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# Territorial self-governance and proportional representation: reducing the risk of territory-centred intrastate violence

Natascha S. Neudorfer <sup>a</sup>, Ulrike G. Theuerkauf <sup>b</sup> and Stefan Wolff <sup>c</sup>

## ABSTRACT

After decades of scholarship, there is still little agreement about the usefulness of territorial self-governance in managing territory-centred conflicts. We argue that the effectiveness of territorial self-governance as a tool of territory-centred conflict management increases when combined with a proportional representation (PR) electoral system for the national legislature in basically open political regimes, but not when combined with a parliamentary form of government at the centre. We propose that the combination of territorial self-governance and PR in at least minimally democratic regimes has most conflict-reducing potential, as both institutions follow a logic of widening the input side of representative politics. We find empirical support for this proposition using binary time-series cross-section analysis. Our findings highlight the need to consider not just the number but, more importantly, the type of power-sharing institutions that are combined with each other when looking for ways to reduce the risk of territory-centred intrastate violence.

## KEYWORDS

conflict; territorial self-governance; power sharing; electoral system

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## INTRODUCTION

Iraq, Myanmar, Ukraine, Yemen – these are just some examples of ongoing civil wars where territorial rule has featured prominently in discussions about their arguable causes and potential solutions. Between 1946 and 2018, there have been 121 episodes of territory-centred intrastate violence (Peterson et al., 2019). The high costs that armed conflicts can impose on economic, social and political development are increasingly well known (Gates et al., 2012; Plümper & Neumayer, 2006). Research on how to reduce the risk of territory-centred intrastate violence, however, remains still inconclusive.

In a novel contribution to the institutionalist debate on conflict management, we argue that researchers and policy-makers need to pay closer attention to the logic that underpins the design


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of different formal political institutions and which side of the minimally democratic process it emphasizes: the input that citizens have into the political system, or the rules that shape interactions between political elites. Following a grievance-based explanation of territory-centred intrastate violence, we expect there to be relevant differences in the violent conflict-reducing effects of institutional combinations depending on the underlying design logic of their constitutive elements. We test this expectation using binary time-series cross-section analysis that covers 67–154 countries (per year) between 1956 and 2007. The key explanatory variables in the analysis are double and triple interaction terms between three dummy variables capturing the country-year presence (or absence) of territorial self-governance, a proportional representation (PR) electoral system for the national legislature and parliamentarism at the centre.

In line with our theoretical expectation that potential grievances about a (real or perceived) lack of political inclusiveness may be best addressed by formal political institutions that emphasize the input side of at least minimally democratic regimes, we find robust empirical evidence that the double interaction of territorial self-governance with a PR electoral system in basically open regimes is most effective at reducing the risk of territory-centred intrastate violence. This particular institutional combination outperforms not only the double interaction between territorial self-governance with parliamentarism but also the triple interaction between territorial self-governance with parliamentarism and PR.

In our analysis, territorial self-governance refers to all state structure arrangements that give formal power to territorially delimited entities within the internationally recognized boundaries of an existing state, to exercise public policy functions that are independent of other sources of authority in this state but subject to its overall constitutional and legal order (Wolff & Weller, 2005). There are, of course, variations among territorial self-governance arrangements depending on how they draw subnational borders and structure relations between central and subnational governments (McGarry, 2007; Sisk, 1996). Their different forms include, for instance, state structures of federacy, devolution and decentralization (Wolff, 2013), symmetric or asymmetric federal arrangements (McGarry, 2007), and polycommunal, non-communal or mixed federalism (Sisk, 1996). For the purpose of this article, we intentionally subsume these different types of territorial self-governance arrangements into one broad category, as no matter which precise form territorial self-governance takes, its key feature remains the same: it increases opportunities for political representation compared with state structures without such arrangements, through the creation of at least one additional layer of formally recognized government at the subnational level with autonomous decision-making powers. This is not to dismiss the relevance of moving down on the ladder of generalization (Sartori, 1970) and analysing different types of territorial self-governance arrangements further, which would be crucial especially when dealing with individual cases. Using a relatively broad categorization of territorial self-governance arrangements, however, is appropriate for this article's research aims, as we are interested in uncovering new stylized facts about the relationship between institutional design and territory-centred intrastate violence. The dependent variable is territory-centred intrastate violence in any given year (no matter whether it is the onset or a continuation year of violence), as we seek to understand the usefulness of territorial self-governance for territory-centred conflict management at any point in time.

In the remainder of this article, we review central claims in the academic debate on territorial self-governance in conflict management; lay out the rationale for our analysis of institutional interaction terms; present the hypotheses, data and research design; and discuss the empirical findings before offering concluding remarks.

## TERRITORIAL SELF-GOVERNANCE AND INTRASTATE VIOLENCE

Territory-centred intrastate violence may occur in two basic forms: between the government of a sovereign state and a domestic challenger, or between groups and entities without official

government involvement (Wolff, 2013). As the latter type of territorial conflict is relatively rare (Wolff, 2013), we focus here on territory-centred intrastate violence in which the government appears as one of the conflicting parties. The government's domestic challengers typically are politically mobilized, territorially concentrated ethnonational groups, whose identity is, in part, derived from the association with their 'homeland', who demand greater rights of self-governance either in the form of autonomy or independence, whose demands are not met by central governments, who are able to overcome collective action problems, and whose wider opportunity structures are permissive to the use of violence (Jenne et al., 2007; Toft, 2003).

More than 30 years after Donald Horowitz's observation that 'federalism can either exacerbate or mitigate ethnic conflict' (Horowitz, 1985, p. 603), the academic and policy-making juries are still out on whether territorial self-governance<sup>1</sup> is an effective tool to help reduce the risk of territory-centred intrastate violence (United Nations and The World Bank, 2018). For every standard example of the usefulness of territorial self-governance in managing territory-centred conflicts – including Belgium, Canada, Switzerland and, albeit with several necessary qualifications, India and Spain (Bakke, 2015; Brancati, 2006) – there are counter-examples highlighting its failures, including Ethiopia, Pakistan, the Soviet Union, Sudan and Yugoslavia (Erk, 2017; Lake & Rothchild, 2005; Roeder, 1991). While there are clear differences between these 10 cases in terms of the economic, political and social conditions under which territorial self-governance has been negotiated, implemented and operated, it is nonetheless disconcerting that there are still few stylized facts about the likely effects of territorial self-governance on the risk of territory-centred intrastate violence.

So far, the academic debate about the likely effects of territorial self-governance on the risk of intrastate violence can be broadly divided into three views: *supportive*, *sceptical* and *contingent*. First are those authors (here labelled 'supportive') who are explicitly in favour of territorial self-governance as a conflict management tool, *inter alia* due to its ability to diffuse political power to the benefit of minorities; bring the government closer to the people; and create additional settings for peaceful bargaining apart from the central government level (Bermeo, 2002; Lijphart, 1979; Stewart et al., 2007).

The second ('sceptical') view notes that territorial self-governance is not an effective conflict management tool, *inter alia* because rights of self-governance may empower secessionist leaders; contribute to power struggles between the central and subnational governments over the extent and exercise of specific powers; or simply be less relevant compared with other factors such as the strength of group identities or different actors' willingness to compromise (Chapman & Roeder, 2007; Lake & Rothchild, 2005).

