

Economic Elites and the Constitutional Design of Sharing and Dividing Power: Constraining, Dispersing, and Inclusive Institutions

(Working Paper*)

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Abstract

Institutions that constrain and disperse governmental authority are not only crucial to democracy and economic growth but also to the maintenance of citizens' political freedoms. What explains the extent to which countries adopt these institutional mechanisms? Building upon work in both constitutional political economy and comparative political institutions, we argue that institutions aimed at dividing or sharing political power can emerge as a result of disputes within the economic elite. Specifically, we propose that the *balance of power* between competing economic elite factions best explains the establishment of such institutional mechanisms. To address possible endogeneity between elite configurations and political institutions, we leverage an original measurement of 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 institutional mechanisms that allow elite groups to protect their diverging economic interests.

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1 Introduction

For decades, the field of constitutional political economy has investigated the properties of institutions that are fundamental to the functioning of democracy (Brennan & Buchanan, 2008; Buchanan, 1975, 1993; Buchanan & Congleton, 2006; Buchanan & Tullock, 1962). This includes essential institutional mechanisms aimed at constraining and dispersing governmental authority. These mechanisms are built to reduce opportunities for the abuse of political power (e.g., Coll, 2008; Holcombe, 1991; Smith et al., 2020), rendering them crucial not only to economic performance, but also trust in government and citizens' political freedoms. Within this literature, economic heterogeneity has been identified as a factor influencing constitutional design, especially with respect to the balance of power between central and regional political institutions (Wibbels, 2005).

Closely related is the work of Arend Lijphart who coined the term “consociationalism” as a set of practices and formal rules that induce elites with diverging interests to accommodate political conflicts through compromise or amicable agreement (Lijphart, 1969, 1975, 1977, 1985). Building on both the insights from constitutional political economy about the centrality of power-dividing institutions as well as the findings in Lijphart's work on consociationalism, we seek an answer to the following question: How does competition between economic elites affect the design of political institutions aimed at dividing and sharing power? As we elaborate in more detail below, we specifically focus on the effects regarding (1) constraining, (2) dispersing, and (3) inclusive institutions as conceptualized by Strøm, Gates, Graham, and Strand (2017) who use the umbrella term “power-sharing institutions” to refer to all of these institutional mechanisms. In this contribution, we adopt this broad and more abstract umbrella term, while simultaneously discussing and applying their more concrete and measurable empirical operationalizations.¹

In answering the aforementioned question, we connect to different parts of a burgeoning literature on comparative political institutions that has focused on refining the idea of

¹Please note that this term itself is contested. Some scholars prefer the label “power-dividing” institutions. We use both terms in a broad sense and provide more concrete operationalizations in our empirical test section.

“power sharing.” In this discourse, scholars operationalize “power-sharing institutions” as those that limit the ability of ruling groups in society to use the state as a vehicle for their own factional purposes (Binningsbø, 2013; Gates, Graham, Lupu, Strand, & Strøm, 2016; Norris, 2008; Rothchild & Roeder, 2005; Walter, 2002). Another strand in this literature has explored the impact of such institutions on civil conflict, peace duration, and democratic survival (e.g., Bormann et al., 2019; Cammett & Malesky, 2012; Gates et al., 2016; Graham, Miller, & Strøm, 2017; Hartzell & Hoddie, 2003; Jarstad & Sisk, 2008; Lijphart, 1999; Rothchild & Roeder, 2005). However, less attention has been paid to systematically examining the causes behind the establishment of power-sharing institutions. Most empirical studies are based on cross-national analyses that treat power-sharing institutions as exogenous (Hartzell & Hoddie, 2003, 2007; Jarstad & Sisk, 2008; Mukherjee, 2006; Sisk, 1996; Walter, 2002). Others use historical case studies and explain power-sharing as a function of political efforts to end or prevent civil war or insurgency (e.g. Barma, 2016; Hartzell & Hoddie, 2007) or as response to flawed elections (Le Van, 2011) in deeply divided societies. 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 (Bunte & Vinson, 2016; Lijphart, 1985).

We begin with the observation that not only societies with a history of violent conflict or visible ethnic/religious divisions create political power-sharing institutions. Instead such institutions can be found in many other societies, 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 what explains their emergence across a broad range of societies, including those without histories of violent internal conflict.

