Revisiting democratic civil peace: Electoral regimes and civil conflict

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Abstract

The debate on democratic civil peace has centered on three general claims: democracies have a low risk of conflict, autocracies have the same low risk of conflict as democracies, and hybrid regimes have the highest conflict risk. We reevaluate these claims, emphasizing that previous studies have focused on the aggregate categories of regimes, neglecting the role of particular institutional features. We propose focusing on the electoral qualities of regimes, which constitute the core of democracy, and argue that constraints on electoral contestation generate incentives for opposition to use force. Building on this framework, we distinguish between five regime types according to their electoral features—non-electoral autocracies, single-party autocracies, multi-party autocracies, minimalist democracies, and polyarchies—and specify hypotheses regarding the likelihood of conflict in each. In a global statistical analysis spanning 1817–2006 and employing the new Lexical Index of Electoral Democracy (LIED), we find that polyarchies, characterized by unconstrained contestation, have a lower risk of conflict than any other regime type (although minimalist democracies are only slightly more prone to conflict). Subsequently, we find that single- and multi-party autocracies, characterized by non-competitive elections, are more peaceful than non-electoral autocracies. Our analysis also reveals two factors that are particularly associated with civil peace: the presence of (any form of) elections and minimal electoral competition. Overall, our study underscores the importance of focusing on the central attributes of democracy and sheds new light on the relationship between particular regime features (or types) and civil conflict, thereby contributing to the growing efforts in conflict research to disaggregate political regimes.

Keywords: democratic civil peace, civil war, armed conflict, political regime, elections, autocracy

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Introduction

The proposition that democracy leads to civil peace has generated extensive debate in conflict research (Hegre, 2014). This debate has centered on three general claims. First, democracies have a low risk of conflict, as democratic regimes create few political grievances and have institutional means to accommodate contenders non-violently. Second, autocracies have as low a risk of conflict as democracies, as autocratic regimes have the means to repress contenders violently. Finally, hybrid regimes ("anocracies") have the highest conflict risk, as they lack both the established institutions to accommodate contenders and effective means to repress them. Initially, empirical work provided considerable evidence to support these claims, suggesting that the democracy–conflict relationship follows an inverted U (Auvinen, 1997; Fearon & Laitin, 2003; Hegre et al., 2001; Henderson & Singer, 2000; Muller & Weede, 1990; Reynal-Querol, 2002). However, subsequent studies have challenged these claims, showing that anocracies do not in fact have a higher risk of conflict than other regimes (Trier & Jackman, 2008; Vreeland, 2008).

In view of this, we revisit the debate on democratic civil peace. We note that previous research has underexplored particular institutional features (see also Fjelde, 2010; Gleditsch & Ruggeri, 2010; Goldstone et al., 2010). Specifically, previous studies have used indicators representing the overall level of democracy that do not account for specific qualities of regimes theorized to influence peace; for example, institutions regulating access to power. We suggest that research on democratic peace should center on the electoral features of regimes, such as the presence and competitiveness of national elections, which form the "inescapably sine qua non" of modern democracy (Huntington, 1991: 9).[1] Hence, we follow the research tradition adopting a "realistic" understanding of democracy, according to which democracy is primarily a method that determines access to government power. This understanding of democracy follows Schumpeter, who defined it as "that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people's vote" (1976: 269).

[1] By emphasizing the electoral qualities of regimes, we do not aim to undermine the importance of other attributes attached to democracy (e.g., the rule of law). We aim, instead, to promote the disaggregation of regime characteristics and focus on the mechanisms through which democracy affects peace. However, given the broad agreement about the centrality of electoral characteristics to democracy and lack of research on their effects on conflict, this aspect should arguably be among the main foci of research on democracy and peace.

We suggest that the electoral qualities of regimes are central not only to the concept of democracy but also to democratic civil peace. To support this claim, we present a theoretical discussion highlighting the role of electoral contestation (Coppedge, Alvarez & Maldonado, 2008; Dahl, 1971). It synthesizes four mechanisms through which electoral contestation may influence the incentives for the opposition to use force. Specifically, constrained electoral contestation can (i) motivate the opposition to substitute electoral competition with violence, (ii) legitimize the use of anti-government violence, (iii) "self-select" the opposition recruits into violence, and (iv) hinder the incumbent's strength.

Building on this framework and extant regime typologies (Diamond, 2002; Howard & Roessler, 2006; Møller & Skaaning 2013), we categorize polities into five "electoral regime" types (political regimes defined by their electoral characteristics): non-electoral autocracies, single-party autocracies, multi-party autocracies, minimalist democracies, and polyarchies. Subsequently, we specify hypotheses on the likelihood of conflict in each.

To shed new light on democracy and civil peace, we employ the new Lexical Index of Electoral Democracy (LIED) (Skaaning, Gerring & Bartusevičius, 2015). This index simultaneously performs a classificatory function, each level identifying a unique regime type, and a discriminating function, distinguishing between different levels of democracy. LIED therefore allows not only assessing whether democracies are more peaceful than autocracies but also identifying conflict risks in concrete regime types. Furthermore, spanning 1800–2013 and including 221 independent polities, LIED has the most comprehensive coverage among extant indices. This enables us to expand the conventional post-1945 timespan threefold, to 1817–2006 (delimited by data on other covariates), substantially widening the temporal scope of our inferences.

Our analysis demonstrates that polyarchies, characterized by unconstrained electoral contestation, outperform all other regime types on civil peace. Moreover, we find that hybrid regimes characterized by at least nominal electoral competition are more peaceful than autocracies without elections. These findings suggest that democracy—understood in the electoral sense—relates to civil conflict in a negative monotonic way. Our disaggregated analysis also reveals two particular factors that are most strongly associated with civil peace: the presence of (any form of) elections and minimal electoral competition.

Altogether, this study contributes to the literature on political regimes and conflict in the following ways. Conceptually, it underscores that research on *democratic* civil peace must focus on the

central attributes of democracy—not correlates of it (e.g. state capacity). Theoretically, it sheds new light on the mechanisms through which particular regime characteristics, as contrasted to aggregate categories, can influence conflict. Empirically, it identifies conflict risks in regime types that represent qualitatively meaningful and ordered categories, generating substantive insights into the relationships between particular electoral characteristics and conflict.

More generally, our study contributes to an emerging effort to disaggregate political regimes, arguably a prerequisite for the progress in research on democratic civil peace. In a recent literature review, Ari, Gleditsch, Hegre, and Wig (2016: 4) noted that

> …we know less about the causal mechanisms tying specific aspects of institutions to conflict outcomes. Disentangling the highly aggregated categories of democracy and democratization…seems a promising avenue for progress…One potentially fruitful strategy is to unpack the 'black box' of aggregated democracy measures and investigate which regime-type dimensions are conductive to peace.

While similar calls to disaggregate political regimes have appeared in previous research (e.g., Gleditsch & Ward 1997), few studies have attempted to address these concerns. One exception is Gleditsch & Ruggeri (2010).[2] Criticizing the use of democracy indices as proxies of state capacity, they propose an alternative measure and show how it affects civil conflict. Further, controlling for state capacity, they identify a negative monotonic relationship between their democracy measure (adjusted Polity Index) and conflict. While the Gleditsch and Ruggeri study convincingly isolates the effects of state capacity from democracy, it sheds little light on the actual features of democracy that influence peace. Here, we explicitly pursue this aim: holding state capacity constant, we investigate the disaggregated features of democracy that account for democratic civil peace.

[2] Other examples include Fjelde (2010) and Goldstone et al. (2010). However, the former exclusively focuses on autocracies (therefore only covering part of the democracy–peace nexus), while the latter focuses on regime features that best predict political instability (without considering their theoretical relevance or centrality to democracy). Also, Goldstone et al. use subcomponents from Polity Index, aggregating them in a way that prevents the identification of particular institutional features accounting for conflict.

Research on political regimes and civil conflict

The democratic civil peace hypothesis has inspired numerous studies on political regimes and civil conflict (Auvinen, 1997; Dunning, 2011; Fearon & Laitin, 2003; Fjelde, 2010; Gleditsch & Ruggeri, 2010; Goldstone et al., 2010; Hegre et al., 2001; Henderson & Singer, 2000; Muller & Weede, 1990; Reynal-Querol, 2002). Many have stressed that democracies experience fewer political grievances than other regimes, as they are less repressive, more politically inclusive, and tolerant. While this does not imply the absence of societal discontent (as grievances may arise from other sources, e.g., the economy), fewer political grievances lead to fewer reasons for politically motivated, state-targeted action (Buhaug, 2006: 696).

Even if grievances arise, democracies can address them non-violently. Democratic institutions (e.g., elections and legislatures) provide opportunities for contenders to pursue their interests and voice discontent. While such institutions foster political competition, they offer a major—arguably more attractive—"substitute" for political violence (Dunning, 2011: 329–332; Gleditsch & Ruggeri, 2010: 301); the more competitive the democratic institutions, the less likely that the opposition pursue their interests violently.

Some scholars have claimed, however, that full autocracies may be just as (or even more) peaceful than full democracies (Buhaug, 2006; Goldstone et al., 2010). Due to constrained political competition, corruption, and violations of human rights, autocracies generate more grievances than democracies, but they can effectively subdue them with force. While democracies can also use force against their citizens (e.g., to subdue illegal opposition), autocrats can do so more extensively because they rely less on popular support to remain in power (Hegre, 2014:163).

While full democracies have the means to accommodate contenders and full autocracies possess the means to repress them, hybrid regimes often lack both, leading to the highest risk of conflict. The inconsistent nature of such regimes is the culprit. By mixing a level of repression that is not comprehensive enough to quell the opposition with some degree of political competition that is not sufficient to fully accommodate the opposition, anocracies both motivate violence and fail to counter it (Henderson & Singer, 2000: 279–280; Muller & Weede, 1990: 627; also Hegre et al., 2001: 33).