None of the aforementioned authors in the supportive or sceptical view denies the relevance of contextual factors for the effectiveness of territorial self-governance as a conflict-mitigating mechanism. The 'contingent' view, however, takes the acknowledgment of context-dependence one step further by phrasing arguments in an explicitly contingent form. As writings in favour of the contingent view have mushroomed since the mid-2000s, it is impossible to review them in depth here, but there is sufficient evidence to indicate that the role of territorial self-governance as either a cure or curse for intrastate violence seems to be affected by five factors in particular: the degree of fiscal decentralization (Ezcurra, 2015); characteristics of the political party system (Brancati, 2006); 'spatial' arrangements of subnational governance (Christin & Hug, 2012); issues related to implementation (Joshi et al., 2017); and the structure of the political system at the centre (Cederman et al., 2015). We expand on arguments belonging to the contingent view by analysing different interaction effects of territorial self-governance with other formal political institutions.

## INSTITUTIONAL DESIGN AND CONFLICT MANAGEMENT

Besides a country's state structure, two other institutions have received particular attention in the institutionalist approach to conflict management, due to their effects on the concentration or

dispersion of political power: electoral systems for the national legislature and forms of government at the centre (Belmont et al., 2002). Formal institutions that tend to concentrate political power amongst representatives of narrowly defined majorities include unitary state structures, majoritarian electoral systems and presidential forms of government (Lijphart, 2004, 2012; Reynolds, 2002). By contrast, territorial self-governance arrangements, PR electoral systems and parliamentary forms of government are frequently described as power-sharing institutions (Binningsbø, 2013; Strøm et al., 2017), as the logic underpinning their design is to maximize the number of different groups who are represented in the political decision-making process (Lijphart, 2004, 2012; Reynolds, 2002).

Much of the debate on institutional design in the context of conflict management has been centred on Arend Lijphart's consociational formula – consisting of grand coalition, group autonomy, proportionality and minority veto – and his assertion that, among these four institutional components, the two most important ones for successful conflict management are group autonomy and grand coalition, the former including territorial self-governance, and the critical enabling mechanism of the latter being parliamentarism (Lijphart, 1979, 2002, 2004). This debate has been framed in a number of different ways, most notably between proponents of consociationalism and their opponents in the centripetalist and power-dividing camps (e.g., Reilly, 2012; Roeder, 2005), and in the context of the 'liberal turn' in consociationalism itself that defines enabling mechanisms of political inclusion depending on their underpinning design logic (McGarry & O'Leary, 2008; Wolff, 2011).

The focus on the underlying logic of formal political institutions is important, as it recognizes that the very features which help to distinguish parliamentary from non-parliamentary forms of government, PR from non-PR electoral system and state structures with territorial self-governance from those without, are crucial in tilting the political playing field towards higher or lower levels of inclusiveness (Lijphart, 2012). The precise degree to which formal political institutions de facto concentrate or disperse political power also depends on the context under which they operate, such as whether presidential and legislative elections are held concurrently under presidential forms of government (Hellwig & Samuels, 2008), or how the support base of different political parties is geographically distributed (Grofman, 2016) or ethnically aligned (Serrano, 2019). However, while context matters, the very design of political institutions is what provides crucial enabling mechanisms for political inclusion or exclusion (Cohen, 1997), and it is these design features that typically stand at the centre of discussions with policy-makers (Htun & Super, 2013; Super & Htun, 2013).

The potential of formal institutions to heighten or lessen levels of political inclusiveness matters, as institutions that enhance the number of possible political winners may help to address security concerns between conflict parties (Walter, 1999), contribute to a culture of cooperation (Binningsbø, 2013), and prevent possible frustrations over political exclusion (Sisk, 1996). Underpinning these arguments is a sometimes implicit, sometimes explicit grievance-based framework which identifies the design of political institutions as key for prospects of peace and violence, due to its effects on the (real or perceived) ability of different groups to be represented 'fairly', that is, to the degree to which they feel entitled in comparison to some reference group (Gurr, 2000; Theuerkauf, 2010a). We take this grievance-based argument further by highlighting differences in the underlying logic of formal political institutions, depending on whether they are more concerned with the input or output side of representative politics.

## INSTITUTIONAL DESIGN AND THE INPUT OR OUTPUT SIDE OF REPRESENTATIVE POLITICS

Modern nation-states and transnational systems such as the European Union (EU), not least because of their size, predominantly rely on representative rather than direct government,

which requires the delegation of political decision-making powers from citizens to political elites and thus a reduction of citizen participation in government decisions (Dahl, 1994). Consequently, the focus on state structure arrangements, electoral systems and forms of government is typically seen as an elite-based approach to conflict management, as these institutions are part of modern representative systems and tend to be assessed based on the incentives they create for political elites (rather than for the citizens they are meant to represent) to cooperate and negotiate with each other (Grofman & Stockwell, 2003). However, classifying state structures, electoral systems and forms of government indiscriminately under the 'elite-based' umbrella neglects crucial differences about whether they are relatively more concerned with the *input* or *output* side of representative politics (cf. Alcantara & Mornden, 2019; Clare et al., 2018).

The underlying logic of designing and defining forms of government as presidential, parliamentary or mixed is primarily concerned with the *output* side of representative politics, that is how political elites interact with each other in the making of government decisions with limited public contestation (Cheibub, 2007; Lijphart, 2002, 2004). This becomes evident, first of all, in discussions of how to identify and distinguish different forms of government from one another. While there are a number of competing definitions (e.g., Elgie, 2011; Linz, 1994; Sartori, 1997), we use here the relatively unambiguous one by Cheibub (2007), which 'focuses exclusively on the relationship between the government and the legislative assembly' (p. 15). Following Cheibub, forms of government are parliamentary if the legislature – and only the legislature – can formally remove the government from power before the official end of its term in office; presidential if the legislature cannot remove the government from power before the official end of its term in office; and mixed if either the legislature or an independently elected president can remove the government from power before the official end of its term in office. Just like we subsume different types of territorial self-governance into one category, we intentionally use a rather broad distinction of parliamentarism, presidentialism and mixed forms of government, in order to facilitate the generation of new stylized facts in our analysis.

As the preceding discussion illustrates, the definition of different forms of government is primarily concerned with the rules of interaction between elites who hold formal positions of political power in the executive and legislature, respectively. The focus on the output side of representative politics becomes further evident in the institutionalist conflict management debate, which has attributed political violence-reducing effects to parliamentary systems due to their ability to create 'the optimal setting for forming a broad powersharing executive' (Lijphart, 2004, p. 101); foster collegial cabinets; give flexibility to the government's term in office through the mutual dependence of executive and legislature; and avoid the zero-sum game of independent presidential elections (Theuerkauf, 2013). The arguable strengths of parliamentarism thus have been predominantly attributed to the way in which it shapes interactions between political elites within government structures and how it regulates representatives' contributions to policy-making processes (Theuerkauf, 2013; Lijphart, 2002, 2004).

