncontiguous country structure								-0.565 (0.499)
Peace duration	-2.019*** (0.207)	-2.042*** (0.210)	-2.051*** (0.212)	-1.919*** (0.207)	-1.862*** (0.204)	-1.952*** (0.222)	-1.945*** (0.221)	-1.968*** (0.224)
Spline_1	-0.023*** (0.003)	-0.023*** (0.003)	-0.023*** (0.003)	-0.021*** (0.003)	-0.020*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)
Spline_2	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.009*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	0.056 (0.550)	0.046 (0.551)	0.088 (0.561)	-0.558 (0.629)	-0.726 (0.635)	0.051 (0.684)	0.085 (0.689)	0.019 (0.822)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 11: Logit Analysis of the Effects of Majoritarian Electoral Systems without Communal Rolls or Seat Reservations on the Risk of Ethnic Civil War, 1955-2007.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Unitary state structure ^a	0.765*** (0.217)	0.792*** (0.219)	0.782*** (0.219)	0.698*** (0.223)	0.813*** (0.225)	0.636*** (0.226)	0.613*** (0.229)	0.517** (0.241)
Ln GDP <i>per capita</i> ^a	0.204** (0.094)	0.200** (0.094)	0.199** (0.094)	0.210** (0.093)	0.211** (0.094)	0.191** (0.095)	0.205** (0.098)	0.250** (0.103)
Ln population size ^a	0.386*** (0.068)	0.377*** (0.068)	0.378*** (0.068)	0.372*** (0.069)	0.366*** (0.070)	0.383*** (0.070)	0.382*** (0.070)	0.366*** (0.076)
Incidence of ethnic war in a neighbouring country	0.574*** (0.188)	0.543*** (0.189)	0.540*** (0.189)	0.405** (0.194)	0.379* (0.197)	0.382* (0.199)	0.385* (0.199)	0.288 (0.216)
Level of ethnic fractionalisation	1.395*** (0.378)	1.427*** (0.378)	1.409*** (0.381)	1.132*** (0.394)	1.339*** (0.392)	0.911** (0.403)	0.920** (0.404)	0.665 (0.442)
Level of socioeconomic inequalities ^a	-0.004 (0.012)	-0.003 (0.012)	-0.003 (0.012)	0.003 (0.012)	0.001 (0.012)	0.022 (0.014)	0.021 (0.015)	0.025* (0.015)
Involvement in violent international conflict		0.523 (0.377)	0.521 (0.376)	0.697* (0.375)	0.747** (0.368)	0.761** (0.372)	0.772** (0.371)	0.959** (0.389)
Recent experience of political instability ^a			0.111 (0.236)	0.107 (0.240)	0.022 (0.245)	0.080 (0.249)	0.072 (0.250)	0.081 (0.258)
Experience of colonial rule ^b				0.730*** (0.194)		0.775*** (0.199)	0.762*** (0.201)	1.106*** (0.237)
Experience of colonial rule (British) ^b					0.518** (0.224)			
Experience of colonial rule (Non-British, Non-French) ^b					1.061*** (0.245)			
Level of democracy ^a						-0.024 (0.017)	-0.026 (0.017)	-0.014 (0.018)
Level of democracy squared ^a						-0.008** (0.004)	-0.008** (0.004)	-0.009** (0.004)
Status as oil exporter							-0.175 (0.259)	0.039 (0.273)
Per cent of mountainous terrain								0.007 (0.005)
Noncontiguous country structure								-0.206 (0.288)
Peace duration	-1.851*** (0.110)	-1.860*** (0.111)	-1.855*** (0.111)	-1.810*** (0.110)	-1.802*** (0.109)	-1.805*** (0.111)	-1.808*** (0.111)	-1.789*** (0.114)
Spline_1	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.019*** (0.002)	-0.019*** (0.002)	-0.019*** (0.002)	-0.019*** (0.002)	-0.019*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	-0.920** (0.398)	-0.944** (0.399)	-0.952** (0.399)	-1.120*** (0.407)	-1.219*** (0.413)	-0.808* (0.447)	-0.757* (0.454)	-0.833* (0.499)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 12: Logit Analysis of the Effects of Unitary State Structures on the Risk of Ethnic Civil War, 1955-2007 (including basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Unitary state structure ^a	0.603* (0.340)	0.609* (0.340)	0.647* (0.346)	0.725** (0.357)	0.827** (0.379)	0.542 (0.369)	0.535 (0.370)	0.309 (0.422)
Ln GDP <i>per capita</i> ^a	0.574*** (0.159)	0.582*** (0.160)	0.587*** (0.161)	0.672*** (0.163)	0.730*** (0.168)	0.587*** (0.170)	0.595*** (0.173)	0.540*** (0.182)
Ln population size ^a	0.364*** (0.116)	0.343*** (0.117)	0.345*** (0.118)	0.342*** (0.120)	0.334*** (0.123)	0.378*** (0.127)	0.380*** (0.128)	0.448*** (0.142)
Incidence of ethnic war in a neighbouring country	1.139*** (0.369)	1.127*** (0.372)	1.159*** (0.375)	1.018*** (0.381)	0.982** (0.383)	1.142*** (0.398)	1.136*** (0.399)	1.052** (0.423)
Level of ethnic fractionalisation	0.674 (0.728)	0.755 (0.733)	0.754 (0.732)	0.915 (0.747)	1.214 (0.784)	0.273 (0.785)	0.259 (0.788)	-0.151 (0.961)
Level of socioeconomic inequalities ^a	-0.018 (0.016)	-0.018 (0.017)	-0.020 (0.017)	-0.009 (0.017)	-0.006 (0.017)	0.024 (0.021)	0.023 (0.022)	0.032 (0.022)
Involvement in violent international conflict		1.146 (0.746)	1.151 (0.753)	1.380* (0.772)	1.465* (0.777)	1.679** (0.766)	1.672** (0.766)	1.795** (0.781)
Recent experience of political instability ^a			-0.313 (0.444)	-0.204 (0.451)	-0.167 (0.474)	-0.229 (0.451)	-0.230 (0.451)	-0.341 (0.459)
Experience of colonial rule ^b				0.956*** (0.366)		0.882** (0.401)	0.874** (0.403)	0.995** (0.456)
Experience of colonial rule (British) ^b					1.345*** (0.437)			
Experience of colonial rule (Non-British, Non-French) ^b					1.342*** (0.491)			
Level of democracy ^a						0.071 (0.083)	0.072 (0.083)	0.145 (0.102)
Level of democracy squared ^a						-0.023** (0.010)	-0.024** (0.010)	-0.032** (0.012)
Status as oil exporter							-0.204 (0.780)	-0.195 (0.775)
Per cent of mountainous terrain								0.004 (0.009)
Noncontiguous country structure								-0.504 (0.531)
Peace duration	-1.983*** (0.205)	-2.002*** (0.207)	-2.016*** (0.210)	-1.891*** (0.204)	-1.818*** (0.201)	-1.938*** (0.219)	-1.936*** (0.219)	-1.963*** (0.224)
Spline_1	-0.022*** (0.003)	-0.022*** (0.003)	-0.023*** (0.003)	-0.021*** (0.003)	-0.020*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)
Spline_2	0.010*** (0.002)	0.010*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.009*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.694 (0.656)	-0.699 (0.656)	-0.667 (0.659)	-1.447* (0.755)	-1.832** (0.802)	-0.717 (0.828)	-0.692 (0.834)	-0.556 (1.033)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 13: Logit Analysis of the Effects of Unitary State Structures on the Risk of Ethnic Civil War, 1955-2007 (no basically closed regimes in sample).

Taken together, the results presented in Tables 9 to 13 do not lead to any clear conclusions about the effects of winner-takes-all compared to gain-dispersing institutions on the risk of large-scale ethnic violence: While holding the different control variables constant, the ‘presidential form of government’ variable has a statistically significant effect on the incidence of ethnic war in only three out of eight models, at the 10% (Model 1) and 5% (Models 2 and 3) significance level respectively (see Table 9). According to its $\exp(b)$ coefficient (i.e. its odds ratio),¹¹¹ and while holding all other variables constant, a presidential form of government increases the odds of large-scale ethnic violence by 1.952 compared to non-presidential forms of government in Model 1; by 2.079 in Model 2; and by 2.077 in Model 3.

Again holding the different control variables constant, neither the ‘majoritarian electoral system’ nor the ‘majoritarian electoral system without communal rolls or seat reservations’ variable have a statistically significant effect on the incidence of ethnic war in any of the statistical models presented in Tables 10 and 11.¹¹² Hence, when controlling for all other variables, there is no statistically significant difference between presidential forms of government and non-presidential forms of government regarding their impact on the incidence of ethnic war in most of my statistical models in Table 9, and no statistically significant difference between majoritarian and non-majoritarian electoral systems for the legislature in any of my statistical models in Tables 10 and 11. Crudely put, the results from Tables 9, 10 and 11 imply that, while holding the control variables constant, it generally does not matter for the risk of large-scale ethnic violence whether the form of government or electoral system for the legislature in basically open regimes are based on winner-takes-all rules.

¹¹¹ The $\exp(b)$ coefficients are reported in the SPSS outputs for my statistical models, but not included in the tables presented in this chapter.

¹¹² Leaving their statistical insignificance aside, it is nonetheless interesting to note that the ‘majoritarian electoral system’ variable has a positive coefficient sign in all statistical models apart from Model 5 (see Table 10), and that – by contrast – the ‘majoritarian electoral system without communal rolls or seat reservations’ variable has a negative coefficient sign in all statistical models (see Table 11). Future research on the effects of ‘backdoor mechanisms to ensure minority representation’ (Reynolds 2005:307) might wish to analyse possible causes for this phenomenon in more detail. See also section 5.5. for a list of basically open regimes that (according to the EEI Dataset) have employed majoritarian electoral systems with communal rolls or seat reservations to enhance ethnic, national or religious minority representation.

By contrast, the ‘unitary state structure’ variable has a statistically significant impact on the incidence of large-scale ethnic violence in all statistical models presented in Table 12 while holding the different control variables constant. Its level of statistical significance is at 1% in Models 1 through 7, and only drops slightly to the 5% level in Model 8. These results seem to indicate that a unitary state structure – in contrast to a presidential form of government and majoritarian electoral system for the legislature – is the only single, formal political institution associated with a low number of possible political winners according to Table 1 (section 3.7.) whose impact on the incidence of ethnic war is statistically significantly different from its gain-dispersing counterparts in all statistical models under consideration. According to its $\exp(b)$ coefficient, and while holding all other variables constant, a unitary state structure increases the odds of large-scale ethnic violence by 2.150 compared to non-unitary state structures in Model 1; by 2.208 in Model 2; by 2.187 in Model 3; by 2.011 in Model 4; by 2.255 in Model 5; by 1.890 in Model 6; by 1.845 in Model 7; and by 1.677 in Model 8.

On the other hand, however, it is important to bear in mind that the sample used to test the effects of unitary state structures in Table 12 – unlike the samples used to test the effects of presidentialism and majoritarian electoral systems in Tables 9 to 11 – includes both basically open and basically closed regimes. Thus, to see how the aforementioned results might change, I test the effects of unitary state structures again while restricting my sample to basically open regimes (see Table 13). This test also addresses possible arguments (mentioned in section 3.3.) that unitary and non-unitary state structures can be meaningfully distinguished only under a democratic framework.

Interestingly, the results reported in Table 13 indeed indicate some relevant changes compared to the results reported in Table 12: When restricting my sample to basically open regimes, and while holding the different control variables constant, the ‘unitary state structure’ variable is still statistically significant in most of my statistical models (i.e. Models 1 to 5), but no longer in all of them. At the same time, also the levels of statistical significance for the ‘unitary state structure’ variable drop

to the 10% significance level in Models 1 to 3, and to the 5% significance level in Models 4 and 5. According to its $\exp(b)$ coefficient, and while holding all other variables constant, a unitary state structure under a basically open regime increases the odds of large-scale ethnic violence by 1.828 compared to non-unitary state structures in Model 1; by 1.839 in Model 2; by 1.911 in Model 3; by 2.064 in Model 4; and by 2.285 in Model 5.

Overall, the results reported in Tables 9 to 13 thus provide insufficient grounds to reject the null hypothesis of Hypothesis 1, i.e.:

Hypothesis 1 (NULL): (Individual) formal political institutions that rely on winner-takes-all principles do not increase the risk of large-scale ethnic violence compared to (individual) formal political institutions that seek to disperse political gains.

Put differently, when analysing political institutions as discrete, separable entities, the conclusions we can draw from our statistical results are contradictory at best and anticlimactic at worst. They are contradictory at best, as the design of some formal political institutions – specifically state structures – seems to matter more for the risk of large-scale ethnic violence than that of others (see in particular Table 12 compared to Tables 9, 10 and 11). They are anticlimactic at worst, as most statistical models in this section indicate that – contrary to the arguments presented in chapters 2 and 3 – it simply does not matter for the odds of large-scale ethnic violence whether formal political institutions are based on winner-takes-all principles. Yet, as I will highlight in section 6.5., these conclusions are a direct consequence of the one-dimensionality of the institutional incentives approach to ethnic violence, as a much clearer picture emerges about the relationship between winner-takes-all institutional design and the risk of large-scale ethnic violence when analysing institutional combinations rather than individual, formal political institutions.

Before turning to the BTSCS analysis of institutional combinations in the next section, a few results regarding the control variables in Tables 9 to 13 ought to be mentioned briefly:

- While holding all other variables constant, several control variables do not have a statistically significant impact on the incidence of large-scale ethnic violence in any of the statistical models presented in Tables 9 to 13. They include the variables on recent experience of political instability, level of democracy, status as oil exporter, per cent of mountainous terrain and noncontiguous country structure.
- The ‘level of ethnic fractionalisation’ and ‘level of socioeconomic inequalities’ variables only reach statistical significance in Table 12, which tests the effects of unitary state structures on the risk of ethnic civil war under both basically open and basically closed regimes. According to Models 1 to 7 in Table 12, the ‘level of ethnic fractionalisation’ variable has a statistically significant positive effect on the incidence of ethnic war (at the 1% significance level in Models 1 to 5, and the 5% significance level in Models 6 and 7) while holding all other variables constant. Although these results are tentative at best – as the ‘level of ethnic fractionalisation’ variable does not reach statistical significance in most statistical models in Tables 9 to 13 –, they nonetheless seem to lend some support to the argument that the risk of large-scale ethnic violence increases with high rather than low levels of ethnic diversity (cf. e.g. Elbadawi and Sambanis 2002b; see also section 5.8.).

According to Model 8 in Table 12, also the ‘level of socioeconomic inequalities’ variable has a statistically significant positive effect on the incidence of ethnic war (at the 10% level) while holding all other variables constant.¹¹³ This result is surprising, as it seems to indicate – following the operationalisation of the ‘level of socioeconomic inequalities’ variable (see section 5.8. and the EEI Dataset

¹¹³ In nearly all cases when the ‘level of socioeconomic inequalities’ variable reaches statistical significance in any of my statistical models (see Tables 12, 20 and 21 in this chapter, and Tables 2-6, 8, 12, 16-19 and 22 in Appendix II), it has a statistically significant positive effect on the incidence of ethnic civil war. Only in Models 1 to 4 in Table 14 in Appendix II has the ‘level of socioeconomic inequalities’ variable a statistically significant negative effect on the incidence of ethnic civil war.

Codebook in Appendix III) – that an increase in socioeconomic equality should lead to an increase in the risk of ethnic civil war. Overall, however, we can easily dismiss the relevance of this result, as the ‘level of socioeconomic inequalities’ variable is clearly not robust, given that it reaches statistical significance only under very few model specifications (see the tables listed under footnote 113).

- Unlike the ‘level of democracy’ variable, the ‘level of democracy squared’ variable is statistically significant whenever it is included in a statistical model in Tables 9 to 13. To be precise, the ‘level of democracy squared’ variable has a statistically significant negative effect on the incidence of ethnic war in Models 6, 7 and 8 in Tables 9 to 13 while holding all other variables constant. These results are in line with Hegre et al.’s (2001) findings of an inverted U-shaped relationship between levels of democracy and the risk of violent intrastate conflict (see also section 5.8.).
- Unsurprisingly, while holding all other variables constant, the ‘population size’ variable has a statistically significant positive effect and the ‘peace duration’ a statistically significant negative effect on the incidence of ethnic war in all models in Tables 9 to 13. These results lend support to arguments that a large population increases the risk of civil war (see e.g. Collier and Hoeffler 2000 cited in Elbadawi and Sambanis 2002b; Fearon and Laitin 2003a; Hegre and Sambanis 2006) and that the risk of ethnic war should decrease the longer a country is at peace (cf. Hegre and Sambanis 2006; see also section 5.8.).
- Holding all other variables constant, the ‘incidence of ethnic war in a neighbouring country’ variable has a statistically significant positive impact on the incidence of ethnic war in all statistical models apart from Model 8 in Table 12. These results further substantiate arguments on the likely spatial interdependence of ethnic civil wars (see e.g. Lake and Rothchild 1998; see also section 5.8.).
- The ‘involvement in violent international conflict’ variable¹¹⁴ reaches statistical significance in all statistical models in which it is included apart from Models 2

¹¹⁴ As stated in section 5.8., the EEI Dataset contains several dummy variables to mark a country’s involvement in violent international conflict. Hence, it should be clarified that all statistical models

and 3 in Tables 10, 11, 12 and 13. While holding all other variables constant, it has a statistically significant positive impact on the incidence of ethnic war, thus lending support to arguments that a country's involvement in a violent interstate conflict increases the risk of intrastate violence (cf. Hegre et al. 2001; see also section 5.8.).

- The 'experience of colonial rule' variable¹¹⁵ has a statistically significant positive effect on the incidence of ethnic war whenever it is included in a statistical model in Tables 9 to 13. In line with the expectations outlined in section 5.8. – and while holding all other variables constant –, countries that used to be under colonial rule are thus at a higher risk of ethnic civil war than countries that did not use to be colonies.

In order to account for the effects of different colonial styles (cf. Blanton, Mason and Athow 2001; see section 5.8.), Model 5 in Tables 9 to 13 replaces the 'experience of colonial rule' variable with two dummy variables on the experience of British colonial rule, and experience of non-British and non-French colonial rule respectively ('BritRul' and 'OthRul' in the EEI Dataset Codebook, Appendix III). Following the example of Henderson (2000), I thus use my dummy variable on the experience of French colonial rule ('FrenRul' in the EEI Dataset Codebook) as baseline. Holding all other variables constant, the 'experience of colonial rule (British)' and 'experience of colonial rule (Non-British, Non-French)' variables have a statistically significant positive effect whenever they are included in my statistical models. In line with Henderson's (2000) findings, this indicates that countries that used to be ruled by a colonial power other than the French are at a higher risk of ethnic civil war than former French colonies.

- Finally, the probably most surprising finding in my data analysis is that – when holding all other variables constant – the 'GDP *per capita*' variable has a statistically significant positive impact on the incidence of ethnic war in all models

in this chapter use the dummy variable on involvement in an extrasystemic *or* interstate armed conflict (see 'InterCon' in the EEI Dataset Codebook, Appendix III).

¹¹⁵ As stated underneath the tables reporting my statistical results, all statistical models in this chapter use the dummy variable that marks all years of those countries which, at any point between 1946 and 2007, either were ruled under a League of Nations mandate or used to be a colony, protectorate or UN trust territory (see 'RulExp2' in the EEI Dataset Codebook, Appendix III).

in Tables 9 to 13. According to my statistical models, an increase in a country's level of economic development (as measured in *GDP per capita* levels) thus should lead to an increase in the risk of ethnic civil war while holding all other variables constant. At first sight, these results seem to stand in direct contradiction to well-known arguments in the civil wars literature that low (not high) levels of *GDP per capita* should be associated with an increase in the risk of intrastate violence (see e.g. Fearon and Laitin 2003a; Hegre and Sambanis 2006; see also section 5.8.). A closer look at the academic debate, however, reveals that my results are not necessarily that digressive, as the aforementioned robust findings of a negative association between a country's *GDP per capita* levels and the risk of violent intrastate conflict refer to the relationship between *GDP per capita* levels and the *onset* of civil war (see e.g. Fearon and Laitin 2003a; Hegre and Sambanis 2006). By contrast, my analysis focuses on the *incidence of ethnic* civil war, as my dependent variable identifies the occurrence of large-scale ethnic violence in any given country year, no matter whether it is the first conflict year or a continuation year (see also section 5.3.). Hence, unlike the research by authors such as Hegre and Sambanis (2006), my data analysis focuses exclusively on ethnic civil wars as a particular type of large-scale intrastate violence (see also section 1.3.), and captures the impact of levels of *GDP per capita* on both their onset and continuation.¹¹⁶ The fact that my statistical models in this and the following section consistently point to a statistically significant positive relationship between *GDP per capita* levels and the incidence of ethnic war (while holding all other variables constant) thus clearly deserves further attention in future research, and contributes to recent arguments that the impact of *GDP per capita* on the risk of civil war is still far from perfectly clear (cf. e.g. Brückner 2011; Djankov and Reynal-Querol 2010).

Apart from changing my key independent variables from individual formal political institutions to institutional combinations, my statistical models in section 6.5. remain the same as in this section. As there are no major changes regarding the effects of my

¹¹⁶ Interestingly, also Reynal-Querol (2002) finds a positive (although not statistically significant) relationship between levels of *GDP per capita* and the incidence of ethnic civil war in most of her statistical models while holding her other variables constant.

control variables in Tables 14, 16 and 17 in section 6.5. compared to Tables 9 to 13 in this section,¹¹⁷ I will not interpret them again. Instead, the next section will concentrate on the effects of institutional combinations on the incidence of ethnic war while holding the control variables constant.

6.5. The Effects of Institutional Combinations

According to Hypothesis 2, institutional combinations which provide a relatively low number of possible political winners are expected to increase the risk of large-scale ethnic violence compared to institutional combinations that provide a higher number of possible political winners (see section 6.2.). Hence, in particular institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure should increase the risk of large-scale ethnic violence compared to all other possible combinations of different forms of government, electoral systems for the legislature and state structures (Hypothesis 2a).

¹¹⁷ To be precise, the ‘GDP *per capita*’, ‘population size’, ‘experience of colonial rule (British)’ and ‘experience of colonial rule (Non-British, Non-French)’ variables continue to exercise a statistically significant positive effect, and the ‘peace duration’ variable a statistically significant negative effect on the incidence of ethnic war in all statistical models in Tables 14, 16 and 17 while holding all other variables constant. Likewise, the ‘recent experience of political instability’, ‘status as oil exporter’, ‘per cent of mountainous terrain’ and ‘noncontiguous country structure’ variables still do not reach statistical significance in any of the statistical models in Tables 14, 16 and 17 while holding all other variables constant. As a slight change to the results reported in Tables 9 to 13, and holding the other variables constant, the ‘level of ethnic fractionalisation’ and ‘level of socioeconomic inequalities’ variables do not reach statistical significance in any of the statistical models presented in Tables 14, 16 and 17. Moreover, the ‘level of democracy squared’ and ‘experience of colonial rule’ variables are no longer statistically significant whenever they are included in a statistical model (see Tables 9 to 13), but lose their statistical significance in Models 6 and 7 in Table 17, and Models 6 and 7 in Table 14 respectively while holding the other variables constant. Surprisingly, the ‘level of democracy’ variable exercises a statistically significant positive effect on the incidence of ethnic war (while holding the other variables constant) according to Model 8 in Table 16. This result, however, can be easily dismissed, as it is clearly not robust to different model specifications, given that this is the only model in sections 6.4. and 6.5. in which this variable reaches statistical significance. Similarly to Tables 9 to 13, the ‘incidence of ethnic war in a neighbouring country’ and ‘involvement in violent international conflict’ variables are not always statistically significant in Tables 14, 16 and 17 when holding all other variables constant (see Model 8 in Table 16, and Models 2 and 3 in Table 14 as well as Models 2, 3, 4 and 5 in Tables 16 and 17 respectively). When they do reach statistical significance, both variables continue to exercise a positive effect on the incidence of ethnic war while holding the other variables constant.

To test Hypothesis 2 and its subhypothesis, I use eight statistical models per set(s) of institutional combinations. As I employ dummy variables to check the effects of different institutional combinations, I again restrict my sample to basically open regimes (see Tables 14 to 17). By doing so, I ensure that my reference categories only include institutional combinations with the gain-dispersing institutions discussed in sections 3.4. and 3.5., and do not contain other forms of government or electoral systems for the legislature that are used under an autocratic framework. As Tables 1 and 2 in Appendix I illustrate, certain institutional combinations (such as of a presidential form of government, majoritarian electoral system for the legislature and mixed state structure, or of a mixed form of government, mixed electoral system for the legislature and mixed state structure) can be observed in very few country years. I therefore merge the dummy variables listed in Tables 1 and 2 in Appendix I (excluding the ones on autocracies) into larger categories, to increase the number of country year observations per category and avoid an inflation of my standard errors. To be precise, I subsume the different institutional combinations listed in Tables 1 and 2 in Appendix I (excluding the ones on autocracies) into the following eight dummy variables:

- a dummy variable that marks all years in which a country employed a presidential form of government, majoritarian electoral system for the legislature and unitary state structure;
- a dummy variable that marks all years in which a country employed a presidential form of government, majoritarian electoral system for the legislature and non-unitary (i.e. federal or mixed) state structure;
- a dummy variables that marks all years in which a country employed a presidential form of government, non-majoritarian (i.e. proportional or mixed) electoral system for the legislature and unitary state structure;
- a dummy variable that marks all years in which a country employed a presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure;

- a dummy variable that marks all years in which a country employed a non-presidential (i.e. parliamentary or mixed) form of government, majoritarian electoral system for the legislature and unitary state structure;
- a dummy variable that marks all years in which a country employed a non-presidential form of government, majoritarian electoral system for the legislature and non-unitary state structure;
- a dummy variable that marks all years in which a country employed a non-presidential form of government, non-majoritarian electoral system for the legislature and unitary state structure; and
- a dummy variable that marks all years in which a country employed a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure.

In order to know how well my statistical models in Tables 14, 16 and 17 fit the data, I look at the percentages of correctly predicted events (i.e. incidence of ethnic war) and nonevents (i.e. no incidence of ethnic war), and whether they lie below or above the threshold of 50% (see also section 6.4.). The according results from my SPSS outputs are as follows:

- The statistical models to test the effects of institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (see Table 14) predict between 99% and 99.1% of nonevents, and between 91.3% and 92.9% of events correctly.
- The statistical models to test the effects of institutional arrangements using combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure as baseline (see Table 16) predict between 99% and 99.2% of nonevents, and between 91.8% and 93.1% of events correctly.
- The statistical models to test the effects of institutional arrangements using combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure as baseline (see Table 17)

predict between 99% and 99.1% of nonevents, and between 91.8% and 93% of events correctly.¹¹⁸

All these percentages are reassuring, as they imply that my statistical models fit the data well.

As mentioned in section 6.2., the purpose of testing Hypothesis 2 and its subhypothesis is to move beyond the mere focus on single, formal political institutions by addressing the first dimension of Ethno-Embedded Institutionalism. As elaborated in chapter 3, this dimension highlights the need for scholars belonging to the institutional incentives approach to ethnic violence to pay greater attention to the specific *combination* of formal political institutions in a given political system and the *overall* number of possible political winners it provides. Tables 14 and 15 present the results from testing the effects of institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure on the risk of ethnic civil war. Tables 16 and 17 present the results from testing the effects of a variety of different institutional arrangements on the risk of ethnic civil war, using either combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (Table 16) or combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure (Table 17) as baseline.

¹¹⁸ When excluding the splines from the statistical models, the numbers of correctly predicted events and nonevents change as follows: The statistical models to test the effects of institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure then predict between 98.6% and 98.9% of nonevents, and between 81.9% and 84.8% of events correctly. The statistical models to test the effects of institutional arrangements using combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure as baseline predict between 98.7% and 99% of nonevents, and between 82.3% and 85.7% of events correctly. And the statistical models to test the effects of institutional arrangements using combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure as baseline predict between 98.6% and 98.9% of nonevents, and between 82.3% and 84.8% of events correctly.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	2.011** (0.778)	2.057*** (0.781)	2.061*** (0.783)	1.707** (0.780)	1.561** (0.781)	1.545* (0.842)	1.534* (0.842)	1.468* (0.866)
Ln GDP <i>per capita</i> ^a	0.599*** (0.159)	0.609*** (0.160)	0.610*** (0.160)	0.662*** (0.161)	0.729*** (0.168)	0.582*** (0.170)	0.590*** (0.172)	0.553*** (0.181)
Ln population size ^a	0.276*** (0.105)	0.252** (0.107)	0.248** (0.107)	0.234** (0.108)	0.207* (0.109)	0.297** (0.116)	0.301** (0.117)	0.428*** (0.141)
Incidence of ethnic war in a neighbouring country	1.344*** (0.379)	1.343*** (0.383)	1.368*** (0.387)	1.234*** (0.391)	1.180*** (0.391)	1.382*** (0.413)	1.375*** (0.415)	1.228*** (0.438)
Level of ethnic fractionalisation	0.445 (0.744)	0.542 (0.751)	0.552 (0.750)	0.631 (0.757)	0.784 (0.777)	0.026 (0.790)	0.010 (0.793)	-0.439 (0.893)
Level of socioeconomic inequalities ^a	-0.015 (0.016)	-0.015 (0.362)	-0.016 (0.017)	-0.007 (0.017)	-0.005 (0.017)	0.024 (0.021)	0.023 (0.022)	0.031 (0.022)
Involvement in violent international conflict		1.246 (0.768)	1.253 (0.773)	1.402* (0.785)	1.465* (0.794)	1.701** (0.779)	1.693** (0.780)	1.838** (0.790)
Recent experience of political instability ^a			-0.202 (0.452)	-0.104 (0.456)	-0.042 (0.471)	-0.183 (0.457)	-0.185 (0.457)	-0.351 (0.466)
Experience of colonial rule ^b				0.736* (0.377)		0.640 (0.410)	0.633 (0.412)	0.841* (0.470)
Experience of colonial rule (British) ^b					1.231*** (0.441)			
Experience of colonial rule (Non-British, Non-French) ^b					0.907* (0.469)			
Level of democracy ^a						0.067 (0.081)	0.068 (0.082)	0.131 (0.100)
Level of democracy squared ^a						-0.023** (0.010)	-0.023** (0.010)	-0.030** (0.012)
Status as oil exporter							-0.235 (0.832)	-0.156 (0.799)
Per cent of mountainous terrain								0.004 (0.009)
Noncontiguous country structure								-0.666 (0.479)
Peace duration	-2.004*** (0.205)	-2.028*** (0.207)	-2.038*** (0.209)	-1.948*** (0.207)	-1.889*** (0.204)	-1.994*** (0.222)	-1.990*** (0.223)	-1.999*** (0.226)
Spline_1	-0.022*** (0.003)	-0.023*** (0.003)	-0.023*** (0.003)	-0.022*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)
Spline_2	0.010*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.153 (0.544)	-0.159 (0.546)	-0.112 (0.556)	-0.582 (0.619)	-0.762 (0.619)	-0.053 (0.674)	-0.034 (0.678)	-0.173 (0.809)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 14: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007.

	Model 1	Model 2	Model 3	Model 4	Model 5
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	0.463*** (0.146)	0.472*** (0.146)	0.473*** (0.145)	0.401** (0.171)	0.370** (0.176)
Ln GDP <i>per capita</i> ^a	0.127* (0.076)	0.127 (0.078)	0.129* (0.078)	0.136 (0.083)	0.153* (0.089)
Ln population size ^a	0.059 (0.038)	0.053 (0.037)	0.052 (0.037)	0.048 (0.036)	0.043 (0.035)
Incidence of ethnic war in a neighbouring country	0.203 (0.126)	0.198 (0.127)	0.203 (0.129)	0.182 (0.121)	0.183 (0.120)
Level of ethnic fractionalisation	0.094 (0.172)	0.113 (0.176)	0.116 (0.177)	0.129 (0.179)	0.164 (0.193)
Level of socioeconomic inequalities ^a	-0.003 (0.004)	-0.003 (0.004)	-0.003 (0.004)	-0.002 (0.004)	-0.001 (0.004)
Involvement in violent international conflict		0.297 (0.189)	0.299 (0.189)	0.332* (0.189)	0.349* (0.185)
Recent experience of political instability ^a			-0.041 (0.091)	-0.021 (0.091)	-0.009 (0.098)
Experience of colonial rule ^b				0.160 (0.100)	
Experience of colonial rule (British) ^b					0.285** (0.120)
Experience of colonial rule (Non-British, Non-French) ^b					0.213* (0.123)
Level of democracy ^a					
Level of democracy squared ^a					
Status as oil exporter					
Per cent of mountainous terrain					
Noncontiguous country structure					
Peace duration	-0.425*** (0.155)	-0.424*** (0.163)	-0.430*** (0.162)	-0.399** (0.164)	-0.396** (0.156)
Spline_1	-0.005*** (0.002)	-0.005** (0.002)	-0.005*** (0.002)	-0.004** (0.002)	-0.004** (0.002)
Spline_2	0.002*** (0.001)	0.002** (0.001)	0.002** (0.001)	0.002** (0.001)	0.002** (0.001)
Spline_3	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)	0.000** (0.000)

Ln GDP per capita, Ln population size and level of ethnic fractionalisation set to their maximum values; incidence of ethnic war in a neighbouring country set to 1; level of socioeconomic inequalities set to its minimum value; all other independent variables set to their means.

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 15: Marginal Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007.

Following the results reported in Table 14, the ‘combination of a presidential form of government, majoritarian electoral system and unitary state structure’ variable has a statistically significant impact on the incidence of ethnic war in all statistical models while holding the different control variables constant. Its level of statistical

significance is at 1% in Models 2 and 3, 5% in Models 1, 4 and 5, and 10% in Models 6 to 8. According to its $\exp(b)$ coefficient (i.e. its odds ratio), and while holding all other variables constant, institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure increase the odds of large-scale ethnic violence by 7.468 compared to all other combinations of different forms of government, electoral systems for the legislature and state structures in Model 1; by 7.825 in Model 2; by 7.852 in Model 3; by 5.510 in Model 4; by 4.762 in Model 5; by 4.690 in Model 6; by 4.635 in Model 7; and by 4.342 in Model 8.

Rather than just looking at odds ratios, we also might be interested to know the marginal effects of combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure on the risk of ethnic civil war. Before the computation of such marginal effects, researchers need to consider carefully at which values they would like to set their independent variables, as marginal effects differ depending on different value specifications (see Long and Freese 2006). As there is no particular rule for the specification of such values other than the researcher's interest (cf. *ibid.*), I choose to set my 'core' control variables (i.e. the ones which appear in all my statistical models in Table 14) at the following values: the 'GDP *per capita*', 'population size' and 'level of ethnic fractionalisation' variables at their maximum values; the 'incidence of ethnic war in a neighbouring country' variable to '1'; and the 'level of socioeconomic inequalities' variable to its minimum value. All other independent variables are set to their means. Based on the arguments outlined in sections 5.8. and 6.4., these value specifications should simulate an environment which is relatively favourable to the incidence of large-scale ethnic violence.¹¹⁹

¹¹⁹ Following the arguments presented in section 5.8. and the control variable results reported in section 6.4., high levels of GDP *per capita*, a large population size, high levels of ethnic fractionalisation and the incidence of ethnic war in a neighbouring country are all factors that contribute to the risk of ethnic civil war. Although the 'level of socioeconomic inequalities' variable is rarely statistically significant in my models (see section 6.4.), I nonetheless set it to its minimum value, following theoretical arguments that a highly unequal society should make the incidence of large-scale ethnic violence more likely (see section 5.8.).

The results in Table 15 show that, under these assigned values, institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure increase the probability of large-scale ethnic violence by 46.3% compared to all other combinations of different forms of government, electoral systems for the legislature and state structures in Model 1; by 47.2% in Model 2; by 47.3% in Model 3; by 40.1% in Model 4; and by 37% in Model 5.¹²⁰

Using the same sets of control variables for my statistical models as in section 6.4., a much clearer picture thus emerges about the relationship between winner-takes-all institutional design and the risk of large-scale ethnic violence when analysing institutional combinations rather than individual, formal political institutions. While most of the results reported in Tables 9 to 13 (section 6.4.) seemed to indicate that it simply does not matter for the odds of large-scale ethnic violence whether formal political institutions are based on winner-takes-all principles, Tables 14 and 15 illustrate clearly that (holding the different control variables constant) institutional combinations which are associated with a particularly low number of possible political winners increase the risk of ethnic civil war compared to institutional combinations that provide a higher number of possible political winners (see also section 3.7.). This finding is particularly notable, given that it is robust to all eight model specifications in Table 14.

Taken together, the results reported in Tables 14 and 15 have two key implications: First, they lend empirical support to my grievance-based explanation of violent intrastate conflict outlined in chapter 2, as they depict the apparent link between high levels of political exclusiveness and the risk of ethnic civil war. Second, and even more importantly, they demonstrate the relevance of the first dimension of Ethno-Embedded Institutionalism, as they highlight the importance of *combinations* of formal political institutions and the *overall* number of possible political winners they

¹²⁰ I only report the results from Models 1 to 5, as – under the aforementioned value specifications – the marginal effects of the ‘combination of a presidential form of government, majoritarian electoral system and unitary state structure’ variable lose their statistical significance in Models 6 to 8.

provide: As section 6.4. illustrated, the analysis of formal political institutions as discrete, separable entities leads to rather contradictory if not anticlimactic conclusions regarding the impact of winner-takes-all institutions on the risk of ethnic civil war. Only when we analyse specific institutional combinations (while holding our various control variables constant), it becomes apparent that the odds of large-scale ethnic violence are related to the total number of possible political winners within a political system. These results illustrate that it is not just of secondary, but of crucial relevance for our understanding about the relationship between institutional design and the risk of ethnic civil war which political institutions are combined with each other in a given political system. Consequently, scholars belonging to the institutional incentives approach to ethnic violence need to overcome its current one-dimensionality, and pay greater attention to the fact that the effects of political institutions such as forms of government or electoral systems do not occur as isolated phenomena, but necessarily depend on the broader set of political institutions that are joint within a political system.