To answer this question, we also connect to elite-centered arguments in political economy. In line with these contributions, 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 argue that the balance of

power between groups within the economic elite (defined as the extent to which there is a symmetric distribution of economic resources), is a key factor in shaping the creation of power-sharing institutions, particularly institutional arrangements that generate accountability mechanisms. Specifically, 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 checks and balances emerge. In such a setting, in equilibrium, balanced competition between elite factions leads to a political compromise about the establishment of power-sharing institutions. These institutions make 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 emergence 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. We claim that the presence of natural resources is not dependent on social organization and thus it is causally prior to political institutions. Thus, 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 than 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 market concentration.

Using this instrumental variables approach, and drawing on [Strøm et al. \(2017\)](#)'s operationalization of power-sharing institutions as (1) *dispersive*, (2) *constraining*, and (3) *inclusive*, we find support for our theory. 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 groups that are not in power from those 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 decision-making processes.

In addition to the literature on political power-sharing institutions, our study also contributes to the existing literature on political accountability, representation, and its tensions. It adds to previous efforts that identify the mechanisms through which different forms of accountability might be achieved (e.g., [Olsen, 2015, 2017](#)) and the causes of vertical and horizontal power concentration/dispersion ([Gerring, Maguire, & Jaeger, 2018](#)). We explain 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 represent their interests in the political system, jeopardizing more common understandings of democratic accountability (which 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 institutional design ([Albertus & Menaldo, 2018](#); [Ansell & Samuels, 2014](#); [Beramendi & Rogers, 2015](#); [Congleton, 2010](#); [Garfias, 2015](#);

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 elites explain transitions to democracy. Similarly, others posit that intra-elite dynamics explains variations in legal frameworks (Berkowitz & Clay, 2011), income tax regimes (Mares & Queralt, 2015), fiscal capacity (Beramendi, Dincecco, & Rogers, 2018; Beramendi & Rogers, 2018), and malapportionment in electoral systems (Beramendi & Rogers, 2015). We side with this set of works, which conveys that intra-economic elite competition affects institutional choices. But, 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 establishment of power-sharing institutions. In other words, we make one main point: Disputes between economic elites representing different sectors certainly matter, but the *balance of power* between economic elite subgroups ultimately determines the extent of power-sharing institutions.

Finally, our study also speaks to works associating elite configurations and political institutions with geography (Beramendi & Rogers, 2015; Berkowitz & Clay, 2011; Boix, 2015; Easterly, 2007; Garfias & Sellars, 2020). Our research design follows the authors who 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, 209); geographic concentration of economic activity in the case of Beramendi and Rogers (2015); and the diversity in resource endowments in ours—the configuration of economic elites, and their impact on institutions.² However, as indicated, our argument differs in that it underscores the balance of power between elite groups, and not their economic homogeneity, the reconfiguration of their interests, or the presence of multiple elites versus a single elite.

The remainder of this study is structured as follows. First, we develop our theory of the emergence of power-sharing institutions. Second, we present our empirical strategy and explain how we construct our measurement for resource diversity, the instrument we use to identify the effect of balanced competition within the elite on institutional design. Third,

²Another literature that establishes a connection between resources and social outcomes is the resource curse debate (C.-S. Kim & Lee, 2018).

we conduct a cross-national analysis. In addition, multiple robustness checks and the analysis of three comparative historical narratives are presented in the appendix. In the last section, we conclude by summarizing our contributions and discussing opportunities for future research.

2 Intra-Elite Balance of Power and Power-Sharing Institutions

In this section, we present a theory that explains the creation of power-sharing institutions as 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 its own purposes, are frequently a result of cooperative agreements between factions of the economic elite, each of which fear their economic interests will be at risk if another faction with opposing interests achieves unchecked political power.

We begin by defining an economic elite as the set of individuals who own and/or manage the factors of production and extraction 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—groups that are also part of the economic elite. Such policies can range from trade policies that benefit some economic sectors over others to macroeconomic measures such as exchange rate policy that modify relative prices in the economy.

Our argument builds on an extensive literature that assumes the benefits and costs of economic policies are asymmetrically distributed across factions of the economic elite. 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, indicating the persistent presence

of latent intra-elite conflicts. For instance, the literature on trade shows 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; 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 constitute diverging political interests. Moreover, other contributions have shown that economic elite subgroups also have contradictory preferences over issues such as regime type (Ansell & Samuels, 2014), taxation schemes (Mares & Queralt, 2015), social policy (Mares, 2003), and state capacity (Beramendi et al., 2018).