Empirical research has tended to support these claims. Numerous studies have shown that full democracies are least likely to experience conflict (e.g. Gleditsch & Ruggeri, 2010; Hegre et al., 2001),

others that full autocracies may be as peaceful as full democracies (Buhaug, 2006; Goldstone et al., 2010). Yet most studies have converged on the finding that anocracies are the most conflict-prone (Auvinen, 1997; Fearon & Laitin, 2003; Hegre et al., 2001; Henderson & Singer, 2000; Muller & Weede, 1990; Reynal-Querol, 2002), suggesting that the regime type–conflict relationship follows an inverted U.

However, Vreeland (2008) has shown that previous research has suffered from an endogeneity problem: the middle values of Polity Index (Marshall, Gurr & Jaggers, 2016), a proxy of democracy used by most studies to identify anocracies, by definition partly reflect violence (see also Strand, 2007). Removing the elements of violence from the index, the middle values seem not to be associated with conflict. Moreover, Vreeland has shown that substituting the revised Polity Index ("xPolity") with alternative measures makes little difference: anocracies have no greater risk of conflict than other regimes (see also Gleditsch & Ruggeri, 2010; Trier & Jackman, 2008).

Yet the results based on xPolity and other graded indicators of democracy suffer more fundamental problems. To disentangle the anocracy–conflict relationship, we must first clearly define anocracies themselves (Ari et al., 2016: 5). Available indicators of political regimes, however, paint a different picture: they merely provide a score reflecting the overall level of democracy without linking specific characteristics to the different levels. While a country with a value of 6 on the Polity scale is considered more democratic than a 5, this score tells us little about the actual qualitative differences between the two regimes.

Furthermore, the graded measures of political regimes are aggregates of many sub-components, and different combinations of values often lead to the same aggregate scores (Cheibub, Gandhi & Vreeland, 2010; Gleditsch & Ward, 1997). Thus, a country scoring low on competitiveness of executive recruitment and high on executive constraints might have the same overall score as another scoring high on competitiveness of executive recruitment and low on executive constraints. Consequently, such 'mashup indices' (Ravallion, 2011) generate heterogeneous pools of autocracies, democracies, and—particularly—hybrid regimes.

These problems have prevented the identification of the exact regime features associated with conflict. Fortunately, recent developments in regime data collection have turned towards greater disaggregation, producing data suitable for our research goal. We present these data in the subsequent section; we now establish a theoretical link between electoral regimes and conflict.

Electoral contestation and civil conflict

As emphasized, understanding the relationship between the electoral characteristics of regimes and civil peace is essential to understanding the democracy–peace nexus. This follows from the concept of democracy, where elections constitute the essential core (Huntington, 1991: 9; Schumpeter, 1976: 269). The key electoral elements are national elections for the legislature and (directly or indirectly) the executive, participation of multiple parties/candidates, and uncertainty about the outcome (Przeworski et al., 2000: 15–16). Together with freedom of expression, which supports the meaningfulness of elections, these elements pertain to what Dahl (1971) has labelled "contestation" (see also Coppedge, Alvarez & Maldonado, 2008). Accordingly, we posit that the arguments linking democracy to conflict should center on these core features.

Dahl (1971) refers to an additional electoral dimension: inclusiveness (or participation). Here, however, we exclusively focus on contestation. Variation in inclusiveness is almost absent after 1945, undermining the relevance of this dimension for understanding contemporary civil conflicts. More importantly, a unidimensional focus on contestation ensures better alignment between our concepts, theory, and measures (Coppedge, Alvarez & Maldonado, 2008). Analyzing both dimensions would involve specifying the theoretical mechanisms pertaining to each, how they interact in producing conflict, and testing their separate (or interacting) effects in empirical analysis. Here, trading extensiveness for relevance and parsimony, we exclusively focus on contestation.

Electoral regimes and electoral events

In our framework, political regimes[3] are distinguished by the presence/absence of periodic elections and their competitiveness; i.e., whether opposition groups are allowed to compete in elections, have a chance of winning, and enjoy freedom of expression. While we use elections to categorize political regimes (hence, 'electoral regimes'), we do not focus on the short-term effects of electoral *events* on violence. Instead, we focus on the sustained effects of electoral *regimes*, which affect the behavior of opposition actors beyond the actual electoral events. For example, if regimes allow periodic electoral

[3] 'Political regimes' refer to the sets of formal and informal political institutions regulating the access to political power (see Mazzuca, 2010).

competition, opposition actors are incentivized to await elections and pursue their interests non-violently between them (via political parties, lobbyism, etc.). Conversely, if regimes constrain electoral competition, opposition actors are dis-incentivized to wait, instead contesting power violently between elections (see also Harish & Little, 2017).

Studies have shown that electoral events in non-democratic regimes increase the risk of ethnic civil war (Cederman, Gleditsch & Hug, 2013), recurrence of civil conflict (Brancati & Snyder, 2013), and small-scale civil violence (Salehyan & Linebarger, 2015). However, these effects have primarily been attributed to the short-term prospects for mobilization around electoral events (Cederman, Gleditsch & Hug, 2013: 390; Salehyan & Linebarger, 2015: 26, 30; see also Kuntz & Thompson, 2009: 254), which do not exist between elections. Hence, while electoral events and regimes are intrinsically related (i.e. the former defines the latter), their immediate and transient effects on peace are likely different.

In a related study of regime survival, Knutsen, Nygård & Wig (2017) suggest that elections serve as "focal points" for mobilizing opposition. Mobilization in autocracies constitutes a typical collective action problem: people are reluctant to express their grievances due to fear of punishment and lack of knowledge as to whether others share their grievances. The salient political nature and time-limited character of elections renders overcoming such collective action problems possible, increasing the prospects of coordinated regime challenge. Yet elections and associated institutions (e.g. parties and legislatures) also provide information, legitimacy, and means for cooptation for the incumbents, which, in the longer run, prevent anti-government challenge. In extensive empirical analysis, Knutsen, Nygård & Wig find that electoral events indeed increase the immediate risk of regime breakdown, whereas periodic elections stabilize autocracies in the longer term.

Focusing more directly on civil violence, Harish & Little (2017) present a formal model suggesting a similar pattern. Their model builds on the same assumption that elections generate favorable opportunities for mobilization, thereby increasing the effectiveness of violent, anti-government action. Aware of this, the opposition should refrain from using violence between elections and displace it instead to electoral events. Compared to a baseline without periodic elections (where the effectiveness of anti-government violence is more constant), long non-electoral periods intersected with short electoral events should lead to a net positive effect on peace.

Electoral regimes are thus likely to have separate effects (from electoral events) on conflict. The likelihood of conflict, however, depends not only on the presence/absence of periodic elections but also on the actual qualities of regimes.

Electoral regime types and incentives for violence

To explain the electoral regime–conflict relationship, we take the perspective of opposition and focus on the following mechanisms: (i) "substitution," (ii) legitimacy of anti-government violence, and (iii) "self-selection." While discussing electoral autocracies, we also consider (iv) how elections and nominal electoral institutions (parties, legislatures, etc.) can strengthen the incumbents and prevent anti-government violence. Below, we first introduce the general mechanisms and then elaborate in detail how they operate in the context of particular regime types.

Non-violent institutional action (e.g., election participation) involves fewer costs than violent non-institutional action (civil conflict) due to the resources and risks involved in armed conflicts. Unlike election participation, an armed conflict with a government requires extensive finances, arms, and recruits, sufficiently motivated to risk injury and death (Hendrix, 2010: 274). Chenoweth & Stephan (2011: 32–39) highlight how violent rebellions face greater obstacles to recruitment—due to the risks and costs associated with armed conflict—on average attracting many times smaller membership than non-violent campaigns. Hence, we assume that a non-violent institutional action[4] is preferred to a violent non-institutional one when the probability of success of the two actions is at least on par. We define the success of an opposition action broadly as gaining access to government power or changing the incumbent's policies.

The probability of the success of non-violent institutional action should vary positively with contestation. If incumbents allow electoral competition, non-violent action may be an effective choice, whereas violent action may be more attractive if incumbents restrict electoral competition. Thus, 'fighting and voting can be seen as strategic substitutes'(Dunning, 2011: 329), and free competition should incentivize participation in elections by increasing the opposition's probability of success of gaining access to power via electoral means. Further, post-conflict literature highlights how democratic

[4] In such contexts, non-violent *non-institutional* action (e.g., protest) is also an option and actually more likely to succeed than violence (Chenoweth & Stephan, 2011; Schock, 2005). However, our focus here is on the choice between routine politics and armed conflict; therefore, we do not address non-violent, non-institutional alternatives to violence.

institutions mitigate commitment problems among the opposition (e.g. Brancati & Snyder, 2013; Durant & Weintraub, 2014; Flores & Nooruddin, 2012; Matanock, 2017). When elections occur in post-conflict settings, ex-warring parties are uncertain about each other's willingness to comply with the formal electoral process, resulting in neither side credibly committing to the elections and a higher risk of conflict recurrence. Such commitment problems can be mitigated by fair electoral competition (Flores & Nooruddin, 2012: 561–2) accompanied by institutions ensuring compliance with elections (e.g., professionalized bureaucracies, impartial courts, and free media; see Brancati & Snyder, 2013: 829–31) or particular electoral design constraining the executive and enabling "the rule of law for elites" (Durant & Weintraub, 2014: 527). This arguably generalizes to non-post-conflict settings, where constrained contestation results in uncertainties regarding the respect for electoral outcomes, dis-incentivizing the opposition from committing to elections and increasing the chance of substitution with violence.