Before concluding this section, we also might be interested to know how institutional combinations other than those of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure influence the risk of large-scale ethnic violence. For this purpose, Tables 16 and 17 report the results from testing the effects of different institutional combinations on the risk of ethnic civil war, using either combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (Table 16) or combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure (Table 17) as baseline. Put differently, Table 16 uses institutional combinations which provide a particularly low number of possible political winners as baseline, while Table 17 uses institutional combinations which provide a particularly high number of possible political winners as baseline (see also Table 1, section 3.7.).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and non-unitary state structure ^a	-0.749 (0.971)	-0.706 (0.964)	-0.705 (0.965)	-1.038 (1.014)	-1.120 (1.070)	-0.939 (1.045)	-0.941 (1.048)	-0.916 (1.104)
Combination of a presidential form of government, non-majoritarian electoral system and unitary state structure ^a	-0.497 (0.631)	-0.484 (0.631)	-0.483 (0.631)	-0.387 (0.665)	-0.414 (0.689)	-0.360 (0.806)	-0.367 (0.812)	-0.589 (0.863)
Combination of a presidential form of government, non-majoritarian electoral system and non-unitary state structure ^a	-1.439* (0.794)	-1.384* (0.792)	-1.385* (0.792)	-1.764** (0.887)	-1.953** (0.984)	-1.501 (0.965)	-1.507 (0.970)	-1.486 (1.007)
Combination of a non-presidential form of government, majoritarian electoral system and unitary state structure ^a	-1.082* (0.606)	-1.069* (0.606)	-1.064* (0.609)	-0.988 (0.616)	-0.900 (0.638)	-0.753 (0.758)	-0.756 (0.760)	-0.648 (0.777)
Combination of a non-presidential form of government, majoritarian electoral system and non-unitary state structure ^a	-0.787 (0.590)	-0.855 (0.592)	-0.860 (0.595)	-0.869 (0.605)	-0.916 (0.611)	-0.645 (0.728)	-0.650 (0.732)	-0.352 (0.781)
Combination of a non-presidential form of government, non-majoritarian electoral system and unitary state structure ^a	-0.699 (0.674)	-0.777 (0.674)	-0.776 (0.674)	-0.573 (0.682)	-0.441 (0.695)	-0.300 (0.880)	-0.303 (0.883)	-0.463 (0.936)
Combination of a non-presidential form of government, non-majoritarian electoral system and non-unitary state structure ^a	-2.247*** (0.776)	-2.204*** (0.775)	-2.197*** (0.781)	-1.905** (0.805)	-1.845** (0.816)	-1.469 (0.974)	-1.457 (0.986)	-1.236 (1.003)
Ln GDP <i>per capita</i> ^a	0.602*** (0.169)	0.616*** (0.170)	0.616*** (0.170)	0.676*** (0.172)	0.741*** (0.177)	0.576*** (0.184)	0.578*** (0.186)	0.559*** (0.200)
Ln population size ^a	0.350*** (0.125)	0.325** (0.126)	0.325** (0.170)	0.348*** (0.128)	0.341** (0.135)	0.383*** (0.140)	0.384*** (0.140)	0.479*** (0.154)
Incidence of ethnic war in a neighbouring country	1.098** (0.430)	1.144*** (0.434)	1.149*** (0.439)	0.945** (0.441)	0.858* (0.442)	1.011** (0.472)	1.011** (0.473)	0.814 (0.497)
Level of ethnic fractionalisation	0.312 (0.754)	0.387 (0.760)	0.391 (0.761)	0.565 (0.775)	0.851 (0.828)	0.133 (0.802)	0.129 (0.804)	-0.348 (0.990)
Level of socioeconomic inequalities ^a	-0.019 (0.019)	-0.019 (0.019)	-0.019 (0.019)	-0.009 (0.019)	-0.008 (0.020)	0.019 (0.024)	0.018 (0.024)	0.029 (0.025)
Involvement in violent international conflict		0.961 (0.769)	0.965 (0.771)	1.130 (0.787)	1.209 (0.794)	1.439* (0.794)	1.439* (0.794)	1.635** (0.818)
Recent experience of political instability ^a			-0.034 (0.452)	0.019 (0.456)	0.027 (0.480)	-0.059 (0.465)	-0.062 (0.467)	-0.210 (0.476)
Experience of colonial rule ^b				0.897** (0.405)		0.799* (0.459)	0.797* (0.460)	1.014** (0.516)
Experience of colonial rule (British) ^b					1.326*** (0.459)			
Experience of colonial rule (Non-British, Non-French) ^b					1.243** (0.581)			
Level of democracy ^a						0.120 (0.101)	0.121 (0.101)	0.209* (0.119)
Level of democracy squared ^a						-0.025** (0.011)	-0.025** (0.011)	-0.035*** (0.013)
Status as oil exporter							-0.060 (0.792)	-0.080 (0.795)
Per cent of mountainous terrain								0.005 (0.010)
Noncontiguous country structure								-0.692 (0.577)
Peace duration	-1.949*** (0.207)	-1.961*** (0.208)	-1.963*** (0.209)	-1.876*** (0.205)	-1.820*** (0.203)	-1.943*** (0.222)	-1.943*** (0.222)	-1.961*** (0.225)
Spline_1	-0.022*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)	-0.021*** (0.003)	-0.020*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)
Spline_2	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.009*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	0.710 (0.756)	0.710 (0.757)	0.715 (0.759)	-0.039 (0.858)	-0.339 (0.912)	0.173 (0.923)	0.182 (0.932)	0.079 (1.093)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 16: Logit Analysis of the Effects of Institutional Combinations on the Risk of Ethnic Civil War, 1955-2007; Baseline: Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	2.583*** (0.860)	2.605*** (0.861)	2.605*** (0.862)	2.078** (0.889)	1.812** (0.893)	2.112** (1.007)	2.143** (1.033)	2.043* (1.090)
Combination of a presidential form of government, majoritarian electoral system and non-unitary state structure ^a	0.881 (0.917)	0.904 (0.908)	0.900 (0.911)	0.418 (0.975)	0.195 (1.035)	0.519 (1.012)	0.539 (1.021)	0.493 (1.091)
Combination of a presidential form of government, non-majoritarian electoral system and unitary state structure ^a	1.089* (0.590)	1.086* (0.591)	1.085* (0.591)	0.963 (0.614)	0.861 (0.639)	1.052 (0.735)	1.082 (0.767)	0.746 (0.815)
Combination of a presidential form of government, non-majoritarian electoral system and non-unitary state structure ^a	0.209 (0.732)	0.248 (0.731)	0.233 (0.731)	-0.285 (0.837)	-0.617 (0.934)	-0.025 (0.917)	0.004 (0.941)	-0.055 (0.977)
Combination of a non-presidential form of government, majoritarian electoral system and unitary state structure ^a	0.416 (0.565)	0.411 (0.568)	0.431 (0.570)	0.309 (0.574)	0.325 (0.595)	0.632 (0.667)	0.655 (0.689)	0.640 (0.710)
Combination of a non-presidential form of government, majoritarian electoral system and non-unitary state structure ^a	0.730 (0.533)	0.633 (0.537)	0.608 (0.543)	0.430 (0.554)	0.307 (0.567)	0.689 (0.638)	0.714 (0.665)	0.897 (0.718)
Combination of a non-presidential form of government, non-majoritarian electoral system and unitary state structure ^a	0.803 (0.607)	0.689 (0.610)	0.690 (0.612)	0.700 (0.607)	0.745 (0.618)	1.079 (0.729)	1.103 (0.751)	0.800 (0.800)
Ln GDP per capita ^a	0.587*** (0.186)	0.605*** (0.169)	0.609*** (0.170)	0.649*** (0.170)	0.699*** (0.174)	0.609*** (0.184)	0.607*** (0.185)	0.590*** (0.199)
Ln population size ^a	0.315** (0.122)	0.289** (0.123)	0.289** (0.123)	0.307** (0.125)	0.304** (0.132)	0.386*** (0.139)	0.385*** (0.139)	0.485*** (0.153)
Incidence of ethnic war in a neighbouring country	1.326*** (0.434)	1.384*** (0.439)	1.402*** (0.442)	1.165** (0.450)	1.049** (0.448)	1.168** (0.488)	1.173** (0.488)	1.003* (0.513)
Level of ethnic fractionalisation	0.462 (0.751)	0.550 (0.758)	0.572 (0.759)	0.703 (0.768)	0.994 (0.814)	0.182 (0.809)	0.194 (0.813)	-0.312 (1.000)
Level of socioeconomic inequalities ^a	-0.016 (0.018)	-0.015 (0.018)	-0.016 (0.018)	-0.008 (0.019)	-0.006 (0.023)	0.017 (0.023)	0.018 (0.024)	0.026 (0.024)
Involvement in violent international conflict		1.139 (0.793)	1.150 (0.797)	1.255 (0.803)	1.320 (0.807)	1.504* (0.799)	1.506* (0.799)	1.671** (0.820)
Recent experience of political instability ^a			-0.164 (0.464)	-0.102 (0.465)	-0.119 (0.486)	-0.103 (0.469)	-0.099 (0.469)	-0.261 (0.479)
Experience of colonial rule ^b				0.785* (0.417)		0.770* (0.455)	0.772* (0.455)	0.947* (0.515)
Experience of colonial rule (British) ^b					1.165** (0.474)			
Experience of colonial rule (Non-British, Non-French) ^b					1.205** (0.568)			
Level of democracy ^a						-0.001 (0.095)	-0.004 (0.097)	0.069 (0.120)
Level of democracy squared ^a						-0.016 (0.011)	-0.016 (0.011)	-0.024* (0.014)
Status as oil exporter							0.114 (0.822)	0.150 (0.817)
Per cent of mountainous terrain								0.004 (0.010)
Noncontiguous country structure								-0.749 (0.584)
Peace duration	-2.001*** (0.208)	-2.018*** (0.209)	-2.025*** (0.211)	-1.940*** (0.209)	-1.877*** (0.207)	-1.972*** (0.223)	-1.973*** (0.224)	-1.990*** (0.227)
Spline_1	-0.022*** (0.003)	-0.023*** (0.003)	-0.023*** (0.003)	-0.022*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)
Spline_2	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.861 (0.725)	-0.850 (0.727)	-0.827 (0.731)	-1.262 (0.789)	-1.487* (0.842)	-0.926 (0.881)	-0.959 (0.913)	-0.867 (1.071)
Observations	2924	2924	2924	2924	2924	2912	2912	2836

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 17: Logit Analysis of the Effects of Institutional Combinations on the Risk of Ethnic Civil War, 1955-2007; Baseline: Institutional Combinations of a Non-Presidential Form of Government, Non-Majoritarian Electoral System for the Legislature and Non-Unitary State Structure.

Following the results in Table 16, only the following institutional combinations have an impact on the incidence of ethnic war that is statistically significantly different from that of institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure while holding all other variables constant: combinations of a presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure (Models 1 to 5); combinations of a non-presidential form of government, majoritarian electoral system for the legislature and unitary state structure (Models 1 to 3); and combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure (Models 1 to 5). Holding all other variables constant, these combinations each decrease the odds of large-scale ethnic violence compared to the baseline category.

Following the results reported in Table 17, and holding all other variables constant, only the following institutional combinations have an impact on the incidence of ethnic war that is statistically significantly different from that of institutional combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure: combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (Models 1 to 8); and combinations of a presidential form of government, non-majoritarian electoral system for the legislature and unitary state structure (Models 1 to 3). Holding all other variables constant, these combinations each increase the odds of large-scale ethnic violence compared to the baseline category.

All in all, the results reported in Tables 16 and 17 are somewhat ambiguous. On the one hand, those institutional combinations that reach statistical significance have the expected coefficient sign, i.e. negative in Table 16 and positive in Table 17. In line with the arguments outlined in section 3.7., this indicates that – while holding all other variables constant – (at least some) institutional combinations that provide a higher number of possible political winners than their baseline category decrease the

risk of ethnic civil war (see Table 16), and (at least some) institutional combinations that provide a lower number of possible political winners than their baseline category increase the risk of ethnic civil war (see Table 17). On the other hand, however, it is surprising that – according to the results reported in Tables 16 and 17, and holding all other variables constant – there is no statistically significant difference between most institutional combinations and their baseline category regarding their impact on the incidence of ethnic war. Also these results support the central claims of my thesis, as they demonstrate the need for further investigations into the effects of institutional combinations and why some of them seem to have a clearer impact on the risk of ethnic civil war than others.

In sum, the results presented in this section (particularly Table 14) not only indicate that institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure indeed increase the risk of large-scale ethnic violence compared to all other possible combinations of different forms of government, electoral systems for the legislature and state structures. They also demonstrate the relevance of the first dimension of Ethno-Embedded Institutionalism by highlighting the need for further investigations into the effects of different institutional combinations and why some of them reach statistical significance in Tables 16 and 17 while others don't. The following section will present my results from testing the second dimension of Ethno-Embedded Institutionalism, using corruption as a prime example of an informal political institution that can be expected to affect the prospects of ethnopolitical (in)stability (see also chapter 4).

6.6. The Effects of Corruption

According to Hypothesis 3, higher levels of corruption should be associated with a higher risk of large-scale ethnic violence (see section 6.2.). Before testing this hypothesis empirically, it is worth summarising some key descriptives of my corruption variable (see Tables 18 and 19), the ICRG Corruption Index by The PRS

Group, Inc. (2009). As mentioned in section 5.7., it should be noted that The PRS Group, Inc. (2009) only provides corruption data from 1984 onwards. Unlike the results presented in sections 6.4. and 6.5., my results in this section therefore refer to the time period of 1984 to 2007 (not, as the previous two sections, of 1955 to 2007). In order to ease the interpretation of the results presented in Tables 18 to 21, I have inverted the ICRG Corruption Index by subtracting its original values from 6, so that high values of my corruption variable indicate high values of corruption and low values low levels of corruption (see also section 5.7.).

A brief look at the EEI Dataset reveals that medium levels of corruption (with values of the inverted ICRG Corruption Index between 2.1 and 4) are much more common than high or low levels of corruption (with values of the inverted ICRG Corruption Index between 4.1 and 6, and 0 and 2 respectively): As Table 18 illustrates, medium levels of corruption can be found in 1678 out of a total of 2996 country year observations in the EEI Dataset (56% of all observations). By contrast, high levels of corruption are reported in only 422 cases (14.1% of all observations) and low levels of corruption in 896 cases (29.9% of all observations).

	High levels of corruption (4.1-6)	Medium levels of corruption (2.1-4)	Low levels of corruption (0-2)
Number of country year observations (Total)	422 (14.1%)	1678 (56%)	896 (29.9%)

Table 18: Total Number of Observations of Different Levels of Corruption in the EEI Dataset.

Rather than looking at the total number of country year observations of different levels of corruption, one might also be interested to know how often these levels of corruption can be observed either during the incidence or absence of ethnic civil war. In this context, Table 19 shows clearly that low levels of corruption can be observed much less frequently under the incidence of ethnic civil war than high or medium levels of corruption (i.e. only in 5% of all its country year observations, compared to 14.8% for medium levels of corruption and 29.6% for high levels of corruption).

	High levels of corruption (4.1-6)	Medium levels of corruption (2.1-4)	Low levels of corruption (0-2)
Number of country year observations (ethnic war)	125 (29.6%)	248 (14.8%)	45 (5%)
Number of country year observations (no ethnic war)	297 (70.4%)	1430 (85.2%)	851 (95%)

Table 19: Number of Observations of Different Levels of Corruption in the EEI Dataset by Incidence and Absence of Ethnic War.

As they are purely descriptive, Tables 18 and 19 do not allow us to draw any general conclusions about the (arguable) association between levels of corruption and the risk of large-scale ethnic violence. Hence, I now turn to my BTSCS analysis for a more substantive understanding of the relationship between corruption and the odds of ethnic civil war:

To test Hypothesis 3, I use nine different statistical models. Models 8 and 9 in Table 20 only differ slightly from each other, as the latter includes the lagged *and* log-transformed ‘GDP *per capita*’ variable, while the former – following the example of Fjelde (2009) – includes only the lagged ‘GDP *per capita*’ variable. In order to ease the interpretation of my results and allow for a more evenly distribution of my key independent variable, I convert all decimal values of the inverted ICRG Corruption Index into integers (see also Neudorfer and Theuerkauf 2011). To increase the relatively short scale on which the corruption variable is originally measured (see The PRS Group, Inc. 2009), I then square all values of my corruption variable (see also Neudorfer and Theuerkauf 2011).¹²¹ Finally, it should be noted that, in contrast to most tables (apart from Table 12) in sections 6.4. and 6.5., my sample to analyse

¹²¹ For other research that increases the original scale of the ICRG Corruption Index, see e.g. Tanzi (2000) and Tavares (2003). Table 2 in Appendix II presents the results of my statistical analysis using the non-squared version of the inverted ICRG Corruption Index with integers. As this table illustrates, also the non-squared corruption variable has a statistically significant positive impact on the incidence of ethnic war in most models while holding all other variables constant. Compared to Table 20, however, my key independent variable’s level of statistical significance is lower in Models 1 to 6 (at the 10% rather than the 5% significance level), and it loses its statistical significance altogether in Models 7 and 8, holding all other variables constant (see Table 2 in Appendix II).

the effects of corruption on the incidence of ethnic war includes both basically open and basically closed regimes (see Tables 20 and 21).¹²²

In order to know how well my statistical models fit the data, I look again at the percentages of correctly predicted events (i.e. incidence of ethnic war) and nonevents (i.e. no incidence of ethnic war), and whether they lie below or above the threshold of 50% (see also sections 6.4. and 6.5.). According to my SPSS outputs, the statistical models to test the effects of corruption (see Table 20) predict between 98.1% and 98.3% of nonevents, and between 94.4% and 94.8% of events correctly.¹²³ These percentages are reassuring, as they imply that my statistical models fit the data well.

As mentioned in section 6.2., the purpose of testing Hypothesis 3 is to move beyond the mere focus on formal political institutions by addressing the second dimension of Ethno-Embedded Institutionalism. As elaborated in chapter 4, this dimension highlights the need for scholars belonging to the institutional incentives approach to ethnic violence to pay greater attention to the relevance of *informal* (and not just openly codified) political institutions for the risk of ethnic civil war. Specifically, I have argued in chapter 4 that corruption is a prime example of an informal political institution that can be expected to increase the risk of large-scale ethnic violence, as networks of corruption – given their tendency to form along ethnic lines and benefit certain ethnic groups over others – are likely to affect the *modus operandi* of formal political institutions in such a way that those ethnic groups who stand outside of these networks have comparatively low chances to obtain the values of political representation. This is likely to give rise to grievances among those ethnic groups who stand outside of ethnically exclusionary networks of corruption, and to heighten the risk of large-scale ethnic violence. Tables 20 and 21 present the results from testing the effects of corruption on the risk of ethnic civil war.

¹²² As mentioned in sections 6.4. and 6.5., I previously restricted my sample to basically closed regimes (apart from Table 12) due to considerations about my reference categories.

¹²³ When excluding the splines, my statistical models to test the effects of corruption predict between 96.3% and 96.9% of nonevents, and between 92.6% and 95.8% of events correctly.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.038** (0.018)	0.037** (0.018)	0.039** (0.018)	0.040** (0.018)	0.047** (0.019)	0.045** (0.019)	0.041** (0.020)	0.037* (0.020)	0.031 (0.021)
Status as oil exporter	-0.675* (0.348)	-0.706* (0.364)	-0.758** (0.366)	-0.762** (0.365)	-1.213*** (0.440)	-1.095** (0.480)	-0.956* (0.491)	-0.916* (0.493)	-0.806 (0.489)
Incidence of ethnic war in a neighbouring country	0.687** (0.287)	0.679** (0.297)	0.615** (0.302)	0.617** (0.302)	0.690** (0.318)	0.668** (0.321)	0.592* (0.327)	0.539 (0.332)	0.374 (0.346)
Level of ethnic fractionalisation	0.644 (0.611)	0.649 (0.633)	0.626 (0.631)	0.691 (0.641)	0.575 (0.689)	0.455 (0.716)	0.560 (0.724)	0.559 (0.725)	0.228 (0.742)
Level of socioeconomic inequalities ^a	0.023 (0.016)	0.024 (0.019)	0.025 (0.019)	0.025 (0.019)	0.023 (0.019)	0.025 (0.019)	0.029 (0.019)	0.046* (0.026)	0.044** (0.021)
Level of democracy ^a		0.000 (0.026)	0.000 (0.026)	0.003 (0.026)	0.001 (0.029)	0.003 (0.029)	0.006 (0.029)	0.009 (0.029)	0.021 (0.031)
Level of democracy squared ^a		-0.001 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.003 (0.006)	-0.002 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.003 (0.007)
Involvement in violent international conflict			0.660 (0.592)	0.673 (0.595)	0.870 (0.624)	0.867 (0.626)	0.762 (0.629)	0.762 (0.632)	0.826 (0.626)
Recent experience of political instability ^a				-0.230 (0.381)	-0.206 (0.395)	-0.190 (0.395)	-0.177 (0.396)	-0.168 (0.395)	-0.240 (0.396)
Per cent of mountainous terrain					-0.005 (0.008)	-0.003 (0.008)	-0.005 (0.008)	-0.006 (0.009)	-0.006 (0.008)
Noncontiguous country structure					0.576 (0.378)	0.478 (0.414)	0.318 (0.436)	0.376 (0.443)	0.420 (0.439)
Experience of colonial rule ^b						0.228 (0.382)	0.305 (0.392)	0.173 (0.417)	0.032 (0.418)
Ln population size ^a							0.137 (0.116)	0.145 (0.116)	0.161 (0.117)
GDP <i>per capita</i> ^a								-0.056 (0.057)	
Ln GDP <i>per capita</i> ^a									-0.536* (0.280)
Peace duration	-1.764*** (0.179)	-1.755*** (0.179)	-1.769*** (0.182)	-1.767*** (0.181)	-1.782*** (0.183)	-1.769*** (0.183)	-1.761*** (0.183)	-1.758*** (0.184)	-1.709*** (0.182)
Spline_1	-0.018*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)
Spline_2	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.002)	0.008*** (0.001)
Spline_3	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Constant	0.946* (0.513)	0.968 (0.591)	1.005* (0.591)	1.020* (0.595)	0.993 (0.678)	0.878 (0.705)	0.465 (0.788)	0.701 (0.820)	1.302 (0.887)
Observations	2715	2702	2702	2702	2655	2655	2655	2650	2650

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 20: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Level of corruption ^a	0.00067* (0.00038)	0.00065* (0.0004)	0.00064* (0.00038)	0.00067* (0.00039)	0.00073* (0.00042)	0.00067* (0.00041)
Status as oil exporter	-0.00876* (0.00495)	-0.00895* (0.00502)	-0.00884* (0.00475)	-0.00895* (0.00479)	-0.01109** (0.0053)	-0.01000* (0.00532)
Incidence of ethnic war in a neighbouring country	0.00886* (0.00467)	0.00871* (0.00486)	0.00764 (0.00465)	0.00771 (0.0047)	0.00785* (0.00475)	0.00730 (0.00461)
Level of ethnic fractionalisation	0.01138 (0.01054)	0.01138 (0.01132)	0.01032 (0.01066)	0.01148 (0.01101)	0.00898 (0.01092)	0.00677 (0.01085)
Level of socioeconomic inequalities ^a	0.00041 (0.00025)	0.00041 (0.00027)	0.00042* (0.00025)	0.00041 (0.00026)	0.00036 (0.00024)	0.00037 (0.00023)
Level of democracy ^a		0.00000 (0.00045)	0.00000 (0.00043)	0.00005 (0.00045)	0.00001 (0.00045)	0.00005 (0.00043)
Level of democracy squared ^a		-0.00001 (0.0001)	-0.00003 (0.00009)	-0.00004 (0.0001)	-0.00004 (0.0001)	-0.00003 (0.00009)
Involvement in violent international conflict			0.01497 (0.01809)	0.01549 (0.01857)	0.02080 (0.02258)	0.01974 (0.02171)
Recent experience of political instability ^a				-0.00351 (0.00554)	-0.00298 (0.00549)	-0.00263 (0.00529)
Per cent of mountainous terrain					-0.00008 (0.00013)	-0.00005 (0.00013)
Noncontiguous country structure					0.01090 (0.00976)	0.00833 (0.00943)
Experience of colonial rule ^b						0.00347 (0.00583)
Ln population size ^a						
GDP <i>per capita</i> ^a						
Ln GDP <i>per capita</i> ^a						
Peace duration	-0.03120*** (0.01138)	-0.03075** (0.01192)	-0.02918** (0.01151)	-0.02939** (0.01159)	-0.02782** (0.01175)	-0.02631** (0.01145)
Spline_1	-0.00031*** (0.00012)	-0.00031** (0.00012)	-0.00029** (0.00012)	-0.00029** (0.00012)	-0.00028** (0.00012)	-0.00027** (0.00012)
Spline_2	0.00013** (0.00005)	0.00013** (0.00006)	0.00012** (0.00005)	0.00012** (0.00005)	0.00012** (0.00006)	0.00012** (0.00005)
Spline_3	-0.00001 (0.00001)	-0.00001 (0.00001)	-0.00001 (0.00001)	-0.00001 (0.00001)	-0.00001 (0.00001)	-0.00002 (0.00001)

Incidence of ethnic war in a neighbouring country set to 1; status as oil exporter set to 0; level of socioeconomic inequalities set to its minimum value; all other independent variables set to their means.

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 21: Marginal Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007.

Following the results reported in Table 20, the ‘level of corruption’ variable has a statistically significant positive impact on the incidence of ethnic war in all statistical models apart from Model 9 while holding the different control variables constant. Its level of statistical significance is at 5% in Models 1 to 7, and 10% in Model 8. According to its exp(b) coefficient (i.e. its odds ratio), and while holding all other variables constant, a one-unit increase in the ‘level of corruption’ variable increases the odds of large-scale ethnic violence by 1.038 in Models 1, 2 and 8; by 1.039 in Model 3; by 1.041 in Model 4; by 1.048 in Model 5; by 1.046 in Model 6; and by 1.042 in Model 7.

Rather than just looking at odds ratios, we also might be interested to know the marginal effects of corruption on the risk of ethnic civil war. As mentioned in section 6.5., there is no particular rule other than the researcher's interest where the values of the independent variables should be set before marginal effects are computed (cf. Long and Freese 2006). Here, I choose to set the 'status as oil exporter' variable to '0'; the 'incidence of ethnic war in a neighbouring country' variable to '1'; and the 'level of socioeconomic inequalities' variable to its minimum value. All other independent variables are set to their means.¹²⁴ Based on the arguments outlined in section 5.8. and subsequent paragraphs, these value specifications should simulate an environment which is relatively favourable to the incidence of large-scale ethnic violence.¹²⁵

The results in Table 21 show that, under these assigned values, a one-unit increase in the 'level of corruption' variable increases the probability of large-scale ethnic violence by 0.067% in Models 1, 4 and 6; by 0.065% in Model 2; by 0.064% in Model 3; and by 0.073% in Model 5.¹²⁶ Admittedly, these values are very small indeed. This, however, may be due to my rather general model specifications, as research by Fjelde (2009) and Neudorfer and Theuerkauf (2011) shows that the impact of different levels of corruption on the probability of intrastate violence varies depending on factors such as the type and degree of a country's natural resource wealth. Leaving the precise values of the marginal effects aside, the most important finding from Table 21 for the purpose of this thesis hence is that it confirms the

¹²⁴ Unlike Table 15, I intentionally do not set the 'level of ethnic fractionalisation' variable to its maximum value, as I cannot rule out the possibility that the ethnically exclusionary tendencies of corruption vary depending on how diverse a society is (see also footnote 68). Setting the 'level of ethnic fractionalisation' variable to its mean rather than its highest value therefore seems more appropriate to get a more 'average' result at this point.

¹²⁵ Following the arguments presented in section 5.8. and the control variable results reported below, the incidence of ethnic war in a neighbouring country should increase the risk of ethnic civil war (see Models 1 to 7 in Table 20), whereas being an oil exporter should decrease the risk of ethnic civil war (see Models 1 to 8 in Table 20) while holding all other variables constant. Although the 'level of socioeconomic inequalities' variable is rarely statistically significant in my BTSCS analysis (see also section 6.4.), I nonetheless set it to its minimum value, following theoretical arguments that a highly unequal society should make the incidence of large-scale ethnic violence more likely (see section 5.8.).

¹²⁶ I only report the results from Models 1 to 6, as – under the aforementioned value specifications – the marginal effects of the 'level of corruption' variable lose their statistical significance in Models 7 to 9.

statistically significant positive impact of corruption on the risk of ethnic civil war while holding all other variables constant.

Taken together, the results reported in Tables 20 and 21 have two key implications: First, they clearly illustrate that higher levels of corruption are associated with a higher risk of large-scale ethnic violence. This finding is particularly notable, given that it is robust to eight out of nine model specifications in Table 20. Based on the assumption that networks of corruption tend to form along ethnic lines and benefit certain ethnic groups over others (see section 4.6.), these results lend empirical support to my grievance-based explanation of violent intrastate conflict outlined in chapter 2, as they depict the apparent link between high levels of political exclusiveness (caused by the ethnically exclusionary tendencies of corruption) and the risk of ethnic civil war. Second, and even more importantly, the findings reported in Tables 20 and 21 demonstrate the relevance of the second dimension of Ethno-Embedded Institutionalism, as they underline the importance of corruption as a prime example of an *informal* political institution: Following the results in Tables 20 and 21, the risk of ethnic civil war is not just influenced by formal institutional design (see sections 6.4. and 6.5.), but also by socially entrenched structures of political interactions that are neither laid down in writing nor guaranteed by the sanctioning mechanisms of the state. In this manner, the statistical results in this section highlight the need for scholars belonging to the institutional incentives approach to ethnic violence to overcome its current research asymmetry in favour of formal political institutions, and to pay greater attention to the fact that political institutions can affect the prospects of ethnopolitical (in)stability even if they are not openly codified but exist over time due to persisting patterns in human behaviour.

Having thus presented the results for my key independent variable, a few findings regarding the control variables in Table 20 ought to be mentioned briefly:

- While holding all other variables constant, several control variables do not have a statistically significant impact on the incidence of large-scale ethnic violence in any of the statistical models presented in Table 20. They include the variables on

level of ethnic fractionalisation, level of democracy, level of democracy squared, involvement in violent international conflict, recent experience of political instability, per cent of mountainous terrain, noncontiguous country structure, experience of colonial rule, population size and the non-log-transformed GDP *per capita* variable.

- Holding all other variables constant, the ‘incidence of ethnic war in a neighbouring country’ variable has a statistically significant positive impact on the incidence of ethnic war in all statistical models apart from Models 8 and 9. These results provide further support for arguments on the likely spatial interdependence of ethnic civil wars (see e.g. Lake and Rothchild 1998; see also sections 5.8. and 6.4.).
- The ‘level of socioeconomic inequalities’ variable only reaches statistical significance in Models 8 and 9 (at the 10% and 5% significance level respectively) while holding all other variables constant. Similarly to the results reported for Table 12 (section 6.4.), the variable’s positive coefficient sign seems to indicate that an increase in socioeconomic equality should lead to an increase in the risk of ethnic civil war. As aforementioned, however, we can easily dismiss the relevance of this result, as the ‘level of socioeconomic inequalities’ variable is clearly not robust, given that it reaches statistical significance only under very few model specifications (see also section 6.4.).
- The log-transformed ‘GDP *per capita*’ variable has a statistically significant negative effect on the incidence of ethnic war (at the 10% significance level) in Model 9 while holding all other variables constant. This result is in line with well-known arguments in the civil wars literature that low levels of GDP *per capita* should be associated with an increase in the risk of intrastate violence (see e.g. Fearon and Laitin 2003a; Hegre and Sambanis 2006). It does, however, stand in contrast to my findings of a statistically significant positive impact of GDP *per capita* levels on the incidence of ethnic war (holding all other variables constant) when investigating the effects of formal political institutions. Taken together, the results reported here and in sections 6.4. and 6.5. thus clearly demonstrate the aforementioned need for further investigations into the relationships between GDP

per capita and ethnic civil war under different model specifications (see also section 6.4.).

- As expected, the ‘peace duration’ variable has a statistically significant negative effect on the incidence of ethnic war in all models in Table 20 while holding all other variables constant. These results further substantiate the argument that the risk of ethnic war should decrease the longer a country is at peace (cf. Hegre and Sambanis 2006; see also sections 5.8. and 6.4.).

- Finally, the possibly most surprising finding in my data analysis is that – when holding all other variables constant – the ‘status as oil exporter’ variable has a statistically significant negative effect on the incidence of ethnic war in all models apart from Model 9. It is statistically significant at the 10% significance level in Models 1, 2, 7 and 8, the 5% level in Models 3, 4 and 6, and the 1% level in Model 5. According to the negative coefficient sign of my ‘status as oil exporter’ variable, being an oil exporter decreases the odds of large-scale ethnic violence compared to not being an oil exporter, holding all other variables constant. In line with the operationalisation of the ‘status as oil exporter’ variable (see ‘Oil’ in the EEI Dataset Codebook, Appendix III), and holding all other variables constant, countries whose fuel exports as a percentage of merchandise exports exceed 33% should thus be at a lower risk of ethnic civil war than countries whose fuel exports as a percentage of merchandise exports do not exceed 33%. These findings stand in contrast to arguments according to which oil wealth should be associated with a greater likelihood of violent intrastate conflict (see e.g. Collier and Hoeffler 2004; Fearon and Laitin 2003a; see also section 5.8.), and lend support to research which highlights the potentially stability-enhancing effects of resource rents (see e.g. Bodea 2012; see also section 5.8.). These results, just like those for my ‘GDP *per capita*’ variable, deserve further attention in future research, given that one’s findings about the relationship between oil wealth and the risk of ethnic civil war may very well differ depending on one’s variable operationalisations (cf. Ross 2006).

Before concluding this chapter and summarising its main results regarding the two dimensions of Ethno-Embedded Institutionalism (see section 6.8.), I will very briefly describe the findings from my robustness tests in the following section.

6.7. Robustness Tests

To test the robustness of my findings, I am interested to know how the statistical results for my key independent variables change under different model or sample specifications. In particular, I am interested to know how they change depending on the inclusion of different control variables; when expanding my samples from sections 6.4. and 6.5. to include also basically closed regimes; and when restricting my samples from sections 6.5. and 6.6. by excluding one world region at a time. The results for my key independent variables can be regarded as robust if they neither lose their statistical significance nor change their coefficient sign when altering my model or sample details (cf. Sala-I-Martin 1997).

The findings from my first robustness test – which checks whether the results for my key independent variables change depending on the inclusion of different control variables – have already been reported in the preceding sections. To recap, my results regarding the effects of unitary state structures when including basically closed regimes in the sample (see Table 12), and regarding the effects of institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (see Table 14) stay robust under all model specifications in sections 6.4. and 6.5.. This is to say that they neither lose their statistical significance nor change their coefficient sign following the inclusion of a number of different control variables. Likewise, my results regarding the effects of corruption (see Table 20) are robust in a vast majority of the model specifications (i.e. 8 out of 9) presented in section 6.6.. Only under Model 9 does the corruption variable lose its statistical significance. Hence, my results on unitary state structures when including basically closed regimes in the sample; on institutional combinations of a presidential form of government, majoritarian electoral system for the legislature

and unitary state structure; and on corruption are robust in the sense that they are not driven by a specific set of control variables. By contrast (and as mentioned in sections 6.4. and 6.5.), the results regarding the effects of presidential forms of government (see Table 9), majoritarian electoral systems for the legislature (see Table 10), institutional arrangements using either combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (see Table 16) or combinations of a non-presidential form of government, non-majoritarian electoral system for the legislature and non-unitary state structure (see Table 17) as baseline are much less robust, both in terms of the key independent variables' level of statistical significance (see in particular Tables 9, 16 and 17) and coefficient sign (see in particular Table 10).

My second robustness test checks whether the results for my key independent variables change when expanding my samples from sections 6.4. and 6.5. to include also basically closed regimes. The findings from this test are reported in Tables 3 to 8 in Appendix II. As in section 6.4., neither my 'majoritarian electoral system' nor my 'majoritarian electoral system without communal rolls or seat reservations' variables reach statistical significance when including basically closed regimes in my sample (see Tables 4 and 5 in Appendix II). Likewise, most of my dummy variables on different institutional arrangements either do not reach statistical significance or lose their statistical significance relatively quickly with the addition of different control variables, both when excluding (see Tables 16 and 17 in section 6.5.) and including (see Tables 7 and 8 in Appendix II) basically closed regimes in my sample. More important for the central claims of my thesis, however, is the fact that the inclusion of basically closed regimes in my sample does not alter the statistically significant positive effect of the 'combination of a presidential form of government, majoritarian electoral system and unitary state structure' variable on the risk of ethnic civil war (holding all other variables constant) under all my model specifications (see Table 6 in Appendix II). This further confirms the robustness of my findings regarding the effects of this variable, and thus lends additional empirical support to my arguments about the relevance of the first dimension of Ethno-Embedded Institutionalism (see also section 6.5.).

The aim of my final robustness test is to see whether my statistical results regarding the effects of corruption and institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure change depending on the exclusion of geographical regions from my sample (cf. Plümpner and Neumayer 2006). For this purpose, I exclude each of the regions listed in the EEI Dataset (see ‘Region’, Appendix III) one by one from my sample. These regions are: Africa (except North Africa); Central Asia and Eastern Europe; East Asia and the Pacific; Europe (except Eastern Europe) and North America; Latin America and the Caribbean; the Middle East and North Africa; and South Asia. Admittedly, from all the robustness checks presented in this section, I am least concerned about the results from this particular test. This is because the figures and graphs in Appendix I clearly show that there are distinct regional patterns regarding the distribution of certain institutional combinations and prevalence of corruption. Hence, it would in a sense be surprising if my findings reported in Tables 14 (section 6.5.) and 20 (section 6.6.) did not change depending on the regions included in my sample. Indeed, as the results in Tables 9 to 22 in Appendix II illustrate, both my ‘combination of a presidential form of government, majoritarian electoral system and unitary state structure’ and ‘level of corruption’ variables are sensitive to the set-up of countries in my sample, as they either lose their statistical significance completely (see Table 15 in Appendix II) or under certain model specifications (see e.g. Table 21 in Appendix II) when excluding certain regions. As aforementioned, however, these results are somewhat expected and, in this sense, mainly illustrate the need for more region- and/or country-specific analyses of the relevance of certain institutional combinations and informal political institutions.

Overall – and leaving the aforementioned sensitivity of my findings to the exclusion of different regions aside –, the results discussed in this section thus confirm the relevance of the two dimensions of Ethno-Embedded Institutionalism, as they further highlight the robustness of my key findings in sections 6.5. and 6.6. under various model specifications.

6.8. Conclusion: The Relevance of Ethno-Embedded Institutionalism

As elaborated in chapter 1, the relationship between political institutions and ethnopolitical (in)stability typically has been analysed by putting predominant emphasis on the effects of single, formal political institutions such as electoral systems, forms of government or state structures (see e.g. Reilly 2001; Reynolds 2002; Roeder and Rothchild 2005; Suberu 2001; Wilkinson 2004). Ethno-Embedded Institutionalism seeks to overcome this rather limited research focus by highlighting the relevance of both institutional combinations (Ethno-Embedded Institutionalism's first dimension, see chapter 3) and informal political institutions (Ethno-Embedded Institutionalism's second dimension, see chapter 4) for the risk of large-scale ethnic violence.

Building on arguments outlined in chapters 2 to 4, and using data from the EEI Dataset presented in chapter 5, this chapter has centred on my approach to and results from testing the relevance of the two dimensions of Ethno-Embedded Institutionalism empirically. As outlined in section 6.3., I obtained my results using binary time-series-cross-section analysis, as I do not seek to make particular predictions for specific countries, but wish to draw general conclusions about the relationship between different institutional repertoires and the risk of large-scale ethnic violence throughout space and time. As discussed in sections 6.4. to 6.6., my statistical results illustrate that a) institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure (see section 6.5.), and b) corruption (see section 6.6.) increase the risk of large-scale ethnic violence, while holding common control variables in the civil wars literature such as regime type or level of economic development constant. These results are particularly notable, given that the statistically significant positive effects of corruption and institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure on the risk of ethnic civil war are robust to various model specifications (see sections 6.5. and 6.6.). My results thus clearly demonstrate the relevance of Ethno-Embedded Institutionalism empirically, and highlight the need for scholars belonging to the

institutional incentives approach to ethnic violence to move beyond the mere focus on single, formal political institutions, and to pay greater attention to the relevance of both institutional combinations and informal political institutions.

Conclusion

Hitherto, the relationships between institutional design and ethno-political (in)stability typically have been analysed by investigating the effects of single, formal political institutions such as electoral systems or state structures (see e.g. Reynolds 2002; Suberu 2001). My doctoral thesis criticises this research focus on two different yet equally relevant accounts: First, the tendency to single out the effects of individual institutions is based on the implicit – and as I claim: wrong – assumption that political institutions can be treated as separate entities and that it is only of secondary relevance of which broader set of institutions they form part. Second, despite studies which highlight the relevance of informal political institutions (see e.g. Sisk and Stefes 2005; Varshney 2002), they have received far less attention in the academic debate so far.

In an attempt to tackle the current limitations of the institutional incentives approach to ethnic violence, I have presented Ethno-Embedded Institutionalism as a new approach to studying the effects of political institutions on the risk of ethnic civil war. Ethno-Embedded Institutionalism consists of two dimensions which build on the explicit acknowledgement that political institutions are ‘embedded entities’ in the sense that a) they never exist on their own but always form part of a wider institutional arrangement (dimension 1) and b) they can affect the prospects of ethno-political (in)stability even if they are not openly codified but exist over time due to persisting patterns in human behaviour (dimension 2). By highlighting the relevance of both institutional combinations and informal political institutions, and thus clearly moving beyond the mere focus on single, formal political institutions, Ethno-Embedded Institutionalism seeks to expand the current research agenda of the institutional incentives approach to ethnic violence, and to deepen our understanding about the relationships between institutional design and the risk of ethnic civil war.

To illustrate the relevance of Ethno-Embedded Institutionalism, I began by defining crucial concepts and outlining key arguments in the academic debate on the causes of violent ethnic conflict in chapter 1. Chapter 2 then presented my grievance-based

explanation of large-scale ethnic violence which, arguably, links political institutions to the risk of ethnic civil war. In a nutshell, the theoretical framework outlined in chapter 2 states that political institutions which are associated with comparatively high levels of political exclusiveness are likely to increase the risk of violent ethnic conflict. This is because they contribute to perceived or objective asymmetries between ethnic groups in terms of their political and socioeconomic standing, and arguably give rise to emotions of anger and resentment among those ethnic groups who consider their chances to obtain the values of political representation (relating to their political recognition, the likelihood with which resources and powers are distributed in their favour, and their perceptions of political, physical and economic security) to be comparatively low.

Chapter 3 focused on the first dimension of Ethno-Embedded Institutionalism by highlighting the relevance of the type of form of government, electoral system for the legislature and state structure that are combined with each other in a given political system. The central argument presented in chapter 3 states that the lower the number of possible political winners provided by a given institutional combination, the more likely it is that this combination will increase the risk of large-scale ethnic violence. Consequently, in particular combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure are expected to heighten the risk of ethnic civil war. This is because they provide the lowest overall number of possible political winners compared to any other combination of presidential, parliamentary or mixed form of government, majoritarian, proportional or mixed electoral system for the legislature and unitary, federal or mixed state structure. I have argued that a low number of possible political winners should increase the risk of large-scale ethnic violence, as it is likely to give rise to grievances among those ethnic groups who feel that the design of formal political institutions systematically prevents them from obtaining the values of political representation outlined in chapter 2.

Chapter 4 centred on the second dimension of Ethno-Embedded Institutionalism, using corruption as a prime example of an informal political institution. The central

argument presented in chapter 4 states that corrupt dealings are likely to increase the risk of ethnic civil war, as networks of corruption – given their ethnically exclusionary tendencies – can be assumed to affect the *modus operandi* of formal political institutions in such a way that those ethnic groups who stand outside of these networks have lower chances to obtain the values of political representation. The four scenarios by which networks of corruption can affect the *modus operandi* of formal political institutions in an ethnically exclusionary manner include the creation of direct incentives for political officeholders (e.g. through bribery or the sustenance of patronage networks) to manipulate the political decision-making process in favour of specific ethnic groups; the generation of distortions and ethnic bias in the political decision-making agenda; the establishment of a culture of selfish value-accumulation; and the undermining of the quality or prospects of democracy. All four scenarios clearly violate the ideal of representational justice (Wimmer 2002) and result in some ethnic groups having greater influence over the political decision-making process than others. Consequently, grievances can be expected to rise among those ethnic groups who cannot reap the benefits of corruption, and ethnicity to become a likely fault line of violent confrontation.

Having outlined the central tenets of Ethno-Embedded Institutionalism in chapters 3 and 4, I moved to the empirical part of my thesis in chapters 5 and 6. Chapter 5 presented the newly created EEI Dataset which – as the first dataset of its kind – fills a clear ‘data gap’ in the current academic debate by providing an unprecedented compilation of quantitative information on different types of political institutions, the incidence of large-scale ethnic violence and common control variables in the civil wars literature. Using data from the EEI Dataset and binary time-series-cross-section analysis, chapter 6 outlined the results from testing the two dimensions of Ethno-Embedded Institutionalism empirically. Crucially, the statistical results presented in chapter 6 provide empirical support for the theoretical propositions described in chapters 3 and 4, that a) institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure, and b) corruption increase the risk of large-scale ethnic violence, while holding a number of different control variables (such as regime type or level of

economic development) constant. These results are particularly notable, given that the statistically significant positive effects of corruption and institutional combinations of a presidential form of government, majoritarian electoral system for the legislature and unitary state structure on the risk of ethnic civil war are robust to various model specifications.

Overall, my thesis thus contributes to the institutional incentives approach to ethnic violence in three relevant regards: through the theoretical conceptualisation and large-N testing of Ethno-Embedded Institutionalism; through the presentation of a grievance-based explanation of large-scale ethnic violence which focuses exclusively on (and clearly identifies) the key values of political representation; and through the introduction of the EEI Dataset as a new, comprehensive data source for the systematic statistical analysis of institutional incentives for ethnic civil war.

Having thus demonstrated the relevance of Ethno-Embedded Institutionalism, it is important to note that this thesis should be seen as just an initial attempt to broaden the currently rather limited research focus of the institutional incentives approach to ethnic violence. To properly overcome its predominant emphasis on single, formal political institutions, much further work needs to be done, such as by investigating in more detail why some institutional combinations seem to have a clearer relationship with the risk of ethnic civil war than others (see section 6.5.); by testing the impact of corruption on the probability of large-scale ethnic violence under different country specifications (see section 6.6.); or by complementing my intentionally rather general conclusions about the relevance of Ethno-Embedded Institutionalism with more in-depth case study analysis. In this sense, my thesis is intended not as the final word, but hopefully as the starting point for much-needed further research into the impact of institutional combinations and informal political institutions on the risk of ethnic civil war.