By contrast, territorial self-governance arrangements and electoral systems are political institutions that are more concerned with the *input* side of representative politics. Instead of the structural constraints affecting interactions between political elites, their definition and design are primarily about the extent to which they enable the representation of societal diversity in national and subnational institutions (Bermeo, 2002; Cohen, 1997; Neudorfer & Theuerkauf, 2014a). This point is particularly well illustrated in academic and policy-making discussions about electoral system design and conflict management, where PR electoral systems have been repeatedly argued to be superior to their non-proportional counterparts, as – given minimally free and fair elections at regular intervals – they are expected to lower the barriers to political representation especially for minority groups; facilitate the creation of parliaments that represent politically mobilized groups in close proportion to their demographic strength; and thus avoid the high stakes of

potentially polarising winner-takes-all competitions (Neudorfer & Theuerkauf, 2014a). This expectation is based on the logic underpinning the design of PR electoral systems, which is to ensure – using quotas or divisors in multimember districts – that parties’ seat shares correspond as closely as possible to their vote shares.

The logic underpinning the design and definition of territorial self-governance arrangements is similarly centred on enhancing the input side of representative politics. Especially proponents of the ‘supportive’ view (outlined above) argue that state structures with territorial self-governance arrangements – which disperse autonomous decision-making power among multiple levels of government – are likely to be a useful tool of conflict management, as they provide opportunities to vote and stand in elections at different levels; enhance chances of political representation especially for geographically concentrated minority groups; bring the government closer to the people; and create additional settings for resource access and peaceful bargaining (Bermeo, 2002; Cohen, 1997; Stewart et al., 2007).

The distinction of political institutions depending on whether they are relatively more concerned with the input or output side of representative politics has relevant implications for the causal mechanisms that may link institutional design to the risk of violent intrastate conflict. Specifically, it highlights the need to refine grievance-based arguments which see violent conflict as an expression of frustrations over issues of political exclusion and the (real or perceived) inability of certain groups to be represented fairly in comparison to some reference group (Gurr, 2000; Neudorfer & Theuerkauf, 2014b; Theuerkauf, 2010a): Given the focus of grievance-based arguments on sentiments amongst entire communities, one should expect grievances over issues of political exclusion to be primarily concerned with the input side of the political process and thus the extent to which certain groups may feel that formal political institutions prevent their representatives from gaining a ‘fair’ amount of political offices (Cederman et al., 2015; Strøm et al., 2017). Grievances over the structural constraints that affect interactions between political elites once voted into power, in this sense, are likely to be a (still relevant but by comparison) secondary issue, as it is arguably the input side of political regimes that affects immediate concerns over who gets access to political power, how likely societal diversity will be reflected at the political decision-making table, and which groups have the political resources needed to further their interests (Ganghof, 2010; Gurr, 2000).

In an important advancement of the power-sharing literature, our arguments explicitly focus on the interaction effects between the constitutive elements of different institutional combinations depending on their input- or output-centred design logic. Following Strøm et al. (2017), much of the academic debate so far has assumed a cumulative effect of power-sharing institutions in their violent conflict-reducing effects, along the lines of ‘the more power-sharing institutions, the better’ (Hartzell & Hoddie, 2003; Lijphart, 1977, 2002). Where scholars have analysed the interaction rather than additive effects of power-sharing institutions, there has been no clear distinction between the constitutive elements of these interactions depending on whether they are relatively more concerned with the input or output side of representative politics (Cederman et al., 2015). Through this lens of institutional combinations, our level of analysis moves beyond the likely effects of individual institutions, so that we are not merely concerned with whether state structures with territorial self-governance outperform those without (Bermeo, 2002), PR electoral systems outperform non-PR ones (Cohen, 1997) or parliamentary forms of government outperform non-parliamentary ones (Theuerkauf, 2013) in their violent conflict-reducing effects. While there are arguments, summarized in previous sections, which highlight the benefits of political institutions that disperse rather than concentrate power for the purpose of conflict management, we want to move beyond one-dimensional comparisons of different forms of government, state structures and electoral systems with one another (Theuerkauf, 2010b).

Instead, the ‘bigger picture’ question that stands at the centre of our analysis is whether the effects of institutional combinations on the risk of territory-centred intrastate violence may vary depending on whether or not their ‘components ... work in concert or reinforce one another’ (Strøm et al., 2017, p. 167) regarding their input- or output-centred design logic. If they do, this has relevant implications for how academics and policy-makers approach institutional design questions, as it becomes crucial to test whether the constitutive elements of different institutional arrangements reinforce or weaken each other’s conflict management potential. This implies moving to a level of investigation which does not treat political institutions in isolation (Theuerkauf, 2010b), but explicitly analyses their interplay.

Three hypotheses follow from all of the above. Starting with a one-dimensional analysis of territorial self-governance before testing the relevance of interaction effects, our grievance-based account of territory-centred intra-state violence leads us to expect that the power-dispersing effects of territorial self-governance arrangements should have reducing effects on the risk of territory-centred intrastate violence:

*Hypothesis 1 (H1): State structures with at least one territorial self-governance arrangement decrease the risk of territory-centred intrastate violence compared with state structures without any territorial self-governance arrangements.*

The second and third hypothesis turn to the analysis of institutional interaction effects. Hypothesis 2 reflects the currently predominant argument of ‘the more power-sharing institutions, the better’. It would challenge the relevance of our input- versus output-centred distinction, as it expects the violent conflict-reducing potential of institutional combinations to increase as long as their constitutive elements all possess some power-sharing potential, irrespective of whether this is more concerned with citizens’ contributions into the political system or the rules that shape interactions between elites holding political office:

*Hypothesis 2 (H2): Institutional combinations of state structures with at least one territorial self-governance arrangement, a proportional electoral system for the national legislature and a parliamentary form of government at the centre decrease the risk of territory-centred intrastate violence more than any other possible combinations of different state structures, electoral systems for the national legislature and forms of government at the centre.*

Hypothesis 3, by contrast, reflects our central theoretical expectation that grievances about a (real or perceived) lack of political inclusiveness in territory-centred conflicts may be best addressed by a combination of formal political institutions that emphasizes the input side of at least minimally democratic regimes. As both privilege the citizens’ side of representative politics, we propose that territorial self-governance and PR systems become mutually reinforcing, so that the violent conflict-reducing effects of territorial self-governance arrangements should be strengthened when set up with a PR electoral system for the national legislature and vice versa. If, on the other hand, they are combined with a parliamentary form of government, the violent conflict-reducing effects of territorial self-governance arrangements (and, in different interaction terms, of PR electoral systems) should be comparatively weaker, as the underlying logic of these institutions pull into different directions in the input- versus output-centred distinction:

*Hypothesis 3 (H3): Institutional combinations of state structures with at least one territorial self-governance arrangement and a proportional electoral system for the national legislature (and non-parliamentary form of government) are more effective at reducing the risk of territory-centred intrastate violence than institutional combinations of state structures with at least one territorial self-governance arrangement and a parliamentary form of government at the centre (and a non-proportional electoral system for the national legislature).*



## RESEARCH DESIGN

To test our hypotheses empirically, we use binary time-series cross-section analysis with a data set that covers all internationally recognized independent states between 1956 and 2007 with a population greater than 500,000 in 2008 according to the Polity IV Project version p4v2008 (Marshall & Jaggers, 2009). Depending on the year and availability of control variables, we include between 67 and 154 countries per year in our analysis.<sup>2</sup>

As we focus on the prevalence of territory-centred intrastate violence, we let our dependent variable take on the value one for all country years between 1956 and 2007 in which the UCDP/PRIO Armed Conflict Dataset v.4-2014 (UCDP/PRIO, 2014) reports one (or, in some cases, more than one) episode of territory-centred intrastate violence<sup>3</sup> that resulted in at least 25 battle-related deaths, and zero otherwise.