The probability of the success and costs associated with non-violence/violence also depends on the legitimacy of anti-government violence. If everyone can pursue interests via the same institutional means and elections constitute the sole legitimate path to power, violence against incumbents may be unpopular—and therefore costly and ineffective (Buhaug, 2006: 696; also Cheibub & Hays, 2017: 91). Conversely, if only particular political actors are allowed to compete for power (e.g., as in single-party regimes) and electoral competition provides little chance of gaining access to power, anti-government violence may have popular support and be more likely to succeed. In cases where elections and legislatures are entirely absent, incumbents cannot even play the "popular legitimacy card," as there are simply no institutions for popular representation (Shock, 2005).

When electoral competition is constrained or banned, opposition often operates underground, which involves multiple barriers that do not exist while joining legal organizations such as political parties in democracies. Chenoweth & Stephan (2011) discuss such barriers in the context of violent campaigns, many of which can be generalized to the context of underground activities (violent or not). Like joining an armed fight, membership in illegal opposition entails higher risks and costs (e.g., capture and imprisonment) than membership of legal organizations. Furthermore, given their clandestine nature, would-be members have limited information about the groups they join, meaning higher uncertainty (about the size and strength of the group, its goals, etc.). Because of their secret character, underground groups themselves must follow careful recruitment practices, selecting only

those with high resolve, reliability, and other qualities pertaining to clandestine activities. Prospective members must therefore be highly motivated and willing to take risks. Arguably, such qualities are conductive to violence. Individuals committing to illegal underground groups are likely to be more risk-taking and less averse to anti-government violence. Thus, compared to legal political organizations, clandestine opposition groups should be staffed with people more likely to accept and use political violence, "self-selecting" into conflict.

The discussion above thus suggests a general pattern: constrained electoral contestation incentivizes opposition actors to use force, implying that *the probability of civil conflict is negatively associated with electoral contestation* (H1).

We now detail each of the mechanisms in the contexts of particular regime types, categorized based on different degrees of contestation. In line with extant typologies of electoral regimes (Diamond, 2002; Howard & Roessler, 2006; Møller & Skaaning, 2013), we distinguish between five generic categories: non-electoral autocracies (no elections); single-party autocracies (single-party elections); multi-party autocracies (multi-party non-competitive elections); minimalist democracies (multi-party competitive elections); and polyarchies (multi-party competitive elections with freedom of expression).

As the label implies, non-electoral autocracies hold no national elections (e.g., present-day Saudi Arabia, Qatar) or postpone them for an unknown length of time (Philippines under Marcos' martial law, present-day Eritrea). In such contexts, opposition actors are incentivized to use force; yet, doing so can incur great costs. As electoral institutions are absent, the incumbents must engage the opposition using other means, usually repression (Davenport, 2007: 490; Fjelde, 2010: 200), which can take extensive forms, since regime survival rests less on popular support (Hegre, 2014: 163; Schock, 2005: 31–32, 49–50).

This has led previous research to claim that full autocracies are "peaceful"; however, there is good reason to doubt this claim. If repression effectively prevented violence, highly repressive regimes would have little conflict. History reveals this hardly to be the case. The top-10 countries in the Correlates of War data (elaborated below) with the highest incidence of large-scale civil war (Sudan (N = 34), Philippines (31), Colombia (29), Burma (27), Indonesia (26), Angola (24), Sri Lanka (22), Ethiopia (19), Chad (18), and Afghanistan (16)) are/were some of the most repressive in the world.

Highly repressive states free of conflict do exist (e.g. Saudi Arabia), but such cases are atypical regarding wealth and state capacity. Unlike the cases above, states like Saudi Arabia can afford a large, professional security apparatus capable of maintaining order. Indeed, state capacity, backed with a strong economy, features as key factors preventing anti-government violence in the qualitative literature (e.g. Bellin, 2004). Large-N studies on political regime and conflict also tend to focus on 'state weakness,' highlighting the role of state capacity in identifying and subduing anti-government mobilization (e.g. Fearon & Laitin, 2003).

The low likelihood of conflict in full autocracies, as identified in previous research, might therefore be due to state capacity, a feature that is not a conceptual attribute of democracy (e.g. Mazzuca, 2010).[5] Indeed, we see little theoretical reason why fully autocratic regimes—understood in the electoral sense—should be peaceful. Given that institutional competition over power is entirely absent, the incentives to substitute it with violence should be greater and have greater popular support than in any other regime type. Further, given that political opposition is entirely banned, most regime contenders must operate underground, attracting members more likely to accept and use anti-government violence. Thus, we expect that *non-electoral autocracies have a higher risk of conflict than any other electoral regime type* (H1a).

The discussion above suggests that H1a should be tested while controlling for state capacity, but how exactly does state capacity relate to democracy—or, more importantly, to electoral features of regimes—and civil war? Arguably, the choice to introduce elections depends on the incumbents' capacity to repress opposition. Bellin (2004: 146) and Fjelde (2010: 199) highlight that repression is rather costly and that only high-capacity states can exclusively rely on it to quell the opposition. If state capacity is low and resources are insufficient to coerce opponents to "peace," incumbents must introduce elections. Likewise, the competitiveness of such elections depends on the incumbents' capacity to repress: the lower the capacity, the more competitive the election required. Thus, we must hold state capacity constant to identify the association between electoral regimes and conflict. The interplay between state capacity and electoral competition is an interesting question in its own right.

[5] Previous research on political regime and conflict has controlled for GDP/cap (which partly proxies for state capacity) and yet found that full autocracies were less prone to violence than anocracies (or even democracies). Virtually all studies finding such a pattern, however, relied on the problematic Polity Index. Analyses based on xPolity or alternative measures have not found anocracies to be more violent than other regimes. Indeed, controlling for irregular leader change, a more direct proxy of state capacity, Gleditsch & Ruggerri (2010) find that democracy is associated with conflict in a negative, monotonic way (consistent with H1a).

Yet our focus here is on electoral features of regimes, categories conceptually most central to democracy.

Civil conflict research often treats electoral autocracies as transitional regimes, but research on electoral authoritarianism suggests that this regime type is often a deliberate choice aimed at undermining the opposition and keeping autocrats in power. Regular elections and nominal legislatures can serve as effective institutional settings to coopt challengers, for example, via spoils allocated through 'elected' seats (Boix & Svolik, 2013; Gandhi & Przeworski, 2006). Autocrats can also use electoral campaigns to signal strength: "By rolling out an impressive electoral campaign machinery and whipping up popular support, the regime credibly signals to (1) the opposition that armed confrontations are futile and (2) the internal elite that coups will be opposed by numerous supporters" (Knutsen, Nygård & Wig, 2017: 103; also Cheibub & Hays, 2017). Elections can also help reveal the strength of challengers (Little 2012) and identify them—and they can then be repressed, discredited, or coopted (Magaloni 2008: 71). Finally, incumbents can use elections and parties to channel popular mobilization into regime-supportive activities and to create forums where "political aspirations and demands from competing factions can be discussed [within regimes' parties] without challenging the foundations of the regime" (Fjelde, 2010: 199; also Davenport, 2007: 491; Gandhi & Przeworski, 2006). Altogether, this suggests that nominal democratic institutions can help autocrats to "divide and rule," weakening the opposition and preventing anti-government violence.

From the opposition perspective, electoral autocracies can also reduce incentives for violence. Compared to non-electoral regimes, the spectrum of means to compete over power increases with one additional choice (Shock 2005: 15). While they do not allow the opposition to gain actual power, nominal democratic institutions do provide a 'venue within which discussion/aspirations/activism can take place—in a sense, it may be the only 'show in town', but at least there is a show' (Davenport, 2007: 490). Elections in autocracies can even result in some degree of popular representation. In Vietnam, for example, a single-party regime, constituency delegates not only raised issues relevant to their constituents in the national assembly but also directly questioned the performance of the executive branch (Malesky & Schuler, 2010).

Additionally, elections and associated institutions, even if only nominal, can improve the legitimacy of incumbents (Schedler, 2002), thereby undermining support for anti-government violence. Further, in some (multiparty) electoral autocracies, opposition actors are formally allowed to organize

and campaign. Compared to underground groups, legal opposition parties have a more diverse membership base, which is less likely to accept (or be motivated to use) anti-government violence. Hence, electoral autocracies should generally be less prone to conflict than non-electoral regimes.

Electoral autocracies come in two basic forms: single-party, where access to power is constrained by banning opposition parties (e.g. present-day Cuba, Vietnam) and multi-party, where competition for power is constrained via informal mechanisms such as intimidation, bribery, and electoral manipulation (e.g., present-day Russia, Zimbabwe). Based on our conceptual framework, we consider non-electoral autocracies, single-party autocracies, and multi-party autocracies as representing three different levels of electoral contestation. On this basis, we hypothesize that s*ingle-party autocracies have a lower probability of conflict than non-electoral autocracies* (H1b) and that *multi-party autocracies have a lower probability of conflict than single-party autocracies* (H1c).

However, the difference in the risk of conflict in single- and multi-party autocracies may not be substantial. While multi-party autocracies, unlike single-party regimes, allow the opposition to organize in parties and compete in national elections, thereby reducing incentives for (and delegitimizing) anti-government violence, electoral competition in multi-party autocracies remains constrained, providing incentives for (and legitimizing) anti-government violence. Further, formally allowed to organize and campaign, opposition actors in multi-party autocracies have better opportunities to mobilize (e.g. Fjelde, 2010: 201). Such opportunities are also greater because multi-party settings provide less effective institutional context for monitoring, coopting, and repressing the opposition (Davenport, 2007; Fjelde, 2010). Counter-acting mechanisms may therefore be at play, generating similar net likelihood of conflict in single- and multi-party autocratic regimes.