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^v The most recent version of this dataset is available at <http://www.systemicpeace.org/inscr/inscr.htm> (accessed December 10, 2010).

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Appendix I: Patterns of Political Institutions

NB: All graphs in this section are based on data from the EEI Dataset. Please see the EEI Dataset Codebook in Appendix III for the relevant data sources.

Section A: Forms of Government

Figure 1: Autocratic Forms of Government Worldwide, 1955-2007.

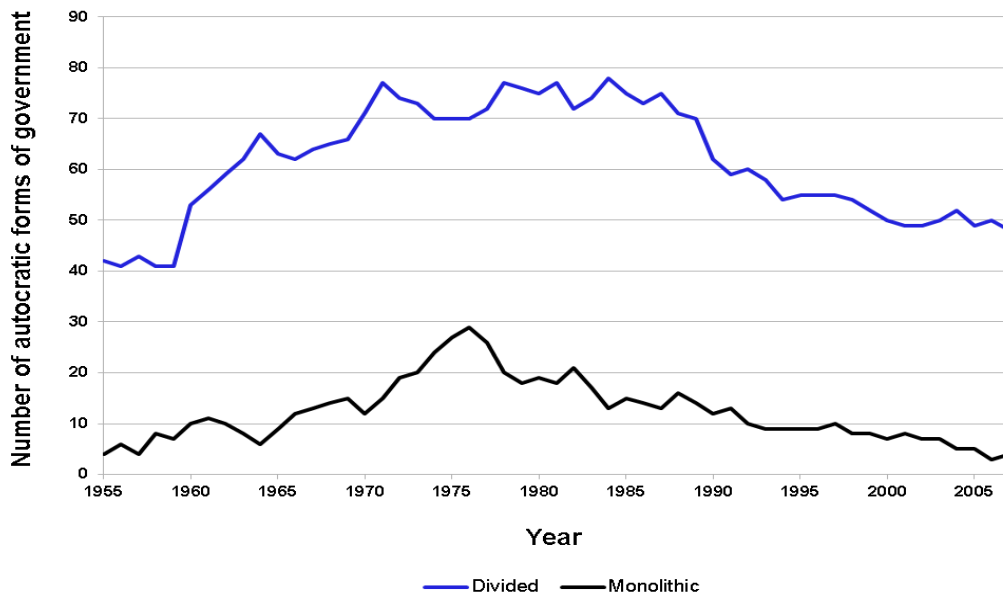


Figure 2: Democratic Forms of Government Worldwide, 1955-2007.

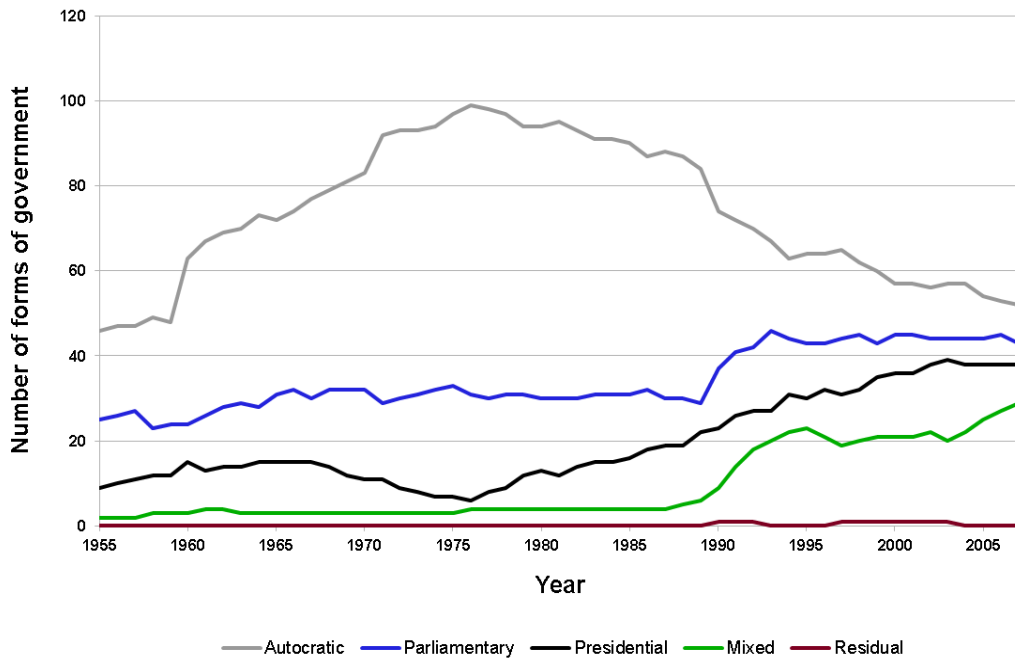


Figure 3: Democratic Forms of Government Africa (except North Africa), 1955-2007.

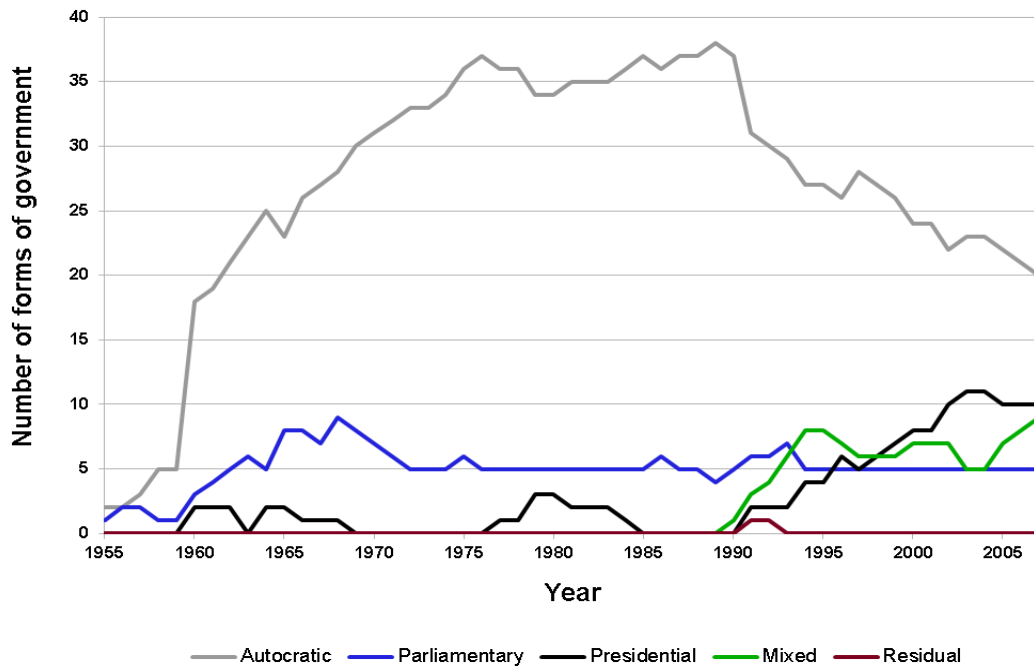


Figure 4: Democratic Forms of Government Central Asia and Eastern Europe, 1955-2007.

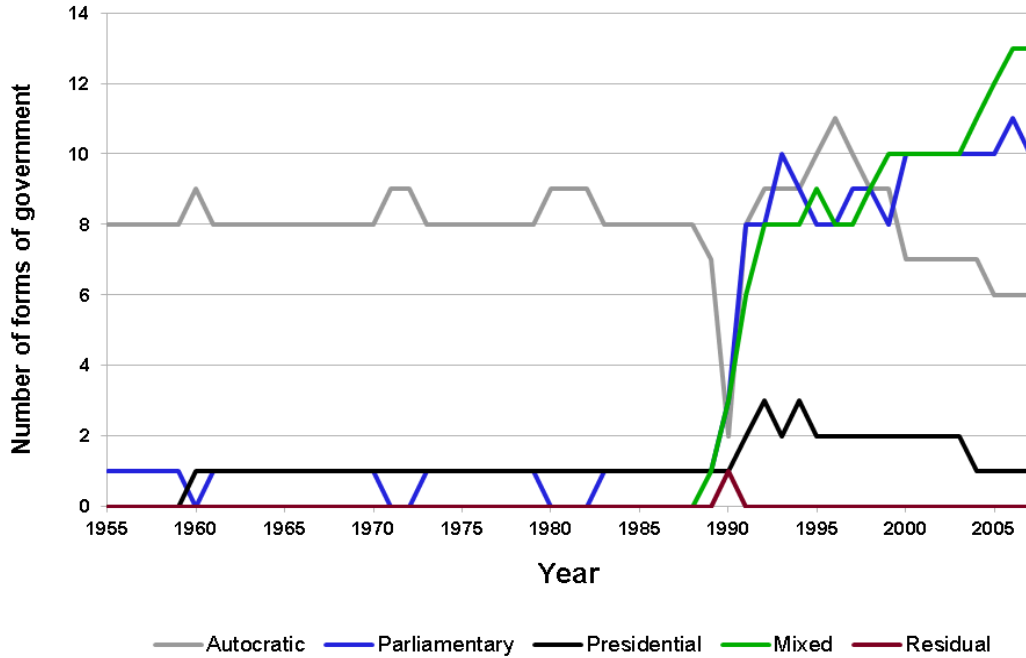


Figure 5: Democratic Forms of Government East Asia and Pacific, 1955-2007.

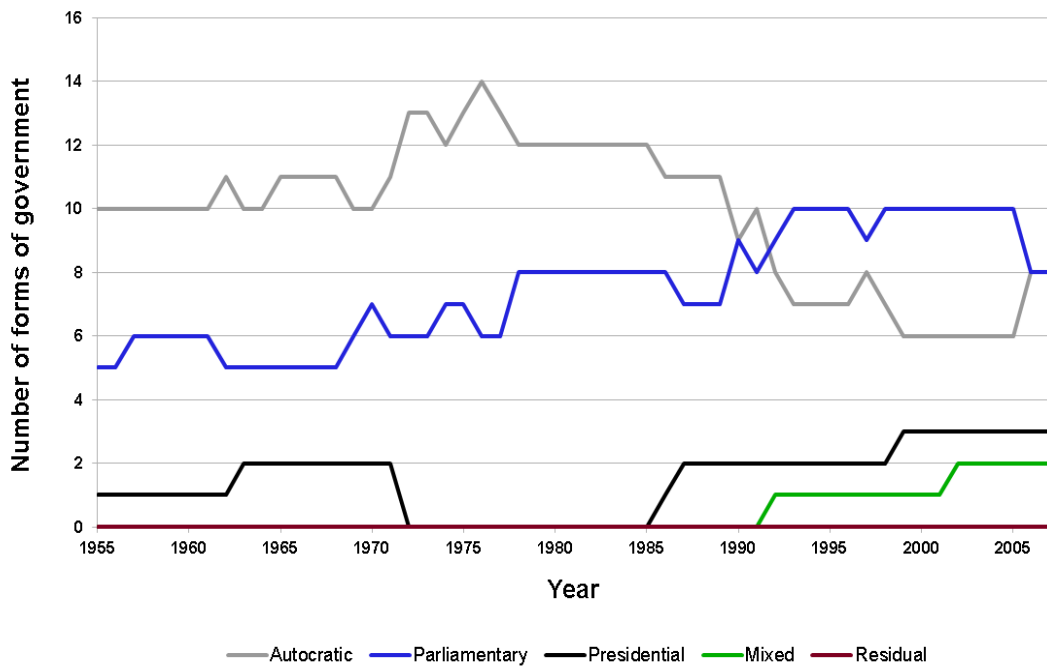


Figure 6: Democratic Forms of Government Europe (except Eastern Europe) and North America, 1955-2007.

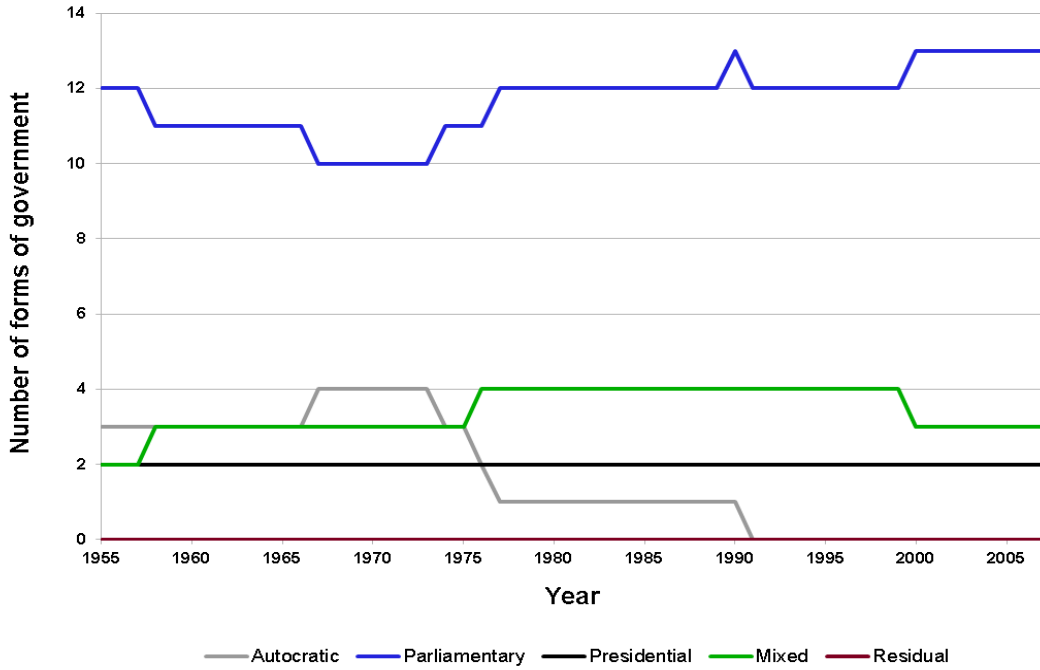


Figure 7: Democratic Forms of Government Latin America and Caribbean, 1955-2007.

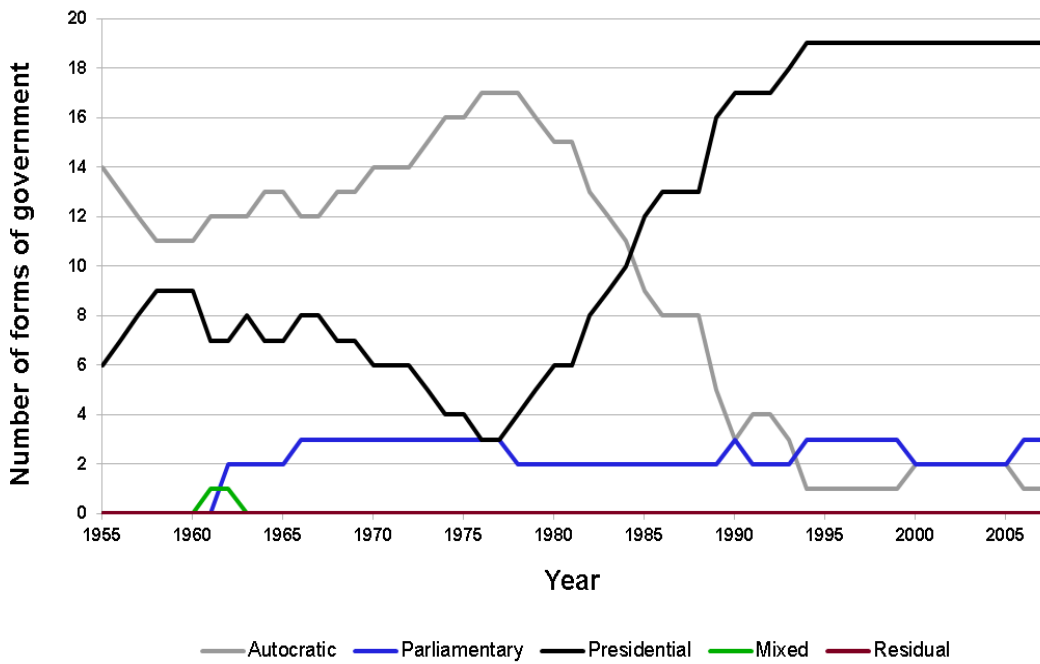


Figure 8: Democratic Forms of Government Middle East and North Africa, 1955-2007.

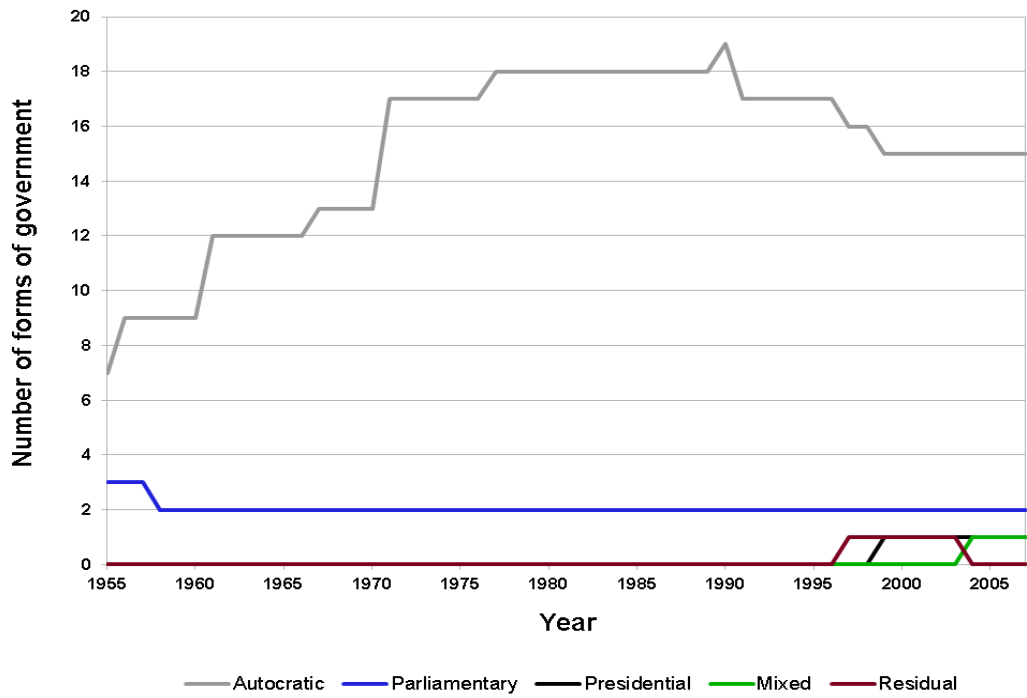
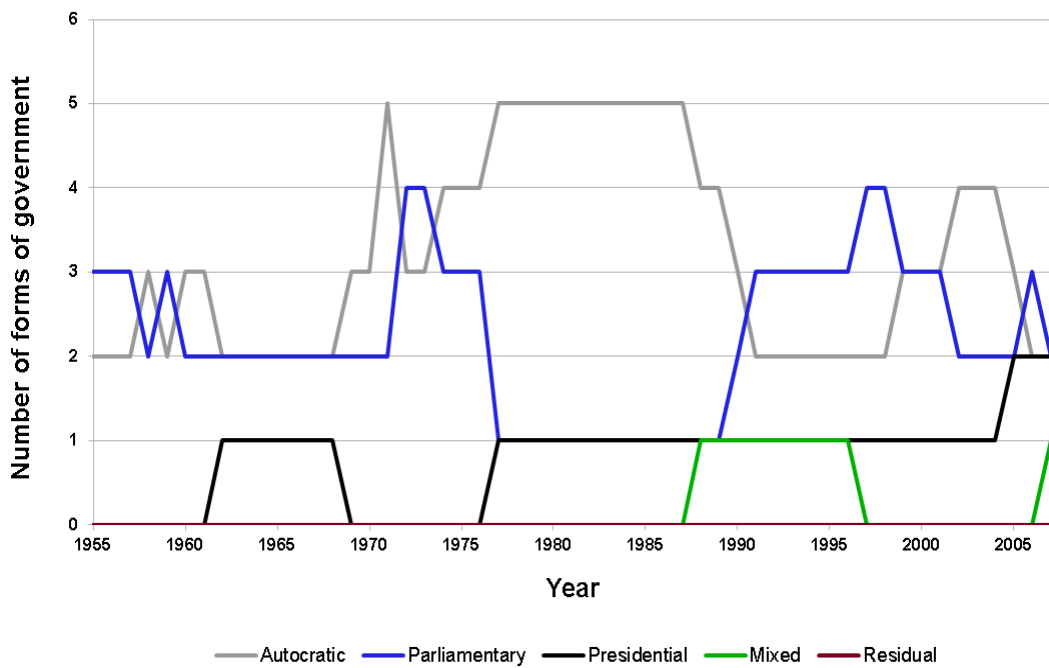


Figure 9: Democratic Forms of Government South Asia, 1955-2007.



Section B: Electoral Systems

Figure 10: Electoral Systems for the Presidency Worldwide, 1955-2007.

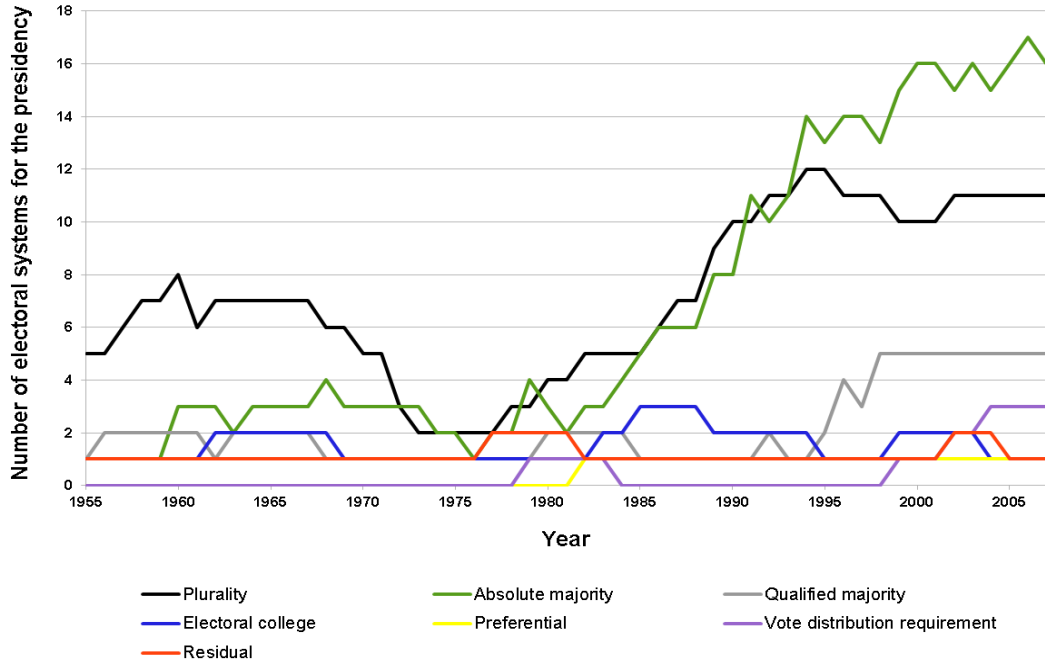


Figure 11: Electoral Systems for the Legislature Worldwide, 1955-2007.

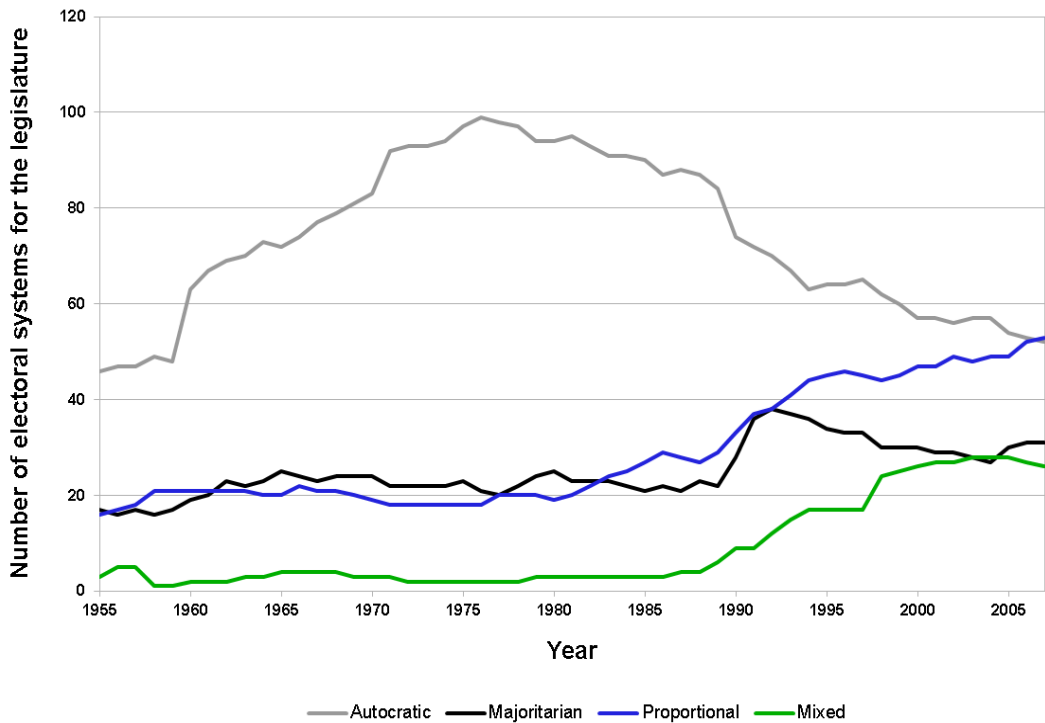


Figure 12: Electoral Systems for the Legislature Africa (except North Africa), 1955-2007.

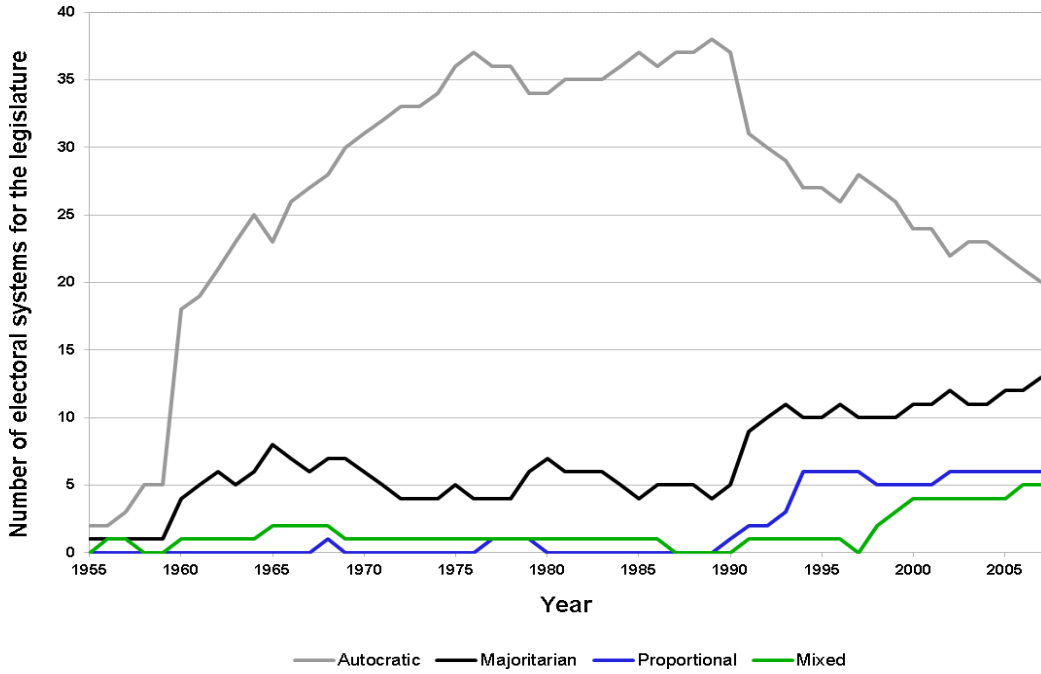


Figure 13: Electoral Systems for the Legislature Central Asia and Eastern Europe, 1955-2007.

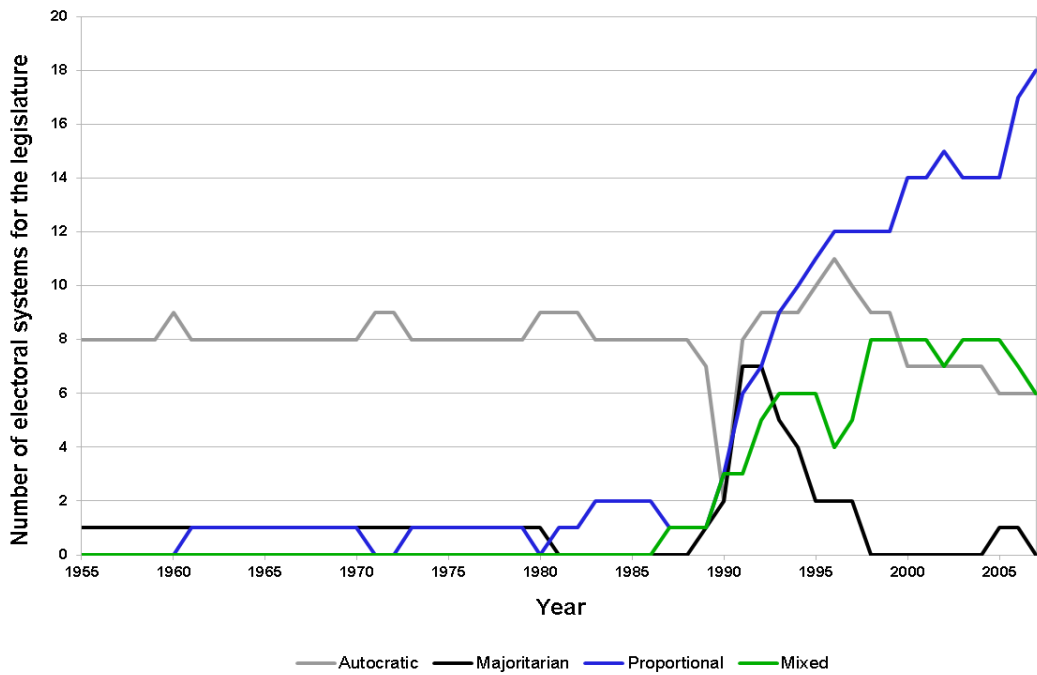


Figure 14: Electoral Systems for the Legislature East Asia and Pacific, 1955-2007.

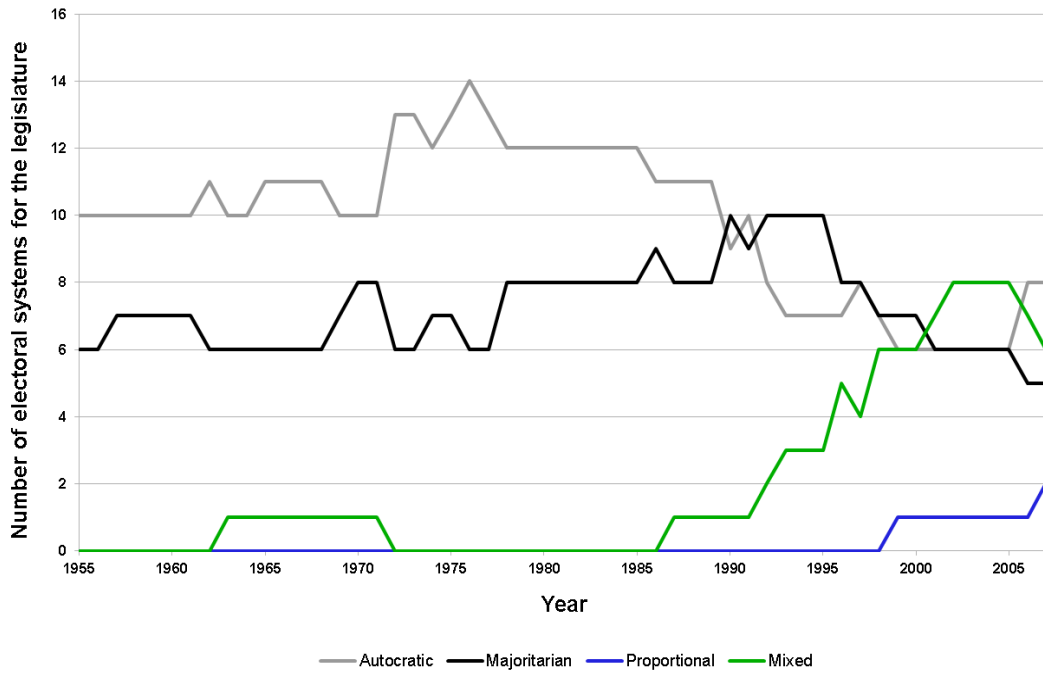


Figure 15: Electoral Systems for the Legislature Europe (except Eastern Europe) and North America, 1955-2007.

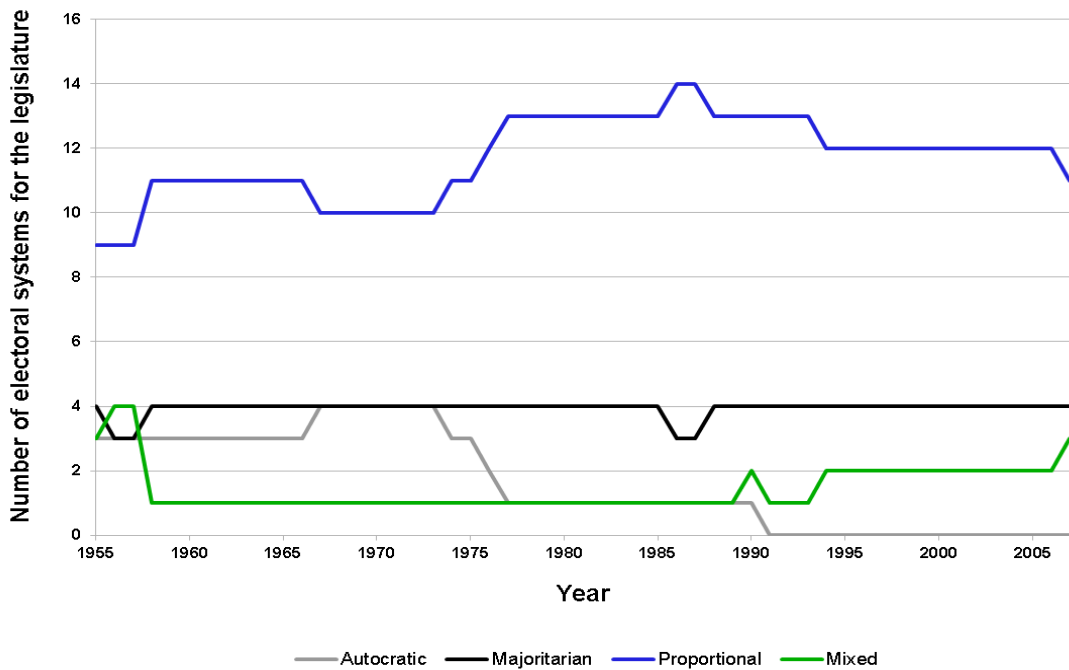


Figure 16: Electoral Systems for the Legislature Latin America and Caribbean, 1955-2007.

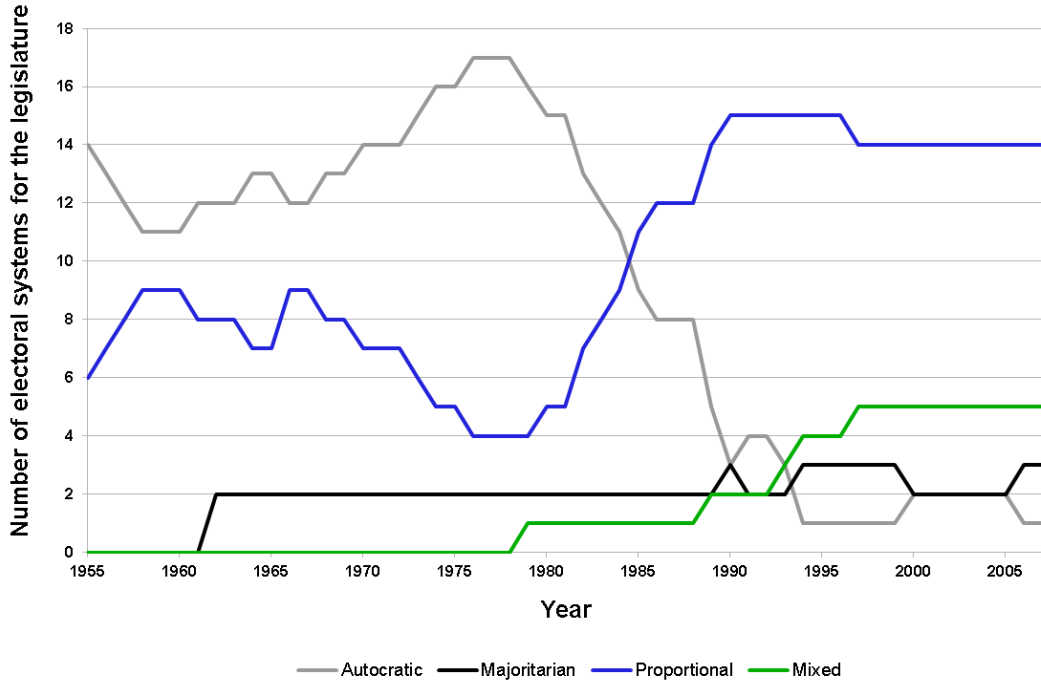


Figure 17: Electoral Systems for the Legislature Middle East and North Africa, 1955-2007.

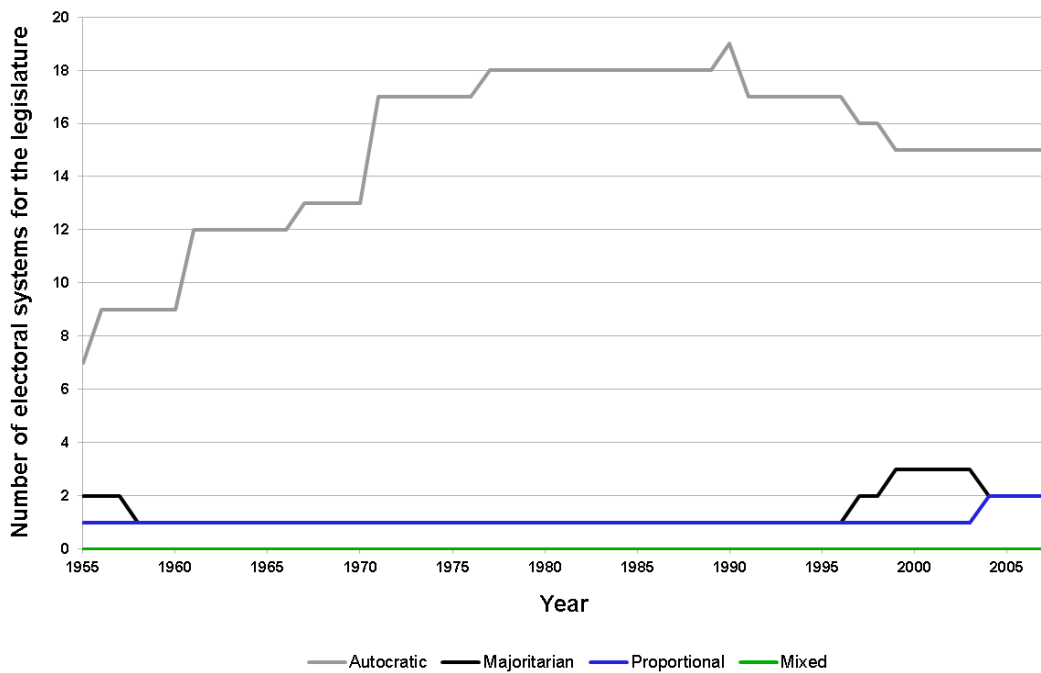


Figure 18: Electoral Systems for the Legislature South Asia, 1955-2007.

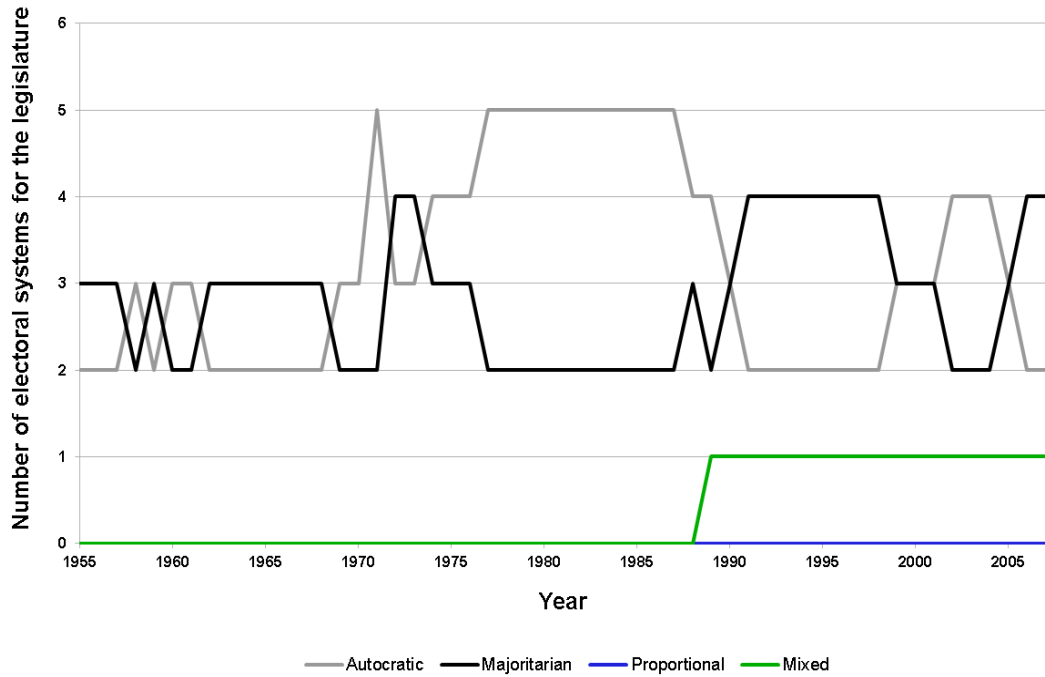
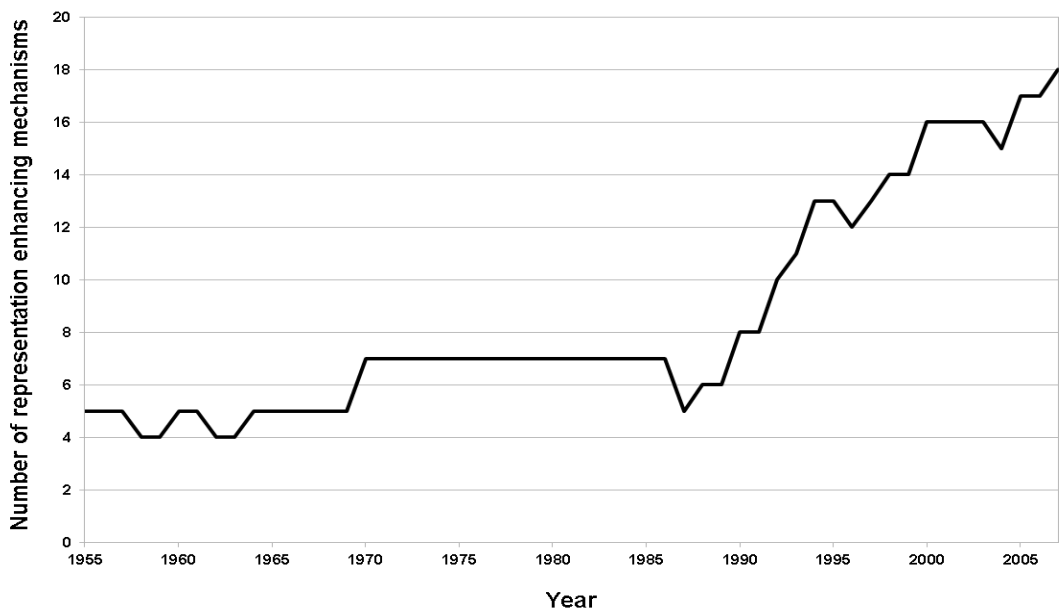


Figure 19: Countries Worldwide Using Seat Reservations or Communal Rolls to Enhance Ethnic, National or Religious Minority Representation, 1955-2007.



