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ORIGINAL PAPER

Economic elites and the constitutional design of sharing political power

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Abstract

What explains the emergence and persistence of institutions aimed at preventing any ruling group from using the state apparatus to advance particularistic interests? To answer this recurring question, a burgeoning literature examines the establishment of power-sharing institutions in societies divided by ethnic or religious cleavages. Going beyond existing scholarly work focused on these specific settings, we argue that political power-sharing institutions can also be the result of common disputes within the economic elite. We propose that these institutions are likely to emerge and persist when competition between elite factions with dissimilar economic interests is balanced. To address the possibility of endogeneity between elite configurations and public institutions, we leverage natural resource diversity as an instrument for elite configurations. We show that, where geological resources are more diverse, competition between similarly powerful economic groups is more likely to emerge, leading ultimately to the establishment of power-sharing mechanisms that allow elite groups to protect their diverging economic interests.

Keywords Economic elites · Power-sharing institutions · Institutional design · Political economy · Elite competition

JEL Classification P16 · P48 · Q34 · D02 · C26 · P52

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1 Introduction

Scholars of democracy have long been interested in the ability of ruling social groups to abuse the power of the state. Thus, they have traced the origins and identified the impact of political institutions that limit the ability of ruling social groups to use the state to their own particularistic advantage (e.g., Congleton, 2010; Lijphart, 1969, 1977; Norris, 2008; North & Weingast, 1989). These arrangements for political power sharing—often embodied in constitutions—are fundamental to the functioning of democracy (e.g., Buchanan & Tullock, 1962; Graham et al., 2017), as they induce elites with diverging interests to credibly commit to resolve conflicts through compromise or amicable agreement (Lijphart, 1977).

The virtues and benefits of power-sharing institutions have been widely investigated and found to be manifold. By constraining the power of ruling elites (e.g., Buchanan, 1975, 1993; Holcombe, 1991) and enabling a broader set of actors to participate in political decision making, power-sharing institutions lower the stakes of political contestation. In doing so, they contribute to the resolution of civil conflict, peace duration, democratic survival, and economic performance (e.g., Bormann et al., 2019; Binningsbø, 2013; Cammett and Malesky 2012; Gates et al. 2016; Graham et al. 2017; Hartzell and Hoddie 2003, 2007, 2015; Lijphart, 1999; Rothchild & Roeder, 2005; Walter, 2002). However, and partially because of the endogenous character of power-sharing institutions, less attention has been paid to the systematic causes behind these institutions' establishment. Most studies are based on cross-national analyses that treat power-sharing institutions as exogenous (e.g., Hartzell & Hoddie, 2003; Jarstad & Sisk, 2008; Mukherjee, 2006; Walter, 2002). Others use case studies and explain power-sharing as a function of efforts to end or prevent civil war or insurgency (e.g., Hartzell & Hoddie, 2007), or as a response to flawed elections in deeply divided societies (Le Van, 2011). Although this latter set of empirical efforts illuminates possible paths to the creation of power-sharing institutions, they are subject to significant selection bias as they focus on societies that have already experienced or are likely to experience civil conflict (e.g., Bunte & Vinson, 2016; Lijphart, 1985).

In this paper we examine the general political-economic circumstances under which it is plausible that power-sharing institutions emerge and endure. We begin with the observation that not only societies with histories of violent conflict or visible ethnic/religious divisions have these kinds of institutions. Instead they can be found in many other contexts as well, which makes an analysis across an extensive set of cases imperative. Because much less is known about why and how countries with no history of civil conflict develop power-sharing institutions, we ask the following question: What explains their emergence across a broad range of societies—including those without histories of violent internal conflict?

To answer this question, we connect to elite-centered contributions in political economy. Specifically, we advance the argument that power sharing can frequently be a consequence of non-violent disputes between economic elite factions that seek to protect their divergent economic interests. We suggest that the

balance of power between groups within the economic elite (defined as the extent to which there is a *symmetric* distribution of economic power), is a key factor in shaping the sustainability of power-sharing institutions, particularly institutional arrangements that generate accountability mechanisms. When there is a symmetric distribution of economic power within the elite—that is, given the presence of multiple yet similarly powerful groups—it is more likely that institutions embodying political checks and balances emerge and persist. In such a setting, in equilibrium, balanced competition between elite factions leads to a stable institutional compromise regarding the establishment of power-sharing mechanisms, which makes it more difficult for any one faction to step over the economic interests of others.

On the contrary, when power is asymmetrically distributed within the elite—that is, a single or a few factions enjoy disproportionately high levels of economic power—it is more likely that power-sharing institutions will not emerge. In such cases, the powerful faction that dominates the economy is likely to capture the state and lock in a set of rules that block the influence of competitors. Thus, the theory we propose is not about how the mere existence of intra-elite disputes or the lack thereof shapes political institutions, but about how the *balance of power* between competing elite factions does so.

To address potential endogeneity problems and related issues of reverse causality, we create an original measurement of resource diversity to instrument for the balance of power within the economic elite. This measure captures the within-country distribution of natural resources by measuring the extent to which different resources are present in similar quantities in any given country. Our assumption is that the presence of natural resources is not dependent on social organization, and, thus, is causally prior to political institutions. Accordingly, countries with several resources available in similar quantities—that is, high resource diversity—are more likely to give rise to multiple elite groups that enjoy relatively symmetric degrees of economic power (compared to countries that rely on a single resource or where the relative weight of resources is unbalanced). Because of a plurality of downstream industries, and, hence, lower market concentration, an economy with high resource diversity is more likely to produce multiple economic factions with competing interests. Likewise, countries with low resource diversity tend to give rise to a monolithic elite and, therefore, to low intra-elite competition, indicated by high levels of market concentration.

Using this instrumental variable approach, and drawing on Strøm, Gates, Graham, and Strand's (2017) operationalization of power-sharing institutions as (1) *dispersive*, (2) *constraining*, and (3) *inclusive*, we find support for our argument. Countries that enjoy high resource diversity tend to give rise to more symmetric competition among economic elites. As a consequence, they develop institutions aimed at protecting elite subgroups that are not in power from those groups who are. Specifically, they tend to establish more dispersive and constraining power-sharing institutions—dispersing power across different political entities within the national territory and putting limits on those who rule. However, the presence of economic elite factions with relatively similar power is not systematically associated with the presence of inclusive institutions that guarantee the participation of ethnic and

religious minorities in decision-making processes. These findings indicate that economic elites support only the type of power-sharing institutions that allow them to protect their economic interests from those of other elite groups, while they have no incentives to involve religious or ethnic minorities—or any other vulnerable actors with whom they might have contradictory interests—in political decision-making processes.

In addition to the literature on political power-sharing institutions, our study also contributes to the existing discourse on political accountability, representation, and tensions between those concepts. It adds to previous efforts that identify the mechanisms through which different forms of accountability might be achieved (e.g., Olsen, 2015) and the causes of vertical and horizontal power concentration/dispersion (e.g., Gerring et al., 2018; Wibbels, 2005). We suggest that the existence of power-sharing institutions—a sign of good governance and institutional quality (Rose-Ackerman, 2017)—paradoxically, might be the result of economic elites' successful attempts to ensure representation of their interests in the political system, which is fundamentally different from more common understandings of democratic accountability that focus on how democratic institutions are accountable to the broad masses.

Furthermore, our study speaks to a growing literature in political economy that underscores the role of economic elites in the institutional design of public organizations and political systems (e.g., Acemoglu & Robinson, 2005; Albertus & Menaldo, 2018; Ansell & Samuels, 2014; Boix, 2003; Berkowitz & Clay, 2011; Beramendi et al., 2019; Congleton, 2010; Garfias, 2018; Garfias & Sellars, 2020; Lizzeri & Persico 2004). For example, Ansell and Samuels (2014) argue that intra-elite disputes between the owners of land and emerging manufacturing/industrial elites explain transitions to democracy. Similarly, others posit that intra-elite dynamics explain variations in other political economy outcomes, such as legal frameworks (Berkowitz & Clay, 2011), income tax regimes (Mares and Queralt 2015), and state capacity (Beramendi et al., 2019; Beramendi & Rogers, 2021; Garfias, 2018). We build on this set of works that conveys that intra-economic elite competition affects institutional choice. However, simultaneously we add a new layer of complexity: It is not only the mere *presence* of elite groups with divergent interests, but rather the *distribution of power* among them that explains the occurrence of power-sharing institutions. In other words, we make one main point: Disputes between economic elite groups representing different sectors certainly matter, but the balance of power between those elite subgroups ultimately determines the extent and character of power sharing.

Finally, our study also contributes to works associating elite configurations and political institutions with geography (Berkowitz & Clay, 2011; Easterly, 2007; Boix, 2015; Beramendi & Rogers, 2021; Garfias & Sellars, 2020). Our research design builds upon contributions that posit a strong relationship between exogenous environmental factors—climate and distance to navigable waterways in the case of Berkowitz and Clay (2011); "rich soils and a salubrious climate" in the case of Boix (2015, p. 209); and the diversity in resource endowments in ours—the configuration of economic elites, and their impact on institutions. However, as indicated, our argument differs because it underscores the balance of power between elite groups, and

not their economic homogeneity, the reconfiguration of their interests, or the mere presence of multiple competing elites.