We hand-coded our key independent variables on territorial self-governance, electoral system and form of government on the basis of *de jure* provisions in ratified constitutional documents or, where these could not be obtained, information from governmental websites and relevant academic publications. The coding denotes all those institutions that have been formally in place on 31 December of every country year in our data set.

The key independent variable to test hypothesis 1 is a dummy variable that we coded as 1 for all years in which a country's state structure includes one (or, in some cases, more than one) territorial self-governance arrangement, and 0 otherwise. Following Wolff and Weller (2005), this variable denotes all those countries as having territorial self-governance where the centre and territorially defined subunits of the state possess their own set of representative institutions that have the formally guaranteed power to exercise exclusive public policy functions in at least one cultural, economic or political sphere.

To test hypothesis 2 and 3, we code two dummy variables which identify PR electoral systems and parliamentary forms of government, respectively, and analyse the effects of different institutional combinations by focussing on predicted probabilities (Berry et al., 2012). The coding of PR electoral systems for the national legislature follows, with minor alterations,<sup>4</sup> Golder (2005) who identifies all those electoral systems as proportional whose electoral formula serves to allocate seats in proportion to a party's (or candidates') share of the vote. The coding of parliamentary forms of government at the centre follows Cheibub (2007), who defines them as systems in which the legislature (and only the legislature) can formally remove the government from power before the official end of its term in office.

As the distinction of parliamentary versus non-parliamentary forms of government and proportional versus non-proportional electoral systems would become meaningless under an autocratic framework in which not even minimal criteria of democracy are met (Cheibub, 2007; Golder, 2005), our electoral system and form of government variables automatically take on the value zero if they operate under a 'basically closed' political regime with a Combined Polity Score  $\leq 0$  according to the Polity IV Project data set version p4v2008 (Marshall & Jaggers, 2009). We use zero as cut-off point, as we prefer to rely on a binary rather than continuous distinction of political regime types when coding our political institutions variables (Alvarez et al., 1996).

As it remains contested whether territorial self-governance can be meaningfully established also under an autocratic framework (Roeder, 1991), we code the presence or absence of territorial self-governance arrangements irrespective of a country's combined polity score. However, we test in our robustness section whether the effects of territorial self-governance on the risk of territory-centred intrastate violence change depending on political regime type, and find that they do not.

By definition, large-*N* analysis is ill-suited for the development of in-depth causal narratives that consider complex layers of context dependence. Within the constraints of our

research design, we therefore rely on a set of control variables to mitigate the risk of omitted variable bias. The theoretical and empirical relevance of these variables has been discussed in more detail elsewhere (Fearon & Laitin, 2003; Hegre et al., 2001), so that it is suffice to note here that they provide information on gross domestic product (GDP) per capita; population size; occurrence of ethnic war in a neighbouring country (to account for potential spillover effects on the risk of territory-centred intrastate violence); level of ethnic fractionalization; level of socioeconomic inequalities; involvement in violent conflict between internationally recognized independent states; recent experience of political instability; experience of colonial rule at any point between 1946 and 2007, further split into colonial rule by the British, French and other colonial powers; level of democracy according to the Polity IV Project version p4v2008 and its square; a country's status as oil exporter; and per cent of mountainous terrain; and non-contiguous state structure. For details on the sources and coding of these variables, see the supplemental data online. We log-transform both the population size and GDP per capita variables in order to account for decreasing marginal effects. We use peace years with three natural cubic splines to account for a potential autocorrelation problem (Beck et al., 1998).

As territorial self-governance arrangements can be part of peace agreements following the outbreak of territory-centred intrastate violence, questions may be raised about endogeneity issues when modulating the direction of causality between territorial self-governance and territory-centred intrastate violence (Cederman et al., 2015). These questions, however, do not pose problems to our theoretical argument, as it explicitly subsumes the onset and duration of territory-centred intrastate violence in our dependent variable (Sambanis, 2004). Of course, the specific causal relationships between institutional design and violent conflict may differ depending on whether territorial self-governance was introduced to help prevent, mitigate or settle territory-centred intrastate violence or none of the above (Wolff, 2013), and explanations for the onset of violent conflict may be very different from those for its duration (Ballentine & Nitzschke, 2003). Irrespective of its origins and primary intentions, however, territorial self-governance by definition increases opportunities for political representation and thus should help to address perceptions of political exclusion that may affect both the risk of violent conflict breaking out and continuing (Wucherpfennig et al., 2012).

Nothing in the set-up of our theoretical argument precludes the introduction of territorial self-governance after territorial intrastate violence has already broken out. Yet the complex causal interplay between institutional design and actors' choices when adopting territorial self-governance arrangements simply goes beyond the scope of one paper and seems best addressed in qualitative research that could take greater account of space and time specific contexts, including the bargaining dynamics in conflict settlement processes and the perceived relevance of certain territorial arrangements for different conflict actors (Bakke, 2015). Within the constraints of our research design, we nonetheless include some 'fixes' to appease concerns about the potentially confounding effects of endogenous relationships. While an instrumental variables approach arguably would be most preferable (Miguel et al., 2004), all of the variables that we have tried as instruments fall short of the basic requirement of being highly correlated with territorial self-governance and uncorrelated with territory-centred intrastate violence. For lack of better alternatives, and following other examples in the civil war literature such as Fearon and Laitin (2003), we therefore deal with endogeneity in our statistical models by lagging all main explanatory variables and possibly affected control variables, that is, GDP per capita, population size, level of socioeconomic inequalities, recent experience of political instability, level of democracy and its square, and status as oil exporter (see also Neudorfer & Theuerkauf, 2014b). We use a one-year lag, but our results remain robust when increasing it to five years.<sup>5</sup>

## EMPIRICAL FINDINGS

Table 1 reports the results from our binary time-series cross-section analysis to test hypothesis 1.<sup>6</sup> Unlike our tests for hypothesis 2 and 3 (reported in Table 2), we do not include any interaction terms here, but control for PR electoral systems and parliamentarism as separate variables in model 3 of Table 1. It should be noted that the sample for Tables 1 and 2 includes both basically open and basically closed regimes, but that our electoral system and form of government variables, as aforementioned, automatically take on the value 0 under a country's combined polity score  $\leq 0$ .

Overall, our time-series cross-section models in Table 1 fit the data very well, as the percentages of adjusted correctly predicted events and non-events all lie above 71% (unadjusted 98%). Other measures including the Bayesian information criterion (BIC), Akaike information criterion (AIC), pseudo- $R^2$ , adjusted count  $R^2$  and adjusted McFadden measure also support our very good model fit (cf. Long & Freese, 2014). We use the statistical software R to produce a separation plot (Figure 1a) for model 1 from Table 1 to visually illustrate how well our statistical models fit the observed data (Greenhill et al., 2011). The fact that the majority of red vertical lines in Figure 1(a) are grouped towards the right illustrates that model 1 from Table 1 fits our observed data very well (Greenhill et al., 2011). We also present a confusion matrix (using R) which again supports a good model fit, as the top left corner fields (statistical model predicts 'no war' and the observed situation in the data set is 'no war') and bottom right corner fields (statistical model predicts 'war' and the observed situation in the data set is 'war') have larger pie pieces than the top right and bottom left corner fields (Figure 1b).