Section C: State Structures

Figure 20: State Structures Worldwide, 1955-2007.

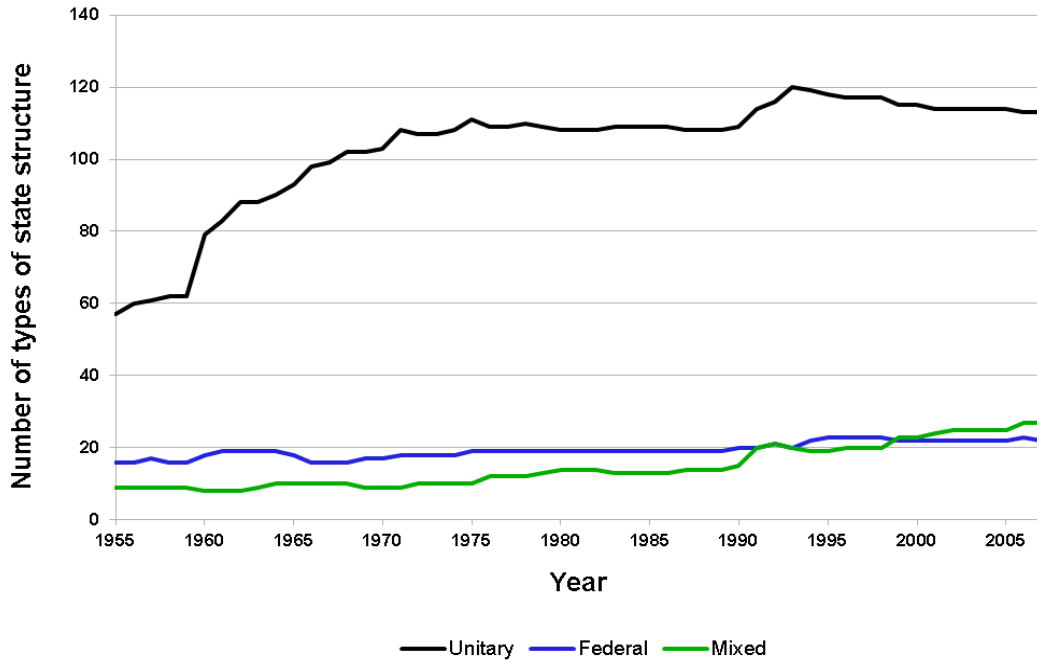


Figure 21: State Structures Africa (except North Africa), 1955-2007.

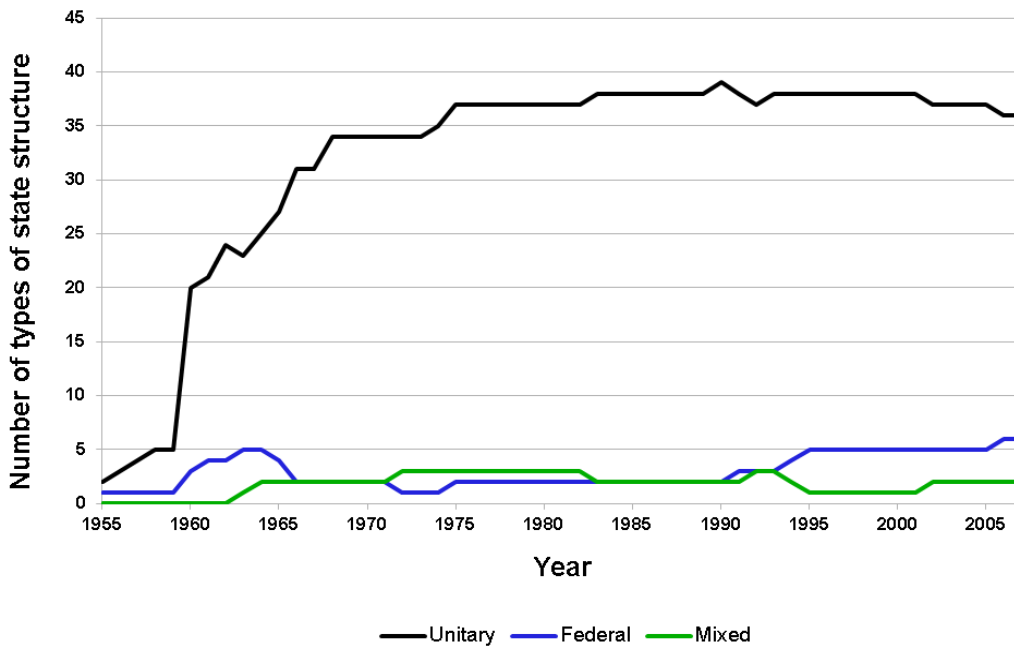


Figure 22: State Structures Central Asia and Eastern Europe, 1955-2007.

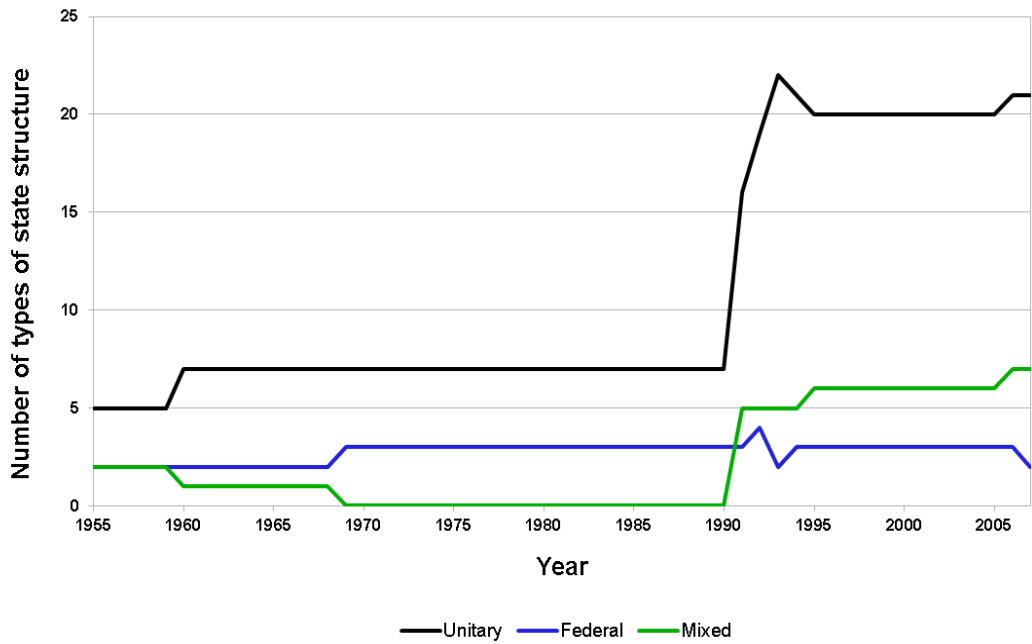


Figure 23: State Structures East Asia and Pacific, 1955-2007.



Figure 24: State Structures Europe (except Eastern Europe) and North America, 1955-2007.

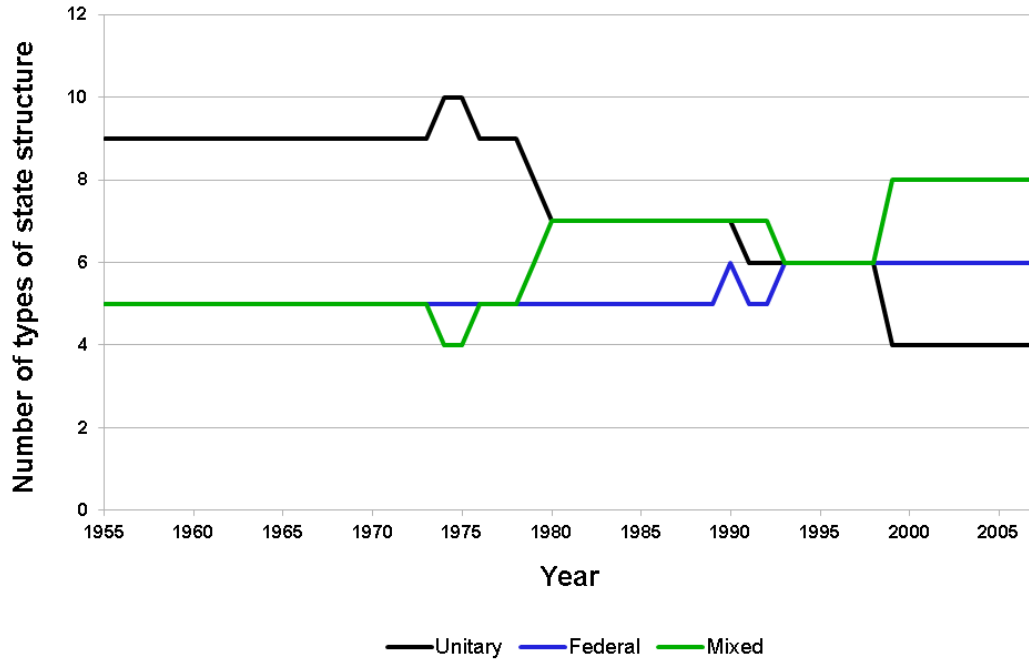


Figure 25: State Structures Latin America and Caribbean, 1955-2007.

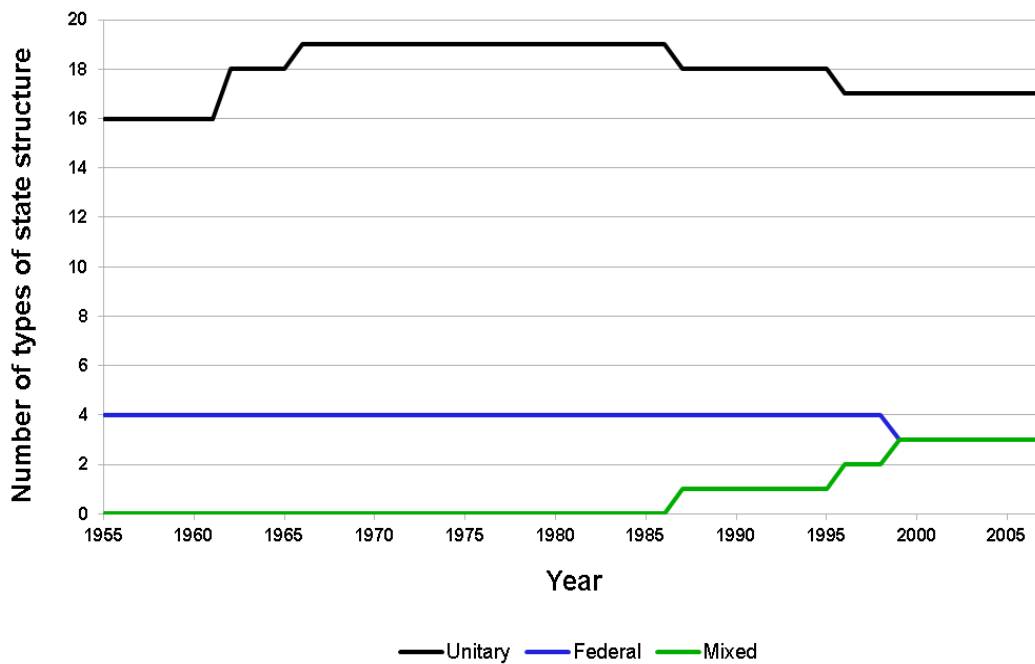


Figure 26: State Structures Middle East and North Africa, 1955-2007.

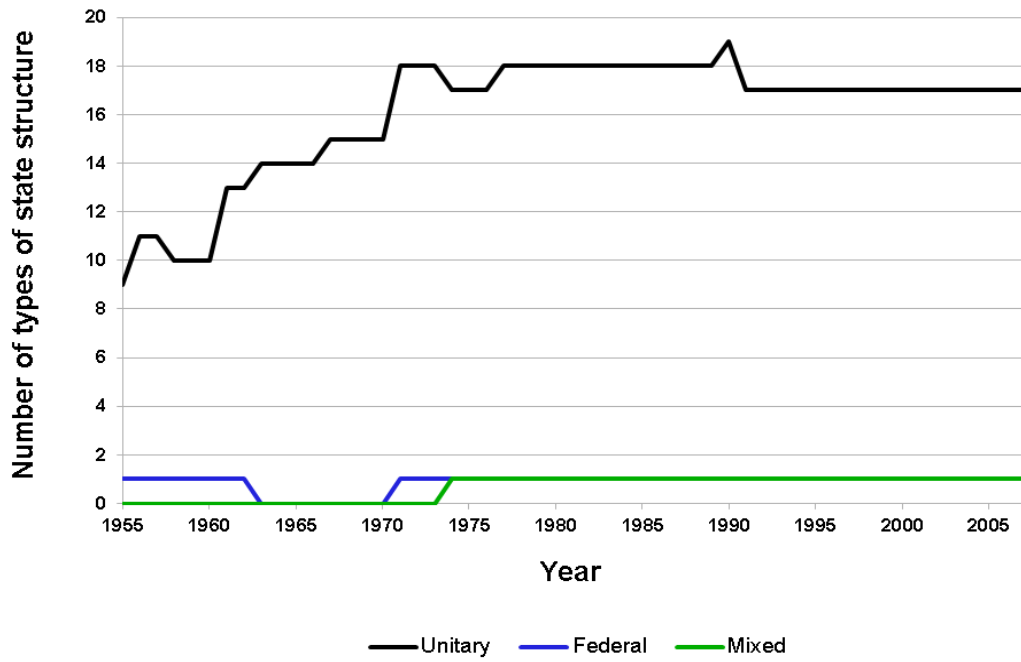
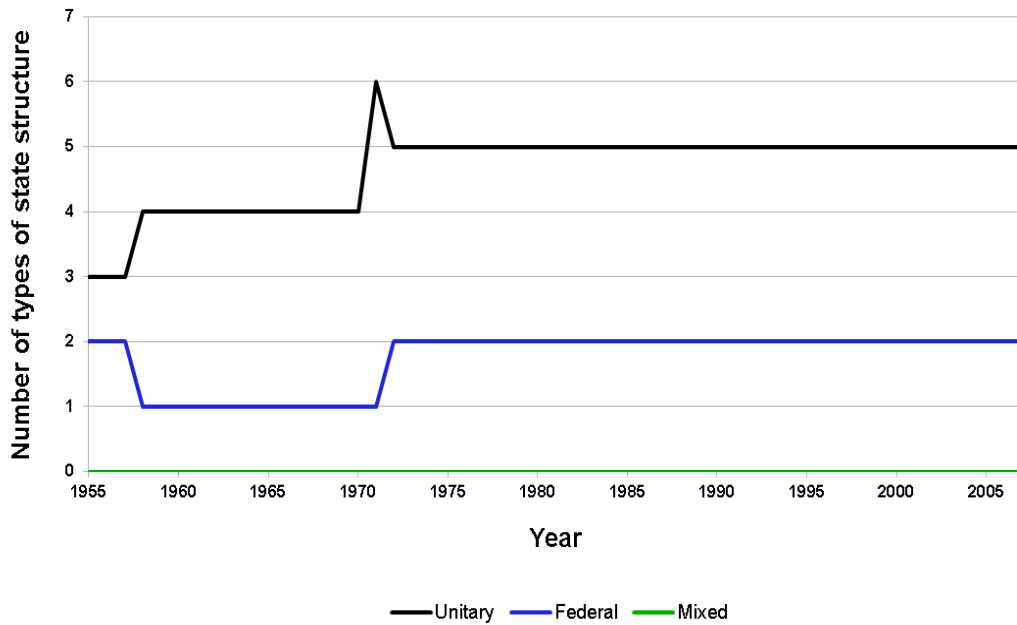


Figure 27: State Structures South Asia, 1955-2007.



Section D: Institutional Combinations

Table 1: Institutional Combinations Worldwide, 1955-2007, Ordered by Institutional Combination.

Combination of presidential form of government, majoritarian electoral system for the legislature and unitary state structure	Combination of presidential form of government, majoritarian electoral system for the legislature and federal state structure	Combination of presidential form of government, majoritarian electoral system for the legislature and mixed state structure
Afghanistan 2005-2007 Armenia 1991-1994 Belarus 1994 Benin 1960-1962 Congo, Republic of 1960-1962 Côte d'Ivoire 2000-2001 Cyprus 1960-1980 Djibouti 1999-2007 Ghana 1979-1980, 1996-2007 Kenya 2002-2007 Liberia 2005-2007 Malawi 1994-2007 Pakistan 1962-1968 Philippines 1955-1971, 1986-1989 Sierra Leone 2007 Sri Lanka 1977-1988 Uganda 1980-1984 Zambia 1964-1967, 1991-2007	Comoros 2002-2007 Kenya 1964-1965 Nigeria 1979-1983, 1999-2007 United States 1955-2007 <i>Number of country years: 75</i>	Azerbaijan 1992 Philippines 1990-1997 <i>Number of country years: 9</i>
<i>Number of country years: 150</i>		

Combination of presidential form of government, proportional electoral system for the legislature and unitary state structure	Combination of presidential form of government, proportional electoral system for the legislature and federal state structure	Combination of presidential form of government, proportional electoral system for the legislature and mixed state structure
Benin 1991-2007	Argentina 1973-1975, 1983-2007	Indonesia 2001-2007
Bolivia 1982-1996	Brazil 1955-1960, 1963, 1985-2007	Nicaragua 1990-2007
Burkina Faso 1977-1979	Switzerland 1955-2007	
Burundi 2002-2004	Venezuela 1958-1992	<i>Number of country years: 25</i>
Chile 1955-1972, 1989-2007	<i>Number of country years: 146</i>	
Colombia 1957-2007		
Costa Rica 1955-2007		
Cyprus 1981-2007		
Dominican Republic 1962, 1978-2007		
Ecuador 1955-1960, 1968-1969		
El Salvador 1984-2007		
Equatorial Guinea 1968		
Guatemala 1966-1973, 1986-2007		
Guyana 1992-2007		
Honduras 1982-2007		
Indonesia 1999-2000		
Liberia 2003-2004		
Mozambique 1994-2007		
Panama 1955-1967		
Paraguay 1989-2007		
Peru 1956-1967, 1980-1991, 1993-2007		
Uruguay 1955-1972, 1985-2006		
<i>Number of country years: 471</i>		

Appendix I – Patterns of Political Institutions

Combination of presidential form of government, mixed electoral system for the legislature and unitary state structure	Combination of presidential form of government, mixed electoral system for the legislature and federal state structure	Combination of presidential form of government, mixed electoral system for the legislature and mixed state structure
Bolivia 1997-2007 Ecuador 1979-2007 Korea, South 1963-1971, 1987-2005 Panama 1989-2007 Sierra Leone 1996, 1998-2006 Sri Lanka 1989-2007	Mexico 1994-2007 Venezuela 1993-1998 <i>Number of country years: 20</i>	Georgia 1995-2003 Korea, South 2006-2007 Philippines 1998-2007 Venezuela 1999-2007
<i>Number of country years: 116</i>		<i>Number of country years: 30</i>
Combination of parliamentary form of government, majoritarian electoral system for the legislature and unitary state structure	Combination of parliamentary form of government, majoritarian electoral system for the legislature and federal state structure	Combination of parliamentary form of government, majoritarian electoral system for the legislature and mixed state structure
Albania 1991 Bangladesh 1972-1973, 1991-2006 Belarus 1991-1993 Botswana 1966-2007 Burma (Myanmar) 1955-1961 Ethiopia 1991 Fiji 1970-1986, 1990-2005 The Gambia 1965-1993 Ghana 1969-1971 Greece 1955 Haiti 1990, 1994-1999, 2006-2007 Jamaica 1962-2007 Japan 1955-1995	Australia 1955-2007 Canada 1955-2007 Comoros 1975 Ethiopia 1995-2007 India 1955-2007 Kenya 1963 Malaysia 1957-2007 Nigeria 1960-1965 Pakistan 1955-1957, 1972-1976, 1997-1998 Uganda 1962-1965	Ethiopia 1992-1994 Mauritius 2002-2007 New Zealand 1955-1995 Papua New Guinea 1976-2007 South Africa 1963-1993 Trinidad and Tobago 1996-2007 United Kingdom 1955-1973, 1999-2007
	<i>Number of country years: 245</i>	<i>Number of country years: 153</i>

Korea, South 1960
Laos 1955-1959, 1961-1974
Latvia 1991-1992
Lebanon 1955-2007
Lesotho 1966-1969, 1993-2001
Lithuania 1991
Macedonia 1993-1997
Mauritius 1968-2001
Mongolia 1990-2007
Nepal 1959, 1990-2001, 2006-2007
Papua New Guinea 1975
Sierra Leone 1961-1970
Solomon Islands 1978-2007
South Africa 1955-1962
Sri Lanka 1955-1976
Sudan 1965-1968, 1986-1988
Syria 1955-1957
Thailand 1969-1970, 1974-1975, 1978-1990, 1992-2000
Trinidad and Tobago 1962-1995
Turkey 1955-1959
United Kingdom 1974-1998

Number of country years: 565

Combination of parliamentary form of government, proportional electoral system for the legislature and unitary state structure	Combination of parliamentary form of government, proportional electoral system for the legislature and federal state structure	Combination of parliamentary form of government, proportional electoral system for the legislature and mixed state structure
Belgium 1955-1979 Czech Republic 1993-2007 Estonia 1991-2007 Greece 1958-1966, 1974-2006 Guyana 1966-1977 Ireland 1955-2007 Israel 1955-2007 Latvia 1993-2007 Macedonia 2002-2007 Montenegro 2006-2007 Namibia 1990-1993 Norway 1955-2007 Slovakia 1993-1998 Spain 1977 Sweden 1955-2007 Turkey 1961-1970, 1973-1979, 1983-1986, 1995-2007	Belgium 1993-2007 Bosnia and Herzegovina 1996-2007 Czechoslovakia 1990-1992 Serbia and Montenegro 2003-2006 South Africa 1994-2007 Yugoslavia, Federal Republic of 2000-2002 <i>Number of country years: 51</i>	Belgium 1980-1992 Denmark 1955-2007 Finland 2000-2007 Italy 1958-1993 Moldova 2000-2007 Netherlands 1955-2007 Spain 1978-2007 <i>Number of country years: 201</i>
<i>Number of country years: 391</i>		

Combination of parliamentary form of government, mixed electoral system for the legislature and unitary state structure	Combination of parliamentary form of government, mixed electoral system for the legislature and federal state structure	Combination of parliamentary form of government, mixed electoral system for the legislature and mixed state structure
<p>Albania 1992-1995, 1997-2007</p> <p>Cambodia 1993-1996, 1998-2007</p> <p>France 1955-1957</p> <p>Greece 1956-1957, 2007</p> <p>Hungary 1990-2007</p> <p>Japan 1996-2007</p> <p>Lesotho 2002-2007</p> <p>Macedonia 1998-2001</p> <p>Somalia 1960-1968</p> <p>Sudan 1956-1957</p> <p>Thailand 2001-2005</p> <p>Turkey 1987-1994</p> <p>Zimbabwe 1965-1986</p>	<p>German Federal Republic 1955-1990</p> <p>Germany 1990-2007</p> <p><i>Number of country years: 54</i></p>	<p>Georgia 1992-1994</p> <p>Italy 1955-1957, 1994-2007</p> <p>New Zealand 1996-2007</p> <p><i>Number of country years: 32</i></p>
<p><i>Number of country years: 121</i></p>		

Combination of mixed form of government, majoritarian electoral system for the legislature and unitary state structure	Combination of mixed form of government, majoritarian electoral system for the legislature and federal state structure	Combination of mixed form of government, majoritarian electoral system for the legislature and mixed state structure
Central African Republic 1993-2002 Congo, Republic of 1991-1996 France 1958-1985, 1988-1998 Kyrgyzstan 2005-2006 Madagascar 2002-2007 Mali 1992-2007 Moldova 1991-1993 Poland 1989-1990	Comoros 1990-1998 Pakistan 1988-1996, 2007 Russia 1992 <i>Number of country years: 20</i>	France 1999-2007 Ukraine 1991-1997 <i>Number of country years: 16</i>
<i>Number of country years: 84</i>		

Combination of mixed form of government, proportional electoral system for the legislature and unitary state structure	Combination of mixed form of government, proportional electoral system for the legislature and federal state structure	Combination of mixed form of government, proportional electoral system for the legislature and mixed state structure
Algeria 2004-2007	Austria 1955-2007	Finland 1955-1999
Bulgaria 1991-2007	Brazil 1961-1962	Moldova 1995-1999
Burundi 2005-2007	Russia 2007	Portugal 1976-2007
Croatia 2000-2002	<i>Number of country years: 56</i>	Serbia 2006-2007
East Timor 2007		Ukraine 2006-2007
France 1986-1987		<i>Number of country years: 86</i>
Guinea-Bissau 1994-2002, 2005-2007		
Kyrgyzstan 2007		
Madagascar 1993-1997		
Moldova 1994		
Namibia 1994-2007		
Poland 1991-2007		
Romania 1990-2007		
Slovakia 1999-2007		
Slovenia 1992-2007		
<i>Number of country years: 123</i>		

Appendix I – Patterns of Political Institutions

Combination of mixed form of government, mixed electoral system for the legislature and unitary state structure	Combination of mixed form of government, mixed electoral system for the legislature and federal state structure	Combination of mixed form of government, mixed electoral system for the legislature and mixed state structure
<p>Armenia 1995, 1998-2007</p> <p>Bulgaria 1990</p> <p>Croatia 2003-2007</p> <p>East Timor 2002-2006</p> <p>Lithuania 1992-2007</p> <p>Madagascar 1991-1992, 1998-2001</p> <p>Mauritania 2007</p> <p>Niger 1993-1995, 1999-2007</p> <p>Senegal 2000-2007</p> <p>Taiwan 1992-2007</p>	<p>Congo, Democratic Republic of 2006-2007</p> <p>Russia 1993-2006</p> <p><i>Number of country years: 16</i></p>	<p>Georgia 1991, 2004-2007</p> <p>Ukraine 1998-2005</p> <p><i>Number of country years: 13</i></p>
<p><i>Number of country years: 81</i></p>		

Autocracy with a unitary state structure	Autocracy with a federal state structure	Autocracy with a mixed state structure
Afghanistan 1955-2004	Argentina 1955-1972, 1976-1982	Azerbaijan 1991, 1993-2007
Albania 1955-1989, 1996	Bosnia and Herzegovina 1994-1995	China 1955-2007
Algeria 1962-2003	Brazil 1964-1984	Czechoslovakia 1955-1959
Angola 1975-2007	Cameroon 1961-1971	Iraq 1974-2007
Armenia 1996-1997	Comoros 1976-1989, 1999-2001	Nicaragua 1987-1989
Bahrain 1971-2007	Congo, Democratic Republic of 1960-1964	Romania 1955-1968
Bangladesh 1971, 1974-1990, 2007	Czechoslovakia 1969-1989	Sudan 1972-1982
Belarus 1995-2007	Ethiopia 1955-1961	Tajikistan 1991-2007
Benin 1963-1990	Libya 1955-1962	Tanzania 1964-2007
Bhutan 1971-2007	Mexico 1955-1993	Uzbekistan 1991-2007
Bolivia 1955-1981	Nigeria 1966-1978, 1984-1998	
Bosnia and Herzegovina 1992-1993	Pakistan 1977-1987, 1999-2006	<i>Number of country years: 214</i>
Bulgaria 1955-1989	Soviet Union 1955-1991	
Burkina Faso 1960-1976, 1980-2007	Sudan 1991-2007	
Burma (Myanmar) 1962-2007	United Arab Emirates 1971-2007	
Burundi 1962-2001	Venezuela 1955-1957	
Cambodia 1955-1992, 1997	Yugoslavia 1955-1992	
Cameroon 1960, 1972-2007	Yugoslavia, Federal Republic of 1992-1999	
Central African Republic 1960-1992, 2003-2007		
Chad 1960-2007	<i>Number of country years: 343</i>	
Chile 1973-1988		
Colombia 1955-1956		
Congo, Democratic Republic of 1965-2005		
Congo, Republic of 1963-1990, 1997-2007		
Côte d'Ivoire 1960-1999, 2002-2007		
Croatia 1992-1999		

Cuba 1955-2007
Czechoslovakia 1960-1968
Democratic Yemen 1967-1990
Djibouti 1977-1998
Dominican Republic 1955-1961, 1963-1977
Ecuador 1961-1967, 1970-1978
Egypt 1955-1957, 1961-2007
El Salvador 1955-1983
Equatorial Guinea 1969-2007
Eritrea 1993-2007
Ethiopia 1962-1990
Fiji 1987-1989, 2006-2007
Gabon 1960-2007
The Gambia 1994-2007
German Democratic Republic 1955-1990
Ghana 1957-1968, 1972-1978, 1981-1995
Greece 1967-1973
Guatemala 1955-1965, 1974-1985
Guinea 1958-2007
Guinea-Bissau 1974-1993, 2003-2004
Guyana 1978-1991
Haiti 1955-1989, 1991-1993, 2000-2005
Honduras 1955-1981
Hungary 1955-1989
Indonesia 1955-1998
Iran 1955-1996, 2004-2007
Iraq 1955-1973
Jordan 1955-2007
Kazakhstan 1991-2007
Kenya 1966-2001

Korea, North 1955-2007
Korea, South 1955-1959, 1961-1962, 1972-1986
Kuwait 1961-2007
Kyrgyzstan 1991-2004
Laos 1960, 1975-2007
Lesotho 1970-1992
Liberia 1955-2002
Libya 1963-2007
Madagascar 1960-1990
Malawi 1964-1993
Mali 1960-1991
Mauritania 1960-2006
Mongolia 1955-1989
Morocco 1956-2007
Mozambique 1975-1993
Nepal 1955-1958, 1960-1989, 2002-2005
Nicaragua 1955-1986
Niger 1960-1990, 1996-1998
Oman 1971-2007
Pakistan 1958-1961, 1969-1971
Panama 1968-1988
Paraguay 1955-1988
Peru 1955, 1962, 1968-1979, 1992
Philippines 1972-1985
Poland 1955-1988
Portugal 1955-1975
Qatar 1971-2007
Romania 1969-1989
Rwanda 1962-2007
Saudi Arabia 1955-2007

Senegal 1960-1999
Sierra Leone 1967, 1971-1995, 1997
Singapore 1965-2007
Somalia 1969-2007
Spain 1955-1976
Sudan 1958-1964, 1969-1971, 1983-1985, 1989-1990
Swaziland 1968-2007
Syria 1961-2007
Taiwan 1955-1991
Tanganyika 1961-1964
Thailand 1955-1968, 1971-1973, 1976-1977, 1991, 2006-2007
Togo 1960-2007
Tunisia 1956-2007
Turkey 1960, 1971-1972, 1980-1982
Turkmenistan 1991-2007
Uganda 1966-1979, 1985-2007
United Arab Republic 1958-1961
Uruguay 1973-1984
Vietnam, Democratic Republic of 1955-1976
Vietnam, Republic of 1955-1975
Vietnam 1976-2007
Yemen Arab Republic 1955-1990
Yemen 1990-2007
Zambia 1968-1990
Zimbabwe 1987-2007

Number of country years: 3349

Table 2: Institutional Combinations Worldwide, 1955-2007, Ordered by Frequency.

Institutional Combination	Number of Country Years in Existence
Autocracy with a unitary state structure	3349
Parliamentary form of government, majoritarian electoral system for the legislature and unitary state structure	565
Presidential form of government, proportional electoral system for the legislature and unitary state structure	471
Parliamentary form of government, proportional electoral system for the legislature and unitary state structure	391
Autocracy with a federal state structure	343
Parliamentary form of government, majoritarian electoral system for the legislature and federal state structure	245
Autocracy with a mixed state structure	214
Parliamentary form of government, proportional electoral system for the legislature and mixed state structure	201
Parliamentary form of government, majoritarian electoral system for the legislature and mixed state structure	153
Presidential form of government, majoritarian electoral system for the legislature and unitary state structure	150

Presidential form of government, proportional electoral system for the legislature and federal state structure	146
Mixed form of government, proportional electoral system for the legislature and unitary state structure	123
Parliamentary form of government, mixed electoral system for the legislature and unitary state structure	121
Presidential form of government, mixed electoral system for the legislature and unitary state structure	116
Mixed form of government, proportional electoral system for the legislature and mixed state structure	86
Mixed form of government, majoritarian electoral system for the legislature and unitary state structure	84
Mixed form of government, mixed electoral system for the legislature and unitary state structure	81
Presidential form of government, majoritarian electoral system for the legislature and federal state structure	75
Mixed form of government, proportional electoral system for the legislature and federal state structure	56
Parliamentary form of government, mixed electoral system for the legislature and federal state structure	54
Parliamentary form of government, proportional electoral system for the legislature and federal state structure	51

Parliamentary form of government, mixed electoral system for the legislature and mixed state structure	32
Presidential form of government, mixed electoral system for the legislature and mixed state structure	30
Presidential form of government, proportional electoral system for the legislature and mixed state structure	25
Presidential form of government, mixed electoral system for the legislature and federal state structure	20
Mixed form of government, majoritarian electoral system for the legislature and federal state structure	20
Mixed form of government, majoritarian electoral system for the legislature and mixed state structure	16
Mixed form of government, mixed electoral system for the legislature and federal state structure	16
Mixed form of government, mixed electoral system for the legislature and mixed state structure	13
Presidential form of government, majoritarian electoral system for the legislature and mixed state structure	9

Section E: Corruption

Figure 28: Corruption Worldwide, 1984-2007.

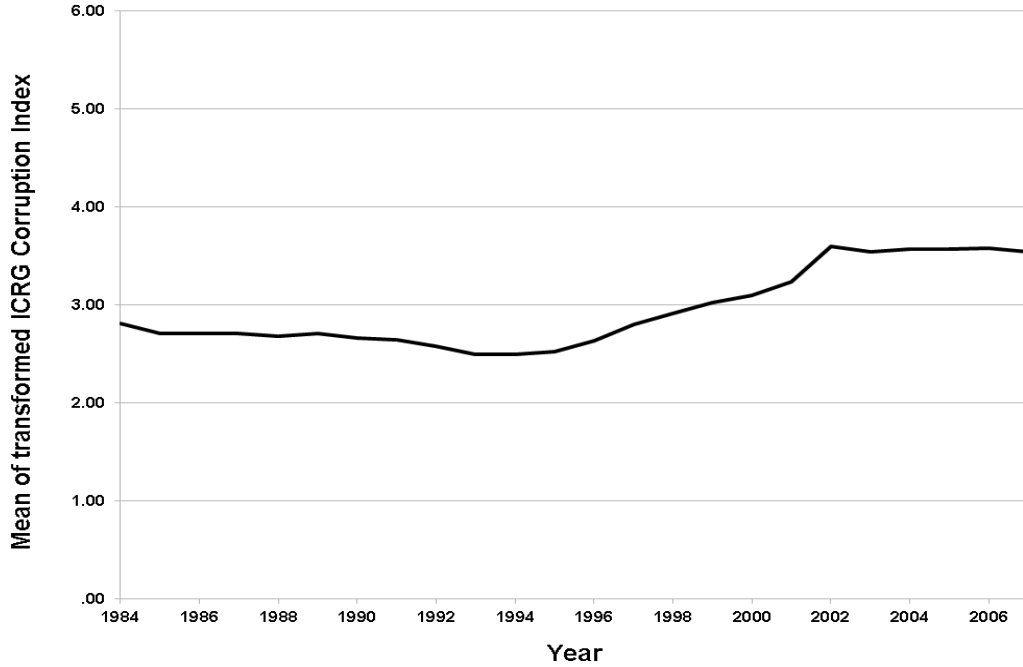


Figure 29: Corruption Africa (except North Africa), 1984-2007.

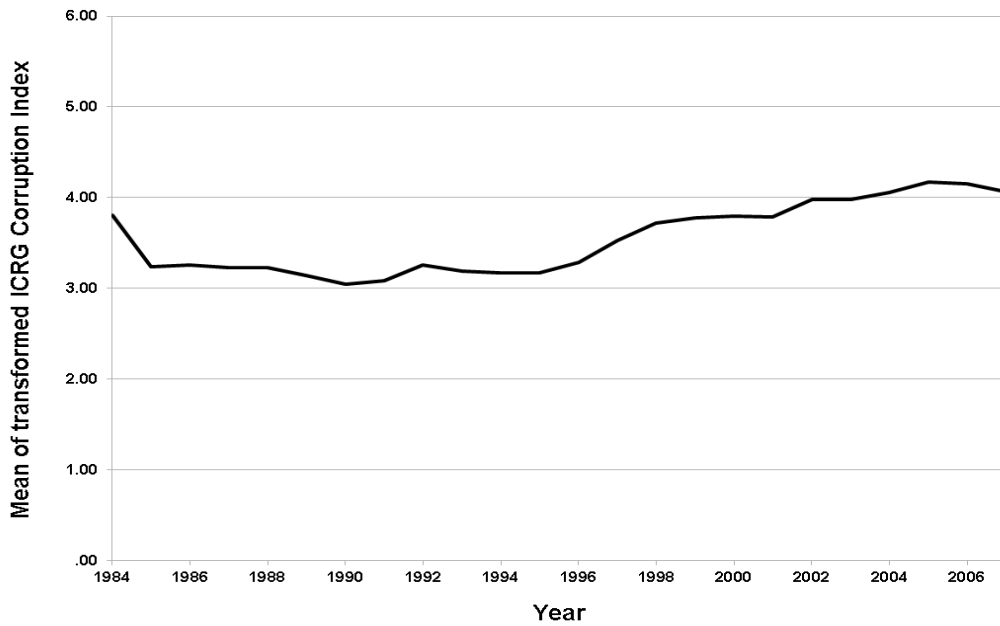


Figure 30: Corruption Central Asia and Eastern Europe, 1984-2007.

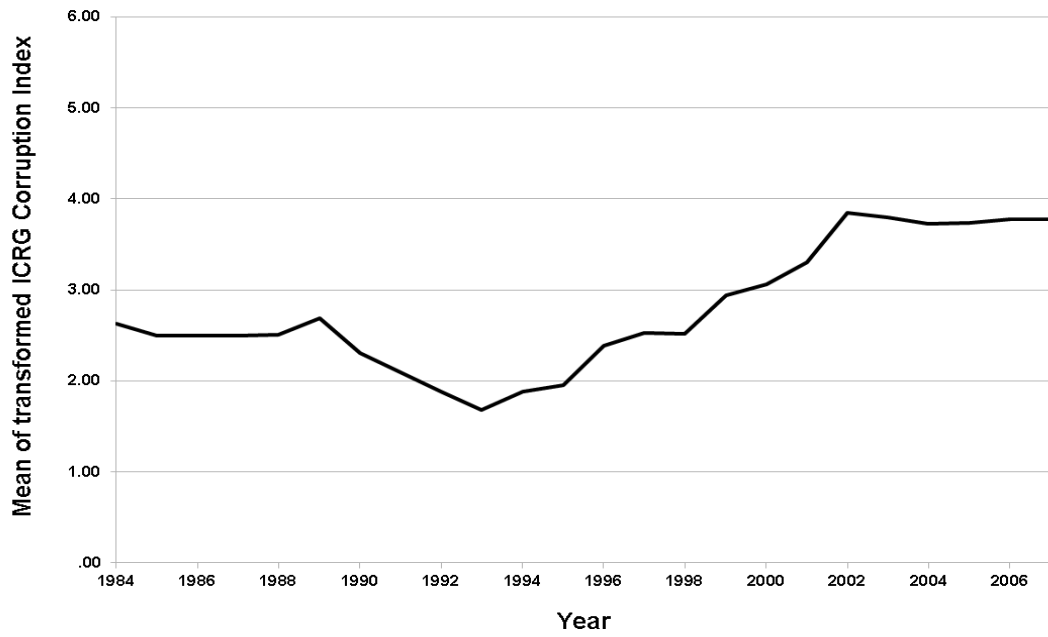


Figure 31: Corruption East Asia and Pacific, 1984-2007.