The remainder of this study is structured as follows. First, we develop our theory linking elite configurations to the emergence of power-sharing institutions. Second, we present our empirical strategy and explain how we construct our measurement of resource diversity, which is the instrument we use to identify the effect of balanced competition within the elite on institutional design. Third, we conduct a cross-national analysis that covers a wide range of cases. In addition, multiple robustness checks and three comparative historical narratives are presented in the supplementary material. In the last section, we conclude by summarizing our contributions to the literature and by discussing opportunities for future research.

2 Intra-elite balance of power and power-sharing institutions

In this section, we present a theory that suggests that the creation of power-sharing institutions is an outcome of contentious relationships between similarly powerful groups within the economic elite. In brief, we argue that institutional arrangements that limit the ability of any given group in a society to use the state as a vehicle for particularistic purposes, are frequently a result of cooperative agreements between factions of the economic elite. Each faction of the elite anticipates that its economic interests will be at risk if another elite faction with opposing interests achieves unchecked political power. This anticipation constitutes a strong interest in the establishment of institutional mechanisms to constrain the (ab)use of such power.

We begin by defining an economic elite as the set of individuals who own the factors of production in an economy. Within this elite, there are often multiple subgroups that manage the extraction, processing, utilization, and/or trading of specific resources, goods, and their derivatives. Each of these groups has an interest in promoting the development of the economic sector they are associated with, which involves advancing policies that might be at odds with the interests of other groups in the economic elite.

Our argument builds on an extensive literature that demonstrates that the benefits and costs of economic policies are asymmetrically distributed across economic elite factions. Specifically, the literatures on international and comparative political economy provide comprehensive evidence that different subgroups of the economic elite have diverging interests with respect to a large number of policy areas. This indicates the persistent presence of intra-elite disputes. For instance, existing works show that preferences around trade policy can produce divides between the owners of different production factors, sectors, subsectors, or of export-oriented and import-competing activities (Frieden, 1992; Gourevitch, 1978; Hiscox, 2002; Rogowski, 1989). Likewise, there is ample evidence that fiscal and monetary policies also create winners and losers within the economic elite, constituting cleavages that result in diverging political interests. Moreover, contributions have shown that economic elite subgroups have contradictory preferences over issues such as regime type (Albertus & Menaldo, 2018; Ansell & Samuels, 2014), taxation schemes (Mares & Queralt, 2015), social policy (Mares, 2003), and state capacity (Beramendi et al., 2019).

Rather than assuming a unified economic elite, this set of scholarly works points out that, even if some specific policies could benefit many members of this elite (for example, labor flexibilization or general cuts in corporate taxes), subgroups within the elite are likely to exhibit significant disagreement regarding many other policy areas and types of institutional arrangements. The central implication of these insights is that factions within the economic elite likely coexist in a situation of persistent latent conflict in which each elite subgroup pushes to implement its particular policy preferences over those of other groups. Accordingly, our work is in line with this stream of research as it also underscores that there is not a "single" or "homogeneous" economic elite (Ippolito & Walker, 1980, p. 282), and that political-economic as well as institutional outcomes are often the result of disputes within this important social group.

We are interested in understanding under which conditions economic elite factions have the incentives as well as the distribution of material capacities to put in place institutional safeguards that protect them from situations in which other groups in society gain unchecked political power. Such a scenario (of unchecked political power) represents a severe threat to economic elites as any other group can potentially transform the state into a predatory vehicle and extract wealth from groups that currently do not have control of governmental institutions, or simply make policy decisions that severely damage others' economic interests (cf. Vahabi, 2020).

The idea that a single faction that gains unchecked power and the ability to implement its particularistic agenda ("factionalism") can have detrimental consequences goes back to at least James Madison's *Federalist* No. 10 (Madison, 1787). In this piece, Madison argued that self-interested factions do not serve the public interest and instead can cause harm to the rights of other groups. His solution to this problem was a republican form of government, in which the broad diversity of represented interests would make it difficult to aggregate interests in such a way that it entails the repression of minorities. Our focus is to precisely disentangle which specific configurations of economic elites and societal cleavages are more fertile for the emergence of similar institutional arrangements—arrangements that contain power-sharing mechanisms aimed at preventing the unchecked abuse of political authority.

First, we assume that subgroups of the economic elite can exert political power directly or indirectly, by supporting political elites that will represent their particularistic interests. Second, in line with an extant literature that posits that democratization frequently is a process led by elite groups that fear abuse of power by other elite factions (Albertus & Menaldo, 2018; Ansell & Samuels, 2014), we propose that power-sharing institutional arrangements are partially a result of the extent to which economic elites groups fear each other's aspiration of unchecked political power. We connect this elite-based approach in political economy with seminal works stressing the importance of societal balance of power for the construction of political institutions that place limits on ruling groups (Lijphart, 1977; Madison, 1787). In doing so, we suggest that a key factor for understanding economic elites' preferences over institutional design has been unexplored so far: the balance of power *within* the economic elite.

We argue that each subgroup of the economic elite has strong incentives to ensure that either they (or their political representatives) hold power and implement policies

in line with their socioeconomic preferences. Alternatively, if the members of the elite group are not in power, they prefer that institutional mechanisms put limits on officeholders that may be aligned with other economic elite factions. To ensure that any elite subgroup's own policy preferences are not directly contradicted, our argument continues, a possible course of action for this one subgroup is to capture the state apparatus—a process that could, in extreme cases, lead to disruptive, open conflict between a current incumbent group and a single or multiple challenger elite groups—each of which can mobilize their economic resources for political purposes (Ansell & Samuels, 2014, p. 40; Acemoglu & Robinson, 2005, p. 80). However, we claim that the likelihood of such attempts to capture the state and particularly the sustainability of such an action fundamentally depend on the balance of power within the elite.

On the one hand, when economic power is balanced between factions, it is unlikely that a single elite group could permanently succeed in an endeavor to gain unchecked power. In this setting, in which no group has significantly more economic power than others, the high cost associated with potential disruptive conflict, paired with substantial uncertainty about the outcome (specifically, which faction will dominate and for how long), makes the establishment of power-sharing institutions a more stable, mutually agreeable solution at the moment of institutional design. Without these institutional devices in place, economic elites predict that the incumbent ruling elite faction will violate the fundamental interests of other elite members. Accordingly, such institutions may also be viewed as "coordination devices" that fragmented economic elites can use to identify abuses and put constraints on political authority (Ordeshook, 1992; Shvetsova, 2005). While the created political institutions mirror the economic power distribution, they also work as an additional insurance mechanism against future attempts to reverse the situation.

Thus, when economic power is symmetrically distributed among factions of the elite, disruptive conflicts with the goal of capturing the state apparatus are less likely to be initiated by any faction.[1] Considering that there are few opportunities for a single elite to dominate and that elites are concerned about the security of their asset ownership, all elite factions have strong incentives to enter long-term compromises that entail the creation of political power-sharing institutions and generate a credible—and hence stable—commitment against unchecked authority (North and Weingast 1989; Stasavage 2002).

Such a commitment is credible because, in the context of balanced power between factions, each faction may find that long-term wealth accumulation can best be realized by binding themselves irreversibly to an agreement that shares political power with other groups (North, 1993). This is the case because, when any ruling faction is in power, it faces a trade-off. The trade-off exists between (1) the possible immediate benefits that may result from forcefully extracting wealth from competing elite factions (which has a high level of risk attached to it as it might result in open and disruptive conflict) and (2) the long-term benefits that result from more

[1] The likelihood of disruptive conflict is also lower because we can assume that, at the domestic level, information asymmetries are much less severe than in international politics, where incomplete information often prevents successful (peaceful) bargaining (Fearon 1995).

stable, institutionalized cooperation with other elites (with a much lower degree of risk), with the costs of extraction/repression also being non-zero. Equally, non-ruling factions face the persistent threat that the ruling group may confiscate parts of their accumulated wealth. Accordingly, the underlying logic of elite compromises is that power-sharing institutions are an effective means for all the parties to prevent *ex post* opportunism *ex ante* (North, 1990, p. 50). Thus, each group prefers to honor the commitment, and this is credible because it is incentive-compatible and hence self-enforcing (North, 1993; Shepsle, 2019).

The political power-sharing arrangements that are established as a result represent "fundamental agreements (often embodied in the constitution) that enable a broad set of actors to exercise power through participation in political decision making" (Strøm et al., 2017, p. 167).[2] In this regard, power-sharing institutions guarantee to different elite factions that, even when the political coalition they are aligned with is not in power, they will still be able to participate in some decision-making processes and prevent outcomes that would be fundamentally detrimental to their interests. Such institutions are not exclusively part of democratic regimes and can range from rules to form cabinets, chief executive offices, legislatures, civil service organizations, courts, armed forces, electoral commissions, to the composition of other administrative agencies.[3]

On the other hand, in the alternative scenario, with one group enjoying access to disproportionate economic power, we instead expect the stronger faction to have both the incentives *and* the capacity to capture the state and impose its own preferences on other groups (while ignoring the preferences of those others). Simultaneously, while weaker factions would prefer to do the same, the low chance of successfully resisting against the more powerful group makes the endeavor prohibitively risky and costly. Given the dominant elite's superior position, it is unlikely that it will pursue the implementation of power-sharing mechanisms that would allow weaker elite groups to interfere in political decision making.