This means that, even if some specific policies could benefit vast parts of the economic elite (for example labor flexibilization or general cuts in corporate taxes), subgroups within the elite are likely to exhibit significant disagreement on many other policy areas. In this regard, our work is in line with previous studies, which underscore that, in many cases, there is not a “single” or “homogeneous” economic elite. In the words of Ippolito and Walker (1980, 282), “the business community is not a monolithic, single-minded entity. [...] [For instance,] a policy responsive to the needs of the natural gas industry might jeopardize the future of the coal companies. For this reason, business groups often conflict with each other...”

Thus, different groups within the economic elite likely have opposing preferences over key policy issues, resulting in a situation of persistent latent conflict in which each elite subgroup wants to implement its particular policy preferences over those of other groups. The existence of diverging preferences is visible in the extensive lobbying efforts that private actors engage in when it comes to influencing government policies. In fully democratic regimes, lobbying is one avenue for private actors to avoid outcomes fundamentally detrimental to their own interests (e.g., I. S. Kim, 2017).

However, simultaneously, each group within the economic elite has strong incentives to put in place structural-institutional safeguards, protecting it from situations in which other groups gain unchecked political power. Such a scenario represents a severe threat to economic elites as any ruling group can convert the state into a predatory vehicle

and extract wealth from others (cf. [Coll, 2008](#); [Vahabi, 2020](#)). Thus, we argue that each subgroup of the elite needs to ensure that they either hold power and implement their own policy preferences, or, if they are not in power, that institutional mechanisms put limits on office holders that might be aligned with another economic elite faction.

Given these circumstances, a possible course of action for any elite 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 that can mobilize their economic resources for political purposes ([Ansell and Samuels, 2014](#), 40; [Acemoglu and Robinson, 2005](#), 80). However, the likelihood of disruptive conflict depends on the balance of power within the elite.

On the one hand, when economic power is balanced between factions of the economic elite, it is unlikely that a single elite group could succeed in open conflict. In this setting, in which no group has significantly more economic power than others, the high cost associated with conflict, paired with substantial uncertainty about the outcome, makes the establishment of power-sharing institutions a stable, mutually agreeable solution that has greater chances of resulting in a sustainable long-term equilibrium.

Thus, when economic power is symmetrically distributed among factions within the elite, disruptive conflicts with the goal of capturing the state apparatus are less likely to be initiated by any faction.³ Considering that there are few opportunities for a single elite to dominate and that elites are concerned about the security of their asset ownership, elites have incentives to enter a compromise that creates political power-sharing institutions and generates a credible commitment against unchecked authority (cf. [Polishchuk & Syunyaev, 2015](#)). These institutions may also be viewed as “coordination devices” that heterogeneous/fragmented economic elites can use to identify abuses and put constraints on political authority ([Ordeshook, 1992](#); [Shvetsova, 2005](#)).⁴ The political institutions that are created mirror the economic power distribution but also work as an additional

³The 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](#)).

⁴While the possibility of elites renegeing on bargains exist (cf. [Stasavage, 2007](#)), it directly follows from our theory that the likelihood of reversals is low when economic power is highly dispersed/decentralized.

institutional insurance mechanism against future attempts to reverse the situation.

The political power-sharing arrangements established as a result are “fundamental agreements (often embodied in a constitution, basic law, peace treaty, or the like) that enable a broad set of actors to exercise power through participation in political decision making” (Strøm et al., 2017, 167).⁵ 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.⁶

On the other hand, in the alternative scenario characterized by an imbalance of power across elite factions, with one group enjoying disproportionate economic power, we instead expect the stronger faction to have both the incentives and capacity to capture the state and impose its preferences over those of others. Simultaneously, weaker factions will have no incentives to expose themselves to conflicts over controlling the state if they are unlikely to win. In such a situation, it is unlikely that the dominant elite group will pursue the implementation of power-sharing mechanisms that would allow weaker elite groups to protect their interests.

Between these two extremes, there are many possible intermediate scenarios. In all, different elite groups might perceive themselves to be able to dominate the others. 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 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

⁵Informal power-sharing mechanisms can serve the same purpose. See Bormann et al. (2019). Because informal practices of power-sharing are more likely to change across time than formal institutions, empirically we focus on the latter.