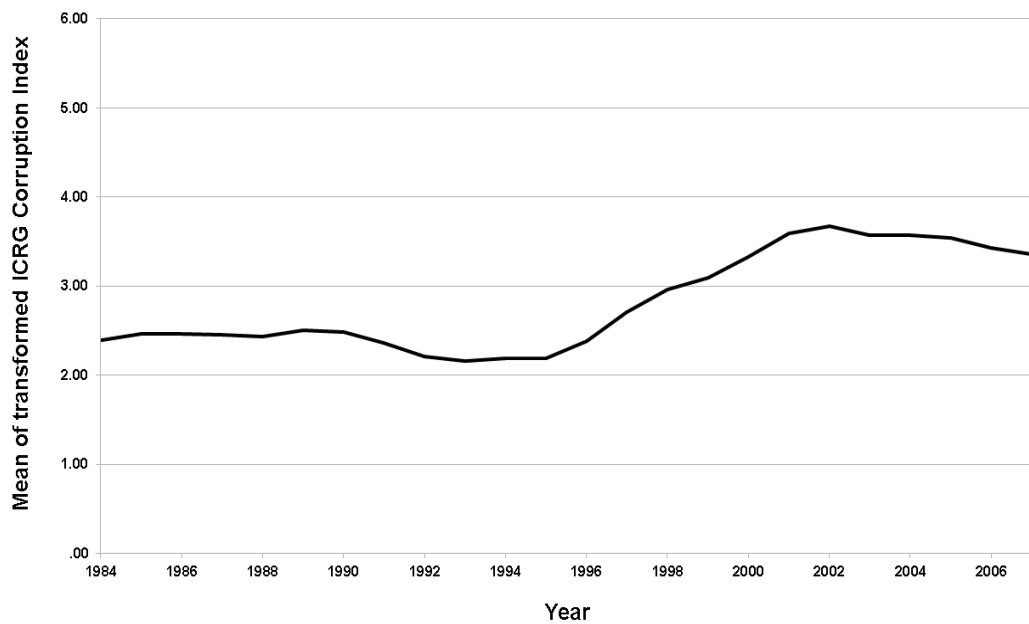


Figure 32: Corruption Europe (except Eastern Europe) and North America, 1984-2007.

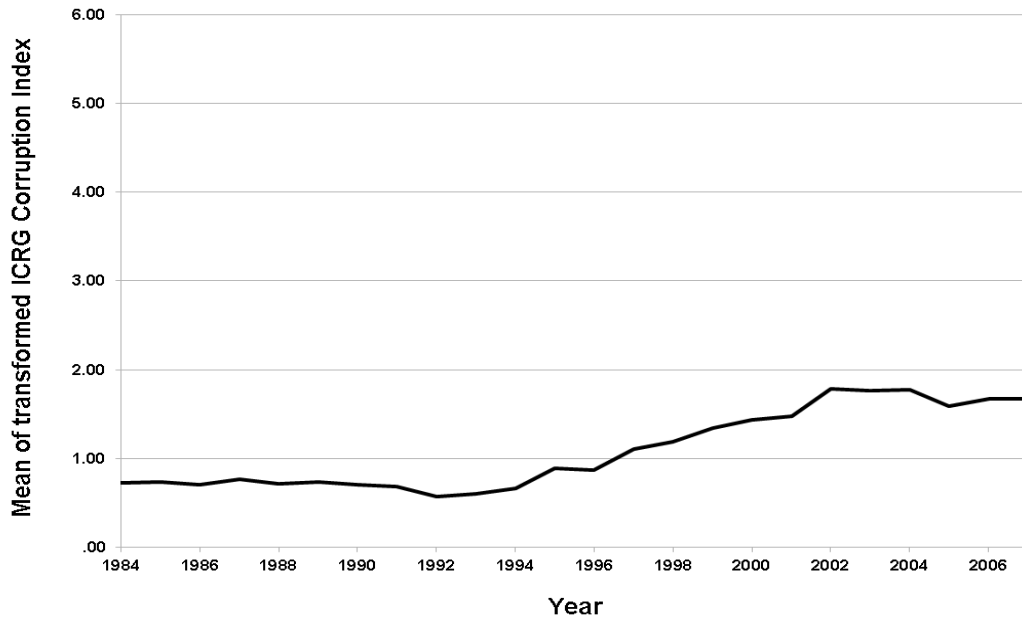


Figure 33: Corruption Latin America and Caribbean, 1984-2007.

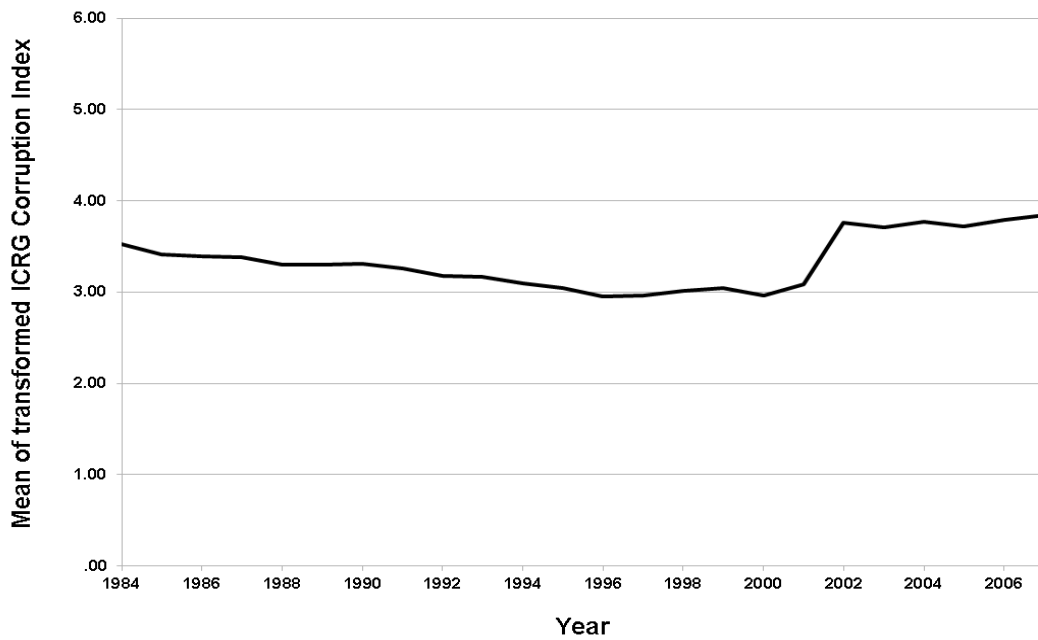


Figure 34: Corruption Middle East and North Africa, 1984-2007.

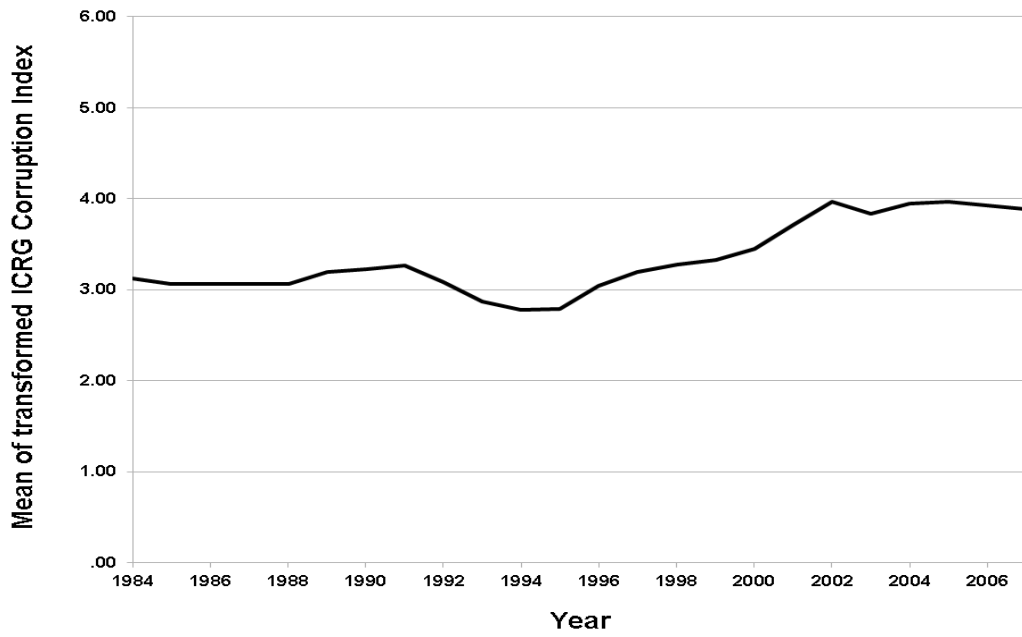


Figure 35: Corruption South Asia, 1984-2007.



Appendix II: Results from Statistical Tests

Table 1: Results from Pairwise Multicollinearity Checks.

Variable combination	R-square value
Involvement in a violent international conflict & Incidence of ethnic war in a neighbouring country	0.01
Level of GDP <i>per capita</i> & Population size	0
Level of GDP <i>per capita</i> & Vanhanen's Index of Power Resources	0.43
Level of GDP <i>per capita</i> & Status as oil exporter	0.02
Level of GDP <i>per capita</i> & Experience of British colonial rule	0.01
Level of GDP <i>per capita</i> & Experience of French colonial rule	0.04
Level of GDP <i>per capita</i> & Experience of colonial rule by other colonial power (non-British, non-French)	0.02
Level of GDP <i>per capita</i> & Level of ethnic fractionalisation	0.05
Level of GDP <i>per capita</i> & Level of democracy	0.12
Level of GDP <i>per capita</i> & Level of corruption	0.2
Level of GDP <i>per capita</i> & Majoritarian electoral system	0
Level of GDP <i>per capita</i> & Proportional electoral system	0.07
Level of GDP <i>per capita</i> & Mixed electoral system	0.01
Level of GDP <i>per capita</i> & Presidential form of government	0
Level of GDP <i>per capita</i> & Parliamentary form of government	0.06
Level of GDP <i>per capita</i> & Mixed form of government	0.02
Level of GDP <i>per capita</i> & Unitary state structure	0.06
Level of GDP <i>per capita</i> & Federal state structure	0.03
Level of GDP <i>per capita</i> & Mixed state structure	0.02
Vanhanen's Index of Power Resources & Population size	0
Vanhanen's Index of Power Resources & Level of ethnic fractionalisation	0.16
Vanhanen's Index of Power Resources & Level of democracy	0.38
Vanhanen's Index of Power Resources & Level of corruption	0.35
Vanhanen's Index of Power Resources & Status as oil exporter	0.01
Status as oil exporter & Level of democracy	0.05
Status as oil exporter & Level of corruption	0.04
Experience of British colonial rule & Level of democracy	0
Experience of British colonial rule & Level of corruption	0.03

Experience of British colonial rule & Majoritarian electoral system	0.09
Experience of British colonial rule & Proportional electoral system	0.05
Experience of British colonial rule & Mixed electoral system	0
Experience of British colonial rule & Presidential form of government	0
Experience of British colonial rule & Parliamentary form of government	0.02
Experience of British colonial rule & Mixed form of government	0.02
Experience of British colonial rule & Unitary state structure	0
Experience of British colonial rule & Federal state structure	0
Experience of British colonial rule & Mixed state structure	0.01
Experience of French colonial rule & Level of democracy	0.08
Experience of French colonial rule & Level of corruption	0.02
Experience of French colonial rule & Majoritarian electoral system	0.01
Experience of French colonial rule & Proportional electoral system	0.04
Experience of French colonial rule & Mixed electoral system	0
Experience of French colonial rule & Presidential form of government	0.02
Experience of French colonial rule & Parliamentary form of government	0.05
Experience of French colonial rule & Mixed form of government	0
Experience of French colonial rule & Unitary state structure	0.05
Experience of French colonial rule & Federal state structure	0.02
Experience of French colonial rule & Mixed state structure	0.02
Experience of colonial rule by other colonial power & Level of democracy	0.01
Experience of colonial rule by other colonial power & Level of corruption	0.04
Experience of colonial rule by other colonial power & Majoritarian electoral system	0
Experience of colonial rule by other colonial power & Proportional electoral system	0.01
Experience of colonial rule by other colonial power & Mixed electoral system	0
Experience of colonial rule by other colonial power & Presidential form of government	0
Experience of colonial rule by other colonial power & Parliamentary form of government	0.01
Experience of colonial rule by other colonial power & Mixed form of government	0

Experience of colonial rule by other colonial power & Unitary state structure	0
Experience of colonial rule by other colonial power & Federal state structure	0.01
Experience of colonial rule by other colonial power & Mixed state structure	0
Level of ethnic fractionalisation & Level of corruption	0.11
Level of ethnic fractionalisation & Majoritarian electoral system	0
Level of ethnic fractionalisation & Proportional electoral system	0.06
Level of ethnic fractionalisation & Mixed electoral system	0.01
Level of ethnic fractionalisation & Presidential form of government	0
Level of ethnic fractionalisation & Parliamentary form of government	0.06
Level of ethnic fractionalisation & Mixed form of government	0.02
Level of ethnic fractionalisation & Unitary state structure	0.01
Level of ethnic fractionalisation & Federal state structure	0
Level of ethnic fractionalisation & Mixed state structure	0.03
Majoritarian electoral system & Presidential form of government	0
Majoritarian electoral system & Parliamentary form of government	0.27
Majoritarian electoral system & Mixed form of government	0
Majoritarian electoral system & Unitary state structure	0.02
Majoritarian electoral system & Federal state structure	0.02
Majoritarian electoral system & Mixed state structure	0
Proportional electoral system & Presidential form of government	0.16
Proportional electoral system & Parliamentary form of government	0.04
Proportional electoral system & Mixed form of government	0.05
Proportional electoral system & Unitary state structure	0.02
Proportional electoral system & Federal state structure	0
Proportional electoral system & Mixed state structure	0.03
Mixed electoral system & Presidential form of government	0.02
Mixed electoral system & Parliamentary form of government	0.01
Mixed electoral system & Mixed form of government	0.03
Mixed electoral system & Unitary state structure	0
Mixed electoral system & Federal state structure	0
Mixed electoral system & Mixed state structure	0
Presidential form of government & Unitary state structure	0

Presidential form of government & Federal state structure	0.01
Presidential form of government & Mixed state structure	0
Parliamentary form of government & Unitary state structure	0.04
Parliamentary form of government & Federal state structure	0.01
Parliamentary form of government & Mixed state structure	0.04
Mixed form of government & Unitary state structure	0.01
Mixed form of government & Federal state structure	0
Mixed form of government & Mixed state structure	0.01

Table 2: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (corruption variable not squared).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.206* (0.120)	0.202* (0.122)	0.207* (0.122)	0.213* (0.123)	0.250* (0.128)	0.234* (0.131)	0.208 (0.135)	0.178 (0.136)	0.132 (0.138)
Status as oil exporter	-0.644* (0.345)	-0.681* (0.361)	-0.725** (0.363)	-0.729** (0.362)	-1.163*** (0.434)	-1.049** (0.478)	-0.901* (0.488)	-0.857* (0.491)	-0.734 (0.497)
Incidence of ethnic war in a neighbouring country	0.679** (0.286)	0.667** (0.296)	0.607** (0.301)	0.607** (0.301)	0.684** (0.317)	0.663** (0.319)	0.578* (0.326)	0.520 (0.330)	0.349 (0.345)
Level of ethnic fractionalisation	0.647 (0.608)	0.646 (0.630)	0.622 (0.628)	0.674 (0.637)	0.550 (0.683)	0.438 (0.711)	0.548 (0.720)	0.540 (0.720)	0.190 (0.739)
Level of socioeconomic inequalities ^a	0.024 (0.017)	0.025 (0.019)	0.027 (0.019)	0.026 (0.019)	0.024 (0.019)	0.026 (0.019)	0.030 (0.019)	0.049* (0.026)	0.046** (0.021)
Level of democracy ^a		-0.001 (0.026)	-0.002 (0.026)	0.000 (0.026)	-0.002 (0.028)	0.000 (0.029)	0.003 (0.029)	0.007 (0.029)	0.019 (0.030)
Level of democracy squared ^a		-0.001 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.003 (0.006)	-0.004 (0.006)	-0.004 (0.007)
Involvement in violent international conflict			0.612 (0.591)	0.621 (0.593)	0.799 (0.621)	0.796 (0.624)	0.681 (0.626)	0.689 (0.630)	0.760 (0.623)
Recent experience of political instability ^a				-0.185 (0.379)	-0.162 (0.393)	-0.147 (0.393)	-0.136 (0.394)	-0.129 (0.392)	-0.211 (0.395)
Per cent of mountainous terrain					-0.006 (0.008)	-0.004 (0.008)	-0.005 (0.008)	-0.007 (0.009)	-0.007 (0.008)
Noncontiguous country structure					0.560 (0.377)	0.469 (0.412)	0.285 (0.435)	0.352 (0.443)	0.398 (0.439)
Experience of colonial rule ^b						0.215 (0.386)	0.302 (0.396)	0.161 (0.420)	0.025 (0.421)
Ln population size ^a							0.155 (0.115)	0.162 (0.116)	0.179 (0.117)
GDP <i>per capita</i> ^a								-0.063 (0.057)	
Ln GDP <i>per capita</i> ^a									-0.571** (0.280)
Peace duration	-1.763*** (0.179)	-1.754*** (0.179)	-1.767*** (0.182)	-1.766*** (0.181)	-1.777*** (0.183)	-1.765*** (0.183)	-1.756*** (0.183)	-1.753*** (0.184)	-1.702*** (0.182)
Spline_1	-0.017*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)
Spline_2	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.002)	0.008*** (0.001)
Spline_3	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Constant	0.725 (0.630)	0.767 (0.711)	0.802 (0.710)	0.809 (0.714)	0.765 (0.780)	0.693 (0.789)	0.263 (0.860)	0.569 (0.900)	1.267 (0.973)
Observations	2715	2702	2702	2702	2655	2655	2655	2650	2650

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 3: Logit Analysis of the Effects of Presidentialism on the Risk of Ethnic Civil War, 1955-2007 (basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Presidential form of government ^a	0.230 (0.279)	0.248 (0.279)	0.246 (0.278)	0.104 (0.294)	0.023 (0.295)	0.163 (0.322)	0.156 (0.323)	0.020 (0.334)
Ln GDP <i>per capita</i> ^a	0.158* (0.093)	0.153 (0.093)	0.153 (0.093)	0.174* (0.093)	0.173* (0.093)	0.159* (0.094)	0.184* (0.097)	0.236** (0.102)
Ln population size ^a	0.278*** (0.061)	0.267*** (0.062)	0.270*** (0.062)	0.280*** (0.063)	0.259*** (0.063)	0.299*** (0.064)	0.303*** (0.064)	0.307*** (0.071)
Incidence of ethnic war in a neighbouring country	0.600*** (0.193)	0.578*** (0.194)	0.573*** (0.194)	0.396** (0.200)	0.369* (0.205)	0.388* (0.204)	0.388* (0.204)	0.249 (0.222)
Level of ethnic fractionalisation	1.387*** (0.376)	1.411*** (0.376)	1.382*** (0.378)	1.102*** (0.392)	1.323*** (0.389)	0.834** (0.402)	0.858** (0.404)	0.591 (0.441)
Level of socioeconomic inequalities ^a	-0.006 (0.011)	-0.005 (0.011)	-0.004 (0.011)	0.002 (0.011)	-0.001 (0.011)	0.025* (0.014)	0.023 (0.014)	0.028* (0.015)
Involvement in violent international conflict		0.445 (0.388)	0.444 (0.387)	0.635* (0.383)	0.648* (0.378)	0.697* (0.378)	0.720* (0.376)	0.914** (0.395)
Recent experience of political instability ^a			0.187 (0.234)	0.166 (0.238)	0.091 (0.244)	0.137 (0.248)	0.121 (0.249)	0.118 (0.257)
Experience of colonial rule ^b				0.790*** (0.194)		0.827*** (0.199)	0.806*** (0.201)	1.193*** (0.238)
Experience of colonial rule (British) ^b					0.525** (0.222)			
Experience of colonial rule (Non-British, Non-French) ^b					1.062*** (0.251)			
Level of democracy ^a						-0.031* (0.017)	-0.035** (0.017)	-0.019 (0.018)
Level of democracy squared ^a						-0.008** (0.004)	-0.008** (0.004)	-0.010** (0.004)
Status as oil exporter							-0.280 (0.257)	-0.024 (0.273)
Per cent of mountainous terrain								0.008* (0.005)
Noncontiguous country structure								-0.263 (0.285)
Peace duration	-1.893*** (0.112)	-1.902*** (0.113)	-1.896*** (0.113)	-1.838*** (0.111)	-1.841*** (0.111)	-1.826*** (0.112)	-1.829*** (0.112)	-1.797*** (0.115)
Spline_1	-0.020*** (0.002)	-0.021*** (0.002)	-0.021*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.019*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	-0.052 (0.309)	-0.046 (0.309)	-0.079 (0.312)	-0.354 (0.325)	-0.277 (0.323)	-0.094 (0.367)	-0.059 (0.369)	-0.246 (0.419)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 4: Logit Analysis of the Effects of Majoritarian Electoral Systems on the Risk of Ethnic Civil War, 1955-2007 (basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Majoritarian electoral system ^a	-0.046 (0.228)	-0.044 (0.228)	-0.049 (0.228)	-0.225 (0.234)	-0.180 (0.237)	-0.030 (0.283)	-0.026 (0.284)	0.165 (0.302)
Ln GDP <i>per capita</i> ^a	0.162* (0.093)	0.158* (0.093)	0.157* (0.093)	0.170* (0.093)	0.170* (0.093)	0.157 (0.095)	0.182* (0.098)	0.246** (0.104)
Ln population size ^a	0.285*** (0.062)	0.275*** (0.062)	0.278*** (0.062)	0.292*** (0.064)	0.266*** (0.063)	0.303*** (0.064)	0.307*** (0.064)	0.306*** (0.070)
Incidence of ethnic war in a neighbouring country	0.556*** (0.187)	0.533*** (0.188)	0.527*** (0.188)	0.365* (0.195)	0.354* (0.197)	0.361* (0.197)	0.363* (0.197)	0.237 (0.214)
Level of ethnic fractionalisation	1.389*** (0.376)	1.413*** (0.376)	1.384*** (0.379)	1.064*** (0.394)	1.299*** (0.390)	0.839** (0.403)	0.862** (0.405)	0.599 (0.441)
Level of socioeconomic inequalities ^a	-0.005 (0.011)	-0.005 (0.012)	-0.004 (0.012)	0.005 (0.012)	0.001 (0.011)	0.025* (0.014)	0.023 (0.014)	0.029* (0.015)
Involvement in violent international conflict		0.424 (0.387)	0.423 (0.386)	0.626 (0.380)	0.642* (0.376)	0.697* (0.378)	0.721* (0.376)	0.911** (0.397)
Recent experience of political instability ^a			0.188 (0.234)	0.172 (0.239)	0.096 (0.244)	0.128 (0.248)	0.112 (0.249)	0.122 (0.257)
Experience of colonial rule ^b				0.833*** (0.197)		0.840*** (0.200)	0.818*** (0.201)	1.192*** (0.236)
Experience of colonial rule (British) ^b					0.564** (0.226)			
Experience of colonial rule (Non-British, Non-French) ^b					1.070*** (0.249)			
Level of democracy ^a						-0.028 (0.020)	-0.032 (0.020)	-0.024 (0.021)
Level of democracy squared ^a						-0.008** (0.004)	-0.008** (0.004)	-0.010** (0.004)
Status as oil exporter							-0.283 (0.258)	-0.015 (0.273)
Per cent of mountainous terrain								0.008* (0.005)
Noncontiguous country structure								-0.305 (0.294)
Peace duration	-1.895*** (0.112)	-1.904*** (0.113)	-1.898*** (0.113)	-1.833*** (0.111)	-1.837*** (0.111)	-1.827*** (0.112)	-1.830*** (0.112)	-1.798*** (0.115)
Spline_1	-0.020*** (0.002)	-0.021*** (0.002)	-0.021*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	-0.021 (0.308)	-0.013 (0.309)	-0.046 (0.312)	-0.340 (0.326)	-0.264 (0.323)	-0.064 (0.367)	-0.029 (0.368)	-0.277 (0.422)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 5: Logit Analysis of the Effects of Majoritarian Electoral Systems without Communal Rolls or Seat Reservations on the Risk of Ethnic Civil War, 1955-2007 (basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Majoritarian electoral system without communal rolls or seat reservations ^a	-0.164 (0.258)	-0.151 (0.258)	-0.161 (0.258)	-0.341 (0.264)	-0.353 (0.268)	-0.214 (0.285)	-0.221 (0.286)	-0.031 (0.3020)
Ln GDP <i>per capita</i> ^a	0.164* (0.093)	0.160* (0.093)	0.160* (0.093)	0.179* (0.093)	0.178* (0.093)	0.156* (0.094)	0.181* (0.097)	0.236** (0.102)
Ln population size ^a	0.287*** (0.061)	0.276*** (0.062)	0.280*** (0.062)	0.291*** (0.063)	0.267*** (0.063)	0.306*** (0.064)	0.309*** (0.064)	0.308*** (0.070)
Incidence of ethnic war in a neighbouring country	0.549*** (0.187)	0.527*** (0.188)	0.521*** (0.188)	0.352* (0.195)	0.337* (0.198)	0.353* (0.198)	0.355* (0.198)	0.246 (0.214)
Level of ethnic fractionalisation	1.382*** (0.376)	1.406*** (0.376)	1.376*** (0.379)	1.063*** (0.393)	1.297*** (0.390)	0.830** (0.402)	0.853** (0.404)	0.591 (0.441)
Level of socioeconomic inequalities ^a	-0.005 (0.012)	-0.004 (0.012)	-0.003 (0.012)	0.005 (0.012)	0.002 (0.012)	0.025* (0.014)	0.023 (0.014)	0.028* (0.015)
Involvement in violent international conflict		0.415 (0.388)	0.414 (0.387)	0.617 (0.383)	0.632* (0.378)	0.694* (0.378)	0.719* (0.376)	0.913** (0.395)
Recent experience of political instability ^a			0.193 (0.234)	0.177 (0.239)	0.102 (0.244)	0.128 (0.248)	0.112 (0.249)	0.117 (0.257)
Experience of colonial rule ^b				0.840*** (0.196)		0.853*** (0.199)	0.831*** (0.201)	1.195*** (0.236)
Experience of colonial rule (British) ^b					0.564** (0.223)			
Experience of colonial rule (Non-British, Non-French) ^b					1.096*** (0.250)			
Level of democracy ^a						-0.024 (0.018)	-0.027 (0.018)	-0.018 (0.019)
Level of democracy squared ^a						-0.009** (0.004)	-0.008** (0.004)	-0.010** (0.004)
Status as oil exporter							-0.287 (0.258)	-0.026 (0.274)
Per cent of mountainous terrain								0.008* (0.005)
Noncontiguous country structure								-0.258 (0.290)
Peace duration	-1.894*** (0.112)	-1.903*** (0.113)	-1.896*** (0.113)	-1.832*** (0.111)	-1.834*** (0.111)	-1.825*** (0.112)	-1.828*** (0.112)	-1.797*** (0.115)
Spline_1	-0.020*** (0.002)	-0.021*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.019*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	-0.009 (0.309)	-0.002 (0.309)	-0.036 (0.312)	-0.334 (0.326)	-0.256 (0.324)	-0.040 (0.367)	-0.003 (0.369)	-0.238 (0.423)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 6: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	1.911*** (0.589)	1.929*** (0.589)	1.904*** (0.587)	1.535*** (0.590)	1.522** (0.597)	1.588** (0.617)	1.587** (0.617)	1.648** (0.637)
Ln GDP <i>per capita</i> ^a	0.179* (0.093)	0.174* (0.093)	0.174* (0.093)	0.187** (0.093)	0.184** (0.093)	0.178* (0.094)	0.203** (0.097)	0.253** (0.102)
Ln population size ^a	0.278*** (0.061)	0.267*** (0.062)	0.270*** (0.062)	0.276*** (0.063)	0.256*** (0.063)	0.298*** (0.064)	0.301*** (0.064)	0.304*** (0.071)
Incidence of ethnic war in a neighbouring country	0.602*** (0.187)	0.577*** (0.188)	0.572*** (0.188)	0.424** (0.194)	0.420** (0.198)	0.407** (0.198)	0.409** (0.198)	0.291 (0.215)
Level of ethnic fractionalisation	1.393*** (0.378)	1.418*** (0.378)	1.390*** (0.381)	1.127*** (0.394)	1.338*** (0.391)	0.871** (0.404)	0.894** (0.406)	0.651 (0.444)
Level of socioeconomic inequalities ^a	-0.005 (0.011)	-0.004 (0.011)	-0.004 (0.011)	0.002 (0.012)	0.000 (0.011)	0.026* (0.014)	0.024 (0.014)	0.029* (0.015)
Involvement in violent international conflict		0.455 (0.390)	0.453 (0.388)	0.639* (0.385)	0.660* (0.380)	0.689* (0.381)	0.712* (0.379)	0.912** (0.399)
Recent experience of political instability ^a			0.165 (0.234)	0.152 (0.237)	0.080 (0.242)	0.132 (0.248)	0.116 (0.249)	0.119 (0.257)
Experience of colonial rule ^b				0.733*** (0.196)		0.776*** (0.200)	0.754*** (0.202)	1.130*** (0.240)
Experience of colonial rule (British) ^b					0.446** (0.224)			
Experience of colonial rule (Non-British, Non-French) ^b					1.013*** (0.248)			
Level of democracy ^a						-0.034** (0.017)	-0.038** (0.017)	-0.024 (0.018)
Level of democracy squared ^a						-0.008** (0.004)	-0.008** (0.004)	-0.009** (0.004)
Status as oil exporter							-0.284 (0.259)	-0.019 (0.275)
Per cent of mountainous terrain								0.008* (0.005)
Noncontiguous country structure								-0.261 (0.285)
Peace duration	-1.899*** (0.112)	-1.909*** (0.113)	-1.903*** (0.113)	-1.848*** (0.111)	-1.849*** (0.111)	-1.837*** (0.112)	-1.840*** (0.112)	-1.809*** (0.115)
Spline_1	-0.021*** (0.002)	-0.021*** (0.002)	-0.021*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	-0.059 (0.310)	-0.052 (0.310)	-0.080 (0.313)	-0.345 (0.326)	-0.293 (0.324)	-0.122 (0.366)	-0.087 (0.368)	-0.332 (0.422)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 7: Logit Analysis of the Effects of Institutional Combinations on the Risk of Ethnic Civil War, 1955-2007; Baseline: Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure (basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and non-unitary state structure ^a	-0.419 (0.740)	-0.395 (0.738)	-0.410 (0.732)	-0.841 (0.788)	-0.976 (0.829)	-0.732 (0.862)	-0.722 (0.870)	-0.823 (0.908)
Combination of a presidential form of government, non-majoritarian electoral system and unitary state structure ^a	-0.118 (0.386)	-0.107 (0.385)	-0.119 (0.386)	-0.124 (0.411)	-0.196 (0.401)	-0.132 (0.540)	-0.156 (0.543)	-0.258 (0.568)
Combination of a presidential form of government, non-majoritarian electoral system and non-unitary state structure ^a	-0.922 (0.582)	-0.895 (0.582)	-0.886 (0.581)	-1.304** (0.659)	-1.580** (0.690)	-1.148 (0.775)	-1.169 (0.777)	-1.285 (0.804)
Combination of a non-presidential form of government, majoritarian electoral system and unitary state structure ^a	-0.609* (0.356)	-0.594* (0.356)	-0.638* (0.359)	-0.720** (0.362)	-0.614* (0.369)	-0.594 (0.543)	-0.594 (0.544)	-0.462 (0.558)
Combination of a non-presidential form of government, majoritarian electoral system and non-unitary state structure ^a	-0.284 (0.339)	-0.296 (0.340)	-0.279 (0.340)	-0.433 (0.345)	-0.441 (0.348)	-0.321 (0.533)	-0.343 (0.535)	-0.215 (0.567)
Combination of a non-presidential form of government, non-majoritarian electoral system and unitary state structure ^a	0.063 (0.414)	0.062 (0.413)	0.041 (0.411)	0.125 (0.402)	0.133 (0.401)	0.309 (0.601)	0.288 (0.603)	0.201 (0.634)
Combination of a non-presidential form of government, non-majoritarian electoral system and non-unitary state structure ^a	-1.371** (0.556)	-1.341** (0.556)	-1.389** (0.564)	-1.182** (0.555)	-1.226** (0.554)	-0.949 (0.725)	-0.909 (0.721)	-0.821 (0.743)
Ln GDP per capita ^a	0.194** (0.095)	0.190** (0.096)	0.189** (0.095)	0.199** (0.095)	0.204** (0.096)	0.160 (0.098)	0.182* (0.102)	0.243** (0.108)
Ln population size ^a	0.326*** (0.065)	0.317*** (0.066)	0.321*** (0.066)	0.343*** (0.067)	0.323*** (0.067)	0.347*** (0.068)	0.349*** (0.068)	0.336*** (0.073)
Incidence of ethnic war in a neighbouring country	0.451** (0.196)	0.437** (0.197)	0.430** (0.197)	0.238 (0.204)	0.202 (0.208)	0.249 (0.208)	0.254 (0.208)	0.145 (0.224)
Level of ethnic fractionalisation	1.294*** (0.381)	1.316*** (0.382)	1.264*** (0.386)	0.970** (0.401)	1.247*** (0.402)	0.826** (0.407)	0.842** (0.408)	0.640 (0.454)
Level of socioeconomic inequalities ^a	-0.003 (0.014)	-0.003 (0.014)	-0.002 (0.014)	0.007 (0.014)	0.004 (0.014)	0.018 (0.016)	0.016 (0.016)	0.022 (0.017)
Involvement in violent international conflict		0.317 (0.384)	0.311 (0.383)	0.526 (0.378)	0.550 (0.373)	0.630* (0.375)	0.652* (0.374)	0.848** (0.394)
Recent experience of political instability ^a			0.244 (0.236)	0.218 (0.241)	0.131 (0.247)	0.142 (0.251)	0.124 (0.252)	0.137 (0.260)
Experience of colonial rule ^b				0.871*** (0.200)		0.875*** (0.207)	0.855*** (0.209)	1.203*** (0.242)
Experience of colonial rule (British) ^b					0.586** (0.229)			
Experience of colonial rule (Non-British, Non-French) ^b					1.161*** (0.260)			
Level of democracy ^a						-0.006 (0.034)	-0.008 (0.035)	0.002 (0.036)
Level of democracy squared ^a						-0.007* (0.004)	-0.007* (0.004)	-0.009** (0.004)
Status as oil exporter							-0.230 (0.260)	0.002 (0.277)
Per cent of mountainous terrain								0.008* (0.005)
Noncontiguous country structure								-0.138 (0.314)
Peace duration	-1.882*** (0.112)	-1.889*** (0.112)	-1.881*** (0.113)	-1.821*** (0.11)	-1.826*** (0.111)	-1.826*** (0.112)	-1.829*** (0.112)	-1.800*** (0.115)
Spline_1	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.019*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	0.067 (0.324)	0.070 (0.324)	0.038 (0.326)	-0.309 (0.343)	-0.253 (0.344)	-0.026 (0.426)	0.012 (0.428)	-0.219 (0.473)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 8: Logit Analysis of the Effects of Institutional Combinations on the Risk of Ethnic Civil War, 1955-2007; Baseline: Institutional Combinations of a Non-Presidential Form of Government, Non-Majoritarian Electoral System for the Legislature and Non-Unitary State Structure (basically closed regimes in sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	1.863*** (0.593)	1.881*** (0.593)	1.851*** (0.591)	1.399** (0.595)	1.381** (0.604)	1.758*** (0.663)	1.738*** (0.663)	1.809*** (0.687)
Combination of a presidential form of government, majoritarian electoral system and non-unitary state structure ^a	-0.059 (0.745)	-0.034 (0.743)	-0.043 (0.738)	-0.491 (0.792)	-0.624 (0.834)	0.038 (0.808)	0.031 (0.815)	-0.086 (0.846)
Combination of a presidential form of government, non-majoritarian electoral system and unitary state structure ^a	0.083 (0.384)	0.094 (0.384)	0.088 (0.384)	0.054 (0.408)	0.008 (0.397)	0.477 (0.502)	0.439 (0.505)	0.317 (0.528)
Combination of a presidential form of government, non-majoritarian electoral system and non-unitary state structure ^a	-0.630 (0.576)	-0.599 (0.575)	-0.591 (0.575)	-1.017 (0.649)	-1.287* (0.678)	-0.368 (0.719)	-0.407 (0.721)	-0.535 (0.739)
Combination of a non-presidential form of government, majoritarian electoral system and unitary state structure ^a	-0.452 (0.357)	-0.436 (0.357)	-0.468 (0.360)	-0.562 (0.361)	-0.440 (0.368)	0.123 (0.477)	0.105 (0.477)	0.225 (0.487)
Combination of a non-presidential form of government, majoritarian electoral system and non-unitary state structure ^a	-0.105 (0.338)	-0.121 (0.340)	-0.106 (0.339)	-0.269 (0.344)	-0.262 (0.346)	0.394 (0.466)	0.354 (0.467)	0.470 (0.492)
Combination of a non-presidential form of government, non-majoritarian electoral system and unitary state structure ^a	0.326 (0.403)	0.318 (0.401)	0.305 (0.399)	0.356 (0.389)	0.364 (0.387)	1.064** (0.509)	1.025** (0.510)	0.906* (0.540)
Ln GDP per capita ^a	0.164* (0.095)	0.160* (0.095)	0.158* (0.095)	0.172* (0.095)	0.172* (0.095)	0.157 (0.096)	0.179* (0.100)	0.239** (0.105)
Ln population size ^a	0.301*** (0.065)	0.290*** (0.065)	0.293*** (0.065)	0.315*** (0.067)	0.297*** (0.067)	0.338*** (0.068)	0.340*** (0.068)	0.330*** (0.073)
Incidence of ethnic war in a neighbouring country	0.556*** (0.195)	0.538*** (0.196)	0.532*** (0.196)	0.334 (0.204)	0.315 (0.209)	0.293 (0.208)	0.296 (0.208)	0.191 (0.225)
Level of ethnic fractionalisation	1.364*** (0.382)	1.389*** (0.382)	1.351*** (0.382)	1.056*** (0.402)	1.339*** (0.401)	0.896** (0.409)	0.911** (0.411)	0.720 (0.458)
Level of socioeconomic inequalities ^a	-0.007 (0.013)	-0.006 (0.013)	-0.005 (0.013)	0.003 (0.014)	0.000 (0.014)	0.024 (0.016)	0.022 (0.016)	0.028* (0.016)
Involvement in violent international conflict		0.412 (0.387)	0.407 (0.386)	0.605 (0.380)	0.626* (0.375)	0.667* (0.378)	0.687* (0.376)	0.883** (0.398)
Recent experience of political instability ^a			0.183 (0.236)	0.164 (0.240)	0.077 (0.246)	0.166 (0.249)	0.149 (0.251)	0.158 (0.259)
Experience of colonial rule ^b				0.835*** (0.202)		0.862*** (0.207)	0.841*** (0.208)	1.176*** (0.243)
Experience of colonial rule (British) ^b					0.506** (0.234)			
Experience of colonial rule (Non-British, Non-French) ^b					1.127*** (0.257)			
Level of democracy ^a						-0.059** (0.029)	-0.060** (0.029)	-0.049 (0.030)
Level of democracy squared ^a						-0.008** (0.004)	-0.008** (0.004)	-0.010** (0.004)
Status as oil exporter							-0.229 (0.261)	-0.001 (0.279)
Per cent of mountainous terrain								0.008 (0.005)
Noncontiguous country structure								-0.157 (0.314)
Peace duration	-1.904*** (0.112)	-1.912*** (0.113)	-1.906*** (0.113)	-1.843*** (0.111)	-1.848*** (0.111)	-1.836*** (0.112)	-1.839*** (0.112)	-1.811*** (0.116)
Spline_1	-0.021*** (0.002)	-0.021*** (0.002)	-0.021*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)	-0.020*** (0.002)
Spline_2	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)	0.009*** (0.001)
Spline_3	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Constant	-0.048 (0.325)	-0.044 (0.325)	-0.068 (0.327)	-0.379 (0.343)	-0.343 (0.346)	-0.383 (0.416)	-0.336 (0.419)	-0.551 (0.471)
Observations	6093	6093	6090	6090	6090	6049	6049	5817

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 9: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 1 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	2.620** (1.118)	2.660** (1.120)	2.652** (1.114)	2.248** (1.110)	2.335** (1.134)	1.779 (1.135)	1.771 (1.135)	1.727 (1.137)
Ln GDP <i>per capita</i> ^a	0.640*** (0.189)	0.644*** (0.189)	0.649*** (0.190)	0.673*** (0.189)	0.697*** (0.201)	0.511** (0.209)	0.520** (0.209)	0.539** (0.224)
Ln population size ^a	0.211* (0.126)	0.198 (0.127)	0.198 (0.127)	0.156 (0.129)	0.152 (0.130)	0.216 (0.137)	0.219 (0.138)	0.360** (0.164)
Incidence of ethnic war in a neighbouring country	1.617*** (0.488)	1.612*** (0.491)	1.617*** (0.491)	1.517*** (0.495)	1.486*** (0.506)	1.533*** (0.504)	1.524*** (0.508)	1.332** (0.528)
Level of ethnic fractionalisation	0.610 (1.014)	0.663 (1.019)	0.640 (1.019)	0.532 (1.033)	0.516 (1.039)	-0.090 (1.088)	-0.084 (1.090)	-0.671 (1.152)
Level of socioeconomic inequalities ^a	-0.019 (0.019)	-0.019 (0.019)	-0.021 (0.020)	-0.010 (0.021)	-0.010 (0.021)	0.026 (0.028)	0.025 (0.028)	0.028 (0.028)
Involvement in violent international conflict		0.737 (0.908)	0.744 (0.913)	0.897 (0.939)	0.893 (0.948)	1.232 (0.924)	1.221 (0.925)	1.375 (0.951)
Recent experience of political instability ^a			-0.215 (0.647)	0.015 (0.660)	0.049 (0.670)	-0.306 (0.678)	-0.307 (0.678)	-0.486 (0.688)
Experience of colonial rule ^b				0.758 (0.472)		0.716 (0.501)	0.704 (0.506)	1.145** (0.563)
Experience of colonial rule (British) ^b					0.900 (0.553)			
Experience of colonial rule (Non-British, Non-French) ^b					0.653 (0.615)			
Level of democracy ^a						0.116 (0.106)	0.118 (0.106)	0.105 (0.111)
Level of democracy squared ^a						-0.027** (0.013)	-0.027** (0.013)	-0.025* (0.014)
Status as oil exporter							-0.173 (0.901)	0.011 (0.842)
Per cent of mountainous terrain								0.010 (0.011)
Noncontiguous country structure								-0.771 (0.522)
Peace duration	-2.489*** (0.293)	-2.502*** (0.295)	-2.507*** (0.296)	-2.400*** (0.295)	-2.378*** (0.297)	-2.377*** (0.298)	-2.375*** (0.298)	-2.328*** (0.297)
Spline_1	-0.029*** (0.004)	-0.029*** (0.004)	-0.029*** (0.004)	-0.027*** (0.004)	-0.027*** (0.004)	-0.027*** (0.004)	-0.027*** (0.004)	-0.027*** (0.004)
Spline_2	0.013*** (0.002)	0.013*** (0.002)	0.013*** (0.002)	0.013*** (0.002)	0.013*** (0.002)	0.013*** (0.002)	0.013*** (0.002)	0.012*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	0.306 (0.657)	0.302 (0.658)	0.345 (0.671)	-0.017 (0.723)	-0.034 (0.722)	0.444 (0.798)	0.454 (0.800)	0.086 (0.930)