Between these two extremes, there are many possible intermediate scenarios. In general, different elite groups might perceive themselves to be able to dominate the other factions. Then, attempts to capture the state are likely to occur, albeit not to succeed permanently. While such attempts may take place, as long as elite factions perceive that there is a relative balance in the distribution of power, an elite compromise with the creation of power-sharing institutions, allowing for a number of different interests to be represented in political decision making, is the most stable (long-term) equilibrium outcome.[4]

[2] Informal power-sharing mechanisms can serve the same purpose. See Bormann et al. (2019). Because informal practices of power-sharing are more likely to change over time than formal institutions, empirically we focus on the latter.

[3] Our study does not focus on elites' preferences regarding democracy but instead regarding power-sharing institutions as intra-elite arrangements. The latter can also be present in authoritarian regimes (Boix & Svolik, 2013; Magaloni, 2008).

[4] Such an equilibrium can be expected to be stable precisely because, as we can infer from previous studies, economic elites' (and overall) wealth grows when no single ruler/elite faction is able to gain permanent and unchecked political power (cf. Gailmard, 2017; Polishchuk & Syunyaev, 2015). Furthermore, for a related argument about the long-term persistence of varying political-economic equilibria with different elite configurations, see Gingerich and Vogler (2021).

We expect that the specific timing of the creation of these institutions will differ from case to case. In general, our argument is primarily concerned with whether or not the existence of power-sharing institutions is a stable or sustainable equilibrium, rather than the exact moment when this equilibrium is achieved.[5] In the supplementary material, we describe these temporal restrictions in more detail and also present three comprehensive case studies that highlight *intertemporal* dynamics of power-sharing institutions (subsubsection A.1.1 and subsection A.5). These case studies also speak to the role that exogeneous economic shocks, such as economic crises, may play in influencing elite configurations and thus political institutions.

To summarize, we argue that, in polities with balanced intra-elite competition (meaning several groups within the economic elite have relatively similar levels of economic power), it is more likely that power-sharing institutions will be a stable solution to latent intra-elite disputes. Instead, without intra-elite competition or when this competition is unbalanced, we expect that such institutional arrangements are unlikely to exist or endure. Thus, we derive the following empirical expectation from our theory: *Countries with balanced intra-elite competition are more likely to have more extensive power-sharing institutions than countries where the economic elite is monolithic or competition between elite groups is unbalanced*. We examine this empirical implication in the following sections.

3 Empirical analysis

As developed in Sect. 2, our theory posits a positive relationship between a more symmetrical distribution of power within the economic elite and the presence of power-sharing institutions. Given the complex interplay between the configuration of economic elites and political institutions, evaluating this relationship represents a challenge. On the one hand, intra-elite balance of power may be related to social, economic, and political unobservables that are likely to have an independent effect on the the emergence and persistence of institutional arrangements. On the other hand, the relationship between intra-economic elite dynamics and institutions is subject to potential feedback loops: Institutions likely affect intra-elite dynamics, for example by shaping economic structures (e.g., Acemoglu & Robinson, 2013; Robinson et al., 2006; Mehlum et al., 2006).[6]

Thus, to test the plausibility of our argument we carry out an instrumental variable estimation approach. Specifically, we use geological resource diversity as an instrument for intra-elite competition, which we measure as average level of market concentration. Building upon an extensive literature positing that geographic conditions shape social and economic organization (Clark & Jacks, 2007; Diamond, 1997;

[5] In line with this conceptual focus, our empirical test is a cross-sectional analysis, rather than one that focuses on time-series dynamics. However, as we point out in the conclusion, future studies could explore the temporal dynamics of the establishment of power-sharing mechanisms.

[6] Because of this positive feedback loop, we are likely to overestimate the effect of market concentration on political institutions in a simple bivariate regression.

Shulman, 2015), we claim that the diversity of geological resources has a significant impact on the characteristics of economic elite factions. Resource diversity, meaning the presence of various natural resources in similar quantities, is likely positively associated with the existence of multiple elite factions that are comparable in their economic strength. Under these conditions, when many resources are present in similar quantities, multiple downstream industries or types of processing facilities tend to emerge, and these industries are likely to be managed by different factions of the elite.[7] In short, we claim that economic elites form around the exploitation of different natural resources and, as long as the weight of such resources (and therefore downstream industries or types of processing facilities) is relatively similar, the distribution of economic power between elite groups is also closer to being balanced, that is, no single group has the economic power to subjugate the others through means of coercion.

Instead, where a single (or a few) natural resource dominates, that is, where resource diversity is low, a high degree of economic monolithicity tends to develop. In this scenario, a single subgroup of the economic elite likely concentrates the ownership of valuable economic assets centered on the extraction, processing, utilization, and/or trading of this resource. Since no other significant resources are available in this economy, the chances of a rival or competitor faction emerging are smaller, leading to an imbalance of power within the elite.

It is important to note at this point that our research design posits a temporal restriction on the argument: Using resource diversity as our instrument becomes possible only when analyzing the age of industrialization/post-industrialization. Specifically, many of the natural resources discussed in the next section fully realize their economic value only with second-stage industrialization processes in the late nineteenth century. Thus, our theory is temporally limited to the modern age. We make the assumption that, once the world economy reaches this age, there is the potential for the emergence of multiple elites and the dynamics leading to the creation of political institutions play out (see also subsubsection A.1.1 in the supplementary material).

As natural resources were, of course, present prior to social organization and our study focuses on a period when discoveries of new resources are relatively small, we argue that the requirement of exogeneity and as-if randomness is met (Angrist et al., 1996). Nonetheless, in the supplementary material we address several possible issues, including (1) the potentially endogenous relationship between recourse discovery and social organization (subsubsection A.1.2) and (2) the presence of preexisting elites (subsubsection A.1.3). Moreover, since our measurement is cross-sectional, in the supplementary material (subsection A.5), we also present three cases

[7] While it is possible that a single elite group eventually gains control over multiple natural resources and the associated downstream industries, our theory is not contradicted by such a scenario: Specifically, we only make the claim that, the more diverse natural resources are in an economy, the more *likely* it is a multitude of elite subgroups with different preferences will emerge. In this regard, ours is a *probabilistic*—and not a deterministic—theory.

that illustrate the intertemporal dynamics of resource configurations, elite competition, and the creation and endurance of power-sharing institutions.

We understand that research designs of this kind have significant shortcomings. Instrumental variable approaches assume that the instrument (in this case, natural resource diversity) must affect the outcome of interest (power-sharing institutions) exclusively through the main explanatory variable (elite structures). This assumption—commonly referred to as the *exclusion restriction*—is both difficult to satisfy and challenging to test. Nonetheless, we make robust arguments for the validity of the exclusion restriction and provide additional empirical evidence frequently used in instrumental variable approaches (see subsubsection A.1.5 and subsection A.3 in the supplementary material). Notwithstanding, it is important to acknowledge that there is one possible violation of the exclusion criterion: the influence that international actors may have on countries' political systems as a result of domestic resource configurations. One can make the plausible argument that, in certain cases, international intervention in domestic politics that results from the availability of resources in a given country impacts the structure of power-sharing institutions. While we acknowledge this possible limitation, we believe that this specific and highly complex question deserves a separate line of inquiry. In this paper, we decide to limit ourselves to the domestic level.

In sum, given the challenges associated with identifying a causal relationship between the configuration of economic elites and political institutions, and the shortcomings of the chosen methodology, the reader should note that we only approximate as-if randomness and thus all our results should be interpreted with caution.

3.1 Data and measurement

3.1.1 The dependent variable: power-sharing institutions

We are interested in explaining variation in political power-sharing institutions across countries.[8] Measuring power-sharing institutions is challenging for several reasons. First, power is a multidimensional concept, and, second, there are several ways in which each dimension of power can be shared through institutional arrangements. Thus, we follow the established definition of Strøm et al. (2017, p. 165) who categorize power-sharing institutions as "arrangements [that] limit the ability of stronger groups to use the power of the state for their own factional purposes." Empirically, too, we build upon their conceptualization of the three forms power-sharing institutions can take: (1) *inclusion*, that is, arrangements that mandate the participation of minority groups in particular offices or decision-making processes; (2) *dispersion*, that is, agreements that divide authority among many actors in a territorial pattern; and (3) *constraint*, defined as institutions that limit the power of any

[8] The choice of the unit of analysis for our empirical test responds to the fact that we theorize how national economic elites shape country-level institutions. However, our argument could also be applied to explain subnational-level dynamics, where similar patterns may be observed.

party or social group in power and protect against abuse of authority (Strøm et al., 2017, p. 169).