The only reliable way to reduce the incentives for anti-government violence is, thus, to allow credible competition over power via non-violent institutional means. In such contexts, citizens are also less likely to accept violence against a democratically elected government, and opposition actors are more likely to consist of diverse memberships, less willing to use anti-government violence. Thus, we hypothesize that *regimes with minimally competitive elections have lower probability of conflict than multi-party autocracies* (H1d).

Finally, we expect polyarchies—regimes where freedom of expression strengthens electoral competition—to have the lowest risk of conflict. In such regimes, citizens can express their preferences without undue restrictions. This increases the credibility of electoral processes and contestation more

broadly, further strengthening the legitimacy of regimes and reducing incentives for violence to a minimum. Thus, we hypothesize that *polyarchies have a lower probability of conflict than any other electoral regime type* (H1e).

Research design

We initially tested the hypotheses in a standard country-year logistic regression. The sample included all annual observations of states as listed in the LIED dataset (which are based on Gleditsch and Ward's list of independent states; see Skaaning, Gerring & Bartusevičius, 2015: 1502). In robustness checks, we implemented a number of additional analyses, including tests with alternative measures of the key variables and alternative analysis techniques.

The Lexical Index of Electoral Democracy

To measure electoral regimes, we employed the Lexical Index of Electoral Democracy (LIED) (Skaaning, Gerring & Bartusevičius, 2015), which allows testing our hypotheses more directly than other indicators of democracy. LIED exclusively focuses on electoral regimes features and adheres to the minimalist definition of democracy: 'regime where leaders are selected through contested elections held periodically before a broad electorate' (Skaaning, Gerring & Bartusevičius, 2015: 1495). The index combines dichotomous indicators of different regime qualities in a systematic fashion, where a series of necessary and jointly sufficient conditions are arranged in a 7-level ordinal scale: (0) no elections; (1) no-party/single-party elections; (2) multiparty elections for legislature; (3) multiparty elections for legislature and executive; (4) minimally competitive, multiparty elections for legislature and executive; (5) minimally competitive, multiparty elections with full male or female suffrage for legislature and executive; (6) minimally competitive, multiparty elections with universal suffrage for legislature and executive.

The second level has very few observations and offers little relevant nuance regarding theoretical distinctions.[6] Hence, we collapsed it with the third level to form the multi-party autocracy

[6] This category primarily covers cases with non-competitive multi-party elections for the legislature where the executive is not accountable to the electorate—typically regimes where a government is appointed by a monarch (rather than an elected parliament) (e.g. present-day Kuwait, Morocco), and transitional regimes with presidential systems where parliamentary elections have not yet been followed by executive elections.

category. The two highest levels concern electoral inclusiveness. Since we exclusively focus on contestation, we combined them with the original fourth to form the minimalist democracy category.

The original index does not explicitly account for freedom of expression. One could thus argue that the highest level potentially covers some hybrid regimes (e.g. Diamond 2002; Schedler 2002). We therefore introduced an additional category that supplements the criteria for minimalist democracy with a high degree of respect for freedom of expression. This addition qualifies the competitiveness of elections and signifies a continuous check on government powers. As such, the index accounts for all of the aspects of Dahl's contestation, and includes five categories:

- L0 = no elections (non-electoral autocracy)
- L1 = no-party or single-party elections (single-party autocracy)
- L2 = multiparty elections for legislature and (direct or indirect) executive (multiparty autocracy)
- L3 = minimally competitive, multiparty elections for legislature and (direct or indirect) executive (minimalist democracy)
- L4 = minimally competitive, multiparty elections for legislature and (direct or indirect) executive and extensive freedom of expression (polyarchy)

The coding of L0–L2 is clear-cut, as the corresponding features are directly observable; however, the coding of minimally competitive elections is based on more elaborate rules. LIED follows the three criteria for contestation outlined by Przeworski et al. (2000: 16): ex-ante uncertainty (elections are sufficiently free to allow the opposition a chance of winning), ex-post irreversibility (the winners take office), and repeatability (the electoral regime is not interrupted). However, whereas Przeworski et al. exclusively rely on government turnover under the same electoral rules as an indicator of contested elections, LIED also includes information from country-specific sources about voter intimidation and electoral fraud (Skaaning, Gerring & Bartucevičius 2015: 1501).[7]

To operationalize freedom of expression, we employed the Global Media Freedom Dataset (Whitten-Woodring & Van Belle, 2017), which distinguishes between three degrees of media freedom, the highest signifying "criticism of government and government officials is a common and normal part

[7] This procedure is similar to that used by Boix, Miller & Rosato (2013). For a detailed account of the coding procedures and examples, see Møller & Skaaning (2015).

of the political dialogue in the mediated public sphere." For observations with minimally competitive elections not covered by this dataset, we implemented additional coding based on the same criteria using country-specific sources.

In contrast to the Polity and Freedom House measures, violent conflict is not directly captured by any of the LIED components. Civil conflict can influence whether elections take place and reduce their competitiveness, but minimally competitive elections can co-exist with civil war, as many of the examples in the dataset signify. Together with the lag structure of our empirical model, the risk of endogeneity related to this issue is arguably small (at least smaller than in prior research).

LIED combines different features into regime types based on theoretical considerations over the centrality of particular features to the concept of electoral democracy. This cumulative ordering implies that the index performs both classificatory (each level connects to a particular combination of regime features) and discriminating functions (distinguishing between levels). Hence, the modified LIED allows not only assessing the overall relationship between democracy and conflict but also identifying the associations between particular configurations of institutional characteristics (e.g., non-competitive multiparty elections) and conflict.

Outcome variable

LIED covers 1800–2013, expanding the conventional post-1945 time-span threefold. This allows us to substantially widen the temporal scope of our inferences and account for factors related to particular historical periods (due to limited data on other covariates, the final analysis spans 1817–2006). To match this scope on the left side of the equation, we employed the data on civil wars (Categories 4–5) from the Correlates of War (COW) Intra-State War Data (4.1) (Sarkees & Wayman, 2010). COW defines civil war as sustained combat between a state government and non-state actor(s) resulting in at least 1000 battle-related deaths annually and taking place within the state territory. Since we focused on civil war onset, country-years after the onset year were set to 0 (the data contains new civil war onsets during ongoing years of other civil wars in the same countries). Following conventions, we also applied the two-year intermittency rule. The final sample included 282 separate onsets (Table I reports civil war incidence for different regimes in different periods).

Table I in here

Control variables

We limited control variables to the likely confounders (i.e. potentially relating to both electoral regimes and civil war). To avoid missing observations and potential collinearity problems, we only included the most likely confounders identified in the literature: wealth, economic growth, oil wealth, state capacity, political regime characteristics unrelated to elections, and instability.

Wealth and economic growth have been linked both to democracy (e.g. Przeworski et al., 2000) and conflict (e.g. Hegre & Sambanis, 2006). Therefore, we introduced the natural log of GDP/cap and annual GDP/cap growth (both lagged). Data on GDP/cap came from Bolt & van Zanden (2013). While theirs is the most complete data on GDP/cap for our analysis period, it contains missing observations. Therefore, we applied a standard interpolation procedure to impute values between available observations, increasing the number of observations from 10,125 to 11,479. Excluding interpolated values from the analysis below does not affect our substantive findings. Furthermore, research has shown that democracy negatively relates to energy resource wealth, particularly oil, and that oil wealth positively relates to conflict (e.g. Ross, 2012). We therefore controlled for the total oil income per capita from Haber & Menaldo (2011) (lagged).

As argued above, the relationship between political regime and conflict can also be confounded by state capacity. Therefore, we introduced the Composite Index of National Capability (CINC) from the National Material Capabilities dataset (Singer, 1987) (lagged). CINC is based on the values of total population, urban population, iron and steel production, energy consumption, military personnel, and military expenditures. We also used the CINC sub-component: military personnel. This measure accounts more directly for a state's *military* capacity and, by extension, its repressive strength.

The electoral qualities relate to other characteristics of regimes that may confound the relationship of interest. Therefore, we also included the Polity2 index from the Polity IV project (Marshall, Gurr & Jaggers, 2016). As some of its sub-components reflect quality of elections and political competition, Polity2 partly overlaps with LIED.[8] Yet Polity2 also captures non-electoral features of regimes, such as factionalism and constraints on the executive that may confound the LIED–civil war relationship.

[8] We are aware of potential collinearity issues. Collinearity diagnostics indicate that mean VIF scores = 1.76 (max = 3.68). Removing Polity2 from the models does not alter our substantive findings.

To assess whether the relationship between electoral regimes and conflict is not driven by *changes* in electoral regimes, we also introduced a measure of regime change/instability. For the full-sample analysis, we used a measure indicating whether a country experienced a one-point increase or decrease in LIED in the preceding three years (alternatively, in the preceding year). For analysis of post-1945 data, we used democratization and autocratization measures (1- and 3-year versions) from Cederman, Hug & Krebs (2010).

We also controlled for population size (ln) with data from Singer (1987) and temporal dependence with cubic polynomials (Carter & Signorino, 2010).[9] Robustness tests included other potential confounders. The Online Appendix provides summary statistics.

While we control for likely confounders, apply fixed effects and time-lags, we cannot entirely rule out the possibility of recursive effects and omitted variable bias. In OA (Tables OA6–OA7 and Figures OA1–OA3), we therefore report an analysis of factors associated with LIED.

Results

Main analyses

Table II reports the main results. We first tested H1, treating LIED as an interval/ratio variable. Subsequently, we tested H1a–H1e, using a 'dummy-coded' version of LIED, treating each level as a separate category.

LIED has a negative, highly significant coefficient when regressed separately.[10] The same is true when LIED is regressed together with the controls. Results also remain similar when using the alternative measures of capacity and instability described above (not reported here). Turning to the dummy-coded version of LIED (Model 8), we find that, compared to non-electoral autocracies, all regime types have significantly lower risk of civil war, with coefficients larger for higher LIED scores. The coefficient for polyarchy, however, should be treated with caution, as there are only two civil war onsets in such regimes in the whole sample (addressed below using alternative measures of conflict).