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 10: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 2 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	2.005** (0.818)	2.063** (0.823)	2.071** (0.824)	1.630** (0.813)	1.485* (0.813)	1.432 (0.892)	1.372 (0.889)	1.371 (0.917)
Ln GDP <i>per capita</i> ^a	0.554*** (0.175)	0.553*** (0.178)	0.556*** (0.178)	0.572*** (0.176)	0.635*** (0.186)	0.512*** (0.183)	0.519*** (0.184)	0.500** (0.199)
Ln population size ^a	0.241** (0.110)	0.211* (0.112)	0.206* (0.113)	0.171 (0.115)	0.127 (0.117)	0.251** (0.124)	0.242* (0.125)	0.399** (0.154)
Incidence of ethnic war in a neighbouring country	1.118*** (0.416)	1.106*** (0.421)	1.133*** (0.428)	0.886** (0.440)	0.804* (0.439)	0.978** (0.472)	0.961** (0.478)	0.939* (0.488)
Level of ethnic fractionalisation	0.714 (0.777)	0.844 (0.785)	0.855 (0.786)	1.049 (0.797)	1.270 (0.829)	0.429 (0.834)	0.448 (0.834)	-0.188 (0.942)
Level of socioeconomic inequalities ^a	-0.013 (0.017)	-0.012 (0.018)	-0.013 (0.018)	0.001 (0.019)	0.005 (0.019)	0.032 (0.023)	0.031 (0.023)	0.038 (0.024)
Involvement in violent international conflict		1.418* (0.793)	1.420* (0.797)	1.624** (0.801)	1.684** (0.809)	1.875** (0.792)	1.868** (0.790)	1.991** (0.808)
Recent experience of political instability ^a			-0.178 (0.489)	-0.064 (0.489)	0.029 (0.507)	-0.113 (0.490)	-0.123 (0.494)	-0.351 (0.512)
Experience of colonial rule ^b				0.942** (0.415)		0.909* (0.467)	0.931** (0.473)	1.030** (0.512)
Experience of colonial rule (British) ^b					1.532*** (0.479)			
Experience of colonial rule (Non-British, Non-French) ^b					1.103** (0.501)			
Level of democracy ^a						0.006 (0.097)	0.007 (0.097)	0.083 (0.129)
Level of democracy squared ^a						-0.017 (0.011)	-0.017 (0.011)	-0.027* (0.015)
Status as oil exporter							-1.038 (1.382)	-0.957 (1.293)
Per cent of mountainous terrain								0.003 (0.011)
Noncontiguous country structure								-0.771 (0.518)
Peace duration	-2.121*** (0.234)	-2.160*** (0.239)	-2.168*** (0.241)	-2.049*** (0.235)	-1.975*** (0.231)	-2.063*** (0.251)	-2.047*** (0.251)	-2.049*** (0.253)
Spline_1	-0.025*** (0.003)	-0.025*** (0.003)	-0.025*** (0.003)	-0.024*** (0.003)	-0.022*** (0.003)	-0.023*** (0.004)	-0.023*** (0.004)	-0.023*** (0.004)
Spline_2	0.012*** (0.002)	0.012*** (0.002)	0.012*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	0.001 (0.558)	-0.002 (0.560)	0.036 (0.569)	-0.567 (0.641)	-0.756 (0.643)	0.019 (0.704)	0.057 (0.705)	0.023 (0.876)
Observations	2651	2651	2651	2651	2651	2639	2639	2563

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 11: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 3 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	2.700*** (0.870)	2.702*** (0.867)	2.704*** (0.866)	2.350*** (0.876)	2.146** (0.897)	2.286** (0.963)	2.256** (0.965)	2.242** (1.019)
Ln GDP <i>per capita</i> ^a	0.834*** (0.194)	0.862*** (0.197)	0.863*** (0.197)	0.936*** (0.204)	1.042*** (0.213)	0.944*** (0.222)	0.983*** (0.229)	0.877*** (0.250)
Ln population size ^a	0.289** (0.117)	0.255** (0.119)	0.258** (0.122)	0.260** (0.121)	0.227* (0.127)	0.352*** (0.133)	0.376*** (0.138)	0.387** (0.179)
Incidence of ethnic war in a neighbouring country	1.501*** (0.420)	1.537*** (0.425)	1.526*** (0.433)	1.380*** (0.443)	1.347*** (0.450)	1.663*** (0.485)	1.635*** (0.490)	1.728*** (0.531)
Level of ethnic fractionalisation	0.639 (0.828)	0.809 (0.840)	0.812 (0.841)	0.841 (0.842)	1.051 (0.863)	0.032 (0.882)	0.001 (0.886)	0.003 (1.006)
Level of socioeconomic inequalities ^a	-0.016 (0.018)	-0.017 (0.018)	-0.017 (0.018)	-0.013 (0.019)	-0.012 (0.019)	0.024 (0.022)	0.020 (0.023)	0.032 (0.024)
Involvement in violent international conflict		1.511* (0.800)	1.512* (0.799)	1.589** (0.808)	1.675** (0.817)	2.069** (0.829)	2.057** (0.831)	2.077** (0.837)
Recent experience of political instability ^a			0.061 (0.475)	0.089 (0.477)	0.071 (0.521)	0.003 (0.484)	0.006 (0.484)	-0.089 (0.488)
Experience of colonial rule ^b				0.655 (0.438)		0.672 (0.522)	0.669 (0.530)	0.470 (0.625)
Experience of colonial rule (British) ^b					1.197** (0.463)			
Experience of colonial rule (Non-British, Non-French) ^b					1.048 (0.853)			
Level of democracy ^a						0.040 (0.094)	0.040 (0.095)	0.180 (0.131)
Level of democracy squared ^a						-0.026** (0.011)	-0.027** (0.011)	-0.044*** (0.015)
Status as oil exporter							-0.756 (1.035)	-0.895 (1.084)
Per cent of mountainous terrain								-0.003 (0.010)
Noncontiguous country structure								0.051 (0.699)
Peace duration	-1.772*** (0.198)	-1.800*** (0.201)	-1.797*** (0.202)	-1.744*** (0.201)	-1.670*** (0.199)	-1.756*** (0.216)	-1.749*** (0.215)	-1.783*** (0.220)
Spline_1	-0.018*** (0.003)	-0.019*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.017*** (0.003)	-0.017*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)
Spline_2	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.007*** (0.002)
Spline_3	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	0.000 (0.001)
Constant	-0.719 (0.636)	-0.765 (0.642)	-0.790 (0.671)	-1.138 (0.722)	-1.368* (0.725)	-0.518 (0.773)	-0.508 (0.778)	-0.435 (0.895)
Observations	2501	2501	2501	2501	2501	2490	2490	2432

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 12: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 4 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	1.740** (0.731)	1.828** (0.744)	1.829** (0.746)	1.555** (0.744)	1.406* (0.744)	1.358* (0.805)	1.348* (0.807)	1.251 (0.825)
Ln GDP <i>per capita</i> ^a	0.484*** (0.161)	0.498*** (0.163)	0.498*** (0.163)	0.548*** (0.165)	0.609*** (0.172)	0.484*** (0.174)	0.490*** (0.177)	0.470** (0.185)
Ln population size ^a	0.284*** (0.109)	0.259** (0.111)	0.255** (0.112)	0.248** (0.113)	0.222* (0.115)	0.309** (0.122)	0.312** (0.123)	0.422*** (0.141)
Incidence of ethnic war in a neighbouring country	1.206*** (0.379)	1.162*** (0.386)	1.179*** (0.390)	1.076*** (0.394)	1.037*** (0.393)	1.212*** (0.413)	1.203*** (0.416)	0.979** (0.441)
Level of ethnic fractionalisation	0.390 (0.824)	0.364 (0.831)	0.366 (0.830)	0.557 (0.847)	0.785 (0.880)	0.173 (0.880)	0.158 (0.883)	0.257 (0.999)
Level of socioeconomic inequalities ^a	0.018 (0.020)	0.018 (0.020)	0.017 (0.021)	0.024 (0.021)	0.026 (0.021)	0.054** (0.026)	0.053** (0.026)	0.067** (0.027)
Involvement in violent international conflict		2.362*** (0.865)	2.379*** (0.870)	2.496*** (0.875)	2.549*** (0.885)	2.749*** (0.844)	2.744*** (0.857)	2.916*** (0.857)
Recent experience of political instability ^a			-0.147 (0.437)	-0.066 (0.440)	-0.019 (0.455)	-0.092 (0.442)	-0.093 (0.442)	-0.234 (0.451)
Experience of colonial rule ^b				0.603 (0.378)		0.611 (0.413)	0.606 (0.415)	1.057** (0.520)
Experience of colonial rule (British) ^b					1.027** (0.430)			
Experience of colonial rule (Non-British, Non-French) ^b					0.857* (0.477)			
Level of democracy ^a						0.068 (0.080)	0.069 (0.081)	0.137 (0.098)
Level of democracy squared ^a						-0.022** (0.010)	-0.022** (0.010)	-0.029** (0.013)
Status as oil exporter							-0.153 (0.792)	0.025 (0.738)
Per cent of mountainous terrain								0.011 (0.010)
Noncontiguous country structure								-0.605 (0.514)
Peace duration	-1.816*** (0.200)	-1.838*** (0.200)	-1.845*** (0.202)	-1.787*** (0.201)	-1.737*** (0.199)	-1.831*** (0.218)	-1.828*** (0.218)	-1.814*** (0.222)
Spline_1	-0.020*** (0.003)	-0.020*** (0.003)	-0.020*** (0.003)	-0.019*** (0.003)	-0.018*** (0.003)	-0.020*** (0.003)	-0.020*** (0.003)	-0.020*** (0.003)
Spline_2	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.008*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.001*** (0.001)	-0.001*** (0.001)	-0.001*** (0.001)	-0.001** (0.001)	-0.001** (0.001)
Constant	-0.266 (0.600)	-0.209 (0.604)	-0.167 (0.616)	-0.637 (0.700)	-0.864 (0.704)	-0.344 (0.746)	-0.329 (0.751)	-1.083 (0.966)
Observations	2047	2047	2047	2047	2047	2035	2035	1991

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 13: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 5 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	1.787** (0.755)	1.833** (0.757)	1.839** (0.758)	1.559** (0.750)	1.416* (0.752)	1.425* (0.817)	1.421* (0.818)	1.322 (0.838)
Ln GDP <i>per capita</i> ^a	0.566*** (0.157)	0.576*** (0.158)	0.576*** (0.159)	0.632*** (0.160)	0.703*** (0.167)	0.556*** (0.171)	0.558*** (0.173)	0.517*** (0.183)
Ln population size ^a	0.261** (0.106)	0.237** (0.108)	0.230** (0.108)	0.227** (0.109)	0.198* (0.110)	0.283** (0.116)	0.284** (0.118)	0.426*** (0.142)
Incidence of ethnic war in a neighbouring country	1.159*** (0.390)	1.159*** (0.393)	1.201*** (0.398)	1.153*** (0.397)	1.112*** (0.400)	1.275*** (0.419)	1.273*** (0.420)	1.076** (0.443)
Level of ethnic fractionalisation	0.489 (0.739)	0.576 (0.745)	0.595 (0.743)	0.622 (0.746)	0.795 (0.765)	0.071 (0.779)	0.064 (0.783)	-0.461 (0.883)
Level of socioeconomic inequalities ^a	-0.019 (0.016)	-0.019 (0.016)	-0.021 (0.017)	-0.009 (0.018)	-0.007 (0.018)	0.018 (0.022)	0.018 (0.022)	0.024 (0.023)
Involvement in violent international conflict		1.154 (0.745)	1.161 (0.754)	1.326* (0.771)	1.394* (0.780)	1.594** (0.768)	1.591** (0.769)	1.728** (0.779)
Recent experience of political instability ^a			-0.380 (0.467)	-0.289 (0.472)	-0.236 (0.491)	-0.347 (0.474)	-0.347 (0.474)	-0.549 (0.484)
Experience of colonial rule ^b				0.758* (0.401)		0.585 (0.433)	0.580 (0.436)	0.766 (0.487)
Experience of colonial rule (British) ^b					1.257*** (0.453)			
Experience of colonial rule (Non-British, Non-French) ^b					0.975** (0.474)			
Level of democracy ^a						0.072 (0.082)	0.072 (0.083)	0.139 (0.101)
Level of democracy squared ^a						-0.022** (0.010)	-0.022** (0.010)	-0.030** (0.013)
Status as oil exporter							-0.083 (0.889)	-0.051 (0.845)
Per cent of mountainous terrain								0.004 (0.009)
Noncontiguous country structure								-0.748 (0.476)
Peace duration	-1.916*** (0.201)	-1.939*** (0.203)	-1.958*** (0.206)	-1.871*** (0.204)	-1.809*** (0.201)	-1.926*** (0.220)	-1.926*** (0.220)	-1.937*** (0.224)
Spline_1	-0.021*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)	-0.021*** (0.003)	-0.020*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)
Spline_2	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.009*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.006 (0.565)	-0.010 (0.566)	0.080 (0.578)	-0.521 (0.671)	-0.736 (0.658)	0.055 (0.735)	0.065 (0.742)	0.031 (0.857)
Observations	2231	2231	2231	2231	2231	2219	2219	2143

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 14: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 6 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	1.908** (0.751)	1.966** (0.759)	1.981*** (0.762)	1.576** (0.755)	1.436* (0.755)	1.460* (0.821)	1.456* (0.822)	1.418* (0.843)
Ln GDP <i>per capita</i> ^a	0.576*** (0.167)	0.591*** (0.169)	0.595*** (0.169)	0.673*** (0.172)	0.736*** (0.179)	0.600*** (0.182)	0.601*** (0.184)	0.564*** (0.191)
Ln population size ^a	0.456*** (0.125)	0.423*** (0.128)	0.417*** (0.128)	0.416*** (0.131)	0.387*** (0.133)	0.475*** (0.142)	0.476*** (0.143)	0.562*** (0.157)
Incidence of ethnic war in a neighbouring country	1.034** (0.404)	1.032** (0.408)	1.087*** (0.416)	0.925** (0.418)	0.911** (0.416)	1.055** (0.441)	1.051** (0.444)	0.903* (0.478)
Level of ethnic fractionalisation	0.434 (0.804)	0.552 (0.814)	0.582 (0.815)	0.804 (0.833)	1.042 (0.866)	0.174 (0.877)	0.168 (0.881)	0.097 (0.965)
Level of socioeconomic inequalities ^a	-0.048** (0.022)	-0.049** (0.023)	-0.051** (0.023)	-0.039* (0.023)	-0.037 (0.023)	-0.012 (0.027)	-0.012 (0.028)	-0.005 (0.028)
Involvement in violent international conflict		1.490* (0.817)	1.525* (0.829)	1.699** (0.834)	1.768** (0.839)	1.893** (0.825)	1.892** (0.826)	2.035** (0.832)
Recent experience of political instability ^a			-0.324 (0.466)	-0.228 (0.468)	-0.228 (0.487)	-0.223 (0.470)	-0.224 (0.470)	-0.351 (0.480)
Experience of colonial rule ^b				0.903** (0.382)		0.783* (0.412)	0.782* (0.412)	0.975** (0.478)
Experience of colonial rule (British) ^b					1.241*** (0.447)			
Experience of colonial rule (Non-British, Non-French) ^b					1.136** (0.476)			
Level of democracy ^a						0.057 (0.083)	0.057 (0.083)	0.116 (0.105)
Level of democracy squared ^a						-0.019* (0.010)	-0.019* (0.010)	-0.025* (0.013)
Status as oil exporter							-0.068 (0.931)	0.025 (0.910)
Per cent of mountainous terrain								0.009 (0.009)
Noncontiguous country structure								-0.342 (0.486)
Peace duration	-1.897*** (0.204)	-1.930*** (0.207)	-1.948*** (0.210)	-1.852*** (0.207)	-1.811*** (0.205)	-1.902*** (0.221)	-1.901*** (0.222)	-1.899*** (0.224)
Spline_1	-0.022*** (0.003)	-0.022*** (0.003)	-0.022*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.021*** (0.003)	-0.022*** (0.003)
Spline_2	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)	0.010*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.535 (0.611)	-0.510 (0.617)	-0.453 (0.623)	-1.157 (0.715)	-1.328* (0.720)	-0.700 (0.776)	-0.694 (0.781)	-1.139 (0.925)
Observations	2818	2818	2818	2818	2818	2813	2813	2737

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 15: Logit Analysis of the Effects of Institutional Combinations of a Presidential Form of Government, Majoritarian Electoral System for the Legislature and Unitary State Structure on the Risk of Ethnic Civil War, 1955-2007 (excluding region 7 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Combination of a presidential form of government, majoritarian electoral system and unitary state structure ^a	1.237 (0.961)	1.247 (0.963)	1.247 (0.963)	0.977 (0.984)	0.590 (1.004)	0.933 (1.021)	0.927 (1.020)	0.759 (1.025)
Ln GDP <i>per capita</i> ^a	0.502*** (0.183)	0.507*** (0.183)	0.506*** (0.184)	0.544*** (0.186)	0.653*** (0.201)	0.489** (0.196)	0.496** (0.199)	0.498** (0.212)
Ln population size ^a	0.313** (0.133)	0.309** (0.133)	0.309** (0.133)	0.307** (0.134)	0.329** (0.138)	0.359** (0.146)	0.362** (0.147)	0.608*** (0.196)
Incidence of ethnic war in a neighbouring country	1.745*** (0.443)	1.749*** (0.444)	1.752*** (0.448)	1.653*** (0.452)	1.561*** (0.448)	1.833*** (0.483)	1.832*** (0.485)	1.689*** (0.516)
Level of ethnic fractionalisation	-0.198 (0.820)	-0.173 (0.826)	-0.171 (0.826)	-0.153 (0.832)	-0.247 (0.889)	-0.817 (0.890)	-0.838 (0.896)	-2.312* (1.246)
Level of socioeconomic inequalities ^a	-0.010 (0.017)	-0.010 (0.017)	-0.011 (0.018)	-0.007 (0.018)	-0.006 (0.018)	0.023 (0.024)	0.022 (0.024)	0.030 (0.026)
Involvement in violent international conflict		0.274 (1.032)	0.274 (1.033)	0.399 (1.029)	0.472 (1.027)	0.739 (1.069)	0.732 (1.069)	0.910 (1.067)
Recent experience of political instability ^a			-0.030 (0.502)	0.034 (0.507)	0.175 (0.529)	-0.015 (0.516)	-0.017 (0.517)	-0.145 (0.523)
Experience of colonial rule ^b				0.496 (0.445)		0.328 (0.474)	0.327 (0.475)	0.741 (0.589)
Experience of colonial rule (British) ^b					1.570** (0.686)			
Experience of colonial rule (Non-British, Non-French) ^b					0.704 (0.508)			
Level of democracy ^a						0.082 (0.086)	0.083 (0.086)	0.147 (0.109)
Level of democracy squared ^a						-0.023** (0.011)	-0.023** (0.011)	-0.036** (0.014)
Status as oil exporter							-0.195 (0.915)	-0.266 (0.898)
Per cent of mountainous terrain								-0.008 (0.011)
Noncontiguous country structure								-1.149* (0.667)
Peace duration	-2.143*** (0.252)	-2.149*** (0.254)	-2.152*** (0.257)	-2.078*** (0.259)	-1.972*** (0.250)	-2.209*** (0.291)	-2.205*** (0.292)	-2.201*** (0.298)
Spline_1	-0.024*** (0.004)	-0.024*** (0.004)	-0.024*** (0.004)	-0.023*** (0.004)	-0.022*** (0.004)	-0.024*** (0.004)	-0.024*** (0.004)	-0.024*** (0.004)
Spline_2	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.010*** (0.002)	0.011*** (0.002)	0.011*** (0.002)	0.011*** (0.002)
Spline_3	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Constant	-0.033 (0.602)	-0.042 (0.603)	-0.035 (0.613)	-0.307 (0.668)	-0.577 (0.669)	0.253 (0.745)	0.269 (0.749)	0.855 (0.942)
Observations	2765	2765	2765	2765	2765	2756	2756	2689

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 16: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 1 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.026 (0.024)	0.029 (0.024)	0.031 (0.024)	0.033 (0.025)	0.047* (0.027)	0.045 (0.028)	0.042 (0.028)	0.035 (0.029)	0.027 (0.029)
Status as oil exporter	-0.588 (0.455)	-0.491 (0.483)	-0.514 (0.492)	-0.533 (0.492)	-0.986* (0.589)	-0.571 (0.663)	-0.429 (0.691)	-0.287 (0.703)	-0.099 (0.712)
Incidence of ethnic war in a neighbouring country	0.703* (0.379)	0.796* (0.408)	0.768* (0.424)	0.755* (0.425)	0.654 (0.463)	0.642 (0.466)	0.552 (0.480)	0.476 (0.483)	0.319 (0.485)
Level of ethnic fractionalisation	0.514 (0.933)	0.689 (0.951)	0.629 (0.984)	0.618 (0.984)	-0.346 (1.103)	-0.724 (1.158)	-0.612 (1.170)	-0.648 (1.165)	-0.409 (1.154)
Level of socioeconomic inequalities ^a	0.025 (0.019)	0.019 (0.024)	0.019 (0.024)	0.018 (0.024)	0.017 (0.026)	0.027 (0.027)	0.030 (0.028)	0.056 (0.036)	0.061* (0.032)
Level of democracy ^a		0.035 (0.033)	0.034 (0.033)	0.038 (0.033)	0.035 (0.038)	0.037 (0.038)	0.041 (0.038)	0.045 (0.038)	0.068* (0.040)
Level of democracy squared ^a		-0.001 (0.008)	-0.001 (0.009)	-0.002 (0.009)	0.002 (0.010)	0.002 (0.010)	0.000 (0.010)	0.000 (0.010)	-0.002 (0.010)
Involvement in violent international conflict			0.165 (0.684)	0.239 (0.695)	0.681 (0.752)	0.628 (0.753)	0.564 (0.755)	0.559 (0.763)	0.546 (0.765)
Recent experience of political instability ^a				-0.498 (0.613)	-0.409 (0.649)	-0.335 (0.653)	-0.349 (0.655)	-0.317 (0.655)	-0.436 (0.655)
Per cent of mountainous terrain					-0.002 (0.010)	0.002 (0.011)	0.002 (0.011)	0.001 (0.011)	0.002 (0.011)
Noncontiguous country structure					0.401 (0.453)	0.163 (0.497)	0.001 (0.542)	0.087 (0.552)	0.218 (0.551)
Experience of colonial rule ^b						0.610 (0.492)	0.654 (0.498)	0.540 (0.516)	0.307 (0.538)
Ln population size ^a							0.104 (0.140)	0.123 (0.141)	0.143 (0.143)
GDP <i>per capita</i> ^a								-0.077 (0.068)	
Ln GDP <i>per capita</i> ^a									-0.890** (0.437)
Peace duration	-1.800*** (0.227)	-1.777*** (0.227)	-1.781*** (0.229)	-1.760*** (0.227)	-1.786*** (0.230)	-1.751*** (0.230)	-1.739*** (0.230)	-1.742*** (0.232)	-1.666*** (0.228)
Spline_1	-0.018*** (0.003)	-0.018*** (0.004)	-0.018*** (0.004)	-0.017*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)	-0.018*** (0.004)	-0.017*** (0.004)
Spline_2	0.008*** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.007*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)
Spline_3	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001* (0.001)	-0.001* (0.001)	-0.001* (0.001)	-0.001** (0.001)	-0.001** (0.001)
Constant	1.253* (0.645)	1.123 (0.713)	1.147 (0.719)	1.212* (0.732)	1.204 (0.828)	0.890 (0.868)	0.591 (0.959)	0.830 (0.984)	1.570 (1.070)
Observations	2030	2017	2017	2017	1977	1977	1977	1972	1972

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 17: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 2 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.050** (0.019)	0.049** (0.020)	0.051*** (0.020)	0.052*** (0.020)	0.051** (0.020)	0.049** (0.021)	0.047** (0.021)	0.037* (0.021)	0.033 (0.021)
Status as oil exporter	-1.028*** (0.385)	-1.143*** (0.415)	-1.236*** (0.419)	-1.233*** (0.417)	-1.602*** (0.487)	-1.525*** (0.519)	-1.420*** (0.537)	-1.488*** (0.544)	-1.308** (0.543)
Incidence of ethnic war in a neighbouring country	0.606* (0.315)	0.563* (0.323)	0.466 (0.330)	0.471 (0.331)	0.512 (0.337)	0.499 (0.338)	0.431 (0.352)	0.340 (0.357)	0.109 (0.374)
Level of ethnic fractionalisation	0.749 (0.664)	0.830 (0.685)	0.837 (0.683)	0.898 (0.694)	0.866 (0.721)	0.787 (0.743)	0.846 (0.748)	1.028 (0.754)	0.508 (0.757)
Level of socioeconomic inequalities ^a	0.032* (0.017)	0.032 (0.020)	0.035* (0.020)	0.035* (0.020)	0.033 (0.020)	0.035* (0.021)	0.037* (0.021)	0.092*** (0.033)	0.063*** (0.023)
Level of democracy ^a		-0.010 (0.029)	-0.012 (0.029)	-0.009 (0.030)	-0.025 (0.032)	-0.024 (0.032)	-0.023 (0.032)	-0.021 (0.032)	-0.008 (0.033)
Level of democracy squared ^a		0.002 (0.006)	0.000 (0.006)	-0.001 (0.006)	-0.003 (0.006)	-0.003 (0.007)	-0.004 (0.007)	-0.003 (0.007)	-0.004 (0.007)
Involvement in violent international conflict			0.866 (0.598)	0.877 (0.600)	1.090* (0.615)	1.089* (0.617)	1.031* (0.620)	1.072* (0.630)	1.172* (0.614)
Recent experience of political instability ^a				-0.205 (0.407)	-0.283 (0.414)	-0.268 (0.415)	-0.259 (0.415)	-0.244 (0.415)	-0.351 (0.416)
Per cent of mountainous terrain					-0.014 (0.010)	-0.012 (0.011)	-0.013 (0.011)	-0.016 (0.011)	-0.015 (0.011)
Noncontiguous country structure					0.558 (0.393)	0.474 (0.440)	0.391 (0.456)	0.443 (0.462)	0.506 (0.458)
Experience of colonial rule ^b						0.174 (0.409)	0.215 (0.415)	-0.081 (0.443)	-0.122 (0.430)
Ln population size ^a							0.085 (0.120)	0.083 (0.120)	0.111 (0.121)
GDP <i>per capita</i> ^a								-0.158** (0.077)	
Ln GDP <i>per capita</i> ^a									-0.761** (0.296)
Peace duration	-1.789*** (0.195)	-1.776*** (0.195)	-1.799*** (0.200)	-1.797*** (0.199)	-1.781*** (0.198)	-1.774*** (0.199)	-1.772*** (0.199)	-1.753*** (0.199)	-1.691*** (0.195)
Spline_1	-0.018*** (0.003)	-0.018*** (0.003)	-0.019*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.017*** (0.003)
Spline_2	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)
Spline_3	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001*** (0.000)	-0.001** (0.000)
Constant	0.790 (0.550)	0.724 (0.624)	0.756 (0.623)	0.771 (0.627)	1.057 (0.710)	0.961 (0.746)	0.730 (0.814)	1.227 (0.842)	1.839** (0.897)
Observations	2420	2407	2407	2407	2375	2375	2375	2371	2371

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 18: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 3 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.037* (0.021)	0.036* (0.022)	0.037* (0.021)	0.040* (0.022)	0.050** (0.023)	0.049** (0.023)	0.044* (0.024)	0.043* (0.024)	0.040 (0.025)
Status as oil exporter	-0.560 (0.371)	-0.583 (0.397)	-0.607 (0.397)	-0.614 (0.396)	-1.227** (0.531)	-1.134* (0.582)	-1.057* (0.587)	-1.055* (0.588)	-1.002* (0.600)
Incidence of ethnic war in a neighbouring country	0.776** (0.317)	0.774** (0.324)	0.723** (0.331)	0.725** (0.331)	0.774** (0.352)	0.747** (0.360)	0.664* (0.366)	0.656* (0.375)	0.591 (0.397)
Level of ethnic fractionalisation	1.244* (0.748)	1.241 (0.799)	1.243 (0.799)	1.326 (0.811)	1.158 (0.861)	1.088 (0.882)	1.177 (0.886)	1.178 (0.886)	1.047 (0.927)
Level of socioeconomic inequalities ^a	0.034* (0.018)	0.035* (0.020)	0.036* (0.020)	0.035* (0.020)	0.035* (0.021)	0.036* (0.021)	0.040* (0.021)	0.041 (0.028)	0.044* (0.023)
Level of democracy ^a		0.002 (0.029)	0.002 (0.029)	0.006 (0.030)	0.003 (0.033)	0.005 (0.034)	-0.005 (0.035)	-0.004 (0.035)	-0.001 (0.036)
Level of democracy squared ^a		-0.001 (0.006)	-0.002 (0.007)	-0.003 (0.007)	-0.003 (0.007)	-0.002 (0.007)	-0.004 (0.007)	-0.004 (0.007)	-0.004 (0.007)
Involvement in violent international conflict			0.409 (0.591)	0.417 (0.595)	0.594 (0.634)	0.592 (0.636)	0.360 (0.658)	0.360 (0.659)	0.376 (0.660)
Recent experience of political instability ^a				-0.270 (0.402)	-0.304 (0.415)	-0.292 (0.415)	-0.257 (0.418)	-0.255 (0.419)	-0.261 (0.418)
Per cent of mountainous terrain					-0.008 (0.008)	-0.006 (0.009)	-0.010 (0.009)	-0.010 (0.009)	-0.010 (0.009)
Noncontiguous country structure					0.789 (0.536)	0.740 (0.553)	0.480 (0.587)	0.489 (0.596)	0.482 (0.587)
Experience of colonial rule ^b						0.164 (0.433)	0.131 (0.443)	0.118 (0.465)	0.062 (0.467)
Ln population size ^a							0.228 (0.168)	0.230 (0.169)	0.240 (0.170)
GDP <i>per capita</i> ^a								-0.006 (0.065)	
Ln GDP <i>per capita</i> ^a									-0.154 (0.323)
Peace duration	-1.711*** (0.197)	-1.700*** (0.197)	-1.707*** (0.199)	-1.706*** (0.198)	-1.705*** (0.198)	-1.697*** (0.198)	-1.698*** (0.198)	-1.699*** (0.199)	-1.690*** (0.199)
Spline_1	-0.015*** (0.003)	-0.015*** (0.003)	-0.015*** (0.003)	-0.015*** (0.003)	-0.016*** (0.003)	-0.016*** (0.003)	-0.016*** (0.003)	-0.016*** (0.003)	-0.016*** (0.003)
Spline_2	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)	0.006*** (0.002)
Spline_3	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
Constant	0.403 (0.641)	0.445 (0.756)	0.456 (0.758)	0.465 (0.764)	0.559 (0.828)	0.460 (0.871)	-0.035 (0.933)	-0.015 (0.956)	0.212 (1.065)
Observations	2373	2360	2360	2360	2313	2313	2313	2312	2312

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 19: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 4 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.034* (0.018)	0.033* (0.018)	0.035* (0.018)	0.036** (0.018)	0.043** (0.019)	0.042** (0.019)	0.037* (0.020)	0.034* (0.020)	0.026 (0.021)
Status as oil exporter	-0.650* (0.341)	-0.684* (0.357)	-0.733** (0.359)	-0.738** (0.358)	-1.254*** (0.438)	-1.167** (0.479)	-1.013** (0.486)	-0.985** (0.489)	-0.859* (0.494)
Incidence of ethnic war in a neighbouring country	0.731** (0.286)	0.721** (0.296)	0.656** (0.301)	0.657** (0.301)	0.721** (0.317)	0.703** (0.320)	0.602* (0.327)	0.562* (0.331)	0.366 (0.346)
Level of ethnic fractionalisation	0.676 (0.615)	0.688 (0.633)	0.668 (0.631)	0.719 (0.641)	0.605 (0.687)	0.517 (0.714)	0.685 (0.730)	0.668 (0.730)	0.321 (0.746)
Level of socioeconomic inequalities ^a	0.042** (0.019)	0.042* (0.022)	0.044** (0.022)	0.043** (0.022)	0.040* (0.022)	0.041* (0.022)	0.047** (0.022)	0.058** (0.026)	0.063*** (0.023)
Level of democracy ^a		-0.001 (0.025)	-0.001 (0.026)	0.001 (0.026)	-0.003 (0.028)	-0.002 (0.028)	0.001 (0.029)	0.004 (0.029)	0.017 (0.030)
Level of democracy squared ^a		0.000 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.002 (0.006)	-0.003 (0.006)	-0.003 (0.006)	-0.003 (0.006)
Involvement in violent international conflict			0.661 (0.594)	0.670 (0.596)	0.909 (0.633)	0.905 (0.635)	0.793 (0.637)	0.789 (0.637)	0.867 (0.632)
Recent experience of political instability ^a				-0.180 (0.376)	-0.143 (0.391)	-0.131 (0.391)	-0.109 (0.392)	-0.109 (0.390)	-0.181 (0.391)
Per cent of mountainous terrain					-0.005 (0.008)	-0.004 (0.008)	-0.005 (0.008)	-0.007 (0.009)	-0.007 (0.008)
Noncontiguous country structure					0.738* (0.396)	0.663 (0.432)	0.498 (0.450)	0.540 (0.456)	0.623 (0.455)
Experience of colonial rule ^b						0.167 (0.378)	0.256 (0.388)	0.161 (0.410)	-0.026 (0.413)
Ln population size ^a							0.167 (0.117)	0.170 (0.117)	0.194 (0.119)
GDP <i>per capita</i> ^a								-0.042 (0.058)	
Ln GDP <i>per capita</i> ^a									-0.569** (0.276)
Peace duration	-1.748*** (0.179)	-1.735*** (0.180)	-1.750*** (0.182)	-1.749*** (0.182)	-1.760*** (0.184)	-1.750*** (0.184)	-1.740*** (0.184)	-1.734*** (0.185)	-1.676*** (0.183)
Spline_1	-0.017*** (0.003)	-0.017*** (0.003)	-0.017*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.017*** (0.003)
Spline_2	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.001)
Spline_3	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Constant	0.842 (0.519)	0.844 (0.592)	0.878 (0.591)	0.889 (0.594)	0.840 (0.676)	0.758 (0.701)	0.215 (0.802)	0.422 (0.843)	1.109 (0.897)
Observations	2303	2291	2291	2291	2250	2250	2250	2245	2245

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 20: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 5 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.037** (0.018)	0.037* (0.019)	0.038** (0.019)	0.040** (0.019)	0.047** (0.020)	0.046** (0.020)	0.043** (0.020)	0.038* (0.021)	0.033 (0.021)
Status as oil exporter	-0.723** (0.349)	-0.738** (0.368)	-0.796** (0.370)	-0.800** (0.369)	-1.187*** (0.440)	-1.170** (0.488)	-1.065** (0.508)	-1.023** (0.510)	-0.917* (0.514)
Incidence of ethnic war in a neighbouring country	0.500* (0.298)	0.503 (0.306)	0.435 (0.311)	0.439 (0.311)	0.524 (0.330)	0.523 (0.330)	0.497 (0.333)	0.418 (0.339)	0.297 (0.349)
Level of ethnic fractionalisation	0.502 (0.611)	0.480 (0.637)	0.453 (0.635)	0.539 (0.647)	0.414 (0.694)	0.400 (0.718)	0.475 (0.725)	0.475 (0.726)	0.158 (0.744)
Level of socioeconomic inequalities ^a	0.015 (0.016)	0.016 (0.019)	0.018 (0.019)	0.017 (0.019)	0.017 (0.019)	0.017 (0.020)	0.020 (0.020)	0.040 (0.026)	0.035 (0.021)
Level of democracy ^a		0.004 (0.026)	0.003 (0.027)	0.007 (0.027)	0.005 (0.029)	0.006 (0.030)	0.007 (0.030)	0.011 (0.030)	0.021 (0.031)
Level of democracy squared ^a		-0.002 (0.006)	-0.003 (0.006)	-0.004 (0.006)	-0.004 (0.006)	-0.004 (0.007)	-0.004 (0.007)	-0.004 (0.007)	-0.005 (0.007)
Involvement in violent international conflict			0.683 (0.582)	0.699 (0.586)	0.875 (0.612)	0.875 (0.613)	0.800 (0.621)	0.799 (0.623)	0.852 (0.616)
Recent experience of political instability ^a				-0.295 (0.397)	-0.278 (0.411)	-0.276 (0.411)	-0.267 (0.411)	-0.259 (0.409)	-0.329 (0.411)
Per cent of mountainous terrain					-0.005 (0.008)	-0.005 (0.008)	-0.006 (0.009)	-0.008 (0.009)	-0.007 (0.009)
Noncontiguous country structure					0.447 (0.382)	0.435 (0.414)	0.334 (0.438)	0.398 (0.444)	0.425 (0.439)
Experience of colonial rule ^b						0.032 (0.410)	0.103 (0.427)	-0.077 (0.455)	-0.157 (0.447)
Ln population size ^a							0.087 (0.122)	0.090 (0.123)	0.106 (0.124)
GDP <i>per capita</i> ^a								-0.068 (0.057)	
Ln GDP <i>per capita</i> ^a									-0.497* (0.271)
Peace duration	-1.722*** (0.177)	-1.713*** (0.177)	-1.727*** (0.180)	-1.729*** (0.179)	-1.746*** (0.181)	-1.744*** (0.183)	-1.736*** (0.183)	-1.734*** (0.183)	-1.687*** (0.182)
Spline_1	-0.017*** (0.003)	-0.017*** (0.003)	-0.017*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.017*** (0.003)
Spline_2	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)	0.008*** (0.001)
Spline_3	-0.001 (0.000)	-0.001 (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Constant	1.225** (0.530)	1.306** (0.628)	1.350** (0.627)	1.362** (0.632)	1.348* (0.715)	1.327* (0.768)	1.017 (0.885)	1.346 (0.922)	1.814* (0.969)
Observations	2187	2174	2174	2174	2127	2127	2127	2122	2122

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 21: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 6 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.034* (0.019)	0.032* (0.019)	0.031 (0.019)	0.033* (0.019)	0.040** (0.020)	0.037* (0.020)	0.030 (0.021)	0.027 (0.021)	0.025 (0.022)
Status as oil exporter	-0.387 (0.439)	-0.410 (0.443)	-0.380 (0.443)	-0.393 (0.441)	-1.104** (0.551)	-0.926 (0.567)	-0.846 (0.562)	-0.771 (0.566)	-0.760 (0.564)
Incidence of ethnic war in a neighbouring country	0.649** (0.311)	0.596* (0.324)	0.536 (0.328)	0.536 (0.328)	0.519 (0.357)	0.409 (0.368)	0.219 (0.378)	0.220 (0.378)	0.142 (0.385)
Level of ethnic fractionalisation	0.447 (0.645)	0.405 (0.666)	0.361 (0.663)	0.435 (0.673)	0.615 (0.729)	0.410 (0.745)	0.766 (0.781)	0.705 (0.781)	0.525 (0.804)
Level of socioeconomic inequalities ^a	-0.008 (0.024)	-0.005 (0.026)	-0.003 (0.026)	-0.005 (0.026)	-0.021 (0.030)	-0.022 (0.031)	-0.021 (0.031)	-0.005 (0.037)	-0.009 (0.032)
Level of democracy ^a		-0.018 (0.029)	-0.021 (0.029)	-0.017 (0.030)	-0.010 (0.032)	-0.007 (0.032)	0.004 (0.033)	0.008 (0.033)	0.014 (0.034)
Level of democracy squared ^a		0.001 (0.007)	0.000 (0.007)	-0.001 (0.007)	-0.003 (0.007)	-0.001 (0.007)	-0.006 (0.007)	-0.006 (0.007)	-0.006 (0.008)
Involvement in violent international conflict			0.765 (0.750)	0.781 (0.759)	0.630 (0.837)	0.489 (0.857)	-0.044 (0.896)	0.022 (0.901)	0.082 (0.896)
Recent experience of political instability ^a				-0.258 (0.389)	-0.182 (0.406)	-0.139 (0.405)	-0.086 (0.406)	-0.091 (0.405)	-0.142 (0.408)
Per cent of mountainous terrain					0.006 (0.009)	0.012 (0.010)	0.012 (0.010)	0.009 (0.011)	0.009 (0.010)
Noncontiguous country structure					0.815* (0.443)	0.648 (0.472)	0.469 (0.483)	0.562 (0.500)	0.575 (0.492)
Experience of colonial rule ^b						0.526 (0.434)	0.747* (0.452)	0.518 (0.520)	0.479 (0.503)
Ln population size ^a							0.306** (0.137)	0.315** (0.138)	0.319** (0.139)
GDP <i>per capita</i> ^a								-0.070 (0.084)	
Ln GDP <i>per capita</i> ^a									-0.341 (0.310)
Peace duration	-1.817*** (0.198)	-1.817*** (0.198)	-1.821*** (0.199)	-1.817*** (0.198)	-1.851*** (0.203)	-1.813*** (0.203)	-1.785*** (0.204)	-1.775*** (0.204)	-1.748*** (0.204)
Spline_1	-0.019*** (0.003)	-0.019*** (0.003)	-0.019*** (0.003)	-0.019*** (0.003)	-0.020*** (0.003)	-0.019*** (0.003)	-0.019*** (0.003)	-0.019*** (0.003)	-0.019*** (0.003)
Spline_2	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)	0.009*** (0.002)
Spline_3	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.001)	-0.001*** (0.001)	-0.001*** (0.001)
Constant	1.272** (0.553)	1.320** (0.628)	1.375** (0.627)	1.394** (0.633)	1.097 (0.704)	0.793 (0.746)	-0.277 (0.908)	0.078 (0.991)	0.326 (1.040)
Observations	2354	2353	2353	2353	2325	2325	2325	2320	2320

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parentheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Table 22: Logit Analysis of the Effects of Corruption on the Risk of Ethnic Civil War, 1984-2007 (excluding region 7 from sample).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Level of corruption ^a	0.044** (0.019)	0.043** (0.019)	0.047** (0.019)	0.047** (0.019)	0.058*** (0.021)	0.057*** (0.021)	0.053** (0.021)	0.050** (0.022)	0.042* (0.022)
Status as oil exporter	-0.631* (0.353)	-0.669* (0.365)	-0.840** (0.374)	-0.839** (0.375)	-1.418*** (0.469)	-1.321*** (0.503)	-1.182** (0.514)	-1.151** (0.517)	-1.017* (0.523)
Incidence of ethnic war in a neighbouring country	0.828*** (0.301)	0.803** (0.315)	0.763** (0.316)	0.763** (0.316)	0.914*** (0.334)	0.891*** (0.337)	0.828** (0.342)	0.794** (0.347)	0.622* (0.359)
Level of ethnic fractionalisation	0.511 (0.640)	0.513 (0.665)	0.559 (0.663)	0.539 (0.674)	0.441 (0.775)	0.268 (0.841)	0.283 (0.846)	0.260 (0.851)	-0.170 (0.894)
Level of socioeconomic inequalities ^a	0.022 (0.016)	0.024 (0.019)	0.023 (0.019)	0.024 (0.019)	0.018 (0.020)	0.020 (0.020)	0.023 (0.020)	0.032 (0.027)	0.038* (0.021)
Level of democracy ^a		-0.004 (0.028)	0.003 (0.028)	0.002 (0.029)	0.006 (0.031)	0.010 (0.032)	0.017 (0.033)	0.019 (0.033)	0.036 (0.035)
Level of democracy squared ^a		-0.001 (0.006)	-0.001 (0.006)	-0.001 (0.006)	0.000 (0.007)	0.000 (0.007)	-0.001 (0.007)	-0.001 (0.007)	-0.002 (0.007)
Involvement in violent international conflict			1.576** (0.763)	1.576** (0.764)	1.993*** (0.751)	2.047*** (0.759)	1.964*** (0.741)	1.946*** (0.745)	1.853** (0.732)
Recent experience of political instability ^a				0.068 (0.410)	0.127 (0.434)	0.130 (0.432)	0.135 (0.433)	0.128 (0.432)	0.047 (0.433)
Per cent of mountainous terrain					-0.004 (0.009)	-0.003 (0.009)	-0.005 (0.009)	-0.006 (0.009)	-0.008 (0.009)
Noncontiguous country structure					0.695* (0.405)	0.575 (0.465)	0.377 (0.497)	0.401 (0.500)	0.468 (0.499)
Experience of colonial rule ^b						0.224 (0.428)	0.373 (0.451)	0.308 (0.471)	0.082 (0.485)
Ln population size ^a							0.143 (0.123)	0.148 (0.123)	0.169 (0.125)
GDP <i>per capita</i> ^a								-0.029 (0.059)	
Ln GDP <i>per capita</i> ^a									-0.550* (0.303)
Peace duration	-1.747*** (0.191)	-1.734*** (0.191)	-1.772*** (0.197)	-1.770*** (0.197)	-1.803*** (0.199)	-1.791*** (0.200)	-1.779*** (0.199)	-1.778*** (0.200)	-1.727*** (0.198)
Spline_1	-0.017*** (0.003)	-0.017*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)	-0.018*** (0.003)
Spline_2	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.002)	0.007*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)	0.008*** (0.002)
Spline_3	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001* (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Constant	0.764 (0.542)	0.795 (0.634)	0.769 (0.633)	0.763 (0.633)	0.566 (0.798)	0.540 (0.797)	0.146 (0.867)	0.302 (0.918)	1.137 (1.014)
Observations	2623	2610	2610	2610	2563	2563	2563	2558	2558

*significant at 10%; **significant at 5%; ***significant at 1%. Standard errors are in parantheses. Estimations performed using Stata 10.0 and SPSS 19.