Holding all other variables constant at their average values and including both basically open and closed regimes in our sample, the dummy variable denoting state structures with at least one territorial self-governance arrangement has a statistically significant reducing effect on the prevalence of territory-centred intrastate violence in all models presented in Table 1.<sup>7</sup> This finding supports our first hypothesis that state structures with at least one territorial self-governance arrangement reduce the risk of territory-centred intrastate violence compared with state structures without such arrangement. These results stay robust when we restrict our sample to basically open regimes only (see model 2 in Table A in the supplemental data online). We note that PR electoral systems have a statistically insignificant positive effect, and parliamentary forms of government a statistically significant positive effect on territory-centred intrastate violence in model 3 of Table 1. However, we do not interpret these results further, as they are based on one-dimensional comparisons of formal political institutions and do not capture the institutional interaction effects in which we are most interested. The findings of central interest to our analysis are reported in Table 2.

To test hypothesis 2, we design a three-way interaction term of our territorial self-governance, PR and parliamentarism dummy variables. We mark the key row for the testing of hypothesis 2 (as opposed to the key rows for the testing of hypothesis 3) towards the bottom of Table 2.

As marginal effects of interaction terms are more cumbersome to depict than marginal effects of individual variables, the dark grey rows in Table 2 denote the predicted probabilities of territory-centred intrastate violence under different institutional combinations, whereby 'TSG' stands for territorial self-governance, 'Parl' for parliamentary form of government and 'PR' for PR electoral system (see Neudorfer, 2018, for another illustration of a triple interaction in maximum likelihood estimations). The rows below and above represent the lower confidence bound (CL) and upper confidence bound (CH) for the point estimates of our predicted probabilities. The control variables are included in the models but not printed in the table due to lack of space.

Simulating existing arguments in the power-sharing debate along the lines of 'the more power-sharing institutions, the better', hypothesis 2 proposes that institutional combinations of state structures with at least one territorial self-governance arrangement, a parliamentary form of government at the centre and PR electoral system for the national legislature should reduce the risk of

**Table 1.** Logit analysis of the effects of state structures with a territorial self-governance (TSG) arrangement on the risk of violent territory-centred intrastate conflicts, 1956–2007 (including basically open and basically closed regimes in sample).

	(1)	(2)	(3)
L.State structure with TSG arrangement	–0.74* (0.32)	–0.67* (0.31)	–0.73* (0.30)
L.Proportional representation			0.05 (0.41)
L.Parliamentary form of government			0.94** (0.36)
L.Ln GDP per capita	0.26+ (0.14)	0.27+ (0.14)	0.28* (0.14)
L.Ln population size	0.38** (0.11)	0.45** (0.10)	0.48** (0.09)
Incidence of ethnic war in a neighbouring country	0.43 (0.28)	0.36 (0.28)	0.24 (0.29)
Level of ethnic fractionalization	0.44 (0.50)	0.22 (0.53)	0.23 (0.55)
L.Level of socioeconomic inequalities	–0.01 (0.02)	–0.01 (0.02)	–0.01 (0.02)
Involvement in violent international conflict	0.78* (0.40)	0.80+ (0.41)	0.77+ (0.42)
L.Recent experience of political instability	–0.35 (0.27)	–0.35 (0.28)	–0.29 (0.30)
Experience of colonial rule	0.59+ (0.36)	1.03** (0.36)	1.17** (0.41)
L.Level of democracy	0.18 (0.18)	0.15 (0.17)	0.14 (0.17)
L.Level of democracy squared	–0.01 (0.02)	–0.01 (0.02)	–0.01 (0.02)
L.Status as oil exporter	–0.05 (0.49)	0.01 (0.47)	0.11 (0.46)
Per cent of mountainous terrain	0.00 (0.01)	–0.00 (0.01)	–0.00 (0.01)
Noncontiguous country structure		–0.69+ (0.37)	–0.78* (0.35)
Constant	–0.67 (0.62)	–0.70 (0.59)	–0.72 (0.55)
Peace years and three natural cubic splines included	Yes	Yes	Yes
Observations	5812	5812	5812

*(Continued)*

**Table 1.** Continued.

	(1)	(2)	(3)
Countries	154	154	154
Margins (TSG = 0–1) CL	–0.029	–0.028	–0.028
Margins (TSG = 0–1) <i>Hypothesis 1</i>	–0.017	–0.015	–0.016
Margins (TSG = 0–1) CH	–0.004	–0.002	–0.004
Margins (WarNei = 0–1)	0.009	0.008	0.005
Pseudo- $R^2$	0.71	0.71	0.72
LR $c^2$	653.81	627.37	651.86
Count $R^2$	0.98	0.98	0.98
Adj. count $R^2$ , adj. McFadden $R^2$	0.71, 0.70	0.72, 0.70	0.72, 0.70
AIC, BIC	979, 1099	976, 1102	969, 1109

Notes: <sup>†</sup>Significant at 10%; \*significant at 5%; \*\*significant at 1%.

Clustered standard errors are shown in parentheses. Estimations were performed using Stata 14. Lagged variables are lagged by one year. Colonial variable refers to colonial experience at any point between 1946 and 2007. Peace years and three natural cubic splines are included in all models, but are not shown.

AIC, Akaike information criterion; BIC, Bayesian information criterion.

territory-centred intrastate violence compared with any other possible combinations of different state structures, electoral systems and forms of government. As the results in the dark grey rows of [Table 2](#) indicate, the combination of territorial self-governance, a PR electoral system and parliamentary form of government indeed reduces the predicted probability of territory-centred intrastate violence compared with institutional combinations that contain neither territorial self-governance nor parliamentarism nor PR, *ceteris paribus*. However, of all possible institutional combinations denoted in [Table 2](#), the combination of territorial self-governance, a proportional electoral system and parliamentary form of government does not result in the lowest likelihood of territory-centred intrastate violence overall. Looking at model 1 of [Table 2](#), which performs comparatively best across all model fit measures, the combination of territorial self-governance, parliamentarism and a PR electoral system reduces the likelihood of territory-centred intrastate violence to 0.060 (i.e., 6%) from 0.081 (i.e., 8.1%) when territorial self-governance, parliamentary form of government and PR are all set to zero. The lowest likelihood of territory-centred intrastate violence with 0.025 (i.e., 2.5%), however, is reached when a country has at least one territorial self-governance arrangement, a proportional electoral system for the national legislature and non-parliamentary form of government. Interestingly, the highest likelihood of territory-centred intrastate violence with 0.133 (i.e., 13.3%) occurs when a country has no territorial self-governance arrangement but does combine parliamentarism with a proportional electoral system for the national legislature.

Even though this effect is almost never significant, the predicted probability for violent territory-centred intrastate conflict is always lower for an institutional package with territorial self-governance than for one without ([Figure 2](#)). Taken together with the findings reported in [Table 2](#), this implies that power-sharing at the centre enabled through parliamentarism and a PR electoral formula (the third marginal effect in [Figure 2b](#)) is an ill-suited substitute for territorial self-governance on its own (the second marginal effect in [Figure 2a](#)) when it comes to reducing the risk of violent territory-centred intrastate conflict.