⁶At this point, it is worth clarifying that our study does not focus on elites’ preferences over democracy but over power-sharing institutions as elite-sharing arrangements. These can also be present in authoritarian regimes (Boix & Svobik, 2013; Magaloni, 2008).

political decision making, is the most stable equilibrium outcome.⁷

Our argument is in line with previous works arguing that different factions of the economic elite—representing various economic sectors (or industries)—may have divergent preferences over institutional arrangements. Some of these accounts have demonstrated that agricultural elites are more likely to oppose democracy and the creation of state capacity than capitalist elites that tend to support democratic institutions (e.g. [Ansell & Samuels, 2014](#); [Beramendi et al., 2018](#); [Lizzeri & Persico, 2004](#); [Mares & Queralt, 2015](#)). These works highlight the fact that the economic interests of these specific elite factions require different types of institutions to flourish. Our argument also sides with previous theoretical and empirical contributions that indicate that the unequal geographical distribution of natural endowments within a nation exacerbates intra-elite conflicts producing institutional change ([Beramendi & Rogers, 2018](#)).

The argument we advance does not contradict these previous accounts and, instead, adds another layer of complexity by allowing fragmentation within the capitalist elite, and focusing on how cooperation between elite groups with divergent interests can affect institutional choices. We suggest that, regardless of which sectors, subsectors, or industries elite subgroups represent—or where they are geographically located—the balance of power between these groups affects their preferences and their capacity to put in place institutional devices that allow them to participate in power even when they are not part of the government coalition. In this sense, our theory underscores how the strength and size of economic elite groups in an economy affects national institution building.

There is an important temporal restriction on our argument. The economic diversity that is at the center of our theory becomes possible only in the age of industrialization. Specifically, many of the resources discussed here 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, the respective elites emerge and the dynamics leading to the

⁷Such an equilibrium can be expected to be stable precisely because, as previous studies have documented, economic elites' (and overall) wealth thrives when no single elite gains unchecked political power (cf. [Polishchuk & Syunyaev, 2015](#)).

creation of political institutions play out. As our theory is not deterministic but probabilistic, the specific timing of the creation of these institutions will differ from case to case. In the appendix, we describe these temporal restrictions in more detail and also present three comprehensive case studies that highlight *intertemporal* dynamics of power-sharing institutions. These case studies also speak to the role that exogenous economic shocks, such as transnational economic crises, may play in influencing elite configurations.⁸

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 put in place. Instead, without intra-elite competition or when such competition is unbalanced, we expect a lack of institutional arrangements that seek to share decision making among groups in a society. Thus, we derive the following empirical expectation from this theory: *Countries with higher levels of 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 sections below.

3 Empirical Analysis

As developed in Section 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. Evaluating this relationship is challenging, given the complex interplay between the configuration of economic elites and political institutions. 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 might affect intra-elite dynamics, for example, by shaping economic structures (Acemoglu &

⁸For the impact of such exogenous shocks, see the Germany case study in particular. It can be found in the paper's appendix.

Robinson, 2013; Mehlum, Moene, & Torvik, 2006; Robinson, Torvik, & Verdier, 2006).⁹

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, 1998; Shulman, 2015), we claim that the diversity of geological resources has a significant impact on the emergence of economic elite factions. Resource diversity, meaning the presence of various natural resources in similar quantities, likely is 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 tend to emerge, and these industries are likely to be exploited by different factions of the elite.¹⁰ In short, we claim that economic elites form around the exploitation of competing natural resources and, as long as the weight of such resources (and therefore industries) 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, there is a high degree of economic monolithicity. In this scenario, a single subgroup of the economic elite likely concentrates the ownership of valuable economic assets centered on the extraction and/or trading of this resource. Since there are no other significant resources available in this economy, the chances of a rival or competitor elite emerging are smaller, leading to an imbalance of power within the elite.

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, Imbens,

⁹Because of this positive feedback loop, we are likely to overestimate the effect of market concentration on political institutions in a simple bivariate regression.

¹⁰While it is possible that a single elite controls multiple natural resources, our theory does not conflict with the emergence of single-elite dominated economies. We only make the point that the more diverse natural resources are in an economy, *the more likely* it is a multiplicity of elite subgroups with different preferences will emerge. In this regard, ours is a *probabilistic* theory.

& Rubin, 1996). Nonetheless, in the appendix we address several possible issues: (1) potential threats to exogeneity related to the timing of discovery and increase in value of natural resources (subsubsection A.1.2), (2) the potentially endogenous relationship between resource discovery and social organization (subsubsection A.1.1), and (3) the presence of pre-existing elites (subsubsection A.1.3). Moreover, since our measurement is cross-sectional, in the Appendix (subsection A.5) we also present three cases that illustrate the *intertemporal* dynamics of resource configurations, elite competition, and the existence of power-sharing institutions.