^aLagged one year.

^bVariable refers to colonial experience at any point between 1946 and 2007.

Appendix III: The EEI Dataset Codebook

Ethno-Embedded Institutionalism

**The Impact of Institutional Repertoires on the Risk of Ethnic Violence,
1955-2007**

**Dataset Codebook
August 2011**

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NB: This codebook aims to provide as meaningful yet as condensed information on the different variables used in the “Ethno-Embedded Institutionalism” (EEI) Dataset as possible. For more detailed information on variables which were adopted from other datasets, it is advisable to consult the quoted sources.

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CC

Country code according to the Correlates of War (COW) Project State System Membership List version 2008.1.ⁱ Please be aware that due to some differences between the countries included in the EEI Dataset and those listed by the COW Project (see **Country**), no country codes are available for the Democratic Republic of Vietnam, the Federal Republic of Yugoslavia/Serbia and Montenegro, Serbia, the Soviet Union, Tanganyika and the United Arab Republic.

Region

Region in which a country is located. The distinction of different regions of the world is largely based on the regional distinction used by The World Bank Group.ⁱⁱ Minor changes compared to the distinction by The World Bank Group include the addition of a seventh region that is not explicitly listed by The World Bank (namely “Europe and North America”) and the classification of the following countries that are missing from the World Bank listing: Australia (added in region 3), Cuba (added in region 5), Cyprus (added in region 2), Czechoslovakia (added in region 2), Democratic Yemen (added in region 6), German Democratic Republic (added in region 4), German Federal Republic (added in region 4), New Zealand (added in region 3), North Korea (added in region 3), Soviet Union (added in region 2), Taiwan (added in region 3), Tanganyika (added in region 1), United Arab Republic (added in region 6), Democratic Republic of Vietnam (added in region 3), Republic of Vietnam (added in region 3), Yemen Arab Republic (added in region 6), Yugoslavia (added in region 2), Federal Republic of Yugoslavia/Serbia and Montenegro (added in region 2).

“Region” takes on the following values:

- 1 = Africa (except North Africa)
- 2 = Central Asia and Eastern Europe
- 3 = East Asia and Pacific
- 4 = Europe (except Eastern Europe) and North America
- 5 = Latin America and Caribbean
- 6 = Middle East and North Africa
- 7 = South Asia

Appendix 2 includes the regional identifier for each country included in the EEI Dataset.

Country

Country name. The EEI Dataset contains information on all countries that are listed as members of the state system by the COW Project State System Membership List version 2008.1, and had a total population of greater than 500,000 in 2008 according to the Polity IV Project dataset version p4v2008.ⁱⁱⁱ Countries that ceased to exist before 2008, such as Czechoslovakia or the German Democratic Republic, have been included if they are listed as former members of the state system by the COW Project and had a total population of greater than 500,000 in their last year of existence according to the **Population** variable (see below).

In order to qualify for state system membership according to the COW Project in the period under consideration (1955 to 2007), an entity must either be a member of the United Nations or have a population greater than 500,000 and receive diplomatic missions from two major powers. The additional threshold that countries need to have a population of greater than 500,000 in 2008 according to the Polity IV Project (or, where applicable, in the last year of their existence according to **Population**) excludes microstates such as Dominica, Luxembourg or Saint Kitts and Nevis from the EEI Dataset.

The EEI Dataset includes six countries in addition to the ones listed by the COW Project State System Membership List version 2008.1: the Democratic Republic of Vietnam, the Federal Republic of Yugoslavia/Serbia and Montenegro, Serbia, the Soviet Union, Tanganyika and the United Arab Republic.

These countries are either missing from the COW Project State System Membership List version 2008.1 (such as the United Arab Republic) or have been subsumed under the conventional short name of their successor entity (e.g. in the COW Project State System Membership List version 2008.1 “Vietnam [1954-2008]” refers to both the Democratic Republic of Vietnam [1954-1976] and the Socialist Republic of Vietnam [1976-today]). The aforementioned six countries have been included as independent countries in the EEI Dataset, as they are territorially and constitutionally different from their successor entities, and have been recognised as separate state

system members by the United Nations^{iv} or at least two major powers. Appendix 1 summarises the differences between the state system members listed by the COW Project and the countries included in the EEI Dataset.

The EEI Dataset includes a total of 174 countries, namely (in order of their appearance in the dataset):

Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Belarus, Belgium, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burma (Myanmar), Burundi, Cambodia, Cameroon, Canada, Central African Republic, Chad, Chile, China, Colombia, Comoros, Democratic Republic of the Congo, Republic of the Congo, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Cyprus, Czechoslovakia, Czech Republic, Democratic Yemen, Denmark, Djibouti, Dominican Republic, East Timor, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Finland, France, Gabon, The Gambia, Georgia, German Democratic Republic, German Federal Republic, Germany, Ghana, Greece, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, North Korea, South Korea, Kuwait, Kyrgyzstan, Laos, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Soviet Union, Russia, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovakia, Slovenia, Solomon Islands, Somalia, South Africa, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syria, Taiwan, Tajikistan, Tanganyika, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, United Arab Republic, United Kingdom, United States, Uruguay, Uzbekistan, Venezuela, Democratic Republic of Vietnam, Republic of Vietnam, Vietnam, Yemen Arab Republic, Yemen, Yugoslavia, Federal Republic of Yugoslavia (renamed “Serbia and Montenegro” in 2003),¹ Serbia, Montenegro, Zambia, Zimbabwe.

¹ The renaming of countries before the 2000s, such as the change from “Zaire” to “Democratic Republic of Congo” in 1997, has not been considered in the EEI Dataset.

Year

Year of observation. The EEI Dataset covers all years between 1955 and 2007. In order to facilitate the merging with other datasets or the transfer to different computer programmes, the standard start and end year for each country in the dataset are set to 1955 and 2007 respectively, even though – for countries that gained their internationally recognised independence after 1955 or/and ceased to exist before 2007 – observations for subsequent variables have only been added from the year of their internationally recognised independence until the end of their existence according to the COW Project State System Membership List version 2008.1. Appendix 2 summarises the start and end year of these observations for all countries included in the EEI Dataset.

EthnWar

Incidence of ethnic war. “EthnWar” is a dummy variable that takes on the value “1” for all years² in which a country experienced large-scale ethnic violence according to the Political Instability Task Force (PITF) Ethnic War Problem Set, 1955-2007.^v By definition, this variable does not distinguish whether a country experienced one or more than one episode of ethnic war within the same year. The rare cases in which a country experienced more than one episode of ethnic war within the same year according to the PITF Ethnic War Problem Set, 1955-2007 include Ethiopia 1963-64 and 1977-78, India 1990-93, Indonesia 1981-84 and 1998-99, Yugoslavia 1991 and the Soviet Union 1991.

Following the PITF, ethnic wars are “episodes of violent conflict between governments and national, ethnic, religious, or other communal minorities (ethnic challengers) in which the challengers seek major changes in their status.” (Marshall, Gurr and Harff 2009:6)^{vi} Wars are defined as “unique political events that are characterized by the concerted (or major) tactical and strategic use of organized violence in an attempt by political and/or military leaders to gain a favorable outcome in an ongoing, [sic] group conflict interaction process.” (ibid.:4) The PITF

² It is worth pointing out that the precise day and month in which an armed conflict started or ended according to the PITF Ethnic War Problem Set, 1955-2007 or the UCDP/PRIO Armed Conflict Dataset version 4-2009 (see below) are irrelevant for the coding of **EthnWar**, **WarNei**, **NWarNei**, **InterCon**, **InterCon2** and **Extrasys** in the EEI Dataset, so that – even if a conflict started relatively late (e.g. in December) or ended relatively early (e.g. in January) in a given year – the aforementioned variables still identify the according year as a conflict year.

excludes rioting and warfare between rival communal groups from its dataset “unless it involves conflict over political power or government policy” (ibid.:6) as a proxy for fighting the government itself.

Two minimum thresholds must be fulfilled in order for a violent ethnic conflict to be included in the PITF Ethnic War Problem Set (ibid.): First, each conflict party must mobilise at least 1,000 people, either as armed agents, demonstrators or troops (mobilisation threshold), and, second, there must be 1,000 or more direct conflict-related deaths over the full course of the armed conflict and at least one year when the annual conflict-related death toll exceeds 100 fatalities (conflict intensity threshold). The PITF defines the full course of an armed conflict as “a continual episode of armed conflict between agents of the state and agents of the opposition group during which there is no period greater than three years when annual conflict-related fatalities are fewer than 100 in each year” (ibid.:6). Fatalities can either result from armed conflict, terrorism, rioting or government repression (ibid.).

Please note that the EEI Dataset deviates slightly from the PITF Ethnic War Problem Set, 1955-2007 in that it includes information on the incidence of ethnic war in the Soviet Union prior to its dissolution. In the PITF Problem Set, this information has been noted under the conflict details for Azerbaijan and Georgia, but not added as a separate country listing for the Soviet Union. See Appendix 3 for the number of observations for this and all subsequent variables.

Peaceyrs

Number of years without large-scale ethnic violence. Based on information from the PITF Ethnic War Problem Set, 1955-2007 and following the example of Nathaniel Beck, Jonathan Katz and Richard Tucker (1998),^{vii} “Peaceyrs” starts at 0 for each country in 1955 or, where applicable, in the first year of its internationally recognised independence (see **Year**), and is then calculated as the number of years prior to the current observation in which there was no incidence of ethnic war. For example, “Peaceyrs” takes on the value “17” for the Philippines in 1972, as prior to the incidence of ethnic war in this year there were 17 years without incidence of large-scale ethnic violence since 1955; “Peaceyrs” then takes on the value “0” for the Philippines from 1973 to 2007, as there was no year without incidence of ethnic war in this country from 1972 onwards.

WarNei

Incidence of ethnic war in a neighbouring country. “WarNei” is a dummy variable that takes on the value “1” for all years in which a neighbouring country experienced large-scale ethnic violence according to the Political Instability Task Force (PITF) Ethnic War Problem Set, 1955-2007. For the purpose of the EEI Dataset, neighbouring countries are defined solely on the basis of whether they share a land (not maritime) border, which implies that island countries such as Sri Lanka are treated as having no neighbouring countries. To code this variable, land borders have been identified according to political maps which are publicly available on the internet. By definition, “WarNei” does not distinguish whether one or more than one neighbouring country experienced large-scale ethnic violence in a given year, or whether a neighbouring country experienced more than one episode of ethnic war within the same year.

NWarNei

Number of ethnic wars in neighbouring countries. “NWarNei” provides the total number of ethnic wars that occurred in a country's neighbouring countries within the same year. This number has been calculated as the sum of all episodes of ethnic war in all neighbouring countries in a given year, based on data by the Political Instability Task Force (PITF) Ethnic War Problem Set, 1955-2007. For instance, “NWarNei” takes on the value “4” for Pakistan in 1992, as its neighbouring countries Afghanistan and China each experienced one episode and its neighbouring country India two episodes of ethnic war in that year. Like **WarNei**, neighbouring countries are defined solely on the basis of whether they share a land (not maritime) border according to political maps that are publicly available on the internet.

InterCon

Involvement in violent international conflict. “InterCon” is a dummy variable that takes on the value “1” for all years in which a country was involved as a primary party in at least one extrasystemic or interstate armed conflict³ that qualifies either as a minor armed conflict or war according to the UCDP/PRIO Armed Conflict

³ Hence, internal and internationalised internal armed conflicts according to the UCDP/PRIO Armed Conflict Dataset have not been taken into account for the coding of “InterCon”.

Dataset version 4-2009,^{viii} i.e. that has resulted either in 25 to 999 battle-related deaths in a given year or in at least 1,000 battle-related deaths in a given year.

According to the UCDP/PRIO Armed Conflict Dataset Codebook, a conflict is “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.” (UCDP and PRIO 2009a:1)^{ix} Extrasystemic armed conflicts are defined as armed conflicts that occur “between a state and a non-state group outside its own territory” (ibid.:7), and interstate armed conflicts as armed conflicts that occur “between two or more states.” (ibid.)⁴ For instance, “InterCon” takes on the value “1” for Afghanistan and the Soviet Union in 1979, as the two countries were engaged as primary parties in an interstate armed conflict with each other in this year (intensity: minor armed conflict); likewise, “InterCon” takes on the value “1” for Malaysia in 1957 (the first year of its internationally recognised independence) and the United Kingdom between 1955 and 1957, as the two countries – or, to be more precise, the government of the United Kingdom and the Communist Party of Malaya – were engaged as primary parties in an extrasystemic armed conflict with each other in these years (intensity in all these years: war).

By definition, “InterCon” does not distinguish whether a country was a primary party to one or more than one episode of violent international conflict in a given year. The cases in which a country was involved in more than one violent international conflict within the same year according to the UCDP/PRIO Armed Conflict Dataset version 4-2009 include: Cambodia 1977, China 1969, the Democratic Republic of Vietnam 1975, France 1955-59 and 1961, Israel 1967 and 1973, Portugal 1963-74 and the United Kingdom 1955-57.

Please note that there is one minor mistake in the data file for the UCDP/PRIO Armed Conflict Dataset version 4-2009 which has been corrected in the EEI Dataset: the end year of the interstate armed conflict between the Democratic

⁴ A state, in turn, is defined in the UCDP/PRIO Armed Conflict Dataset Codebook as “an internationally recognised sovereign government controlling a specific territory or an internationally unrecognised government controlling a specified territory whose sovereignty is not disputed by another internationally recognized sovereign government previously controlling the same territory.” (UCDP and PRIO 2009a:2)

Republic of Vietnam and the Republic of Vietnam has been adjusted to 1975 rather than 1974, based on information from the UCDP/PRIO Armed Conflict Dataset version 4-2009 Version History.^x

InterCon2

Involvement in interstate armed conflict. "InterCon2" is a dummy variable that takes on the value "1" for all years in which a country was involved as a primary party in at least one interstate armed conflict that qualifies either as a minor armed conflict or war according to the UCDP/PRIO Armed Conflict Dataset version 4-2009, i.e. that has resulted either in 25 to 999 battle-related deaths in a given year or in at least 1,000 battle-related deaths in a given year. While **InterCon** identifies those years in which a country was a primary party to either an extrasystemic or interstate armed conflict, "InterCon2" thus indicates a country's involvement only in the latter type of conflict. By definition, "InterCon2" does not distinguish whether a country was a primary party to one or more than one episode of interstate armed conflict in a given year.

InterCon3

Involvement in extrasystemic armed conflict. "InterCon3" is a dummy variable that takes on the value "1" for all years in which a country was involved as a primary party in at least one extrasystemic armed conflict that qualifies either as a minor armed conflict or war according to the UCDP/PRIO Armed Conflict Dataset version 4-2009, i.e. that has resulted either in 25 to 999 battle-related deaths in a given year or in at least 1,000 battle-related deaths in a given year. While **InterCon** identifies those years in which a country was a primary party to either an extrasystemic or interstate armed conflict, "InterCon3" thus indicates a country's involvement only in the former type of conflict. By definition, "InterCon3" does not distinguish whether a country was a primary party to one or more than one episode of extrasystemic armed conflict in a given year.

Population

Total population in millions. The primary source for this variable are the population data provided by the Penn World Table version 6.3.^{xi} For those country years in

which no population data are available from this dataset, two additional sources were used: the population variable from Kristian Gleditsch's Expanded Trade and GDP Data version 5.0^{xii} (used for Czechoslovakia 1955-92, the Democratic Republic of Vietnam 1955-75, Democratic Yemen 1967-90, the German Democratic Republic 1955-90, the German Federal Republic 1955-90, Pakistan 1955-70 [*prior to independence of Bangladesh*], the Republic of Vietnam 1955-75, the Soviet Union 1955-90, the Yemen Arab Republic 1955-90 and Yugoslavia 1955-91); and the total population, both sexes variable from the 2006 revision of the World Population Prospects database by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat^{xiii} (used for Burma 1955-2007 and North Korea 1955-2007). The population size of the United Arab Republic 1958-61 has been calculated by adding the population data provided by the Penn World Table version 6.3 for Egypt and Syria in these years; likewise, the population size of the Federal Republic of Yugoslavia/Serbia and Montenegro 1992-2006 has been calculated by adding the population data provided by the Penn World Table version 6.3 for Montenegro and Serbia in these years.

GDPpc

GDP per capita in thousands U.S. dollars. The two sources for this variable are the GDP per capita, current prices data from Kristian Gleditsch's Expanded Trade and GDP Data version 5.0 for country years between 1955 and 2004, and the real gross domestic product per capita, current price data from the Penn World Table version 6.3 for country years between 2005 and 2007.

EconRes

Index of Distribution of Economic Power Resources according to Tatu Vanhanen's Democratization and Power Resources 1850-2000 dataset.^{xiv} Vanhanen calculated this variable as the sum of the two products that are obtained from multiplying the value of family farm area with the percentage of agricultural population, and the value of the degree of decentralisation of non-agricultural economic resources with the percentage of non-agricultural population (FSD 2010).^{xv} According to Vanhanen, the higher the value of the Index of Distribution of Economic Power Resources, “the more widely economic power resources based on the ownership and/or control of the means of production are distributed in a society.” (Vanhanen 1997:56)^{xvi}

Please note that, while Vanhanen's Democratization and Power Resources 1850-2000 dataset only provides values for the Index of Distribution of Economic Power Resources in ten-year intervals (i.e. for 1948, 1958, 1968 etc., without any data for the years in-between), these values have been added in the EEI Dataset for entire time periods, so that for instance the value provided in Vanhanen's dataset for Belgium in 1948 ("60.0") has been added for this country for all years from 1955 (the start year of the EEI Dataset, see **Year**) to 1957; the value provided by Vanhanen for Belgium in 1958 ("90.0") then has been added for this country for all years from 1958 to 1967, the value for 1968 ("90.0") for this country for all years from 1968 to 1977 and so on. As exceptions to this rule, the 1988 value for Ethiopia was only added from 1988 to 1992 (i.e. only until the year prior to Eritrea's internationally recognised independence in 1993) and the 1968 value for Pakistan was only added from 1968 to 1970 (i.e. only until the year prior to Bangladesh's internationally recognised independence in 1971), in recognition of the fact that the boundary changes in both countries in 1993 and 1971 respectively are likely to have had an impact on the distribution of economic power resources within their societies in these and subsequent years.

PowRes

Index of Power Resources according to Tatu Vanhanen's Democratization and Power Resources 1850-2000 dataset. Vanhanen calculated this variable by multiplying the values of the Index of Occupational Diversification (i.e. the arithmetic mean of urban population and non-agricultural population), Index of Knowledge Distribution (i.e. the arithmetic mean of students and literates) and Index of the Distribution of Economic Power Resources (see **EconRes**), and then dividing the product by 10,000 (FSD 2010). According to Vanhanen, the higher the value of the Index of Power Resources, "the more widely politically relevant power resources are usually distributed among various sections of the population" (Vanhanen 1997:56).

Please note that, while Vanhanen's Democratization and Power Resources 1850-2000 dataset only provides values for the Index of Power Resources in ten-year intervals (i.e. for 1948, 1958, 1968 etc., without any data for the years in-between), these values have been added in the EEI Dataset for entire time periods, so that for instance the value provided in Vanhanen's dataset for Belgium in 1948 ("22.2") has been added for this country for all years from 1955 (the start year of the EEI

Dataset, see **Year**) to 1957; the value provided by Vanhanen for Belgium in 1958 (“35.6”) then has been added for this country for all years from 1958 to 1967, the value for 1968 (“39.2”) for this country for all years from 1968 to 1977 and so on. As exceptions to this rule, the 1988 value for Ethiopia was only added from 1988 to 1992 (i.e. only until the year prior to Eritrea's internationally recognised independence in 1993) and the 1968 value for Pakistan was only added from 1968 to 1970 (i.e. only until the year prior to Bangladesh's internationally recognised independence in 1971), in recognition of the fact that the boundary changes in both countries in 1993 and 1971 respectively are likely to have had an impact on the distribution of power resources within their societies in these and subsequent years.

Oil

Status as oil exporter. Following the example of James Fearon and David Laitin (2003a, 2003b),^{xvii} “Oil” is a dummy variable that takes on the value “1” for all years in which a country's fuel exports as a percentage of merchandise exports exceeded 33%.⁵ The main source for country years between 1955 and 1999 is the oil exporters variable provided by the replication data for Fearon and Laitin's (2003a) article. Since Fearon and Laitin's dataset only covers country years up to 1999, “Oil” has been coded for country years between 2000 and 2007 using the fuel exports as a percentage of merchandise exports data from the World Bank's World Development Indicators.^{xviii} These World Bank data were also used to double-check and, where necessary, correct apparent coding mistakes in Fearon and Laitin's oil exporters variable (e.g. Nigeria 1966-68, Norway 1978, Tunisia 1972-73).⁶

Where no data were available from the World Bank (e.g. Equatorial Guinea after 1983) or where there was reason for doubt about the accuracy of the information provided (e.g. Laos 1962-74), additional information was sought from sources including e.g. government websites, newspaper articles or reports by relevant

⁵ Please note that the coding information for the oil exporters variable provided in Fearon and Laitin's (2003a) article and their (2003b) data notes contradict each other slightly in that the former states that the dummy variable marks those country years “in which fuel exports exceed one third [i.e. 33.3%] of export revenues” (Fearon and Laitin 2003a:81) and the latter that the dummy variable marks those “country years that had greater than 33% [i.e. 33.0%] fuel exports.” (Fearon and Laitin 2003b:4) The EEI Dataset uses the latter threshold, which is why, as mentioned above, “Oil” takes on the value “1” for all years in which a country's fuel exports as a percentage of merchandise exports exceeded 33.0% rather than 33.3%.

⁶ For a complete list of corrected values, please contact the author of the EEI Dataset.

organisations such as the International Energy Agency or the U.S. Energy Information Administration, in order to complete missing data or, where necessary, correct the World Bank information.

In line with Fearon and Laitin's coding rules, the last available value of "Oil" was "extended forward for each country for the most recent years" (Fearon and Laitin 2003b:4) if no information was available from any of the aforementioned sources, based "on the assumption [that] once countries come 'on line' for oil production[,] they generally stay there" (ibid.).

Mountain

Percent of mountainous terrain according to the replication data for James Fearon and David Laitin's (2003a) article. Since Fearon and Laitin's dataset only covers country years up to 1999, values for country years between 2000 and 2007 were included by simply extending forward the last available value of "Mountain" for each country.

Please note that the percent of mountainous terrain variable in Fearon and Laitin's replication data does not seem to take boundary changes into account, as it remains the same for instance for Pakistan before and after the internationally recognised independence of Bangladesh. Based on the recognition that boundary changes are likely to have an impact on a country's proportion of mountainous terrain, this has been corrected in the EEI Dataset insofar that no values were added from Fearon and Laitin's dataset for: Ethiopia prior to Eritrea's internationally recognised independence in 1993; Pakistan prior to Bangladesh's internationally recognised independence in 1971; the Democratic Republic of Vietnam (whose percentage of mountainous terrain is the same as that of the Socialist Republic of Vietnam in Fearon and Laitin's data); the German Federal Republic (whose percentage of mountainous terrain is the same as that of reunified Germany in Fearon and Laitin's data); the Soviet Union (whose percentage of mountainous terrain is the same as that of the Russian Federation in Fearon and Laitin's data); and Yugoslavia (whose percentage of mountainous terrain is the same as that of the Federal Republic of Yugoslavia in Fearon and Laitin's data).

Noncont

Noncontiguous country according to the replication data for James Fearon and David Laitin's (2003a) article. "Noncont" is a dummy variable that takes on the value "1" for all years in which a country can be described as noncontiguous in the sense that some of its territory holding at least 10,000 people is separated from the land area containing the capital city either by land or 100 km of water (ibid.). Colonial empires have been ignored for the coding of this variable (ibid.).

Since Fearon and Laitin's dataset only covers country years up to 1999, the remaining country years between 2000 and 2007 have been coded using political maps and demographic data which are publicly available on the internet. In the same manner, countries which are included in the EEI Dataset but not in Fearon and Laitin's replication data have been identified as either noncontiguous or not. Noncontiguous countries which are not among the countries considered in Fearon and Laitin's dataset include Comoros, the Solomon Islands and the United Arab Republic.

Please note that Fearon and Laitin mistakenly do not code Democratic Yemen as a noncontiguous country; this minor coding mistake has been corrected in the EEI Dataset. Also, due to differences between the EEI Dataset and Fearon and Laitin's replication data regarding the year in which Bangladesh gained internationally recognised independence, Pakistan has been identified as a noncontiguous country until 1970 in the EEI Dataset, rather than until 1971 as in Fearon and Laitin's replication data.

BritRul

Former British colony, protectorate, trust territory or subject to British League of Nations mandate. "BritRul" is a dummy variable that takes on the value "1" for all years of those countries which, at any point between 1946 and 2007, either were ruled under a British League of Nations mandate or used to be a British colony,⁷

⁷ Or were part of a British colony, such as current-day Bangladesh, India and Pakistan which all used to be part of British India.

British protectorate or UN trust territory under British administration.⁸ For the purpose of the EEI Dataset, neither this variable nor **RulExp1** and **RulExp2** (see below) mark countries that had the status of a self-governing dominion or a protected state. Protected states are thereby distinct from protectorates because, unlike the latter, they had “a properly organised internal government” (UK Home Office 2010:1)^{xix} and, at least *de iure*, were subject to the British government's direct involvement only in their external but not their internal affairs (ibid.). Sources for the coding of this variable include information from the United Nations,^{xx} the CIA World Factbook^{xxi} and, where necessary (i.e. to confirm or clarify information from the previous two sources), relevant government websites as well as the BBC country profiles.^{xxii}

The countries in the EEI Dataset that, at any point between 1946 and 2007, either were ruled under a British League of Nations mandate or used to be a British colony, British protectorate or UN trust territory under British administration include: Bahrain, Bangladesh, Botswana, Burma, Cyprus, Democratic Yemen, Fiji, The Gambia, Ghana, Guyana, India, Jamaica, Jordan, Kenya, Lesotho, Malawi, Malaysia, Mauritius, Nigeria, Pakistan, Qatar, Sierra Leone, Singapore, Solomon Islands, Somalia, Sri Lanka, Sudan, Swaziland, Tanganyika, Tanzania, Trinidad and Tobago, Uganda, Zambia and Zimbabwe.

Please note that – since British and Italian Somaliland were joined in independent Somalia, and Sudan used to be ruled by an Anglo-Egyptian condominium prior to its independence in 1956 – both “**BritRul**” and **RulOth** (see below) take on the value “1” for all years for Somalia and Sudan.

FrenRul

Former French colony, protectorate, trust territory or subject to French League of Nations mandate. “**FrenRul**” is a dummy variable that takes on the value “1” for all years of those countries which, at any point between 1946 and 2007, either were

⁸ Please note that the previous belonging to another country (e.g. of Eritrea to Ethiopia before its internationally recognised independence in 1993), foreign military administrations or occupations were not taken into account for the coding of **BritRul**, **FrenRul**, **OthRul**, **RulExp1** and **RulExp2**.

ruled under a French League of Nations mandate or used to be a French colony,⁹ French protectorate or UN trust territory under French administration. Sources for the coding of this variable include information from the United Nations, the CIA World Factbook and, where necessary (i.e. to confirm or clarify information from the previous two sources), relevant government websites as well as the BBC country profiles.

The countries in the EEI Dataset that, at any point between 1946 and 2007, either were ruled under a French League of Nations mandate or used to be a French colony, French protectorate or UN trust territory under French administration include: Algeria, Benin, Burkina Faso, Cambodia, Cameroon, the Central African Republic, Chad, Comoros, the Republic of the Congo, Côte d'Ivoire, Djibouti, Gabon, Guinea, Laos, Madagascar, Mali, Mauritania, Morocco, Niger, Senegal, Syria, Togo, Tunisia, the Democratic Republic of Vietnam, the Republic of Vietnam and Vietnam.

OthRul

Former colony, protectorate, trust territory or subject to a League of Nations mandate of any country other than France or the United Kingdom. “OthRul” is a dummy variable that takes on the value “1” for all years of those countries which, at any point between 1946 and 2007, either were ruled under a League of Nations mandate of any country other than France or the United Kingdom or used to be a colony, protectorate or UN trust territory¹⁰ of any country other than France or the United Kingdom (such as, for instance, Belgium or Portugal). Sources for the coding of this variable include information from the United Nations, the CIA World Factbook and, where necessary (i.e. to confirm or clarify information from the previous two sources), relevant government websites as well as the BBC country profiles.

The countries in the EEI Dataset that, at any point between 1946 and 2007, either were ruled under a League of Nations mandate of any country other than France or the United Kingdom or used to be a colony, protectorate or UN trust territory of any

⁹ Or were part of a French colony, such as current-day Cambodia, Laos and Vietnam which all used to be part of French Indochina.

¹⁰ Or were part of a UN trust territory, such as current-day Burundi and Rwanda which both used to be part of the Ruanda-Urundi trust territory.

country other than France or the United Kingdom include: Angola, Burundi, the Democratic Republic of the Congo, East Timor, Equatorial Guinea, Guinea-Bissau, Indonesia, Mozambique, Namibia, Papua New Guinea, the Philippines, Rwanda, Somalia and Sudan.

RulExp1

Former colony, protectorate, trust territory or subject to a League of Nations mandate. “RulExp1” is a dummy variable that takes on the value “1” for all years of those countries which, at any point between 1900 and 1945, either were ruled under a League of Nations mandate or used to be a colony, protectorate or UN trust territory. Sources for the coding of this variable include information from the United Nations, the CIA World Factbook and, where necessary (i.e. to confirm or clarify information from the previous two sources), relevant government websites as well as the BBC country profiles.

RulExp2

Former colony, protectorate, trust territory or subject to a League of Nations mandate. “RulExp2” is a dummy variable that takes on the value “1” for all years of those countries which, at any point between 1946 and 2007, either were ruled under a League of Nations mandate or used to be a colony, protectorate or UN trust territory. Sources for the coding of this variable include information from the United Nations, the CIA World Factbook and, where necessary (i.e. to confirm or clarify information from the previous two sources), relevant government websites as well as the BBC country profiles.

EthFrAI

Ethnic fractionalisation index according to Alberto Alesina et al. (2003).^{xxiii} The index depicts “the probability that two randomly drawn individuals from the population belong to two different [ethnic] groups” (ibid.:156), based on the formula

$$\text{FRACT}_j = 1 - \sum_{i=1}^N s_{ij}^2$$

where s_{ij} is the share of group i ($i = 1 \dots M$) in country j . To define ethnicity, Alesina et al. use a combination of racial and linguistic characteristics (ibid.). The index ranges between 0 (complete ethnic homogeneity) and 1 (complete ethnic heterogeneity), i.e. the closer the value of “EthFrAI” to 1, the closer a given society is to being completely ethnically heterogeneous; conversely, the closer the value of “EthFrAI” to 0, the closer a given society is to being completely ethnically homogeneous.

The primary source for this variable are the ethnic fractionalisation data provided by Alesina et al. (2003). As Alesina et al. (2003) do not provide data for all countries included in the EEI Dataset nor for Ethiopia following Eritrea's internationally recognised independence in 1993 and Pakistan prior to Bangladesh's internationally recognised independence in 1971, additional values of “EthFrAI” have been calculated using the aforementioned formula and ethnicity data from the following sources: the CIA World Factbook 1980^{xxiv} for Czechoslovakia 1955-92, the German Democratic Republic 1955-90, the German Federal Republic 1955-90 and the Yemen Arab Republic 1955-90; the CIA World Factbook 2007^{xxv} for Ethiopia 1993-2007, Montenegro 2006-07 and Serbia 2006-07; Wright (1991)^{xxvi} for Pakistan 1955-70; and Anderson and Silver (1989)^{xxvii} for the Soviet Union 1955-91.

Please note that the values of “EthFrAI” from the aforementioned sources have been added in the EEI Dataset for entire time periods rather than particular country years, i.e. the ethnic fractionalisation value which Alesina et al. calculated for Sri Lanka based on ethnicity data from 2001 has been added in the EEI Dataset for this country for all years between 1955 and 2007, the ethnic fractionalisation value which Alesina et al. calculated for Thailand based on ethnicity data from 1983 has been added for this country for all years between 1955 and 2007 and so on.

Polity

Revised Combined Polity Score according to the Polity IV Project dataset version p4v2008. Like the Polity IV Project's Combined Polity Score, the Revised Combined Polity Score ranges from -10 (strongly autocratic) to +10 (strongly democratic). It differs from the Combined Polity Score, as instances of so-called standardised authority scores (-66, -77 and -88) have been converted to conventional polity scores within the range of -10 to +10, in order “to facilitate the use of the POLITY

regime measure in time-series analyses.” (Marshall and Jagers 2009b:15)^{xxviii} Under the Combined Polity Score, the standardised authority scores mark interruption periods (-66), interregnum periods (-77) and transition periods (-88).

The Polity IV Project team computes the Combined Polity Score which underlies the Revised Combined Polity Score by subtracting the Institutionalized Autocracy score from the Institutionalized Democracy score (ibid.). The latter two scores are derived from the codings of variables which measure the competitiveness of executive recruitment, the openness of executive recruitment, constraints on the chief executive, the competitiveness of political participation and the regulation of participation (ibid.).¹¹ Please note that all “Polity” values have been calculated by the Polity IV Project team “according to the regime in place on December 31 of the year coded.” (ibid.:11)

Anoc

Anocracy. “Anoc” is a dummy variable that takes on the value “1” for all years in which a country's Combined Polity Score according to the Polity IV Project dataset version p4v2008 lies between -5 and +5 or takes on the value -66, -77 or -88. Please note that all values of the Combined Polity Score have been calculated by the Polity IV Project team “according to the regime in place on December 31 of the year coded.” (Marshall and Jagers 2009b:11)

PolThres

Prevalence of autocratic regime features. “PolThres” is a dummy variable that takes on the value “1” for all years in which the autocratic features of a country's political regime outweighed the democratic ones. The primary source for this variable is the Combined Polity Score according to the Polity IV Project dataset version p4v2008: “PolThres” takes on the value “1” for all years in which a country's Combined Polity Score is ≤ 0 .¹² For those country years in which the Combined Polity Score takes on

¹¹ Please consult the Polity IV Project Dataset Users' Manual for further details on the coding of these variables and how they are used to calculate the Institutionalized Democracy score and the Institutionalized Autocracy score.

¹² It is worth emphasising at this point that, for the purpose of the EEI Dataset, country years in which the Combined Polity Score takes on the value “0” are also treated as years in which the autocratic features of a country's political regime outweighed the democratic ones.

the value -66, -77 or -88, or in which no data are available from the Polity IV Project dataset version p4v2008, additional sources were consulted, including reports by Freedom House,^{xxix} the Bertelsmann Transformation Index,^{xxx} the Inter-Parliamentary Union,^{xxxi} the ACE Electoral Knowledge Network,^{xxxii} the U.S. Library of Congress Country Studies^{xxxiii} and relevant academic publications. These sources were used to gather as much information as possible for the country and year in question on the competitiveness of executive recruitment, the openness of executive recruitment, constraints on the chief executive, the competitiveness of political participation and the regulation of participation (the key criteria on which the calculation of the Combined Polity Score is based, see **Polity**). Drawing on this information, an assessment was made whether the autocratic features of a country's political regime that was in place on December 31 of a given year seem to have outweighed the democratic ones; "PolThres" was then coded according to this assessment for the country years in which the Combined Polity Score takes on the value -66, -77 or -88, or in which no data are available from the Polity IV Project dataset version p4v2008.¹³

Instab

Recent experience of political instability. Following the example of James Fearon and David Laitin (2003a), "Instab" is a dummy variable that takes on the value "1" if a country's Combined Polity Score according to the Polity IV Project dataset version p4v2008 either took on the value -77 or -88 or had a three-or-greater change in any of the three years prior to the current observation. For instance, "Instab" takes on the value "1" for El Salvador in 1965 and 1966, as El Salvador's Combined Polity Score according to the Polity IV Project dataset version p4v2008 changed from -3

¹³ It is important to emphasise again that "PolThres" – just like **Anoc** and **Instab** – is coded based on the values of the Combined Polity Score rather than the Revised Combined Polity Score. Hence, in some occasions – such as for instance El Salvador 1982-83 or Hungary 1989 – when the standardised authority scores under the Combined Polity Score have been converted into conventional values >0 under the Revised Combined Polity Score (see **Polity**), "PolThres" might still take on the value "1" if additionally consulted sources indicate that the autocratic features of a country's political regime at the end of the year in question outweighed the democratic ones; conversely, "PolThres" might take on the value "0" even though the standardised authority scores under the Combined Polity Score have been converted into conventional values ≤ 0 under the Revised Combined Polity Score, if additionally consulted sources indicate that the democratic features of a country's political regime at the end of the year in question outweighed the autocratic ones (see e.g. Comoros 1995).

in 1963 to 0 in 1964; likewise, “Instab” takes on the value “1” for Bolivia from 1955 to 1958, as Bolivia's Combined Polity Score took on the value -88 from 1952 to 1955.

Please note that the coding of the political instability variable in the EEI Dataset differs from that in Fearon and Laitin's replication data, as the latter treat the year in which a three-or-greater change in the Combined Polity Score occurs as instance of political instability, rather than the last year before such a change. Hence, the aforementioned change in El Salvador's Combined Polity Score from -3 in 1963 to 0 in 1964 leads Fearon and Laitin to code their political instability variable as “1” for El Salvador from 1965 to 1967, based on the assumption that 1964 was particularly affected by political instability as the year in which the Combined Polity Score changes. In contrast, “Instab” takes on the value “1” in the EEI Dataset for El Salvador only from 1965 to 1966, based on the assumption that 1964 is the first year of a new period of political stability (since the Combined Polity Score remains at “0” from 1964 to 1971) and that thus 1963 is likely to have been more affected by political instability as the last year before the change in the Combined Polity Score.

CorrICRG

International Country Risk Guide (ICRG) Corruption Index according to the ICRG Researcher's Dataset (Table 3B), © The PRS Group, Inc. (2009).^{xxxiv} Starting with the year 1984, the index provides annual data on the level of corruption within a country's political system, based on assessments by country experts. It takes into account 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 those sorts of] actual or potential corruption [with which the ICRG Corruption Index is particularly concerned] 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)^{xxxv} The index ranges between 0 and 6, with low numbers indicating high levels of corruption and high numbers indicating low levels of corruption.

LElec

Number of legislative elections. Following, with minor alterations, the example of Matt Golder (2005),^{xxxvi} “LElec” indicates the number of a country's elections to the national legislature in unicameral systems, to the lower house of the national legislature in bicameral systems and, where applicable, to constitutional assemblies in years during which the democratic features of the country's political regime outweighed the autocratic ones. The number of legislative elections provided by “LElec” does not include indirect legislative elections, such as through the Basic Democrats system in Pakistan in 1962 and 1965. The use of several rounds of voting for the same legislative elections does not affect the coding of “LElec”, i.e. it does not increase the number of legislative elections counted.