[9] To test for model misspecification, we compared standard errors to robust and clustered standard errors of the specifications discussed below (King & Roberts, 2015), and found no sizable differences.
[10] We use "significant" for estimates significant at 10%.

Due to combined missing observations among the covariates, Models 7–8 contain 10,115 observations of a possible 16,153. While such missingness is not untypical (even for post-1945 analyses), we attempted to increase the sample by removing GDP/cap and growth, covariates with most missing values (note that state wealth is partly controlled for by the remaining CINC). This generated 1,327 additional observations, further strengthening the association between LIED and civil war (Models 9–10).

In Models 8 and 10, the base category is non-electoral autocracy. A stronger test of H1a–H1e is a successive comparison of each regime type to one level below. Model 11 shows results with GDP/cap and growth included back in the block. The coefficients for single-party autocracies, minimalist democracies, and polyarchies remain significant. In contrast, while significant when compared to the base category of non-electoral autocracies, the coefficient for multi-party autocracy turns insignificant when compared to single-party autocracy. Before discussing these results in the next section, we now turn to robustness tests.

Table II in here

Robustness tests

An almost-200-year timespan increases the scope of our inferences and allows ruling out the possibility that these findings are confounded by idiosyncrasies of particular periods. However, electoral regimes and their links to conflict are potentially different now than 200 years ago, pointing to potential heterogeneity problems. To address this, we limited the sample to post-1945.

Table OA2 (appendix) reports the estimates. The coefficient of the interval LIED remains significant at 0.1% despite the sample size dropping to 6,823 and the number of civil wars from 232 to 134. The estimates for the dummy LIED are similarly in line with previous results. All regimes have lower risk of civil war than non-electoral autocracies (although the coefficient for single-party autocracy is now above 10%).

Analyzing post-1945 allows exploring additional confounders. Recent research has identified a robust relationship between horizontal inequalities and civil conflict (e.g. Cederman, Gleditsch & Buhaug, 2013). Horizontal inequalities may also be associated with electoral qualities of regimes, as political and economic discrimination is often maintained by constraining contestation. Therefore, we

controlled for horizontal ethno-political inequality—captured by "max discrimination" (the relative demographic size of the largest ethnic group subject to active discrimination)—and horizontal economic inequality, proxied by "max low ratio" (the relative income gap between the poorest group and the national average). Following previous research, we also controlled for inequality and ethnic diversity in the total population with Gini coefficient and an ethnic fractionalization index. The four indices come from Cederman, Gleditsch & Buhaug (2013). The estimates for our key variable essentially remain the same. All LIED levels also have significant coefficients (the coefficient for single-party autocracy is now significant at 5%). As previously, a stronger test comparing each regime type to one level below indicates that all levels, besides L2 (multi-party autocracy), have significant coefficients.

We subsequently introduced alternative measures of the dependent variable (Table OA3). First, we substituted the COW civil war with internal war from the UCDP/PRIO Armed Conflict Dataset v.4-2011, 1946–2010 (Gleditsch et al., 2002; Themnér & Wallensteen, 2011). The coefficient of the interval LIED remains negative and significant at 5%. Similarly, all levels of LIED retain negative signs, although the coefficients for single- and multi-party autocracies are not significant when compared to the reference category, and the coefficient for polyarchy is not significant compared to minimalist democracy. Second, we substituted the COW category of civil war with a lower-intensity armed conflict (from the same UCDP/PRIO dataset). The coefficient of the interval LIED remains negative and significant, although $p = 0.059$, and the estimate itself is smaller. This difference potentially pertains to the fact that regime-related factors affect whole populations, having potential to cause large-scale violence. Conversely, minor conflicts often concern particular segments of populations, such as peripheral ethnic groups (e.g., Buhaug, 2006) fighting states over their specific status (not the status of the states). To assess this claim, we replicated our analysis using the UCDP/PRIO's governmental war and found that the coefficient of LIED—compared to the aggregate category—became considerably larger and more significant (Table OA3, Models 17g–19g).

As previously, all levels of the dummy LIED have negative signs. The coefficients for single- and multi-party autocracies remain insignificant compared to the base category, but the coefficient for polyarchy attains significance compared to minimalist democracy (polyarchies contain eight onsets of UCDP/PRIO's internal war and 14 onsets of minor conflict).

We also controlled for time-invariant country-level factors via country-fixed effects. Despite a two-fold reduction of the sample (analysis of full data dropped 83 polities), the estimates correspond to the previous results (Tables OA4–OA5). The interval LIED is negative and significant in all models but one. In most specifications, all LIED levels also retain negative signs, although only the coefficient for minimalist democracy is consistently significant across all specifications.

Discussion

The results support our central expectation that contestation positively relates to civil peace. The analysis of interval LIED suggests that this relationship is potentially linear, concurring with Gleditsch & Ruggeri (2010: 303) that once we control for state capacity, democracy relates to civil war in a negative monotonic way. However, Figure 1 demonstrates that this relationship is more complex than the linear model suggests. Single-party autocracies have a substantially lower risk of conflict than non-electoral regimes; however, multi-party autocracies only have a slightly lower risk of conflict than single-party autocracies. Subsequently, minimalist democracies have substantially lower risk of conflict than multi-party autocracies. This indicates that the key elements accounting for civil peace are the presence of (any form of) elections and minimal electoral competition. More generally, these results demonstrate the usefulness of LIED: it allows us to identify conflict risks in particular regime types and reveal key electoral features that are associated with civil peace.

Figure 1 in here

These patterns are consistent with our theoretical claims. If electoral contestation is absent, the opposition has incentives to use force. Elections and associated institutions—even if non-competitive—apparently reduce such incentives, probably because they offer alternatives to violence, facilitate autocratic divide-and-rule strategies, and diminish acceptance of anti-government violence. The fact that multi-party autocracies are only slightly less prone to conflict than single-party regimes indicates that regimes allowing opposition parties but no genuine competition introduce counteracting mechanisms that partly cancel out the positive effects on civil peace associated with increased political openness.

Irrespective of their form (single- or multi-party), electoral autocracies therefore appear to be intrinsically conflict-prone (even if less conflict-prone than non-electoral regimes): civil peace is more likely to prevail when the opposition has a meaningful chance of gaining power via electoral means. The less constrained the electoral contestation, the less attractive, costly, and illegitimate anti-government violence. Polyarchies, where electoral contestation is qualified by high levels of freedom of expression, are therefore least prone to conflict (although not much less conflict-prone than minimalist democracies).

As hinted above, non-electoral regimes are highly repressive, and the risk of conflict in such regimes might therefore not pertain to 'substitution,' legitimacy, or 'self-selection,' but rather to the repression–dissent link. Contrary to extant claims in the literature, pervasive repression, coupled with low state capacity, may not only fail to prevent violence but actually provoke it: "an overwhelming use of coercive force is a costly strategy with a high risk of backfiring. It depletes bases of support and strengthens the cause of potential conspirators to depose the dictator" (Fjelde, 2010: 199). Additionally, repression potentially "increases the costs and decreases the anticipated success of nonviolent relative to violent resistance" (Rørbæk, 2016: 1), further heightening the risk of conflict. We claim not that alternative or supplementary mechanisms are implausible, noting only that our research design cannot adjudicate between causal explanations. Large-N cross-national design allows the identification of patterns consistent with the theorized claims. Identifying the actual mechanisms driving these patterns, however, requires scaling down and alternative analytical approaches (e.g. congruence analysis or process tracing).

Irrespective of the actual mechanism accounting for our findings, the patterns revealed in our analysis lead us to concur with Hegre et al.: "There *is* a democratic civil peace" and "[t]he most reliable path to stable domestic peace in the long run is to democratize as much as possible" (2001: 44). Our analysis indicates, however, that this path may not be smooth—some moves "up the ladder" of contestation are more promising than others. Apparently, there are two critical thresholds where the risk of civil war decreases substantially: one between non-electoral and electoral regimes, the other between regimes with/without competitive elections.

Replication data

All analyses were conducted using Stata 14.2. The dataset and do-file for the empirical analysis in this article, along with the online appendix, can be found at http://www.prio.org/jpr/datasets.

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Tables

Table I. Cross-tabulation: LIED and Civil War onset—historical periods

	Civil war							
	1817–1880		*1881–1945*		*1946–2006*		*1817–2006*	
LIED	*0*	*1*	*0*	*1*	*0*	*1*	*0*	*1*
L0	1680	27	809	29	1339	55	3828	111
L1	315	11	579	15	1934	30	2828	56
L2	1175	25	1103	19	1548	40	3826	84
L3	337	3	957	3	1739	23	3033	29
L4			300	0	2056	2	2356	2