To measure these three types of power-sharing institutions we use the *Inclusion, Dispersion, and Constrain (IDC) dataset* (Strøm et al., 2017). These indices were created using factor analysis based on 19 empirical indicators and empirically capture the following aspects of a polity. The *dispersive power-sharing index* captures the powers allocated to subnational governments, the accountability of subnational governments to citizens, and the representation of subnational constituencies in the central government. The *constraining power-sharing index* includes provisions that bar active military personnel from participation in electoral politics, measures of the constitutional protection of religious liberties, bans on explicitly ethnic or religious parties, and an effective rule of law that includes judicial checks on political executives. Finally, the *inclusive power-sharing index* captures the presence of grand coalitions, mutual veto, and the reservation of seats or executive positions for minority groups—especially ethnic and religious minorities—to ensure their inclusion in central-government decision making.[9]

As a robustness check, we provide an alternative empirical conceptualization of power-sharing institutions as accountability mechanisms that put constraints on rulers by providing avenues to monitor their conduct and limit their power. Here we use several indicators from the *Varieties of Democracy* (VoD) dataset (Coppedge et al., 2018) that approximate our theoretical understanding of power sharing.[10] Specifically, we use the following indicators: (1) *Division of power index*, referring to the division of power between federal, regional, and local government institutions; (2) *Horizontal accountability index*, referring to the degree of accountability between branches of government; (3) *Vertical accountability index*, referring to the degree of accountability of the government toward citizens; (4) *Election management body (EMB) autonomy*, referring to the degree to which the body managing national elections can operate without political interference; and (5) *Political civil liberties index*, referring to the comprehensiveness and strength of political civil liberties (rights to organize politically). These measures all have in common that they refer to mechanisms to decentralize, distribute, or put checks on political power, which is in line with our general understanding of power-sharing institutions.[11]

3.1.2 The explanatory variable: intra-elite balance of power

Measuring the extent to which there is competition between groups within the economic elite, and the degree of balance in such competition, is perhaps even more

[9] Please note that the last of the three measurements reflects the circumstance that the literature on power-sharing institutions started with the analysis of ethnic/religious conflicts within societies. Since our theory is primarily concerned with economic elites, we have no strong expectation regarding this specific operationalization of power sharing. For a detailed explanation of how these measures were constructed, see Strøm et al. (2017, pp. 171–175). The year of these measures is 2010.

[10] With respect to the VoD dataset, we use data from the year 2015.

[11] In the supplementary material, we provide more information on how these indicators are measured (subsubsection A.2.2) and also show their correlation with economic development (subsubsection A.2.3).

challenging. It is empirically difficult to identify the number of economic elite groups in a national economy and the extent to which these groups have leverage to impose their preferences over the preferences of others. Recall that, in Sect. 2, we defined an economic elite as a set composed of different subgroups, each of which controls a specific resource and its derivatives. As a proxy of intra-elite balanced competition, we use the average level of market concentration in any given economy. Market concentration is high when only a few businesses have a large market share and low when many of them (and of similar size) are present. Therefore, we claim that, when market concentration is high, a smaller number of elite members tend to concentrate a high level of economic power, which can be used to influence politics and push through particular interests (Du Boff & Herman, 2001, pp. 26–28).

The measurement we use is based on an indicator created by Ballesteros (2016), who utilizes the Herfindahl–Hirschman Index (HHI) to estimate the degree of market concentration by industry and country. We rely on these data to calculate the average market concentration across industries in any given country.[12]

3.1.3 The instrument: resource diversity

To measure our instrument, the extent to which a country has many different resources in comparable quantities—that is, *resource diversity*—we create and use a novel indicator that captures the number and weight of the natural resources present in an economy. This measurement is based on seven key resources that are of great strategic and/or economic value [coal, iron ore, oil, natural gas, diamonds, agricultural land, timber (BP, 2017; Kimberly Process, 2016; Matos, 2015; USGS, 2014; World Bank, 2021)] and is computed as follows.

First, we begin by constructing a measurement of resource endowments. To do so we compute the amount of each resource in each country.[13] Second, we standardize the endowment of every resource i to have a mean of 0 and a standard deviation of 1 across countries, using the following formula:

$$ResSt_{ij} = \frac{Res_{ij} - Mean(Res_i)}{SD(Res_i)} \quad (1)$$

This means that a country j that has the average endowment of a specific resource has a value of 0, a country with a value of 1 has one standard deviation more in this resource than the average country, and so on. Note that this measurement also partially reflects the value of the resource, as the value of resources is directly related

[12] Since this variable is based on all industries within a country, we expect that only marginal changes occur even over longer timer periods. Due to temporal restrictions in terms of data availability, we use the year 2006.

[13] For coal, iron ore, oil, natural gas, and diamonds, we calculate the amount per capita; for agricultural land and forest area, we use agricultural land and forest area relative to the overall area of the country. In the subsequent calculcations, we do not assign (market) prices to these resources for two reasons: First, market prices are endogeneous to social organization and would thus violate the prerequisites of an instrumental variable approach. Second, market prices are highly volatile over time. While the choice of any specific point in time would be arbitrary, its effect on the results would be comprehensive.

to their scarcity. Since actual resource prices (as well as the underlying currency values) often fluctuate heavily—sometimes even over short time periods—using a standardized measure to compare the relative availability (and thus indirectly also the value) of different resources is a superior choice from our perspective. Accounting for the endowment across countries, our standardized measure is a good representation of the relative availability of resources and thus their relative value.

Third, we identify the mean resource endowment of country *j*. This measure reflects how much a country deviates on average from other countries in its overall resource endowment.

$$Mean\ Endowment_j = \frac{\sum_{i=1}^{n} ResSt_{ij}}{n} \tag{2}$$

This is the average of a country's endowment in natural resources. Countries can score highly on this measurement if they have an enormous amount of a single resource (e.g., 1 resource at 7 standard deviations above the mean). Alternatively, they can have moderately high amounts of each resource and also score highly (e.g., 7 resources at 1 standard deviation above the mean each, which would lead to the same overall endowment as the country above). Thus, our endowment measure indicates the presence of resources but does not reflect the extent to which there is resource diversity.

As a fourth step, we create a measure of resource monolithicity that takes higher values when there is a single or a few predominant resources:

$$Monolithicity_j = \sqrt{\sum_{i=1}^{n} (ResSt_{ij} - Mean\ Endowment_j)^2} \tag{3}$$

Mathematically, this is comparable to the standard deviation in resources for any given country. This measure is very high when there is an uneven distribution of resources, that is, when a country has highly concentrated endowments in only one or only a few resources.

We then transform this measurement by taking the inverse of monolithicity:

$$Inverse\ Monolithcity_j = -Monolithicity_j \tag{4}$$

Finally, we subtract the minimum observed value from this measurement to create a measurement of diversity that has 0 as its lower bound:

$$Diversity_j = Inverse\ Monolithcity_j - Min(Inverse\ Monolithcity) \tag{5}$$

This measurement indicates specifically the extent to which an economy has a distribution of natural resources available in similar quantities (high resource diversity)

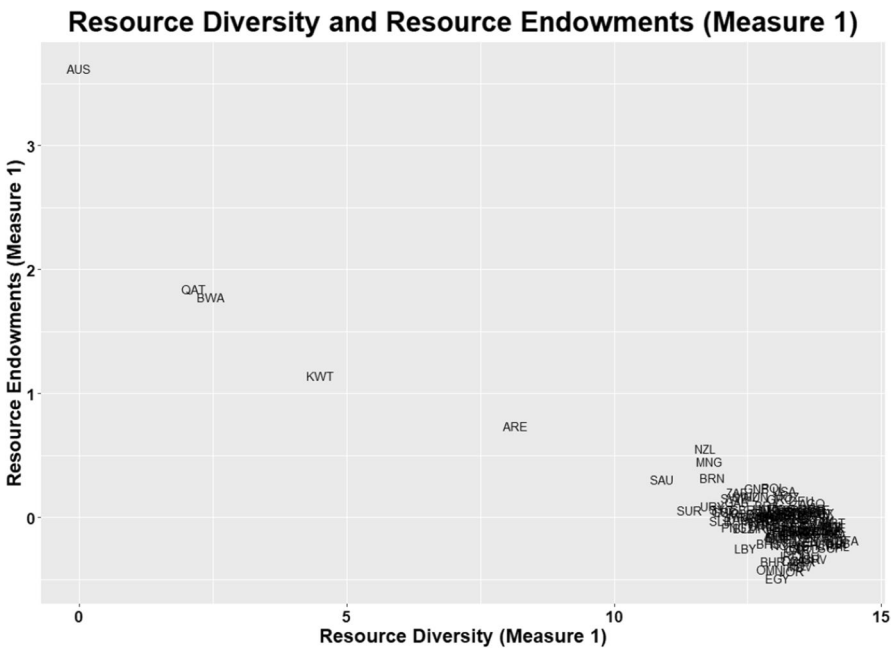

Fig. 1 Resource diversity and resource endowments (measure 1)