Overall, the results do not support hypothesis 2, as the institutional combination of territorial self-governance, a PR electoral system for the national legislature and parliamentary form of

**Table 2.** Logit analysis of the effects of state structures with a territorial self-governance (TSG) arrangement, proportional representation and parliamentary form of government (interaction) on the risk of violent territory-centred intrastate conflicts, 1956–2007 (including basically open and basically closed regimes in sample).

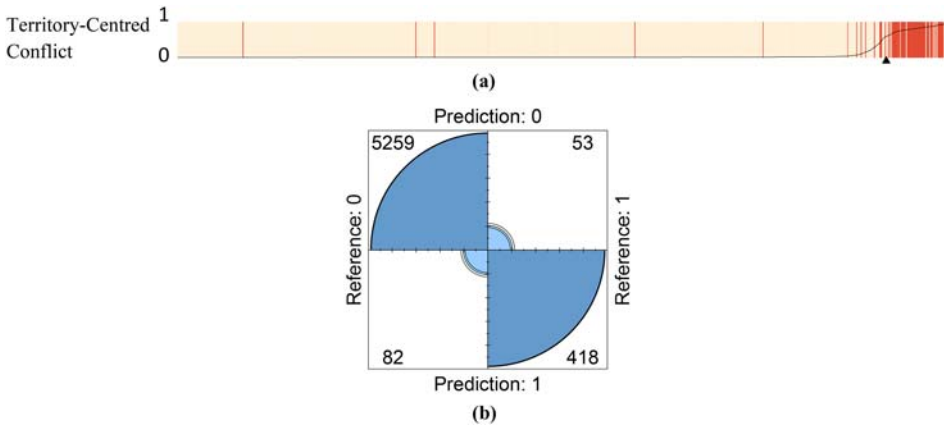
	(1)	(2)	(3)
L.State structure with TSG arrangement	−0.61 (0.39)	−0.68 <sup>+</sup> (0.40)	−0.68 <sup>+</sup> (0.40)
L.Proportional representation	−2.15** (0.75)	−2.18** (0.73)	−2.18** (0.73)
L.State structure with TSG arrangement*	0.04 (0.56)	0.10 (0.56)	0.10 (0.56)
L.Parliamentary form of government	−0.01 (0.50)	−0.04 (0.51)	−0.04 (0.51)
L.State structure with TSG arrangement*	0.52 (0.52)	0.72 (0.57)	0.72 (0.57)
L.Parliamentary form of government			
L.Proportional representation*	4.08** (1.03)	3.94** (1.04)	3.94** (1.04)
L.Parliamentary form of government			
L.State structure with TSG arrangement * L.Proportional representation * L.Parliamentary form of government	−2.77** (0.84)	−2.56** (0.86)	−2.56** (0.86)
Noncontiguous country structure		−0.47 (0.38)	−0.47 (0.38)
Splines and controls included	Yes	Yes	Yes
Observations	5812	5812	5812
Countries	154	154	154
TSG = 1 Parl = 1 PR = 1 CL	0.044	0.046	0.046
TSG = 1 Parl = 1 PR = 1 <i>Hypothesis 2</i>	0.060	0.066	0.066
TSG = 1 Parl = 1 PR = 1 CH	0.077	0.086	0.086
TSG = 1 Parl = 0 PR = 1 CL	0.008	0.008	0.008
TSG = 1 Parl = 0 PR = 1 <i>Hypothesis 3</i>	0.025	0.024	0.024
TSG = 1 Parl = 0 PR = 1 CH	0.041	0.040	0.040
TSG = 1 Parl = 1 PR = 0 CL	0.067	0.069	0.069
TSG = 1 Parl = 1 PR = 0 <i>Hypothesis 3</i>	0.078	0.081	0.081
TSG = 1 Parl = 1 PR = 0 CH	0.090	0.094	0.094
TSG = 1 Parl = 0 PR = 0 CL	0.053	0.052	0.052
TSG = 1 Parl = 0 PR = 0	0.067	0.066	0.066
TSG = 1 Parl = 0 PR = 0 CH	0.081	0.080	0.080
TSG = 0 Parl = 1 PR = 1 CL	0.092	0.087	0.087
TSG = 0 Parl = 1 PR = 1	0.133	0.127	0.127
TSG = 0 Parl = 1 PR = 1 CH	0.175	0.168	0.168
TSG = 0 Parl = 0 PR = 1 CL	0.010	0.010	0.010

(Continued)

**Table 2.** Continued.

	(1)	(2)	(3)
TSG = 0 Parl = 0 PR = 1	0.034	0.034	0.034
TSG = 0 Parl = 0 PR = 1 CH	0.059	0.058	0.058
TSG = 0 Parl = 1 PR = 0 CL	0.062	0.061	0.061
TSG = 0 Parl = 1 PR = 0	0.081	0.080	0.080
TSG = 0 Parl = 1 PR = 0 CH	0.099	0.100	0.100
TSG = 0 Parl = 0 PR = 0 CL	0.068	0.069	0.069
TSG = 0 Parl = 0 PR = 0	0.081	0.081	0.081
TSG = 0 Parl = 0 PR = 0 CH	0.093	0.094	0.094
Margins (WarNei = 0–1)	0.004	0.003	0.003
Pseudo- $R^2$	0.724	0.725	0.725
AIC	950.03	950.09	950.09
BIC	1110	1117	1117

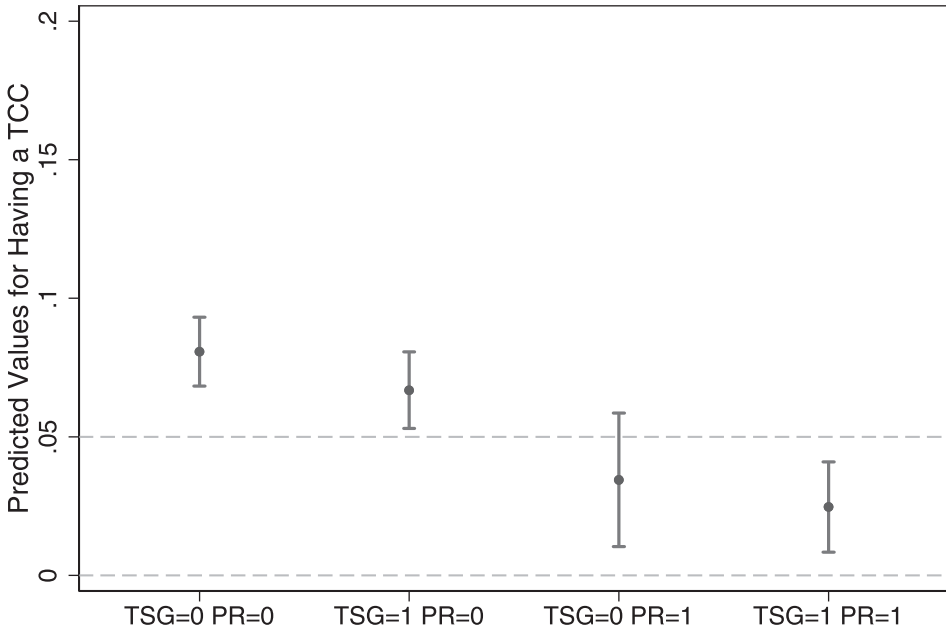
Notes: +Significant at 10%; \*Significant at 5%; \*\*Significant at 1%. Clustered standard errors are shown in parentheses. Estimations were performed using Stata 15. Lagged variables are lagged by one year. Control variables are for model 1 are gross domestic product (GDP) per capita, population, ethnic war in neighbouring country, ethnic fractionalization, socioeconomic inequalities, international conflict, political instability, colonial history, democratic institutions (single and squared), status as oil exporter, and per cent of mountainous terrain. Peace years and three natural cubic splines included in all models but not printed in the table. AIC, Akaike information criterion; BIC, Bayesian information criterion.