Table II. Logistic regression estimates of civil war onset: 1817–2006

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*
LIED	-0.34***	-0.21***	-0.20**	-0.21**	-0.21**	-0.30***	-0.30***		-0.43***		
	(0.05)	(0.06)	(0.07)	(0.07)	(0.07)	(0.09)	(0.09)		(0.08)		
L1								-0.41*		-0.47*	-0.41*
								(0.20)		(0.18)	(0.20)
L2								-0.37+		-0.56**	0.03
								(0.20)		(0.18)	(0.22)
L3								-1.09**		-1.59***	-0.71*
								(0.33)		(0.31)	(0.29)
L4								-2.02**		-2.66***	-0.93+
								(0.62)		(0.54)	(0.55)
Population	0.27***	0.22***	0.22***	0.21***	0.25***	0.24***	0.24***	0.25***	0.25***	0.26***	0.25***
	(0.03)	(0.04)	(0.04)	(0.04)	(0.06)	(0.06)	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)
GDP/cap (ipol)		-0.48***	-0.48***	-0.48***	-0.47***	-0.46***	-0.46***	-0.42***			-0.42***
		(0.10)	(0.10)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)			(0.11)
GDP growth(ipol)			-1.76+	-1.71	-1.70	-1.29	-1.21	-1.17			-1.17
			(1.06)	(1.06)	(1.06)	(1.09)	(1.08)	(1.09)			(1.09)
Oil income				-0.03	-0.03	-0.03	-0.03	-0.03	-0.16	-0.14	-0.03
				(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.12)	(0.12)	(0.08)
CINC					-2.55	-2.71	-2.53	-2.49	-2.94	-2.74	-2.49
					(2.14)	(2.18)	(2.18)	(2.15)	(2.03)	(2.00)	(2.15)
Polity2						0.02	0.02	0.03+	0.02	0.04*	0.03+
						(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Instability(3y)							0.14	0.12	0.12	0.10	0.12
							(0.16)	(0.16)	(0.15)	(0.15)	(0.16)
Constant	-5.02***	-1.22	-1.32	-1.14	-1.57+	-1.34	-1.45	-1.73+	-4.51***	-4.58***	
	(0.36)	(0.80)	(0.81)	(0.84)	(0.90)	(0.92)	(0.93)	(0.94)	(0.51)	(0.51)	–
N	13637	10664	10528	10223	10205	10115	10115	10115	11442	11442	10115
chi2	263.21	240.71	236.47	233.13	233.45	228.61	229.36	235.96	231.22	242.79	235.96

L1 = single-party autocracy; *L2* = multi-party autocracy; *L3* = minimalist democracy; *L4* = polyarchy. Non-electoral autocracy (*L0*) is the base category in Models 8 and 10. In Model 11 the base categories are: *L0* for *L1*; *L1* for *L2*; *L2* for *L3*; and *L3* for *L4* (resulting in four different constants: -1.73+ (0.94); -2.13* (0.95); -2.10* (0.95); and -2.82** (1.02), respectively). Standard errors in parentheses. Cubic polynomials not reported. $^{+}p<0.10$, $^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$.

Figures

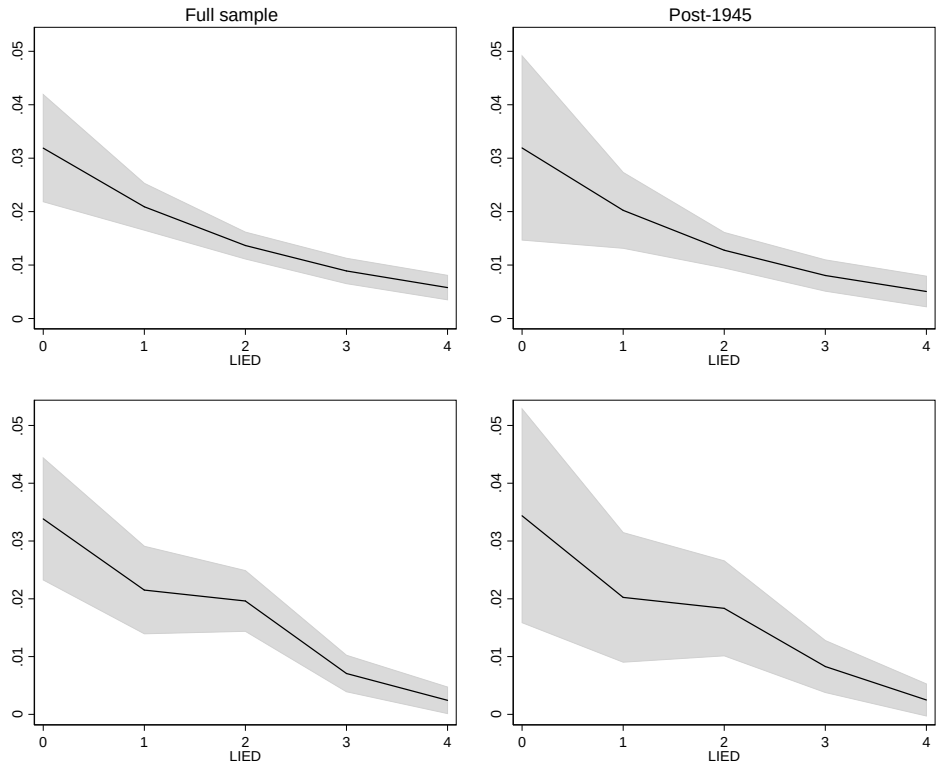

Figure 1. Estimated probabilities (with 95% CI) of civil war onset as a function of interval (upper panel) and dummy-coded LIED. The estimates are based on Models 9, 14 (upper panels) and 10, 15, holding other variables at their mean values.

Revisiting democratic civil peace: Electoral regimes and civil conflict

ONLINE APPENDIX

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Table OA1. Summary statistics

	N	*Mean*	*SD*	*Min*	*Max*
COW civil war	16153	.0174581	.1309746	0	1
UCDP/PRIO civil war	8179	.0193178	.1376478	0	1
UCDP/PRIO minor armed conflict	8179	.0346008	.1827777	0	1
LIED	16153	1.815267	1.376021	0	4
Population	13814	8.614745	1.751309	2.197225	14.08632
GDP/capita	10125	7.843521	.9685045	5.313206	10.667
GDP/capita(ipol)	11479	7.694867	1.005517	5.313206	10.667
GDP growth	9878	1.887728	6.331687	-61.47274	86.89957
GDP growth(ipol)	11321	.0172097	.0652825	-.6147274	1.903334
Oil income	13258	.3259811	2.597221	0	78.5888
CINC	13815	.0134944	.0374784	2.43e-07	.3838635
Personnel	13464	3.365309	1.887183	0	9.433564
Polity2	14450	-.8096194	6.993453	-10	10
Instability(3y)	16153	.2123445	.40898	0	1
Instability	16153	.0836996	.2769454	0	1
Democratization(3y)	6479	.0839636	.2773546	0	1
Autocratization(3y)	6479	.0461491	.2098241	0	1
Democratization	6863	.0199621	.1398802	0	1
Autocratization	6863	.0113653	.1060083	0	1
Gini	6744	41.71103	10.60062	15.9	73.9
Fractionalization	7480	.3844273	.282732	.001	.9250348
Max discrimination	7389	.0722347	.1796279	0	.98
Max low ratio	7389	1.197898	.5415661	1	6.773902

Table OA2. Logistic regression estimates of civil war onset: 1946–2006

	(12)	*(13)*	*(14)*	*(15)*	*(16)*
LIED	-0.41***		-0.47***		
	(0.12)		(0.13)		
L1		-0.36		-0.54*	-0.54*
		(0.25)		(0.27)	(0.27)
L2		-0.54*		-0.64*	-0.10
		(0.27)		(0.29)	(0.31)
L3		-1.33**		-1.45***	-0.81*
		(0.41)		(0.44)	(0.36)
L4		-2.51***		-2.65***	-1.20*
		(0.68)		(0.71)	(0.58)
Population	0.35***	0.34***	0.28**	0.26**	-
	(0.08)	(0.08)	(0.09)	(0.09)	
GDP/capita	-0.35**	-0.31*	-0.40**	-0.36*	-
	(0.12)	(0.12)	(0.15)	(0.15)	
GDP growth	-0.01	-0.01	-0.02	-0.02	-
	(0.01)	(0.01)	(0.01)	(0.01)	
Oil income	-0.02	-0.03	0.31*	0.31*	-
	(0.07)	(0.08)	(0.14)	(0.14)	
CINC	-16.29*	-14.80*	-17.93*	-16.50*	-
	(7.06)	(6.94)	(7.52)	(7.41)	
Polity2	0.05*	0.06**	0.07**	0.08**	-
	(0.02)	(0.02)	(0.02)	(0.03)	
Instability(3y)	-0.01	-0.05	-0.03	-0.07	-
	(0.20)	(0.21)	(0.21)	(0.22)	
Gini			-0.01	-0.01	-
			(0.01)	(0.01)	
Fractionalization			0.13	0.12	-
			(0.37)	(0.37)	
Max discrimination			1.03**	1.02**	-
			(0.38)	(0.38)	
Max low ratio			0.38**	0.35*	-
			(0.15)	(0.15)	
Constant	-3.11*	-3.32**	-2.29	-2.24	-
	(1.23)	(1.23)	(1.48)	(1.47)	
N	6823	6823	6097	6097	-
chi2	113.24	117.94	117.97	122.38	

L1 = single-party autocracy; *L2* = multi-party autocracy; *L3* = minimalist democracy; *L4* = polyarchy. Non-electoral autocracy (*L0*) is the base category in Models 13 and 15. Standard errors in parentheses. Cubic polynomials not reported. $^{+}p<0.10$, $^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$.