Please note three relevant differences between “LElec” and Golder's variable on the number of legislative elections (Golder 2004):^{xxxvii} first, “LElec” automatically takes on the value “0” for those country years in which **PoIThres** takes on the value “1”, i.e. legislative elections in years during which the autocratic features of a country's political regime outweighed the democratic ones are not indicated; second, unlike Golder's variable, “LElec” includes separate, direct elections to constitutional assemblies in its count of the number of legislative elections; third, partial elections (such as those in Poland in 1989) in which only a restricted number of parliamentary seats was freely contested through direct elections are also included in “LElec”.

Countries which held two legislative elections in the same year according to “LElec” include Bangladesh in 1996, Colombia in 1990, Fiji in 1977, Greece in 1989, Ireland in 1982, Mali in 1997, Sri Lanka in 1960, Thailand in 1992 and the United Kingdom in 1974.

The primary source for this variable are the replication data for Golder's (2005) article. Since these replication data only cover country years up to 2000 and bearing in mind the aforementioned coding differences between Golder's variable on the number of legislative elections and “LElec”, additional sources were used to double-check, extend and modify the information provided by Golder's dataset. These additional sources include data by the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe,^{xxxviii} the Inter-Parliamentary Union, the ACE Electoral Knowledge Network, the U.S. Library of Congress Country Studies and

parliament websites. Where data sources contradict each other on an election year, the information provided by national parliaments was chosen where available, otherwise the year on which three out of four sources agree.

PElec

Number of presidential elections. Following, with minor alterations, the example of Matt Golder (2005), “PElec” indicates the number of a country's popular presidential elections in years during which the democratic features of the country's political regime outweighed the autocratic ones. “Popular presidential elections” are here defined as those elections in which presidents are either directly elected (such as in Ireland) or through an electoral college that has been directly elected specifically for the purpose of the presidential elections (such as in the United States). Presidential elections through electoral bodies that have not been directly elected, such as in the case of the German *Bundesversammlung*, are hence not included in the number of presidential elections provided by “PElec”. Direct elections to the prime minister, such as in Israel in 1996, 1999 and 2001, have not been included either.

Please note that, like **LElec** and in contrast to the replication data for Golder's (2005) article, “PElec” automatically takes on the value “0” for those country years in which **PoIThres** takes on the value “1”, i.e. presidential elections in years during which the autocratic features of a country's political regime outweighed the democratic ones are not indicated. Apart from this criterion, it is irrelevant for the coding of “PElec” under which form of government popular presidential elections were held. The use of several rounds of voting for the same presidential elections does not affect the coding of “PElec”, i.e. it does not increase the number of presidential elections counted; in instances where different rounds of voting took place in more than one year, “PElec” only counts the year in which the first round of voting occurred, so that for example “PElec” takes on the value “1” for Madagascar in 1992 and “0” for Madagascar in 1993, even though the first round of voting for the same presidential elections took place in November 1992 and the second round in February 1993. Presidential elections which combine aspects of popular and non-popular elections in different rounds of voting, such as under so-called majority congressional systems (Jones 1995),^{xxxix} or in which the president is elected on the same ballot as candidates for seats in the legislature (such as in Guyana) have been included in the number of presidential elections counted by “PElec”.

The only country which held two presidential elections in the same year according to “PElec” is Argentina in 1973.

The primary source for this variable are the replication data for Golder's (2005) article. Since these replication data only cover country years up to 2000 and bearing in mind the aforementioned coding difference between Golder's variable on the number of presidential elections and “PElec”, additional sources were used to double-check, extend and modify the information provided by Golder's dataset. These additional sources include data by the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe, the Inter-Parliamentary Union, the ACE Electoral Knowledge Network, the U.S. Library of Congress Country Studies and government websites. Where data sources contradict each other on an election year, the information provided by national governments was chosen where available, otherwise the year on which three out of four sources agree.

MinRep

Use of electoral mechanisms to enhance ethnic, national or religious minority representation in the national legislature. “MinRep” is a dummy variable that takes on the value “1” for all years in which a country employed specific electoral mechanisms designed to ensure the political representation of certain ethnic, national or religious minorities in the national legislature in unicameral systems or in the lower house of the national legislature in bicameral systems while the democratic features of the country's political regime outweighed the autocratic ones. Please note that “MinRep” automatically takes on the value “0” for those country years in which **PolThres** takes on the value “1”, i.e. the use of electoral mechanisms to enhance ethnic, national or religious minority representation in years during which the autocratic features of a country's political regime outweighed the democratic ones are not indicated. As long as **PolThres** does not take on the value “1”, “MinRep” marks all country years from the year in which a country first employed electoral mechanisms to enhance ethnic, national or religious minority representation in the national legislature in its legislative elections up to (but not including) the year in which the same country held legislative elections that no longer employed these mechanisms.

The types of electoral mechanisms indicated by “MinRep” include seat reservations¹⁴ and the use of communal rolls. Not included are exemptions for political parties representing specific ethnic, national or religious minorities from the formal threshold for winning seats in the legislature; arrangements which encourage ethnically diverse party lists; affirmative gerrymandering; measures to enhance geographical communal representation (cf. Reynolds 2005);^{xl} the use of representation enhancing mechanisms in institutions other than the national legislature in unicameral systems or the lower house of the national legislature in bicameral systems; and reserved seats for paramount chiefs unless they are explicitly intended to enhance the representation of specific minority groups.

Based on these specifications, “MinRep” takes on the value “1” for: Afghanistan 2005-07, Burma 1955-61, Burundi 2005-07, Colombia 1994-2007, Croatia 2000-07, Cyprus 1960-2007, Ethiopia 1994-2007, Fiji 1970-86 and 1990-2005, India 1955-2007, Iran 1997-2003, Lebanon 1955-2007, Mauritius 1968-2007, Montenegro 2006-07, New Zealand 1955-2007, Niger 1993-95 and 1999-2007, Pakistan 1988-98 and 2007, Philippines 1998-2007, Romania 1990-2007, Slovenia 1992-2007, Syria 1955-57, Taiwan 1992-2007, Venezuela 2000-07, Zambia 1964-67 and Zimbabwe 1970-86.

Sources for the coding of this variable include information from Reynolds (2005), Golder (2004, 2005), the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe, the Inter-Parliamentary Union, the ACE Electoral Knowledge Network, the Electoral Institute for the Sustainability of Democracy in Africa,^{xii} national constitutions, electoral laws and other formal documents (such as peace treaties) which affect the electoral mechanisms in place, and relevant academic publications on individual countries. Where data sources contradict each other on the use of electoral mechanisms designed to enhance the political representation of ethnic, national or religious minorities in a given country and year, the information provided by national constitutions and electoral laws was chosen where available, otherwise the information on which two out of three sources agree.

¹⁴ The precise number of reserved seats is thereby irrelevant for the coding of “MinRep”. Mauritius's “best loser” system represents a special because flexible type of seat reservation arrangement that is also indicated by “MinRep”. On the other hand, the “minority regime allocations” (Reynolds 2005:305) in South Africa prior to 1994 have not been included among the electoral mechanisms indicated by “MinRep”.

ElecTypLeg

Type of electoral system for the legislature. “ElecTypLeg” provides information on the type of electoral system used for a country's elections to the national legislature in unicameral systems and to the lower house of the national legislature in bicameral systems.¹⁵ Please note that “ElecTypLeg” automatically takes on the value “0” for those country years in which **PolThres** takes on the value “1”, i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones. In country years during which **PolThres** does not take on the value “1”, “ElecTypLeg” is coded as follows:

1 = majoritarian electoral system

2 = proportional electoral system

3 = mixed electoral system

As long as **PolThres** does not take on the value “1”, “ElecTypLeg” indicates the use of a certain type of electoral system for the legislature from the year in which a country first employed this system in its legislative elections up to (but not including) the year in which the same country held legislative elections that employed a different type of electoral system for the legislature. For instance, “ElecTypLeg” takes on the value “1” for Sri Lanka from 1955 to 1988 and the value “3” for Sri Lanka from 1989 to 2007, as the country first employed a mixed electoral system for the legislature in the 1989 legislative elections, after having previously used a majoritarian electoral system for the legislature.

The definition of different types of electoral system for the legislature follows, with minor alterations, the classification by Matt Golder (2005). According to Golder (2005), majoritarian electoral systems require the winning candidate to obtain either a plurality or majority of the vote; proportional systems allocate seats in proportion to a party's (or candidates') share of the vote; and mixed systems employ a mixture of majoritarian and proportional electoral rules. Unlike Golder (2005), electoral systems with multiple electoral tiers are not treated as a separate category in the EEI Dataset, but have been identified as majoritarian, proportional or mixed depending

¹⁵ Electoral systems used for the elections of constitutional assemblies have not been taken into account for the coding of “ElecTypLeg” if the constitutional assembly (such as the one that was directly elected in Paraguay in 1991) existed as a representative body in addition to the national legislature.

on the electoral formula(s) used in different tiers to translate votes into seats. Following these definitions, majoritarian electoral systems include for instance the first-past-the-post, limited vote and alternative vote systems (Golder 2004). Proportional electoral systems include quota and highest average systems using party lists as well as the single transferable vote (*ibid.*).

In line with the replication data for Golder's (2005) article, electoral systems are classified as mixed in the EEI Dataset if more than 5% of the deputies in the national legislature in unicameral systems or more than 5% of the deputies in the lower house of the national legislature in bicameral systems have been elected by an electoral formula that is different from the one used to elect all other deputies (Golder 2005). This includes electoral systems in which more than 5% of the seats in the national legislature were awarded as bonus seats to political parties that either won the highest number of votes at the electoral district level (such as in Sri Lanka since 1989) or countrywide (such as in Greece since 2007), while all other seats were awarded according to a proportional electoral formula. In contrast to Golder's replication data, questions of district magnitude have been taken into account for the identification of mixed electoral systems in the EEI Dataset: here, electoral systems also have been coded as mixed if a country (such as Somalia between 1964 and 1968) officially employed a proportional electoral system countrywide, yet more than 5% of the deputies in the national legislature in unicameral systems or more than 5% of the deputies in the lower house of the national legislature in bicameral systems were elected in single-member districts while all other deputies were elected in multi-member districts.

Please note that the definition of electoral systems for the legislature used for the EEI Dataset focuses exclusively on the type of electoral formula used to translate votes into seats. Issues such as whether mixed electoral systems are dependent or independent, potential restrictions on the number of freely contestable seats in the legislature, the use of communal rolls or the employment of indirect election arrangements such as the Basic Democrats system in Pakistan's 1962 and 1965 legislative elections are irrelevant for the coding of "ElecTypLeg".

Sources for the coding of this variable include data by Golder (2004, 2005), the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe,

the Inter-Parliamentary Union, the ACE Electoral Knowledge Network, the Electoral Institute for the Sustainability of Democracy in Africa, national constitutions, electoral laws and other formal documents (such as peace treaties) which affect the electoral system in place, government and parliament websites, and relevant academic publications on individual countries. Where data sources contradict each other on the type of electoral system for the legislature used in a given country and year, the information either provided by national constitutions, electoral laws and other formal documents which affect the electoral system in place or provided by government and parliament websites was chosen where available, otherwise the information on which two out of three sources agree.

Maj

Use of a majoritarian electoral system for the legislature. “Maj” is a dummy variable that takes on the value “1” for all years in which a country employed a majoritarian electoral system for elections to the national legislature in unicameral systems or to the lower house of the national legislature in bicameral systems while the democratic features of the country's political regime outweighed the autocratic ones. “Maj” takes on the value “0” for those country years in which **PoIThres** takes on the value “1” (i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones), as well as for those country years in which **PoIThres** does not take on the value “1” but a type of electoral system for the legislature was used that was not majoritarian. As long as **PoIThres** does not take on the value “1”, “Maj” indicates the use of a majoritarian electoral system for the legislature from the year in which a country first employed this system in its legislative elections up to (but not including) the year in which the same country held legislative elections that employed a different type of electoral system for the legislature. Please see **ElecTypLeg** for further details and the sources used for the coding of this variable.

Prop

Use of a proportional electoral system for the legislature. “Prop” is a dummy variable that takes on the value “1” for all years in which a country employed a proportional electoral system for elections to the national legislature in unicameral systems or to the lower house of the national legislature in bicameral systems while the

democratic features of the country's political regime outweighed the autocratic ones. "Prop" takes on the value "0" for those country years in which **PoIThres** takes on the value "1" (i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones), as well as for those country years in which **PoIThres** does not take on the value "1" but a type of electoral system for the legislature was used that was not proportional. As long as **PoIThres** does not take on the value "1", "Prop" indicates the use of a proportional electoral system for the legislature from the year in which a country first employed this system in its legislative elections up to (but not including) the year in which the same country held legislative elections that employed a different type of electoral system for the legislature. Please see **ElecTypLeg** for further details and the sources used for the coding of this variable.

MixedEI

Use of a mixed electoral system for the legislature. "MixedEI" is a dummy variable that takes on the value "1" for all years in which a country employed a mixed electoral system for elections to the national legislature in unicameral systems or to the lower house of the national legislature in bicameral systems while the democratic features of the country's political regime outweighed the autocratic ones. "MixedEI" takes on the value "0" for those country years in which **PoIThres** takes on the value "1" (i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones), as well as for those country years in which **PoIThres** does not take on the value "1" but a type of electoral system for the legislature was used that was not mixed. As long as **PoIThres** does not take on the value "1", "MixedEI" indicates the use of a mixed electoral system for the legislature from the year in which a country first employed this system in its legislative elections up to (but not including) the year in which the same country held legislative elections that employed a different type of electoral system for the legislature. Please see **ElecTypLeg** for further details and the sources used for the coding of this variable.

ElecTypPres

Type of electoral system for the presidency. "ElecTypPres" provides information on the type of electoral system used for the presidency in countries which have a

presidential form of government in years during which the democratic features of the country's political regime outweighed the autocratic ones. Accordingly, "ElecTypPres" automatically takes on the value "0" for those country years in which **FormGov** takes on any value other than "2" (see below). In country years during which **FormGov** takes on the value "2", "ElecTypPres" is coded as follows:

- 1 = plurality system
- 2 = absolute majority system
- 3 = qualified majority system
- 4 = electoral college system
- 5 = preferential electoral system
- 6 = electoral system with vote distribution requirement

This coding scheme follows, with minor alterations, that by Matt Golder (2004, 2005) for his variable on types of electoral system for the presidency. It differs from Golder's variable, as he distinguishes only five types of electoral system used in presidential elections, whereas "ElecTypPres" includes a sixth category specifically for electoral systems with vote distribution requirements, as employed for instance in Nigeria between 1979 and 1983. Moreover, "ElecTypPres", unlike Golder's variable, takes on the value "99" in those country years during which **FormGov** takes on the value "2" but none of the aforementioned categories to identify different types of electoral system for the presidency can be usefully applied. This includes Burundi's transitional government between 2002 and 2004; Sri Lanka between 1977 and 1981, i.e. in the first years following the change from a parliamentary to a presidential form of government; and Switzerland between 1955 and 2007 due to the uniqueness of the rotation principle for the Swiss presidency. Please note that so-called majority congressional systems (Jones 1995) have been coded as absolute majority systems.

As long as **FormGov** takes on the value "2", "ElecTypPres" indicates the use of a given type of electoral system for the presidency from the year in which a country first employed this system in its presidential elections up to (but not including) the year in which the same country held presidential elections that employed a different type of electoral system for the presidency. For instance, "ElecTypPres" takes on the value "1" for Colombia from 1957 to 1993 and the value "2" for Colombia from

1994 to 2007, as the country first employed an absolute majority system in the 1994 presidential elections, after having previously used a plurality electoral system for the presidency.

Sources for the coding of this variable include data by Golder (2005), the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe, the ACE Electoral Knowledge Network, the Electoral Institute for the Sustainability of Democracy in Africa, the Political Database of the Americas,^{xlii} national constitutions, electoral laws and other formal documents (such as peace treaties) which affect the electoral system in place, government and parliament websites, and relevant academic publications on individual countries. Where data sources contradict each other on the type of electoral system for the presidency used in a given country and year, the information either provided by national constitutions, electoral laws and other formal documents which affect the electoral system in place or provided by government and parliament websites was chosen where available, otherwise the information on which two out of three sources agree.

FormGov

Form of government. “FormGov” automatically takes on the value “0” for those country years in which **PoIThres** takes on the value “1”, i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones. In country years during which **PoIThres** does not take on the value “1”, “FormGov” is coded as follows:

- 1 = parliamentary form of government
- 2 = presidential form of government
- 3 = mixed form of government

The definition of different forms of government in the EEI Dataset follows the classification by José Cheibub (2007)^{xliii} which centres on the question “whether the government can be removed by the assembly in the course of its constitutional term in office” (Cheibub 2007:15): systems in which the government cannot be removed by the legislature are presidential; systems in which the government can only be

removed by the legislature are parliamentary;¹⁶ and systems in which either the legislature or the independently (i.e. directly or indirectly)¹⁷ elected president can remove the government are mixed (ibid.). Further issues such as the extent of the president's or legislature's political powers are irrelevant for the distinction of different forms of government. In addition to the aforementioned categories, "FormGov" takes on the value "99" in those country years during which **PoIThres** takes on the value "0" but none of the aforementioned categories to identify different forms of government can be usefully applied. This includes Albania in 1990, i.e. the country's last year under a Communist constitution; Niger between 1991 and 1992, i.e. the country's last two years under its 1989 one-party constitution; and Iran between 1997 and 2003 due to the uniqueness of the Islamic Republic's institutional arrangements.

Please note that the sole basis for the coding of "FormGov" are the formal rules in place in a given country and year which determine the relationship between the government and the legislature; these formal rules include national constitutions and constitutional amendments as well as any other laws or formal documents (such as peace treaties) which have the status of constitutional clauses or constitutional laws. "FormGov" thereby has been coded according to the formal rules in effect (i.e. that have already entered into force in a given country) on December 31 of the year coded.

In line with Cheibub's (2007) further specifications regarding the classification of different forms of government, first, it does not matter for the coding of "FormGov" whether the parliamentary vote of no confidence that can remove the government in parliamentary or mixed forms of government is restricted, i.e. whether the legislature may consider a vote of no confidence only for a limited number of times during each legislative session; second, given the government's responsibility to the legislature, its simultaneous responsibility to an independently elected president in mixed forms of governments may be direct (such as when the president can unilaterally dismiss

¹⁶ Please note that the precise title of a country's head of government is of secondary relevance for the coding of "FormGov", so that for instance forms of government have been identified as parliamentary if the government can only be removed by the legislature irrespective of the fact whether the heads of government in these systems (such as in current-day South Africa) are called "presidents" rather than "prime ministers" (see Cheibub 2007).

¹⁷ It is worth emphasising that it is thus irrelevant for the identification of mixed forms of government in the EEI Dataset whether the president was directly elected or not, as long as she was elected independently from the legislature.

the entire government or one minister at a time) or indirect (such as when the president removes the government by dissolving the legislature); third, an independently elected president is only then considered to be able to remove the government if she can initiate its dismissal; and fourth, the government is not considered to be responsible to the legislature if the legislature can remove ministers but not the head of government (*ibid.*).

The primary source for this variable are the data provided in Cheibub's (2007) volume. Since these data only cover country years up to 2002 and are based on a method to distinguish democratic from non-democratic regimes that differs from the use of **PolThres** in the EEI Dataset, additional sources were used to extend, double-check and, where necessary, correct apparent coding mistakes in Cheibub's data (e.g. Haiti 1994-99, Macedonia 1993-2002, Pakistan 1972-6).¹⁸ These additional sources include primarily national constitutions and constitutional amendments as well as any other laws or formal documents (such as peace treaties) which have the status of constitutional clauses or constitutional laws. Where such formal documents could not be obtained, further information was sought from government and parliament websites, and relevant academic publications on individual countries. If different academic publications contradict each other on the form of government in a given country and year, the information was chosen on which two out of three sources agree.

Parl

Use of a parliamentary form of government. "Parl" is a dummy variable that takes on the value "1" for all years in which a country employed a form of government in which the government can only be removed by the legislature (Cheibub 2007) while the democratic features of the country's political regime outweighed the autocratic ones. "Parl" takes on the value "0" for those country years in which **PolThres** takes on the value "1" (i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones), as well as for those country years in which **PolThres** does not take on the value "1" but a form of government was used that was not parliamentary. As long as **PolThres** does not take on the value "1", "Parl" indicates the use of a parliamentary form of government

¹⁸ For a complete list of corrected values, please contact the author of the EEI Dataset.

according to the formal rules in effect in a given country on December 31 of the year coded. Please see **FormGov** for further details and the sources used for the coding of this variable.

Pres

Use of a presidential form of government. “Pres” is a dummy variable that takes on the value “1” for all years in which a country employed a form of government in which the government cannot be removed by the legislature (Cheibub 2007) while the democratic features of the country's political regime outweighed the autocratic ones. “Pres” takes on the value “0” for those country years in which **PoIThres** takes on the value “1” (i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones), as well as for those country years in which **PoIThres** does not take on the value “1” but a form of government was used that was not presidential. As long as **PoIThres** does not take on the value “1”, “Pres” indicates the use of a presidential form of government according to the formal rules in effect in a given country on December 31 of the year coded. Please see **FormGov** for further details and the sources used for the coding of this variable.

Mixed

Use of a mixed form of government. “Mixed” is a dummy variable that takes on the value “1” for all years in which a country employed a form of government in which either the legislature or the independently (i.e. directly or indirectly) elected president can remove the government (Cheibub 2007) while the democratic features of the country's political regime outweighed the autocratic ones. “Mixed” automatically takes on the value “0” for those country years in which **PoIThres** takes on the value “1” (i.e. for those years during which the autocratic features of a country's political regime outweighed the democratic ones), as well as for those country years in which **PoIThres** does not take on the value “1” but a form of government was used that was not mixed. As long as **PoIThres** does not take on the value “1”, “Mixed” indicates the use of a mixed form of government according to the formal rules in effect in a given country on December 31 of the year coded. Please see **FormGov** for further details and the sources used for the coding of this variable.

FormGovAut

Autocratic form of government. Following the example of Mike Alvarez et al. (1996),^{xliv} “FormGovAut” provides information on core characteristics of a country's form of government in years during which the political regime's autocratic features outweighed the democratic ones. “FormGovAut” automatically takes on the value “0” for those country years in which **PolThres** takes on the value “0”, i.e. for those years during which the democratic features of a country's political regime outweighed the autocratic ones. In country years during which **PolThres** does not take on the value “0”, “FormGovAut” is coded as follows:

- 1 = autocratic form of government with a legislature or at least one political party
- 2 = autocratic form of government with an executive only

In line with the coding rules for Alvarez et al.'s variable on autocratic forms of government (Alvarez et al. 1996), “FormGovAut” takes on the value “1” irrespective of the political powers of the legislature or political parties, i.e. questions such as whether “the legislature is a rubber stamp or the chief executive obeys dictates of the single party” (Alvarez et al. 1996:16) are irrelevant for the coding of this variable. Please note that, for the purpose of the EEI Dataset, autocratic forms of government with a popularly elected constituent assembly have been subsumed under the category of autocratic forms of government with a legislature, and that autocratic forms of government are only then considered to have at least one political party if representatives of at least one political party hold some degree of executive power. Autocratic forms of government in which the executive is drawn from members of a social or political movement rather than a political party are coded as autocratic forms of government with an executive only. Similarly to **FormGov**, “FormGovAut” has been coded according to the autocratic form of government that exists in a given country on December 31 of the year coded.

The primary source for this variable are the replication data for Alvarez et al.'s (1996) article.^{xlv} Since these data only cover country years up to 1990 and are based on a method to distinguish democratic from non-democratic regimes that differs from the use of **PolThres** in the EEI Dataset, additional sources were used to double-check, extend and modify the information provided by Alvarez et al.. These

additional sources include information from Cheibub (2007), the Oxford Scholarship Series on Elections in Asia, Africa, the Americas and Europe, the Inter-Parliamentary Union, the Electoral Institute for the Sustainability of Democracy in Africa, the U.S. Library of Congress Country Studies, government and parliament websites, and relevant academic publications on individual countries. Where data sources contradict each other on the autocratic form of government in a given country and year, the information provided by government or parliament websites was chosen where available, otherwise the information on which two out of three sources agree.

StateStruct

Type of state structure. “StateStruct” is coded as follows:

0 = unitary state structure

1 = federal state structure

2 = mixed state structure

Unlike for instance **ElectTypLeg** and **FormGov**, it does not matter for the coding of “StateStruct” whether **PoIThres** takes on the value “0” or “1”.

The EEI Dataset uses the following definitions for different types of state structure: state structures are unitary if there is no formally guaranteed division of power among multiple levels of government with distinct spheres of responsibility; state structures are federal if they feature a formally guaranteed “layer of institutions between a state’s center and its localities ... [which has] its own leaders and representative bodies ... [who also] share decision-making power with the center” (Bermeo 2002:98),^{xlvi} and where both the centre and territorially defined subunits of the state possess their own formally guaranteed spheres of responsibility;¹⁹ and state structures are mixed if otherwise unitary states contain one or more autonomous regions, i.e. one or more territorially defined subunits whose executive, legislative and judicial institutions have the formally guaranteed power to exercise public policy functions in one or more cultural, economic or political spheres

¹⁹ Please note that, as long as this definition applies, it is of secondary relevance for the coding of “StateStruct” whether a country's constitution in fact uses the term “federalism” to describe the country's state structure.

independently of other sources of authority in the state (cf. Ackrén 2009; Wolff 2009).^{xlvii} Mixed state structures are thereby distinct from federal ones, as they do not “necessitate territorial subdivisions across the entire state territory” (Wolff 2009:42-3) nor is there necessarily a formal guarantee that representatives of the autonomous region(s) can share political power at the centre (cf. *ibid.*).

Please note that the sole basis for the coding of “StateStruct” are the formal rules in place in a given country and year which determine the type of state structure; these formal rules include national constitutions and constitutional amendments as well as any other laws or formal documents (such as peace treaties) which have the status of constitutional clauses or constitutional laws. This emphasis on the open codification of a country's state structure in the national constitution (or any other formal document that has constitutional status for a given country) implies that, for the purpose of the EEI Dataset, a region is not considered to be autonomous if a region's representatives declared its autonomy status but this status has not been formally recognised by the central government. “StateStruct” thereby has been coded according to the formal rules in effect in a given country (i.e. that have already entered into force) on December 31 of the year coded.

The degree of power exercised by the representative bodies of federal state units or autonomous regions; the formal conditions under which the autonomy status of a given region may be revoked; the existence of non-territorial autonomy arrangements; the number of autonomous regions in a country with mixed state structure; and the establishment of either a bicameral national legislature (such as in Brazil) or a unicameral national legislature (such as in Comoros) in countries with a federal state structure are irrelevant for the coding of “StateStruct”.

The primary source for the coding of this variable are national constitutions and constitutional amendments as well as any other laws or formal documents (such as peace treaties) which have the status of constitutional clauses or constitutional laws for a given country. Where such formal documents could not be obtained, further information was sought from government and parliament websites, the Forum of Federations,^{xlviii} the volumes by Elazar (1991),^{xlix} Gana and Egwu (2003),ⁱ Gibson (2004),ⁱⁱ He, Galligan and Inoguchi (2007),ⁱⁱⁱ Majeed, Watts and Brown (2006)ⁱⁱⁱⁱ and Ortino, Žagar and Mastny (2005),^{liv} and relevant academic publications on individual

countries. Where academic publications contradict each other on the state structure in a given country and year, the information was chosen on which two out of three sources agree.

Unit

Use of a unitary state structure. “Unit” is a dummy variable that takes on the value “1” for all years in which a country's state structure did not feature a formally guaranteed division of power among multiple levels of government with distinct spheres of responsibility. This variable is coded according to the formal rules in effect in a given country on December 31 of the year in question. Please see **StateStruct** for further details and the sources used for the coding of this variable.

Fed

Use of a federal state structure. “Fed” is a dummy variable that takes on the value “1” for all years in which a country's state structure featured a “layer of institutions between a state’s center and its localities ... [which has] its own leaders and representative bodies ... [who also] share decision-making power with the center” (Bermeo 2002:98), and where both the centre and territorially defined subunits of the state possessed their own formally guaranteed spheres of responsibility. This variable is coded according to the formal rules in effect in a given country on December 31 of the year in question. Please see **StateStruct** for further details and the sources used for the coding of this variable.

MixedSt

Use of a mixed state structure. “MixedSt” is a dummy variable that takes on the value “1” for all years in which a country's otherwise unitary state structure contained one or more autonomous regions, i.e. one or more territorially defined subunits whose executive, legislative and judicial institutions have the formally guaranteed power to exercise public policy functions in one or more cultural, economic or political spheres independently of other sources of authority in the state (cf. Ackrén 2009; Wolff 2009). Please see **StateStruct** for further details and the sources used for the coding of this variable.

PresMaj

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government and majoritarian electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

PresProp

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government and proportional electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

PresMixedEl

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government and mixed electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

PresUnit

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government and unitary state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresFed

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government and federal state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government and mixed state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMaj

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government and majoritarian electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

ParlProp

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government and proportional electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

ParlMixedEI

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government and mixed electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

ParlUnit

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government and unitary state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlFed

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government and federal state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government and mixed state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMaj

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government and majoritarian electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

MixedProp

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government and proportional electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

MixedMixedEI

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government and mixed electoral system for the legislature. Please see **FormGov** and **ElecTypLeg** for further details of the underlying variables and sources used for their coding.

MixedUnit

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government and unitary state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedFed

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government and federal state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government and mixed state structure. Please see **FormGov** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MajUnit

Dummy variable that takes on the value “1” for all years in which a country employed a majoritarian electoral system for the legislature and unitary state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MajFed

Dummy variable that takes on the value “1” for all years in which a country employed a majoritarian electoral system for the legislature and federal state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MajMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a majoritarian electoral system for the legislature and mixed state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PropUnit

Dummy variable that takes on the value “1” for all years in which a country employed a proportional electoral system for the legislature and unitary state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PropFed

Dummy variable that takes on the value “1” for all years in which a country employed a proportional electoral system for the legislature and federal state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PropMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a proportional electoral system for the legislature and mixed state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedEIUnit

Dummy variable that takes on the value “1” for all years in which a country employed a mixed electoral system for the legislature and unitary state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedEIFed

Dummy variable that takes on the value “1” for all years in which a country employed a mixed electoral system for the legislature and federal state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedEIMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a mixed electoral system for the legislature and mixed state structure. Please see **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresMajUnit

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, majoritarian electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresMajFed

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, majoritarian electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresMajMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, majoritarian electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresPropUnit

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, proportional electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresPropFed

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, proportional electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresPropMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, proportional electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresMixedEIUnit

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, mixed electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

PresMixedEIFed

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, mixed electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and

StateStruct for further details of the underlying variables and sources used for their coding.

PresMixedEIMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a presidential form of government, mixed electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMajUnit

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, majoritarian electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMajFed

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, majoritarian electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMajMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, majoritarian electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlPropUnit

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, proportional electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlPropFed

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, proportional electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlPropMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, proportional electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMixedEIUnit

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, mixed electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

ParlMixedEIFed

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, mixed electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and

StateStruct for further details of the underlying variables and sources used for their coding.

ParlMixedEIMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a parliamentary form of government, mixed electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMajUnit

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, majoritarian electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMajFed

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, majoritarian electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMajMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, majoritarian electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedPropUnit

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, proportional electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedPropFed

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, proportional electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedPropMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, proportional electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMixedEIUnit

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, mixed electoral system for the legislature and unitary state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMixedEIFed

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, mixed electoral system for the legislature and federal state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

MixedMixedEIMixedSt

Dummy variable that takes on the value “1” for all years in which a country employed a mixed form of government, mixed electoral system for the legislature and mixed state structure. Please see **FormGov**, **ElecTypLeg** and **StateStruct** for further details of the underlying variables and sources used for their coding.

AutUni

Dummy variable that takes on the value “1” for all years in which the autocratic features of a country's political regime outweighed the democratic ones, and the country employed a unitary state structure. Please see **PoIThres** and **StateStruct** for further details of the underlying variables and sources used for their coding.

AutFed

Dummy variable that takes on the value “1” for all years in which the autocratic features of a country's political regime outweighed the democratic ones, and the country employed a federal state structure. Please see **PoIThres** and **StateStruct** for further details of the underlying variables and sources used for their coding.

AutMixedSt

Dummy variable that takes on the value “1” for all years in which the autocratic features of a country's political regime outweighed the democratic ones, and the country employed a mixed state structure. Please see **PoIThres** and **StateStruct** for further details of the underlying variables and sources used for their coding.

APPENDICES

Appendix 1. Differences between the COW Project State System Membership List v2008.1 and the countries included in the EEI Dataset.

COW Project state system member	Countries included in the EEI Dataset [1955-2007]
Russia [1816-2008]	Soviet Union [1955-1991] Russia (aka the Russian Federation, excludes former SU republics such as Georgia or Kazakhstan) [1992-2007]
Tanzania [1961-2007]	Tanganyika [1961-1964] Tanzania (United Republic of, includes Zanzibar) [1964-2007]
<i>missing</i>	United Arab Republic (union between Egypt and Syria) [1958-1961]
Vietnam [1954-2008]	Democratic Republic of Vietnam (aka North Vietnam) [1955-1976]* Vietnam (Socialist Republic of, merges North and South Vietnam) [1976-2007]
Yugoslavia [1944-2008]	Yugoslavia (Socialist Republic of) [1955-1992] Federal Republic of Yugoslavia (union of Serbia and Montenegro, renamed "Serbia and Montenegro" in 2003) [1992-2006]
<i>missing</i>	Serbia** [2006-2007]

*In contrast to North Vietnam, the Republic of Vietnam (aka South Vietnam) [1954-1975] is listed by the COW Project.

** In contrast to Serbia, Montenegro [2006-2008] is listed by the COW Project.

Appendix 2. Start and end year of observations for all countries in the EEI Dataset.

Regional identifier	Country	Start year	End year
7	Afghanistan	1955	2007
2	Albania	1955	2007
6	Algeria	1962	2007
1	Angola	1975	2007
5	Argentina	1955	2007
2	Armenia	1991	2007
3	Australia	1955	2007
4	Austria	1955	2007
2	Azerbaijan	1991	2007
6	Bahrain	1971	2007
7	Bangladesh	1971	2007
2	Belarus	1991	2007
4	Belgium	1955	2007
1	Benin	1960	2007
7	Bhutan	1971	2007
5	Bolivia	1955	2007
2	Bosnia and Herzegovina	1992	2007
1	Botswana	1966	2007
5	Brazil	1955	2007
2	Bulgaria	1955	2007
1	Burkina Faso	1960	2007

3	Burma (Myanmar)	1955	2007
1	Burundi	1962	2007
3	Cambodia	1955	2007
1	Cameroon	1960	2007
4	Canada	1955	2007
1	Central African Republic	1960	2007
1	Chad	1960	2007
5	Chile	1955	2007
3	China	1955	2007
5	Colombia	1955	2007
1	Comoros	1975	2007
1	Democratic Rep. of the Congo	1960	2007
1	Republic of the Congo	1960	2007
5	Costa Rica	1955	2007
1	Côte d'Ivoire	1960	2007
2	Croatia	1992	2007
5	Cuba	1955	2007
2	Cyprus	1960	2007
2	Czechoslovakia	1955	1992
2	Czech Republic	1993	2007
6	Democratic Yemen	1967	1990
4	Denmark	1955	2007
6	Djibouti	1977	2007
5	Dominican Republic	1955	2007

3	East Timor	2002	2007
5	Ecuador	1955	2007
6	Egypt	1955	1957*
6	Egypt	1961	2007
5	El Salvador	1955	2007
1	Equatorial Guinea	1968	2007
1	Eritrea	1993	2007
2	Estonia	1991	2007
1	Ethiopia	1955	2007
3	Fiji	1970	2007
4	Finland	1955	2007
4	France	1955	2007
1	Gabon	1960	2007
1	The Gambia	1965	2007
2	Georgia	1991	2007
4	German Democratic Republic	1955	1990
4	German Federal Republic	1955	1990
4	Germany	1990	2007
1	Ghana	1957	2007
4	Greece	1955	2007
5	Guatemala	1955	2007
1	Guinea	1958	2007
1	Guinea-Bissau	1974	2007
5	Guyana	1966	2007

5	Haiti	1955	2007
5	Honduras	1955	2007
2	Hungary	1955	2007
7	India	1955	2007
3	Indonesia	1955	2007
6	Iran	1955	2007
6	Iraq	1955	2007
4	Ireland	1955	2007
6	Israel	1955	2007
4	Italy	1955	2007
5	Jamaica	1962	2007
3	Japan	1955	2007
6	Jordan	1955	2007
2	Kazakhstan	1991	2007
1	Kenya	1963	2007
3	North Korea	1955	2007
3	South Korea	1955	2007
6	Kuwait	1961	2007
2	Kyrgyzstan	1991	2007
3	Laos	1955	2007
2	Latvia	1991	2007
6	Lebanon	1955	2007
1	Lesotho	1966	2007
1	Liberia	1955	2007

6	Libya	1955	2007
2	Lithuania	1991	2007
2	Macedonia	1993	2007
1	Madagascar	1960	2007
1	Malawi	1964	2007
3	Malaysia	1957	2007
1	Mali	1960	2007
1	Mauritania	1960	2007
1	Mauritius	1968	2007
5	Mexico	1955	2007
2	Moldova	1991	2007
3	Mongolia	1955	2007
6	Morocco	1956	2007
1	Mozambique	1975	2007
1	Namibia	1990	2007
7	Nepal	1955	2007
4	Netherlands	1955	2007
3	New Zealand	1955	2007
5	Nicaragua	1955	2007
1	Niger	1960	2007
1	Nigeria	1960	2007
4	Norway	1955	2007
6	Oman	1971	2007
7	Pakistan	1955	2007

5	Panama	1955	2007
3	Papua New Guinea	1975	2007
5	Paraguay	1955	2007
5	Peru	1955	2007
3	Philippines	1955	2007
2	Poland	1955	2007
4	Portugal	1955	2007
6	Qatar	1971	2007
2	Romania	1955	2007
2	Soviet Union	1955	1991
2	Russia	1992	2007
1	Rwanda	1962	2007
6	Saudi Arabia	1955	2007
1	Senegal	1960	2007
1	Sierra Leone	1961	2007
3	Singapore	1965	2007
2	Slovakia	1993	2007
2	Slovenia	1992	2007
3	Solomon Islands	1978	2007
1	Somalia	1960	2007
1	South Africa	1955	2007
4	Spain	1955	2007
7	Sri Lanka	1955	2007
1	Sudan	1956	2007

1	Swaziland	1968	2007
4	Sweden	1955	2007
4	Switzerland	1955	2007
6	Syria	1955	1957*
6	Syria	1961	2007
3	Taiwan	1955	2007
2	Tajikistan	1991	2007
1	Tanganyika	1961	1964
1	Tanzania	1964	2007
3	Thailand	1955	2007
1	Togo	1960	2007
5	Trinidad and Tobago	1962	2007
6	Tunisia	1956	2007
2	Turkey	1955	2007
2	Turkmenistan	1991	2007
1	Uganda	1962	2007
2	Ukraine	1991	2007
6	United Arab Emirates	1971	2007
6	United Arab Republic	1958	1961
4	United Kingdom	1955	2007
4	United States	1955	2007
5	Uruguay	1955	2007
2	Uzbekistan	1991	2007
5	Venezuela	1955	2007

3	Democratic Rep. of Vietnam	1955	1976
3	Republic of Vietnam	1955	1975
3	Vietnam	1976	2007
6	Yemen Arab Republic	1955	1990
6	Yemen	1990	2007
2	Yugoslavia	1955	1992
2	Federal Rep. of Yugoslavia (renamed "Serbia and Montenegro" in 2003)	1992	2006
2	Serbia	2006	2007
2	Montenegro	2006	2007
1	Zambia	1964	2007
1	Zimbabwe	1965	2007

* Between February 1958 and October 1961, the United Nations recognised the union between Egypt and Syria (the United Arab Republic) as a single member state. Syria resumed separate UN membership in October 1961, while Egypt continued under the name "United Arab Republic" until changing it to the "Arab Republic of Egypt" in September 1971 (UN 2006). 1957 is listed as end year of Syria and Egypt before their union, as they existed separately only one month in 1958.

Appendix 3. Number of observations for different variables in the EEI Dataset.

Variable name	Number of observations
EthnWar	7266
Peaceyrs	7266
WarNei	7266
NWarNei	7266
InterCon	7266
InterCon2	7266
InterCon3	7266
Population	7259
GDPpc	7242
EconRes	6315
PowRes	6315
Oil	7262
Mountain	6921
Noncont	7266
BritRul	7266
FrenRul	7266
OthRul	7266
RulExp1	7266
RulExp2	7266
EthFrAl	7167
Polity	7171
Anoc	7244
PolThres	7266
Instab	7244

CorrICRG	2996
LElec	7266
PElec	7266
MinRep	7266
ElecTypLeg	7266
Maj	7266
Prop	7266
MixedEI	7266
ElecTypPres	7266
FormGov	7266
Parl	7266
Pres	7266
Mixed	7266
FormGovAut	7266
StateStruct	7266
Unit	7266
Fed	7266
MixedSt	7266
PresMaj	7266
PresProp	7266
PresMixedEI	7266
PresUnit	7266
PresFed	7266
PresMixedSt	7266
ParlMaj	7266
ParlProp	7266

ParlMixedEI	7266
ParlUnit	7266
ParlFed	7266
ParlMixedSt	7266
MixedMaj	7266
MixedProp	7266
MixedMixedEI	7266
MixedUnit	7266
MixedFed	7266
MixedMixedSt	7266
MajUnit	7266
MajFed	7266
MajMixedSt	7266
PropUnit	7266
PropFed	7266
PropMixedSt	7266
MixedEIUnit	7266
MixedEIFed	7266
MixedEIMixedSt	7266
PresMajUnit	7266
PresMajFed	7266
PresMajMixedSt	7266
PresPropUnit	7266
PresPropFed	7266
PresPropMixedSt	7266
PresMixedEIUnit	7266

PresMixedEIFed	7266
PresMixedEIMixedSt	7266
ParlMajUnit	7266
ParlMajFed	7266
ParlMajMixedSt	7266
ParlPropUnit	7266
ParlPropFed	7266
ParlPropMixedSt	7266
ParlMixedEIUnit	7266
ParlMixedEIFed	7266
ParlMixedEIMixedSt	7266
MixedMajUnit	7266
MixedMajFed	7266
MixedMajMixedSt	7266
MixedPropUnit	7266
MixedPropFed	7266
MixedPropMixedSt	7266
MixedMixedEIUnit	7266
MixedMixedEIFed	7266
MixedMixedEIMixedSt	7266
AutUni	7266
AutFed	7266
AutMixedSt	7266

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