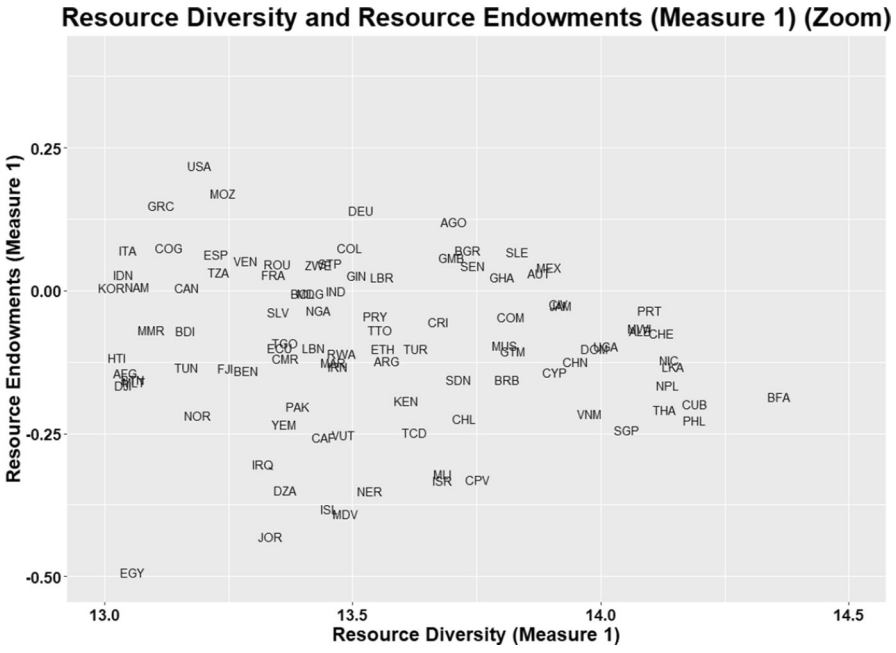

Fig. 2 Resource diversity and resource endowments (measure 1) (zoom)

or, instead, a distribution where one or a few resources predominate (low resource diversity).[14]

As a robustness check, in addition to the first measure, we create two further alternative measurements of our instrument. The second measurement is based on the most recent data available rather than the earliest data available. The third measurement incorporates three additional resources of great relevance for modern economies (often constituting their own industries)—aluminum, copper, and pig iron—and standardizes agricultural land and forests by both area (square kilometers) and population, instead of just area.[15]

There are two reasons why our preferred measurement is the first one: First, the initial measurement consists of only the economically and strategically most important resources, which are generally known to constitute a power base for the elite that controls them. Second, the first measurement refers to the earliest time of available resource data, making it less likely that (possibly endogenous) processes of resource extraction have altered these values in a substantial fashion.[16]

Figures 1 and 2 provide graphical evidence on the distinction between resource endowments and resource diversity. Both figures show the distribution of resource endowments against resource diversity across countries. Figure 1 shows that there is no perfect correlation between these two measures, indicating that resource diversity is indeed measuring the extent to which resources are balanced in an economy regardless of the number of resources that are available. The y-axis is the level of resource endowments as computed by us and the x-axis is the level of resource diversity. We observe that there is a handful of countries with significantly above-average resource endowments (e.g., Australia (AUS) or the United Arab Emirates (ARE)), with varying degrees of resource diversity. Figure 2 provides a closer look at the distribution of the vast majority of countries that are more diverse in resources when compared to more extreme cases.[17]

3.1.4 Other covariates

In some empirical specifications, we include two other, possibly relevant covariates. The first one, the natural logarithm of GDP per capita (*GDP PC (log.)*) (Coppedge et al., 2018), to account for levels of economic development; the second one, the level of resource rents as percent of GDP (*Resource Rents (% of GDP)*) (World Bank, 2021), to address the alternative argument that our results are driven by the "resource curse." Because of our confidence in the exogeneity of resource configurations (see, among others, subsubsection A.1.5 in the supplementary material) (and despite possible technical issues with an instrumental variable approach),

[14] Further details on how we constructed the measurements of resource diversity can be found in the supplementary material (subsubsection A.2.4).

[15] For more details on the different measurements of our instrument and their sources, see the supplementary material (subsubsection A.2.5).

[16] We address the possibility of endogeneity in the supplementary material (subsection A.1).

[17] Graphs based on the two alternative measures can be found in the supplementary material (subsubsection A.2.6 and subsubsection A.2.7).

we include these covariates only as a robustness check to demonstrate that our results generally hold even when accounting for these additional factors.

Furthermore, in the supplementary material (subsubsection A.4.3 and subsubsection A.4.4), we include settler mortality as measured by Acemoglu et al. (2001) as an additional/alternative instrument and discuss how it affects our results.

Table A4 in the supplementary material (subsubsection A.2.1) shows descriptive statistics for all variables used in the empirical analysis.

3.2 Estimation

In our instrumental variable approach the first-stage equation models the effect of *resource diversity* (Z) and *resource endowments* (W) on *market concentration* (X). In some specifications we also control for relevant countries' characteristics (V). Formally, we estimate the relationship between the instrument and market concentration using the following first-stage model:

$$x_i = \gamma_0 + \gamma_1 z_i + \gamma_2 w_i + \mathbf{v_i'}\boldsymbol{\gamma} + u_i \tag{6}$$

where x_i is the level of market concentration in observation i, γ_0 is the intercept, γ_1 is the coefficient of *resource diversity*, γ_2 is the coefficient of *resource endowment*, $\mathbf{v_i'}$ is an optional vector of control variables, $\boldsymbol{\gamma}$ is the associated vector of coefficients, and u_i is the error term at the first stage.

The second stage is estimated using the following model:

$$y_i = \beta_0 + \beta_1 \hat{x}_i + \mathbf{v_i'}\boldsymbol{\beta} + \boldsymbol{\varepsilon_i} \tag{7}$$

where y_i is the outcome of interest, the presence of power-sharing institutions measured as previously explained, $\hat{x}_i$ is the predicted value of market concentration, and β_1 is the main coefficient of interest. A causal interpretation of β_1 requires that resource diversity is relevant (that is, γ_1 indicates a statistically significant association of *resource diversity* with *market concentration*) and conditionally exogenous. In other words, resource diversity should not independently affect the presence of power-sharing institutions and should not be correlated with other omitted variables that could influence institutional choice. As we argue, in this context, the exogeneity assumption is substantively and technically reasonable: Resources do not act by themselves—the presence of resources primarily affect political institutions through the actions of economic elites that control them. In the supplementary material, we further discuss and empirically examine and check if we meet the requirements of the exclusion restriction (subsubsection A.1.5).

4 Results

In this section, we test our argument using two-stage least squares regression. We begin by examining first-stage evidence linking our resource measurements, constructed as explained above, with market concentration. Table 1 presents evidence

Table 1 Stage 1: resource configurations and market concentration

	Dependent variable		
	Market concentration		
	(1)	(2)	(3)
Resource Diversity 1	−0.029**		
	(0.012)		
Resource Endowment 1	−0.180***		
	(0.057)		
Resource Diversity 2		−0.022**	
		(0.010)	
Resource Endowment 2		−0.147***	
		(0.047)	
Resource Diversity 3			−0.024*
			(0.013)
Resource Endowment 3			−0.172**
			(0.072)
Constant	1.257***	1.174***	1.208***
	(0.158)	(0.132)	(0.167)
Observations	136	157	128
R^2	0.079	0.064	0.051
Adjusted R^2	0.065	0.052	0.036
F Statistic	5.698*** (df = 2; 133)	5.257*** (df = 2; 154)	3.383** (df = 2; 125)

OLS *p < 0.1; **p < 0.05; ***p < 0.01

Table 2 Market concentration (IV1) and power-sharing institutions

	Dependent variable		
	Inclusive	Dispersive	Constraining
	(1)	(2)	(3)
Market Conc. (IV1)	0.616	−8.302***	−5.037***
	(0.773)	(1.741)	(1.822)
Constant	−0.485	7.440***	4.757***
	(0.652)	(1.538)	(1.606)
Observations	132	132	132

IV, Robust SE *p < 0.1; **p < 0.05; ***p < 0.01

on the first-stage relationship: Countries that have a higher level of resource diversity tend to have lower average levels of market concentration. Each specification uses a different measure of resource diversity and resource endowments. In all of them, the coefficients of the different resource diversity measures are negative, indicating that countries with higher resource diversity have lower levels of market concentration relative to those with low resource diversity. This negative association between

Table 3 Market concentration (IV1) and power-sharing institutions (with controls)

	Dependent variable		
	Inclusive	Dispersing	Constraining
	(1)	(2)	(3)
Market Conc. (IV1)	−0.883	−14.179***	−7.767*
	(1.748)	(5.349)	(3.984)
GDP PC (Log.)	−0.064	−0.566**	−0.485**
	(0.113)	(0.272)	(0.220)
Resource Rents (Pct.)	0.004	0.024	−0.014
	(0.014)	(0.025)	(0.019)
Constant	1.358	17.619**	11.663**
	(2.371)	(6.947)	(5.372)
Observations	112	112	112

IV, Robust SE *p < 0.1; **p < 0.05; ***p < 0.01

resource diversity and market concentration is in line with our expectation that the presence of various resources in similar amounts is associated with the presence of multiple sectoral elites of relatively similar economic power. Thus, the results of this first-stage provide evidence in support of our assumptions and the relevance of the resource diversity instrument.[18]

In the supplementary material (subsubsection A.4.2), we present further evidence directly linking our instrument (resource diversity) to power-sharing institutions. In line with our theory, we find a positive association between these two variables using both the preferred and alternative measurements of power sharing discussed above.