Table OA3. Logistic regression estimates of civil war onset: Alternative measures of civil conflict

	UCDP/PRIO war			*UCDP/PRIO minor*			*UCDP/PRIO gov.*		
	(17)	*(18)*	*(19)*	*(20)*	*(21)*	*(22)*	*(17g)*	*(18g)*	*(19g)*
LIED	-0.28*			-0.18+			-0.41*		
	(0.13)			(0.10)			(0.17)		
L1		-0.38	-0.38		-0.28	-0.28		-0.35	-0.35
		(0.28)	(0.28)		(0.22)	(0.22)		(0.35)	(0.35)
L2		-0.22	-0.16		-0.05	0.24		-0.35	-.003
		(0.29)	(0.30)		(0.22)	(0.23)		(0.38)	(.39)
L3		-1.14*	-0.92*		-0.66*	-0.61*		-1.57*	-1.22*
		(0.45)	(0.37)		(0.33)	(0.27)		(0.61)	(0.50)
L4		-1.78**	-0.64		-1.35**	-0.69*		-2.95**	-1.38+
		(0.65)	(0.50)		(0.47)	(0.34)		(0.97)	(0.82)
Population	0.43***	0.41***	-	0.34***	0.32***	-	0.08	0.07	-
	(0.09)	(0.09)		(0.06)	(0.07)		(0.12)	(0.12)	
GDP/capita	-0.13	-0.11	-	-0.32**	-0.28**	-	-0.11	-0.06	-
	(0.14)	(0.15)		(0.10)	(0.11)		(0.19)	(0.19)	
GDP growth	0.02	0.02	-	-0.00	0.00	-	0.03	0.03	-
	(0.01)	(0.02)		(0.01)	(0.01)		(0.02)	(0.02)	
Oil income	0.24+	0.24	-	0.26*	0.26*	-	0.23	0.24	-
	(0.14)	(0.15)		(0.11)	(0.11)		(0.15)	(0.15)	
CINC	-9.08+	-7.68	-	-7.37+	-6.08	-	1.18	2.08	-
	(5.12)	(5.04)		(3.91)	(3.83)		(6.42)	(5.99)	
Polity2	0.01	0.03	-	0.02	0.04+	-	0.03	0.05	-
	(0.02)	(0.03)		(0.02)	(0.02)		(0.03)	(0.04)	
Instability(3y)	0.03	-0.00	-	0.17	0.13	-	-0.21	-0.25	-
	(0.22)	(0.22)		(0.16)	(0.16)		(0.29)	(0.29)	
Gini	-0.00	-0.00	-	-0.00	-0.01	-	-0.00	-0.00	-
	(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)	
Fractionalization	0.81*	0.76*	-	0.65*	0.61*	-	0.95+	0.88+	-
	(0.38)	(0.39)		(0.28)	(0.28)		(0.50)	(0.50)	
Max discrimination	0.60	0.65	-	0.44	0.45	-	0.80	0.82	-
	(0.41)	(0.42)		(0.32)	(0.33)		(0.51)	(0.51)	
Max low ratio	0.18	0.16	-	0.15	0.13	-	-0.73	-0.69	-
	(0.13)	(0.13)		(0.11)	(0.11)		(0.47)	(0.46)	
Constant	-6.60***	-6.37***	-	-3.76***	-3.63***	-	-2.91	-3.01	-
	(1.50)	(1.50)		(1.09)	(1.09)		(1.92)	(1.90)	
N	6067	6067	-	6067	6067	-	6067	6067	-
chi2	128.71	134.68	-	156.14	165.46	-	51.66	58.50	-

L1 = single-party autocracy; *L2* = multi-party autocracy; *L3* = minimalist democracy; *L4* = polyarchy. Non-electoral autocracy (*L0*) is the base category in Models 18, 21, and 18g. Standard errors in parentheses. Cubic polynomials not reported. $^{+}p<0.10$, $^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$.

Table OA4. Logistic regression estimates of civil war onset: Country fixed-effects

	(23)	*(24)*	*(25)*	*(26)*	*(27)*	*(28)*	*(29)*	*(30)*
Analogous to model	*7*	*14*	*17*	*20*	*8*	*15*	*18*	*21*
LIED	-0.30**	-0.43**	-0.34*	-0.12				
	(0.10)	(0.14)	(0.15)	(0.11)				
L1					-0.38+	-0.28	-0.24	-0.04
					(0.23)	(0.32)	(0.32)	(0.25)
L2					-0.40+	-0.72*	-0.12	0.24
					(0.23)	(0.36)	(0.35)	(0.27)
L3					-1.07**	-1.53**	-1.47**	-0.85*
					(0.36)	(0.49)	(0.54)	(0.39)
L4					-1.60*	-1.56+	-3.77**	-0.81
					(0.70)	(0.86)	(1.33)	(0.61)
Population	-0.08	-0.15	0.86*	0.24	-0.08	-0.16	0.79*	0.19
	(0.19)	(0.35)	(0.37)	(0.26)	(0.19)	(0.36)	(0.38)	(0.27)
GDP/capita(ipol)	-0.73**				-0.68**			
	(0.22)				(0.23)			
GDP growth(ipol)	-1.26				-1.32			
	(1.09)				(1.10)			
GDP/capita		0.12	0.34	0.38		0.16	0.33	0.44
		(0.39)	(0.36)	(0.27)		(0.40)	(0.37)	(0.28)
GDP growth		-0.02	0.01	-0.00		-0.02	0.01	-0.01
		(0.01)	(0.01)	(0.01)		(0.01)	(0.02)	(0.01)
Oil income	0.14	0.06	-0.14	-0.24	0.13	0.06	-0.10	-0.23
	(0.21)	(0.24)	(0.28)	(0.24)	(0.21)	(0.24)	(0.28)	(0.25)
CINC	4.01	-69.69	-42.77*	-25.90*	3.57	-69.56	-42.07*	-26.10*
	(5.79)	(45.57)	(18.53)	(10.75)	(5.81)	(44.77)	(17.80)	(10.86)
Polity2	0.05**	0.08**	0.02	0.04+	0.06**	0.10**	0.05	0.07**
	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
Instability(3y)	0.22	0.06	0.20	0.32+	0.21	0.05	0.09	0.26
	(0.17)	(0.23)	(0.23)	(0.17)	(0.17)	(0.23)	(0.24)	(0.17)
Gini		-0.03	0.04+	0.03+		-0.03	0.05*	0.04*
		(0.02)	(0.02)	(0.02)		(0.02)	(0.02)	(0.02)
Max discrimination		-0.06	0.90	0.68		-0.11	0.94	0.69
		(0.62)	(0.69)	(0.56)		(0.63)	(0.70)	(0.57)
Max low ratio		0.41	0.09	0.08		0.39	0.02	0.03
		(0.58)	(0.37)	(0.35)		(0.59)	(0.37)	(0.35)
N	5600	2418	2641	4002	5600	2418	2641	4002
chi2	49.66	42.96	30.71	60.54	52.42	44.04	40.50	70.45

L1 = single-party autocracy; *L2* = multi-party autocracy; *L3* = minimalist democracy; *L4* = polyarchy. Non-electoral autocracy (*L0*) is the base category in Models 27–30. Standard errors in parentheses. Cubic polynomials not reported. $^{+}p<0.10$, $^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$.

Table OA5. Logistic regression estimates of civil war onset: Country fixed-effects: Comparing LIED levels

	(31)	*(32)*	*(33)*	*(34)*
Analogous to model	*27*	*28*	*29*	*30*
LIED				
L1	-0.38^{+}	-0.28	-0.24	-0.04
	(0.23)	(0.32)	(0.32)	(0.25)
L2	-0.03	-0.44	0.11	0.28
	(0.24)	(0.38)	(0.36)	(0.27)
L3	-0.67*	-0.82^{+}	-1.34**	-1.09***
	(0.31)	(0.42)	(0.46)	(0.34)
L4	-0.53	-0.03	-2.31^{+}	0.04
	(0.64)	(0.80)	(1.25)	(0.53)
Population	-	-	-	-
GDP/capita(ipol)	-			
GDP growth(ipol)	-			
GDP/capita		-	-	-
GDP growth		-	-	-
Oil income	-	-	-	-
CINC	-	-	-	-
Polity2	-	-	-	-
Instability(3y)	-	-	-	-
Gini		-	-	-
Max discrimination		-	-	-
Max low ratio		-	-	-
N	-	-	-	-
chi2	-	-	-	-

Standard errors in parentheses. Cubic polynomials not reported. $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table OA6. OLS regression estimates of LIED

	(35)	*(36)*	*(37)*	*(38)*	*(39)*	*(40)*	*(41)*	*(42)*	*(43)*	*(44)*
Population	-0.05	0.00	0.00	-0.04	-0.05	-0.05	0.00	-0.00	0.00	0.01
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
GDP/capita(ipol)		0.72***	0.72***	0.81***	0.80***	0.80***				
		(0.07)	(0.07)	(0.06)	(0.06)	(0.06)				
GDP growth(ipol)			0.21	-0.10	-0.10	-0.10				
			(0.30)	(0.24)	(0.24)	(0.24)				
Oil income				-0.12***	-0.12***	-0.12***	-0.21+	-0.22+	-0.22+	-0.22+
				(0.02)	(0.02)	(0.02)	(0.11)	(0.11)	(0.11)	(0.11)
CINC					0.79	0.76	-3.07	-2.95	-3.15	-2.48
					(1.40)	(1.40)	(2.91)	(2.84)	(2.96)	(2.66)
Instability(3y)						-0.04	-0.09	-0.09	-0.10	-0.10
						(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
GDP/capita							0.88***	0.90***	0.89***	0.89***
							(0.05)	(0.05)	(0.05)	(0.05)
GDP growth							0.00	0.00	-0.00	-0.00
							(0.00)	(0.00)	(0.00)	(0.00)
Gini							0.01*	0.01*	0.01*	0.01*
							(0.01)	(0.01)	(0.01)	(0.01)
Fractionalization								0.19	0.24	0.27
								(0.23)	(0.23)	(0.23)
Max discrimination									-0.46+	-0.45+
									(0.25)	(0.26)
Max low ratio										-0.10
										(0.09)
Constant	2.35***	-3.60***	-3.63***	-3.85***	-3.74***	-3.70***	-5.23***	-5.40***	-5.34***	-5.35***
	(0.42)	(0.51)	(0.51)	(0.48)	(0.47)	(0.48)	(0.63)	(0.66)	(0.65)	(0.65)
N	13814	10664	10528	10223	10205	10205	6183	6183	6141	6141
R^2	0.003	0.282	0.286	0.346	0.346	0.346	0.391	0.392	0.396	0.397

Clustered standard errors on countries in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table OA7. Ordered logit regression estimates of LIED