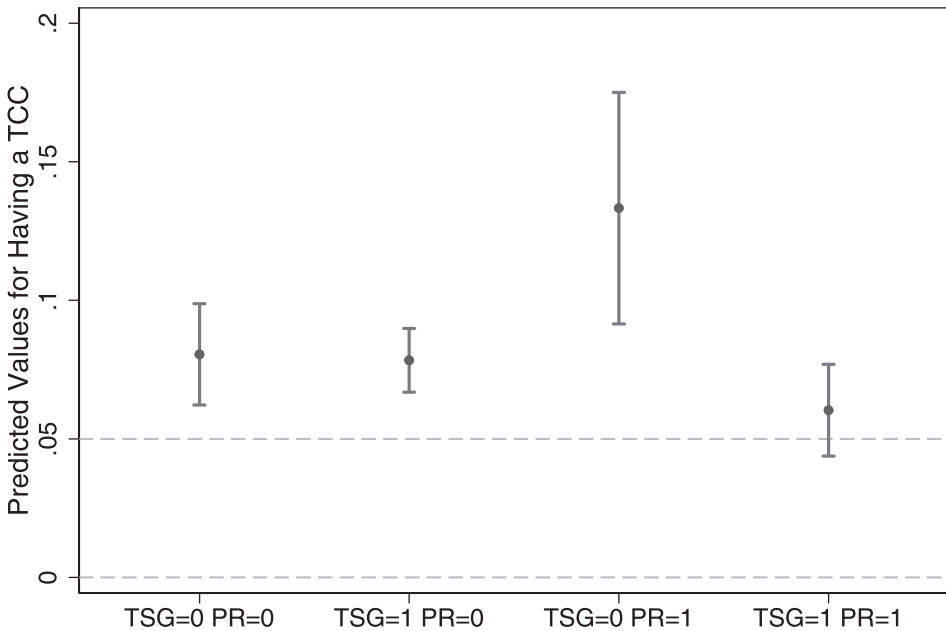
**Figure 1.** (a) Separation plot for model 1 of Table 1; and (b) confusion matrix for model 1 of Table 1.

government at the centre does not decrease the risk of territory-centred intrastate violence more than any other three-way combination included in Table 2.

By contrast, hypothesis 3 expects the institutional combination of territorial self-governance with a PR electoral system for the national legislature (and a non-parliamentary form of government at the centre) to be more effective at reducing the risk of territory-centred intrastate violence than the combination of territorial self-governance with parliamentarism (and non-PR electoral system). For this hypothesis to hold, the predicted probabilities of territory-centred intrastate violence under the combination ‘TSG = 1 Parl = 0 PR = 1 (H3)’ should be lower than those under



(a)



(b)

**Figure 2.** (a) Predicted probabilities of violent territory-centred intrastate conflict (TCC) without parliamentarism; and (b) predicted probabilities of violent territory-centred intrastate conflict (TCC) with parliamentarism.

‘TSG = 1 Parl = 1 PR = 0 (H3)’ in Table 2, which is the case in all models. This difference in predicted probabilities is significant across all model specifications, as the lower confidence bound of ‘TSG = 1 Parl = 1 PR = 0 (H3)’ is always larger than the upper confidence bound of ‘TSG = 1



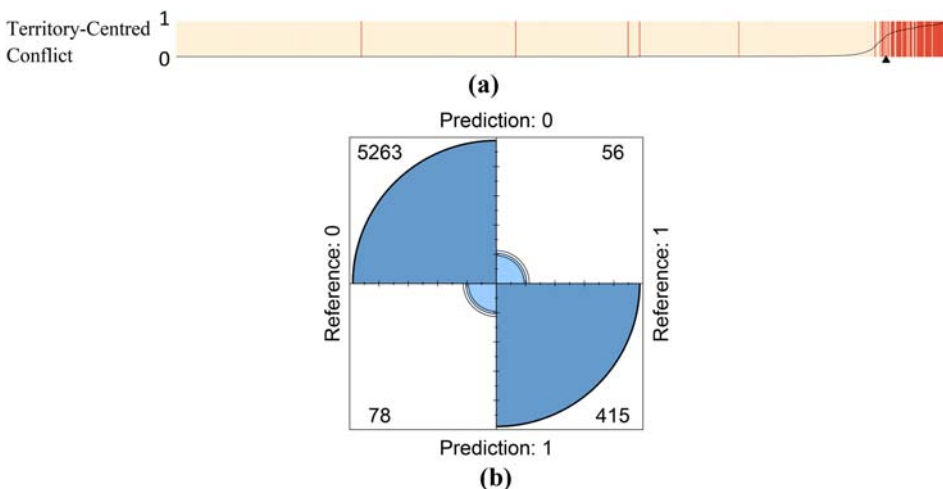
Parl = 0 PR = 1 (H3)'. Like Table 1, these findings are based on a very good fit of the statistical models to the data (Table 2 and Figure 3).

When interpreting these results, it is important to note that they do not indicate that non-parliamentary forms of government are superior to parliamentary forms of government in reducing the risk of territory-centred intrastate violence. Such an interpretation would be misleading, as the aforementioned results are for entire institutional combinations and do not lend themselves to one-dimensional comparisons of one constitutive element of these combinations. In other words, the findings reported in Table 2, Figure 2 should not be used for one-dimensional comparisons of parliamentary versus non-parliamentary forms of government (nor PR versus non-PR or TSG versus non-TSG on their own), but need to be interpreted holistically as complete interaction terms. What such a holistic interpretation reveals is that institutional packages which include both TSG and PR always outperform those which lack the TSG and PR combination in their territory-centred intrastate violence-reducing effects.<sup>8</sup>

The findings thus should not be seen as a challenge to consociational or other power-sharing arguments that emphasize the relevance, within broader institutional formulas, of grand coalitions (Lijphart, 1979, 2002, 2004; Theuerkauf, 2013) and meaningful executive power sharing (McGarry & O'Leary, 2008). Instead, our findings simply indicate that – when seeking to reduce the risk of territory-centred intrastate violence, and on the basis of the data we have used – the combination of territorial self-governance and a PR electoral system for the national legislature in basically open regimes tends to be particularly effective, and more so than any other combination of political institutions we analysed. This is in line with our theoretical expectation that grievances which affect the input side of at least minimally democratic regimes – and thus over who gets access to political power, how likely societal diversity will be reflected in elected decision-making bodies and which groups have the political resources needed to further their interests (Ganghof, 2010; Gurr, 2000) – may be particularly relevant for mitigating the risk of territory-centred intrastate violence.