In the second stage of our regression, we estimate the relationship between market concentration and different measures of power-sharing institutions, instrumented on resource diversity. These results are presented in Tables 2 and 3. Here, we specifically examine the relationship between all three primary outcome variables (*inclusive*, *dispersive*, and *constraining* institutions) and the first (and preferred) measurement of our key independent variable, resource diversity.

Table 2 presents the results without controls. These models rely only on our research-design assumptions, and are arguably (for the reasons detailed above) the most reliable estimates. It shows that the absence of elite competition in the form of high market concentration has a statistically significant and negative impact on the presence of *dispersive* and *constraining* institutions, but not

[18] In all specifications of our reduced-form model, resource endowments are included as a covariate since its exclusion would constitute omitted variable bias. For example, a country with a marginal amount of resources could be resource diverse as well, but in this case the effect on elite structures would be less substantial. As expected, resource endowments are also negatively associated with market concentration. This is so because even the presence of a single resource increases the likelihood that countries have more than just a political-administrative elite, which leads to a minimum degree of elite competition. The full table can be found in the supplementary material (Table A10).

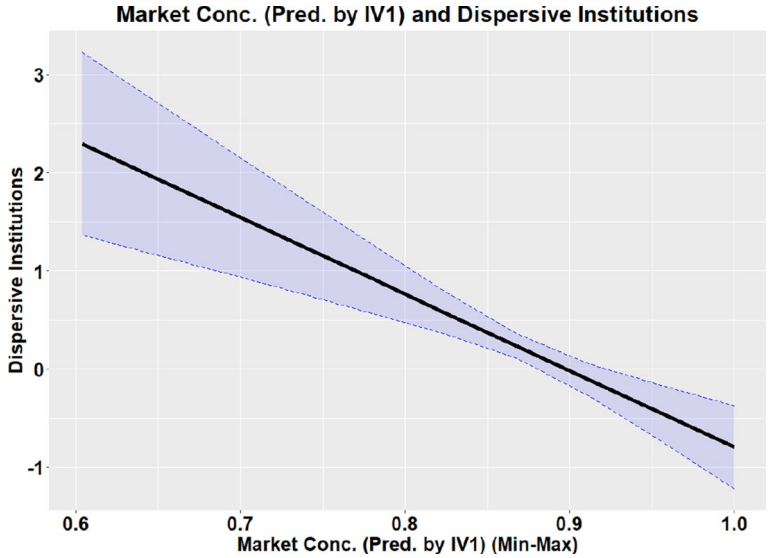

Fig. 3 Market concentration (predicted by IV1) and dispersive institutions

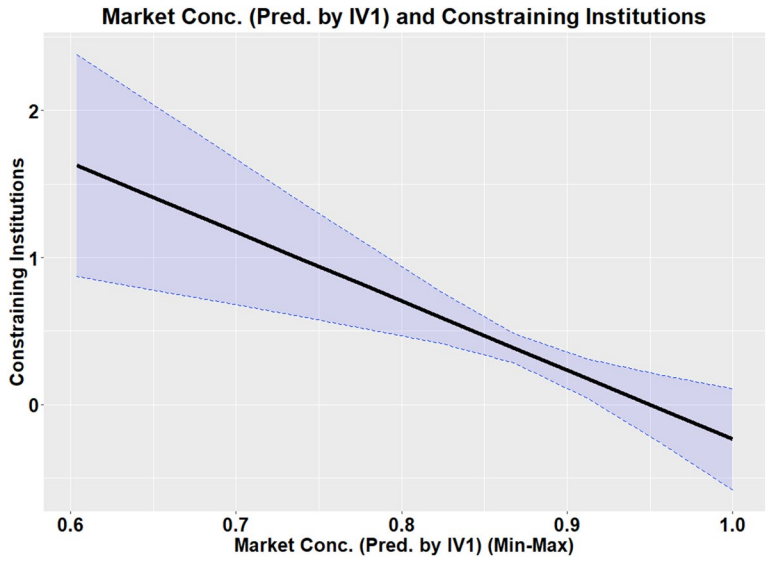

Fig. 4 Market concentration (predicted by IV1) and constraining institutions

of *inclusive* institutions. Specifically, the results of Model (2) indicate that an increase of 0.1 in the market concentration index, which takes values between 0.21 and 1, is associated with a decrease of 0.83 standard deviations in the dispersive institutions index, which, following Strøm et al. (2017) is standardized (with

Table 4 Market concentration (IV1) and alternative measures of power-sharing institutions

	Dependent variable				
	Div. of Pow.	EMB Aut.	Pol. Civ. Lib.	Horiz. Acc.	Vert. Acc.
	(1)	(2)	(3)	(4)	(5)
Market Conc. (IV1)	−3.001***	−8.653***	−2.048***	−5.325***	−4.183***
	(0.869)	(2.808)	(0.757)	(1.756)	(1.289)
Constant	3.170***	8.553***	2.509***	5.244***	4.469***
	(0.765)	(2.458)	(0.664)	(1.535)	(1.133)
Observations	126	132	132	132	132

IV, Robust SE *p < 0.1; **p < 0.05; ***p < 0.01

a mean of 0 and a standard deviation of 1). Similarly, the results shown in Model (3) of Table 2 indicate that an increase on 0.1 in the market concentration index is related to a decrease of 0.50 standard deviations in the constraining institutions index.

These results are consistent with the notion that, in countries in which the economic elite is fragmented in multiple, similarly powerful groups, it is more likely to observe an elite compromise regarding the establishment of power-sharing arrangements. Specifically, we see a higher likelihood of institutional mechanisms that enable these groups to protect their economic interests by controlling subnational policy arenas and putting in place checks and balances to the central government. However, and precisely because they seek to protect their material interests, elite compromises are not likely to include the type of power-sharing institutions that allow for the participation of a wide variety of actors, including ethnic, religious minorities and the most vulnerable groups in society in decision making processes. If these other groups were given channels of political influence, they could decide against the core economic interests of the considered elite subgroups.

Table 3 presents the results with covariates. The results remain statistically significant (at $\alpha < 0.1$ or better) and the magnitudes of the estimated effects increase slightly. In the supplementary material, we also show that these results hold when using our two alternative measurements of resource diversity (see Table A26, Table A27, Table A28, and Table A29).

Figures 3 and 4 graphically illustrate the results from models (2) and (3) presented in Table 2 by, respectively, plotting the predicted values that the dispersive institutions and the constraining institutions indexes take at different values of market concentration, each displaying 90% confidence intervals. In both cases, and in line with our argument, it can be observed that, as market concentration increases, that is, competition among economic elites becomes less balanced, the level of power-sharing decreases.

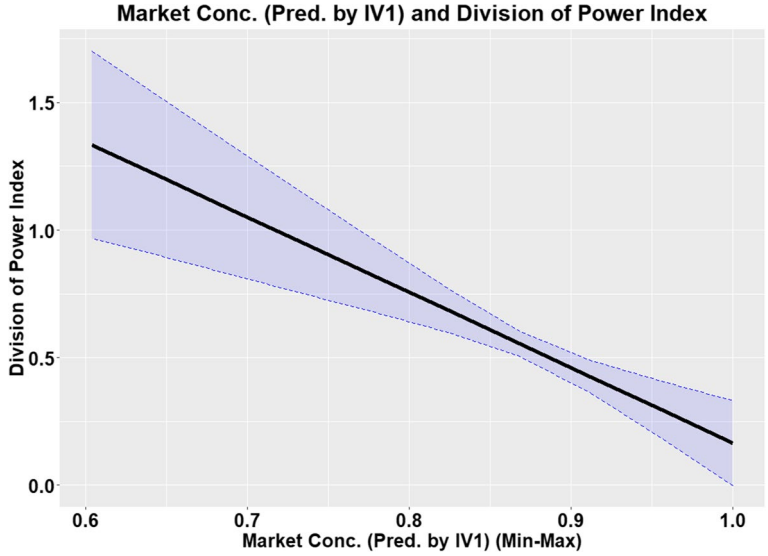

Fig. 5 Market concentration (predicted by IV1) and division of power index

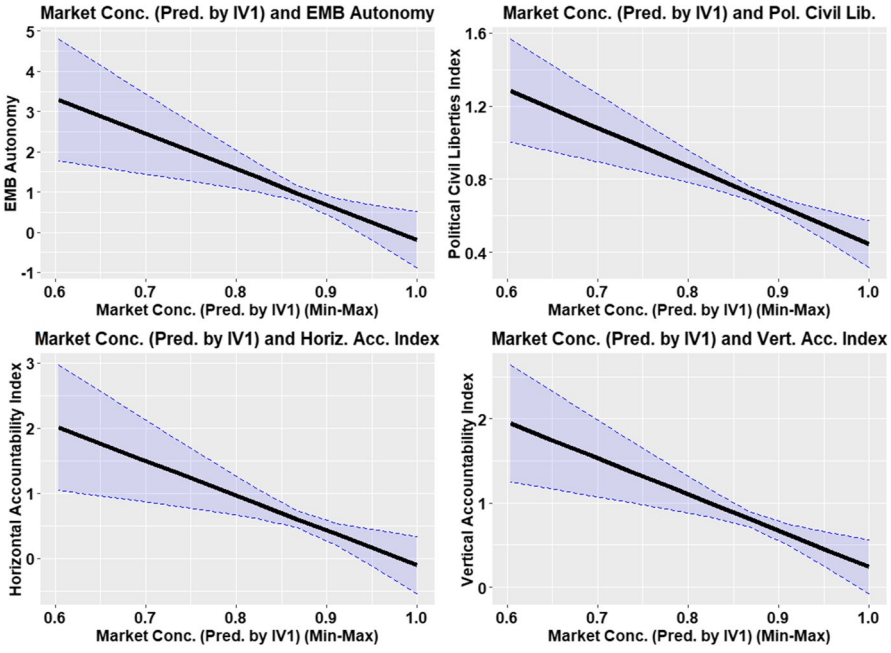

Fig. 6 Market concentration (predicted by IV1) and alternative measures of power-sharing institutions