	(45)	*(46)*	*(47)*	*(48)*	*(49)*	*(50)*	*(51)*	*(52)*	*(53)*	*(54)*
Population	-0.06***	-0.03*	-0.03**	-0.11***	-0.13***	-0.13***	-0.03+	-0.05*	-0.05*	-0.03
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
GDP/capita(ipol)		1.30***	1.32***	1.59***	1.58***	1.58***				
		(0.02)	(0.02)	(0.03)	(0.03)	(0.03)				
GDP growth(ipol)			-0.03	-0.46+	-0.46+	-0.47+				
			(0.27)	(0.27)	(0.27)	(0.27)				
Oil income				-0.55***	-0.55***	-0.55***	-0.40***	-0.42***	-0.43***	-0.43***
				(0.02)	(0.02)	(0.02)	(0.04)	(0.04)	(0.04)	(0.04)
CINC					0.73	0.70	-4.86***	-4.65***	-4.91***	-3.65***
					(0.47)	(0.47)	(1.01)	(1.01)	(1.04)	(1.07)
Instability(3y)						-0.05	-0.14*	-0.15**	-0.16**	-0.16**
						(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
GDP/capita							1.56***	1.61***	1.61***	1.62***
							(0.03)	(0.03)	(0.03)	(0.03)
GDP growth							0.00	0.00	-0.00	-0.00
							(0.00)	(0.00)	(0.00)	(0.00)
Gini							0.02***	0.02***	0.02***	0.02***
							(0.00)	(0.00)	(0.00)	(0.00)
Fractionalization								0.43***	0.55***	0.61***
								(0.09)	(0.09)	(0.10)
Max discrimination									-0.81***	-0.80***
									(0.13)	(0.13)
Max low ratio										-0.18***
										(0.05)
N	13814	10664	10528	10223	10205	10205	6183	6183	6141	6141
chi2	44.79	3957.57	3976.53	5098.75	5084.98	5086.02	3175.12	3197.08	3219.94	3235.36

Standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

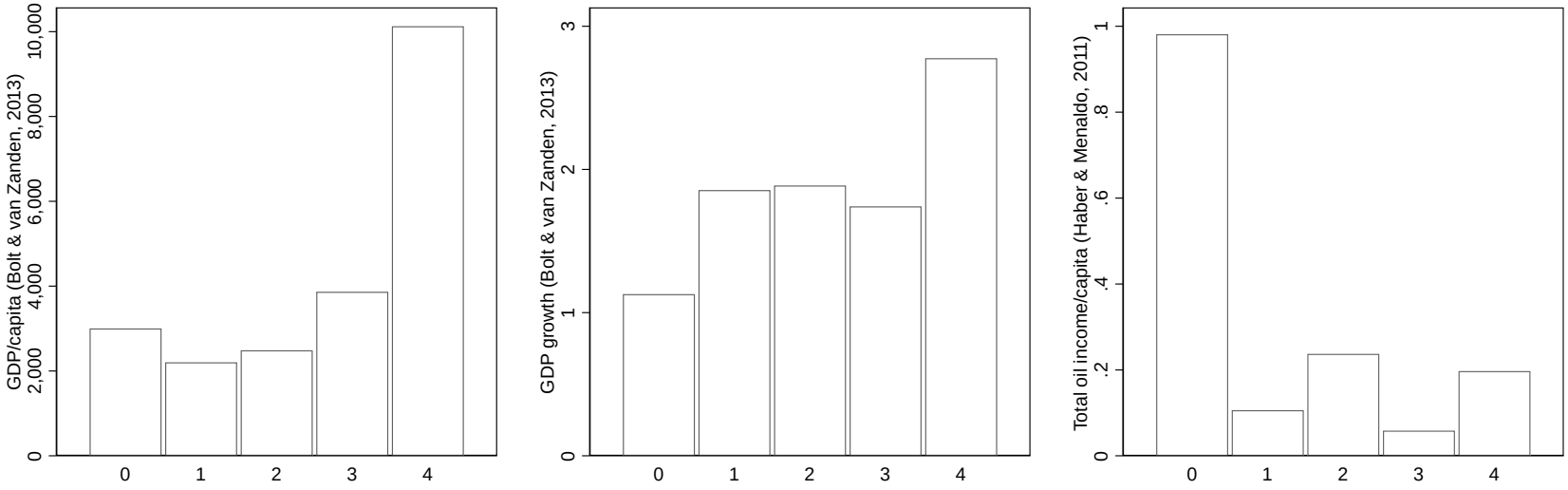

Figure OA1. GDP/capita, GDP growth, and oil income by LIED

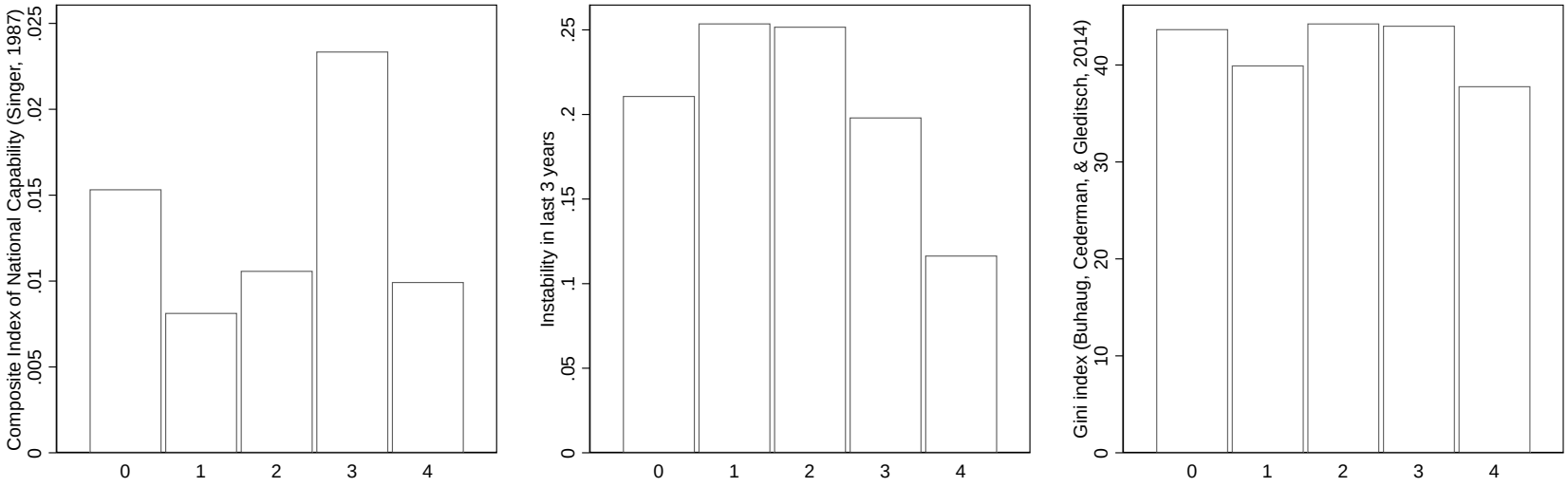

Figure OA2. CINC, Instability, and Gini by LIED

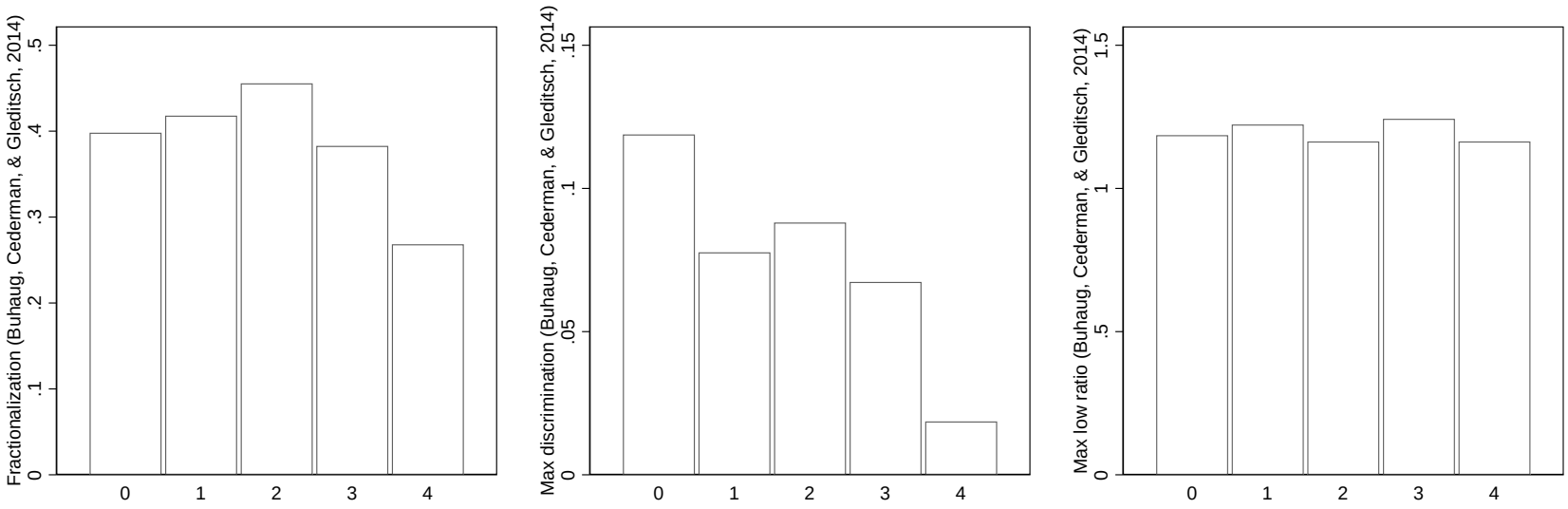

Figure OA3. Fractionalization, Max discrimination, and Max low ratio by LIED