## ROBUSTNESS

We run several robustness checks to ensure that our results are not driven by multi-collinearity, our statistical estimation procedure, variable coding or omitted variable bias.<sup>9</sup> As detailed in the



**Figure 3.** (a) Separation plot for model 1 of Table 2; and (b) confusion matrix for model 1 of Table 1.

supplemental data online, the results stay robust according to the definition by Sala-i-Martin (1997) when:

- Excluding population size, democracy, democracy squared and level of socioeconomic inequalities from our models due to their relatively high correlation with territorial self-governance (cf. Wooldridge, 2013).
- Using the method suggested by Carter and Signorino (2010) instead of splines to account for temporal dependence.
- Running probit, xtlogit or relogit instead of logit.
- Changing the set-up of the sample through bootstrapping and country-wise jackknife.
- Adding different combinations of control variables.
- Using coarsened exact matching according to Iacus et al. (2012).
- Changing our dependent variable to measuring the onset of territory-centred intrastate violence only, and then to measuring the prevalence of ethnic war according to the Political Instability Task Force Ethnic War Problem Set, 1955–2007 (Political Instability Task Force, 2009).<sup>10</sup>
- Replacing our original territorial self-governance variable with either a dummy variable denoting federal systems only or a count variable on the duration of territorial self-governance.

To further reduce the risk of omitted variable bias, we also consider conditions that facilitate the mobilization of aggrieved groups into (violent) action once a motive for (violent) action exists (Gurr, 2000). Previous research indicates that the territorial concentration of groups might be a particularly relevant facilitator for the mobilization into territory-centred intrastate violence, as it may increase group cohesion and capacity to translate grievances into violent action (Toft, 2003; Weidmann, 2009). To test the relevance of groups' territorial concentration, we use information provided by Girardin et al. (2015), collapse it from the group to the national level to ensure compatibility with our own data set and recode the collapsed variable to contain only zeros (not a single group has a concentrated settlement in the country) and ones (at least one group has a concentrated settlement in the country). The findings remain robust also when including this territorial concentration variable in our models (see Table F in the supplemental data online).

## CONCLUSIONS

The usefulness of territorial self-governance in helping to reduce the prevalence of territory-centred intrastate violence is best assessed when considering its interaction with other formal political institutions. In an advancement of previous scholarship which has either assumed a cumulative effect of power-sharing institutions or failed to separate the effects of electoral systems and forms of government in combination with territorial self-governance clearly, we show that it is not the number of power-sharing institutions which matters most in territory-centred conflict management, but rather the types of formal political institutions that operate together. This, we argue, is because the underlying logics on which the design of different political institutions is based may either reinforce each other's conflict-reducing effects, or make them weaker if they pull into different directions.

The analysis has focused on the interaction effects of three power-sharing institutions that tend to receive particular attention in the institutionalist debate on conflict management: territorial self-governance arrangements, PR electoral systems and parliamentary forms of government. The underlying logic of territorial self-governance arrangements and PR electoral systems is to widen the input side of at least minimally democratic regimes, through the election of representatives to the national legislature and the creation of subnational representative institutions. The underlying logic of parliamentary forms of government, by contrast, is more concerned with the

rules that shape interactions between political elites within executive structures, regulate representatives' contributions to policy-making processes and thus influence government outputs.

Using binary time-series cross-section analysis, we have demonstrated that the combination of territorial self-governance with a PR electoral system in basically open regimes is most effective at reducing the risk of territory-centred intrastate violence. This particular institutional combination not only outperforms the double interaction between territorial self-governance with parliamentarism, but also the triple interaction between territorial self-governance with parliamentarism and PR. This finding is in line with our theoretical expectation that grievances about a (real or perceived) lack of political inclusiveness in territory-centred conflicts may be best addressed by an institutional combination whose power-sharing elements similarly emphasize, and thus reinforce, the input side of at least minimally democratic regimes.

Taken with the caveat that large-*N* statistical research can only provide us with generalized trends rather than in-depth causal narratives, our analysis nonetheless provides important insights for the academic and policy-making debates on institutional conflict management. Building on the contingent view of territorial self-governance as a tool for territory-centred conflict management, and refining grievance-based arguments on the potential links between institutional design and violent intrastate conflict, our analysis clearly indicates that it is not just institutions that matter, but even more so the types of institutions that operate together.

Future research may want to build on these findings by analysing the relevance of our theoretical arguments for individual case studies and the ways in which they can be translated into feasible policy advice. Building on the generalized trends we have presented, more fine-grained analyses could help to uncover how the effects of institutional combinations may further vary depending on the type of territorial self-governance (such as fully and symmetrically federalized state structures, or multiple asymmetric autonomy or devolution arrangements in otherwise unitary state structures), form of government (such as president-parliamentary or premier-presidential mixed forms) and electoral system (such as list or non-list system) that operate together. In particular qualitative research would be well suited to give greater consideration to the context under which different institutional combinations have been adopted, and the various types of conflict beyond territory-centred intrastate violence that may be affected by institutional design choices. These avenues of further research notwithstanding, we are confident to have found robust results on the relevance of institutional combinations and their components' underlying design logic for territory-centred conflict management.

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## DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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## NOTES

1. Of which federalism is one but not the only form.
2. The data that support the findings of this study are available from the corresponding author upon request.
3. We include both internal and internationalized internal territory-centred armed conflicts according to the UCDP/PRIO in our analysis.
4. For details, see the supplemental data online.
5. For the results for the five-year lag, see Tables K and L in the supplemental data online.
6. For all descriptive data, see Table O in the supplemental data online.
7. All tables were produced with estout (Jann & Long, 2010).
8. We can illustrate the superiority of institutional packages that contain the TSG and PR combination over those that do not as follows. First, if we keep the form of government fixed as parliamentary, the predicted probabilities in model 1 of Table 2 show that countries with an institutional combination of TSG, a PR electoral system for the national legislature and parliamentary form of government at the centre (TSG = 1 Parl = 1 PR = 1: 0.060) have a lower risk of territory-centred intrastate violence occurring than the combination of TSG, a non-PR electoral system (i.e., majoritarian or mixed) for the national legislature and parliamentary form of government at the centre (TSG = 1 Parl = 1 PR = 0: 0.078), and a lower risk than the combination of non-TSG (i.e., state structures without at least one territorial self-governance arrangement), a PR electoral system for the national legislature and parliamentary form of government at the centre (TSG = 0 Parl = 1 PR = 1: 0.133). Second, if we keep the form of government fixed as non-parliamentary, the combination of TSG, a PR electoral system for the national legislature and non-parliamentary form of government (i.e., presidential or mixed) (TSG = 1 Parl = 0 PR = 1: 0.025) has a lower risk of territory-centred intrastate violence occurring than the combination of TSG, a non-PR electoral system for the national legislature and non-parliamentary form of government (TSG = 1 Parl = 0 PR = 0: 0.067), and a lower risk than the combination of non-TSG, a PR electoral system for the national legislature and non-parliamentary form of government (TSG = 0 Parl = 0 PR = 1: 0.034).
9. For conciseness, we present only the results from the robustness tests of the best performing model (model 1, labelled 'original model' in the robustness tests). The robustness results from the testing of hypothesis 1 (and model 1 of Table 1) are included in Tables A, B, E–G and K–N in the supplemental data online. The robustness results from the testing of hypotheses 2 and 3 (and model 1 of Table 2) are included in Tables C–F, H, L and P also online.
10. As aforementioned, however, the analysis only covers the period 1956–2007 because of data availability of other variables.

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