4.1 Other robustness tests

The results shown so far are consistent with the notion that a less monolithic, more fragmented economic elite—as indicated by lower average market concentration—increases the likelihood of observing power-sharing institutions. In the supplementary material (subsection A.5), we illustrate these dynamics with three historical narratives (Argentina, Germany, and Saudi Arabia) that better showcase the specific mechanisms behind this relationship as well as the intertemporal dynamics of our theory.

In addition to using the primary power-sharing measurements provided by Strøm et al. (2017), we also use another set of empirical indicators by Coppedge et al. (2018) closely related to our understanding of power-sharing institutions. We do this to ensure that our results are not dependent on any single empirical measurement but can be generalized to power-sharing institutions as broadly understood in the literature.

Table 4 shows the results of our two-stage regression using these alternative measures. These results are graphically illustrated in Figs. 5 and 6. As expected, we again observe a strongly negative relationship between *market concentration* and the five alternative measures of power-sharing institutions. This indicates that our main results are robust to using different measurements of power-sharing institutions. In the supplementary material, we show that these results are also robust to including controls (Table A30) and using both of our alternative measurements of resource diversity (subsubsection A.4.8 and subsubsection A.4.9).

Finally, our models generally pass the relevant tests for weak instrument, and the standard Wu-Hausman and Sargan tests. There results are discussed in detail in the supplementary material (subsection A.3).

5 Conclusion

In this article, we argue that the composition of economic elites is a key determinant of the constitutional design of sharing political power. Building on the literatures on constitutional political economy, consociationalism/power sharing, and elite-centered approaches to institution building, we propose that more balanced competition among economic elite factions makes the establishment of power-sharing mechanisms more likely. In these contexts of balanced elite competition—characterized by high uncertainty about which specific faction would prevail in open conflict—the threat that elites face from other elite groups' unconstrained political authority gives them incentives to establish and to commit to the maintenance of power-sharing mechanisms. Vice versa, in settings where a monolithic economic elite prevails or competition among elite factions is unbalanced, the dominant group is likely to block the establishment of such type of institutions to protect its particularistic interests.

We address the endogenous relationship between the configuration of economic elites and political institutions by using an original measurement of geological resource diversity as an instrument for intra-elite balance of power. Using this empirical approach, we show that where geological resources are more

diverse, competition between similarly powerful groups within the economic elite is more likely to emerge, leading ultimately to sustained investments in institutions that allow elites to control decision-making processes at the subnational level and to put limits on the power of the central government. However, we find that elite agreements do not include the type of arrangements that incorporate multiple societal actors (particularly minority groups) in central political processes, as these groups may act against elites' socioeconomic interests.

This study contributes to our general understanding of how economic elites influence the design of political institutions by putting forward an argument that—for the first time—connects recent elite-competition arguments in political economy with the traditional idea of societal balance of power present in texts going as far back as Madison's (1787) *Federalist* No. 10 and appearing again in the work by Lijphart (1977). Nevertheless, despite this crucial contribution, many areas for future research on the topic remain open.

First, more refined empirical tests, ideally in subnational settings, and additional case studies need to be conducted. Specifically, future contributions can expand this research by investigating within-country variation in states that exhibit significant regional variation in the levels of elite competition and resource diversity. Moreover, our study relied on cross-sectional measurements of resource diversity and elite competition. An advancement beyond our approach would be testing the articulated hypotheses using time series analysis. This would allow for a more precise assessment of if, when, and how (incremental/substantial) changes in the configuration of elite power lead to institutional transformation. In addition, future studies could add more cases going beyond the three qualitative historical narratives we presented in the supplementary material of this study. Furthermore, future contributions could illustrate the mechanisms connecting elite conflict to institutional design in more detail and with more cases. Empirically, there is also space to think about other research designs that could help isolate the effect of elite competition, including alternative instrumental variable approaches similar to ours.

Second, from a theoretical perspective, we focus on the presence/absence of power-sharing institutions as the possibly most important outcome of variation in the intensity and type of elite competition, but the structures of other political-administrative institutions (e.g., public bureaucracies) are likely affected by these conflict dynamics as well. Thus, future contributions could consider other types of institutions and aspects of political-administrative systems as outcomes of interest. For instance, political economy studies that stress the role of intra-elite competition in major distributive struggles could benefit from factoring in the extent to which such competition is balanced, as this might lead to cooperative elite behavior rather than conflict. Additionally, future studies could combine the insights that we have gained here with an investigation of the international and transnational dimension of how resource configurations affect political institutions.

Whether and how economic (and other) elites influence the design of political institutions has been a longstanding concern among political scientists. Power sharing institutions are crucial devices in any democratic society: They have potential effects on redistributive patterns as they prevent the government from privileging

certain groups over others; they also help structuring democratic institutions in a more pluralistic way, which implies higher degrees of separation of power, a key precondition for a democracy to be self-enforcing/reinforcing. Thus, in a global context where inequality is on the rise (Piketty, 2014) and many established democracies are threatened by backsliding (Levitsky & Ziblatt 2018), the study of power-sharing institutions is not only relevant but also timely.

Supplementary Information The online version supplementary material available at https://doi.org/10.1007/s10602-021-09338-6.

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References

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review*, *91*(5), 1369–1401.

Acemoglu, D., & Robinson, J. A. (2005). *Economic origins of dictatorship and democracy*. Cambridge University Press.

Acemoglu, D. & Robinson, J. A. (2013). *Why nations fail: The origins of power, prosperity, and poverty*. Crown Business.

Albertus, M., & Menaldo, V. (2018). *Authoritarianism and the elite origins of democracy*. Cambridge University Press.

Angrist, J. D., Imbens, G. W., & Rubin, D. B. (1996). Identification of causal effects using instrumental variables. *Journal of the American Statistical Association*, *91*(434), 444–455.

Ansell, B. W., & Samuels, D. J. (2014). *Inequality and democratization: An elite-competition approach*. Cambridge University Press.

Ballesteros, L. (2016). Firm's economic reliance to national markets and the corporate provision of public goods. The Wharton School Research Paper No. 80. https://ssrn.com/abstract=2586580

Beramendi, P., Dincecco, M., & Rogers, M. (2019). Intra-elite competition and long-run fiscal development. *Journal of Politics*, *81*(1), 49–65.

Beramendi, P., & Rogers, M. (2021). Disparate geography and the origins of tax capacity. *Review of International Organizations*, *16*, 213–237.

Berkowitz, D., & Clay, K. B. (2011). *The evolution of a nation: How geography and law shaped the American states*. Princeton University Press.

Binningsbø, H. M. (2013). Power sharing, peace and democracy: Any obvious relationships? *International Area Studies Review*, *16*(1), 89–112.

Boix, C. (2003). *Democracy and redistribution*. Cambridge University Press.

Boix, C. (2015). *Political order and inequality: Their foundations and their consequences for human welfare*. Cambridge University Press.

Boix, C., & Svolik, M. W. (2013). The foundations of limited authoritarian government: Institutions, commitment, and power-sharing in dictatorships. *Journal of Politics*, *75*(2), 300–316.
Bormann, N. C., Cederman, L. E., Gates, S., Graham, B. A., Hug, S., Strom, K., et al. (2019). Does formal or informal power sharing produce peace? *American Journal of Political Science*, *63*(1), 84–100.
BP. (2017). Statistical Review of World Energy. https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html. Accessed October 19, 2017.
Buchanan, J. M. (1975). *The limits of liberty: Between anarchy and Leviathan*. University of Chicago Press.
Buchanan, J. M. (1993). How can constitutions be designed so that politicians who seek to serve "public interest" can survive and prosper? *Constitutional Political Economy, 4*(1), 1–6.
Buchanan, J. M., & Tullock, G. (1962). *The calculus of consent: Logical foundations of constitutional democracy*. University of Michigan Press.
Bunte, J. B., & Vinson, L. T. (2016). Local power-sharing institutions and interreligious violence in Nigeria. *Journal of Peace Research*, *53*(1), 49–65.
Cammett, M., & Malesky, E. (2012). Power sharing in postconflict societies: Implications for peace and governance. *Journal of Conflict Resolution*, *56*(6), 982–1016.
Clark, G., & Jacks, D. (2007). Coal and the industrial revolution, 1700–1869. *European Review of Economic History*, *11*(1), 39–72.
Congleton, R. D. (2010). *Perfecting parliament: Constitutional reform, liberalism, and the rise of western democracy*. Cambridge University Press.
Coppedge, M., Gerring, J., Lindberg, S. I., Skaaning, S. E., Teorell, J., Altman, D., & Zimmerman, B. (2018). Varieties of democracy—v-dem [country-year/country-date] datatset v8. https://v-dem.net/en/. V-Dem Project.
Diamond, J. M. (1997). *Guns, germs and steel: The fates of human societies*. W. W. Norton.
Du Boff, R. B., & Herman, E. S. (2001). Mergers, concentration, and the erosion of democracy. *Monthly Review*, *53*(1), 14.
Easterly, W. (2007). Inequality does cause underdevelopment: Insights from a new instrument. *Journal of Development Economics*, *84*(2), 755–776.
Fearon, J. D. (1995). Rationalist explanations for war. *International Organization*, *49*(3), 379–414.
Frieden, J. A. (1992). *Debt, development, and democracy: Modern political economy and Latin America, 1965–1985*. Princeton University Press.
Gailmard, S. (2017). Building a new imperial state: The strategic foundations of separation of powers in America. *American Political Science Review*, *111*(4), 668–685.
Garfias, F. (2018). Elite competition and state capacity development: Theory and evidence from post-revolutionary Mexico. *American Political Science Review*, *112*(2), 339–357.
Garfias, F., & Sellars, E. A. (2021). From conquest to centralization: Domestic conflict and the transition to direct rule. *Journal of Politics*, *83*(3), 992–1009.
Gates, S., Graham, B. A., Lupu, Y., Strand, H., & Strøm, K. W. (2016). Power sharing, protection, and peace. *Journal of Politics*, *78*(2), 512–526.
Gerring, J., Maguire, M., & Jaeger, J. (2018). A general theory of power concentration: demographic influences on political organization. *European Political Science Review*, *10*(4), 491–513.
Gingerich, D., & Vogler, J. P. (2021). Pandemics and political development: The electoral legacy of the Black Death in Germany. *World Politics*, *73*(3), 393–440.
Gourevitch, P. (1978). The second image reversed: The international sources of domestic politics. *International Organization*, *32*(4), 881–912.
Graham, B. A., Miller, M. K., & Strøm, K. W. (2017). Safeguarding democracy: Powersharing and democratic survival. *American Political Science Review*, *111*(4), 686–704.
Hartzell, C., & Hoddie, M. (2003). Institutionalizing peace: Power sharing and post-civil war conflict management. *American Journal of Political Science*, *47*(2), 318–332.
Hartzell, C., & Hoddie, M. (2007). *Crafting peace: Power-sharing institutions and the negotiated settlement of civil wars*. Pennsylvania State University Press.
Hartzell, C. A., & Hoddie, M. (2015). The art of the possible: Power sharing and post—civil war democracy. *World Politics*, *67*(1), 37–71.
Hiscox, M. J. (2002). *International trade and political conflict: Commerce, coalitions, and mobility*. Princeton University Press.
Holcombe, R. G. (1991). Constitutions as constraints: A case study of three American constitutions. *Constitutional Political Economy*, *2*(3), 303–328.

Ippolito, D. S., & Walker, T. G. (1980). *Political parties, interest groups, and public policy: Group influence in American politics*. Prentice Hall.
Jarstad, A. K., & Sisk, T. D. (2008). *From war to democracy: Dilemmas of peacebuilding*. Cambridge University Press.
Kimberly Process. (2016). Diamond production data. https://kimberleyprocessstatistics.org/static/pdfs/public_statistics/2015/2015SemiAnnualProduction.pdf. Accessed February 2, 2018.
Le Van, A. C. (2011). Power sharing and inclusive politics in Africa's uncertain democracies. *Governance*, *24*(1), 31–53.
Levitsky, S. & Ziblatt, D. (2018). *How democracies die*. Crown.
Lijphart, A. (1969). Consociational democracy. *World Politics*, *21*(2), 207–225.
Lijphart, A. (1977). *Democracy in plural societies: A comparative exploration*. Yale University Press.
Lijphart, A. (1985). *Power-sharing in South Africa*. Institute of International Studies at the University of California, Berkeley.
Lijphart, A. (1999). *Patterns of democracy: Government forms and performance in thirty-six countries*. Yale University Press.
Lizzeri, A., & Persico, N. (2004). Why did the elites extend the suffrage? Democracy and the scope of government, with an application to Britain's "age of reform". *Quarterly Journal of Economics*, *119*(2), 707–765.
Madison, J. (1787). Federalist paper number 10. The Federalist Papers.
Magaloni, B. (2008). Credible power-sharing and the longevity of authoritarian rule. *Comparative Political Studies*, *41*(4–5), 715–741.
Mares, I. (2003). *The politics of social risk: Business and welfare state development*. Cambridge University Press.
Mares, I., & Queralt, D. (2015). The non-democratic origins of income taxation. *Comparative Political Studies*, *48*(14), 1974–2009.
Matos, G. (2015). Historical global statistics for mineral and material commodities (2015 version): U.S. Geological Survey Data Series 896. https://www.usgs.gov/centers/nmic/historical-global-statistics-mineral-and-material-commodities
Mehlum, H., Moene, K., & Torvik, R. (2006). Institutions and the resource curse. *Economic Journal*, *116*(508), 1–20.
Mukherjee, B. (2006). Why political power-sharing agreements lead to enduring peaceful resolution of some civil wars, but not others? *International Studies Quarterly*, *50*(2), 479–504.
Norris, P. (2008). *Driving democracy: Do power-sharing institutions work?* Cambridge University Press.
North, D. C. (1990). A transaction cost theory of politics. *Journal of Theoretical Politics*, *2*(4), 355–367.
North, D. C. (1993). Institutions and credible commitment. *Journal of Institutional and Theoretical Economics*, *149*(1), 11–23.
North, D. C., & Weingast, B. R. (1989). Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England. *Journal of Economic History*, *49*(4), 803–832.
Olsen, J. P. (2015). Democratic order, autonomy, and accountability. *Governance*, *28*(4), 425–440.
Ordeshook, P. C. (1992). Constitutional stability. *Constitutional Political Economy*, *3*(2), 137–175.
Piketty, T. (2014). *Capital in the twenty-first century*. Harvard University Press.
Polishchuk, L., & Syunyaev, G. (2015). Ruling elites' rotation and asset ownership: Implications for property rights. *Public Choice*, *162*(1–2), 159–182.
Robinson, J. A., Torvik, R., & Verdier, T. (2006). Political foundations of the resource curse. *Journal of Development Economics*, *79*(2), 447–468.
Rogowski, R. (1989). *Commerce and coalitions: How trade affects domestic political alignments*. Princeton University Press.
Rose-Ackerman, S. (2017). What does "governance" mean? *Governance, 30*(1), 23–27.
Rothchild, D., & Roeder, P. G. (2005). Sustainable peace: Power and democracy after civil wars. In D. Rothchild & P. G. Roeder (Eds.), *Power sharing as an impediment to peace and democracy* (pp. 29–50). Cornell University Press.
Shepsle, K. A. (2019). Discretion, institutions, and the problem of government commitment. In P. Bourdieu, J. S. Coleman, & Z. W. Coleman (Eds.), *Social theory for a changing society* (pp. 245–265). Routledge.
Shulman, P. A. (2015). *Coal and empire: The birth of energy security in industrial America*. John Hopkins University Press.
Shvetsova, O. (2005). Mass-elite equilibrium of federal constitutional legitimacy. *Constitutional Political Economy*, *16*(2), 125–141.

Stasavage, D. (2002). Credible commitment in early modern Europe: North and Weingast revisited. *Journal of Law, Economics, and Organization*, *18*(1), 155–186.
Strøm, K. W., Gates, S., Graham, B. A., & Strand, H. (2017). Inclusion, dispersion, and constraint: Powersharing in the world's states, 1975–2010. *British Journal of Political Science*, *47*(1), 165–185.
USGS. (2014). US Geological Survey—2014 Minerals Yearbook. https://minerals.usgs.gov/minerals/pubs/commodity/iron_ore/myb1-2014-feore.pdf. Accessed April 18, 2018.
Vahabi, M. (2020). Introduction: A symposium on the predatory state. *Public Choice*, *182*(3–4), 233–242.
Walter, B. F. (2002). *Committing to peace: The successful settlement of civil wars*. Princeton University Press.
Wibbels, E. (2005). *Federalism and the market: Intergovernmental conflict and economic reform in the developing world*. Cambridge University Press.
World Bank. (2021). World Development Indicators. https://data.worldbank.org/data-catalog/world-development-indicators. Accessed June 15, 2021.