It is important to note 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 (power-sharing institutions) exclusively through the main explanatory variable (elite structures). This assumption—often referred to as the *exclusion restriction*—is both difficult to satisfy and challenging to test. Nonetheless, we provide arguments for the validity of the exclusion restriction and provide additional empirical evidence frequently used in instrumental variable approaches (see, subsubsection A.1.5 in the appendix). Yet, since we only approximate as-if randomness, all our results should be interpreted with caution.

Furthermore, 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 resulted from the availability of resources impact 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 project, we decide to substantively limit ourselves to the domestic level.

3.1 Data and Measurement

3.1.1 The Dependent Variable: Power-Sharing Institutions

We are interested in explaining variation in power-sharing political institutions across countries.¹¹ Measuring power-sharing institutions is challenging for several reasons. First, power is a multidimensional concept, and, second, there are multiple ways in which each dimension of power can be shared through institutional arrangements. Thus, we follow the established definition of Strøm et al. (2017, 165), who think of 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 party or social group in power and protect against abuse of authority (Strøm et al., 2017, 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

¹¹The 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. An ideal extension of this work would be to analyze the suggested dynamics using comparable data *within* countries, which is currently not available. On the challenges and possible solutions to measuring geographic distribution, see Lee and Rogers (2019).

executive positions for minority groups—especially ethnic and religious minorities—to ensure their inclusion in central government decision making.¹²

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 check their power. Here we use several indicators from the *Varieties of Democracy* dataset (Coppedge et al., 2018) that are close to our theoretical understanding of power sharing.¹³ 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 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.¹⁴

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 balance of such competition, is perhaps even more 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 preference over the others. Recall that, in Section 2, we have defined an economic elite as a set composed by different subgroups, each of which controls a specific resource and its derivatives. As a

¹²Please note that the last measure reflects the circumstance that the literature on power-sharing started with ethnic/religious conflicts within societies. Since our theory is primarily about economic elites, we have no strong expectation regarding this specific operationalization of power sharing. For a detailed explanation on how measures were constructed, see Strøm et al. (2017, p.171-175). The year of these measures is 2010.

¹³From the VoD dataset, we use data from the year 2015.

¹⁴In the appendix, we provide more information on how these indicators are measured (subsubsection A.2.2) and show their correlation with economic development (subsubsection A.2.3).

proxy of intra-elite balanced competition, we use the average level of market concentration in a given economy. Market concentration is high when 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, 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 this data to calculate the average market concentration across industries in a given country.¹⁵

3.1.3 The Instrument: Resource Diversity

To measure our instrument, the extent to which a country has many different resources in comparable quantities—i.e., 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 resources that are of great strategic and/or economic value (coal, iron ore, oil, natural gas, diamonds, agricultural land, timber) 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.¹⁶ 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 formula:

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

¹⁵Since 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.

¹⁶For 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 calculations, 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.

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 to their scarcity. Since actual resource prices often fluctuate heavily—sometimes even over short time periods—using this standardized measure to compare the values 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.

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

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 SD above the mean). Alternatively, they can have moderately high amounts of each resource and also score highly (e.g., 7 resources at 1 SD 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:

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

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, i.e. 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:

$$\text{Inverse Monolithicity}_j = -\text{Monolithicity}_j \quad (4)$$

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

$$\text{Diversity}_j = \text{Inverse Monolithicity}_j - \text{Min}(\text{Inverse Monolithicity}) \quad (5)$$

This measurement indicates specifically the extent to which an economy has a distribution of natural resources available in similar quantities or, instead, a distribution where one or a few resources predominate.¹⁷

As a robustness check, we create two alternative measurements of our instrument. The second one 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.¹⁸

There are two reasons why our preferred measurement is the first one: First, the first 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 (endogenous) processes of resource extraction have altered these values in a substantial fashion.¹⁹

Figure 1 and **Figure 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

¹⁷Further details on how we constructed the measurement of resource diversity can be found in the appendix ([subsubsection A.2.4](#)).

¹⁸For more details on the different measurements of our instrument and their sources, see the appendix ([subsubsection A.2.5](#)).

¹⁹We address the possibility of endogeneity in the appendix ([subsection A.1](#)).

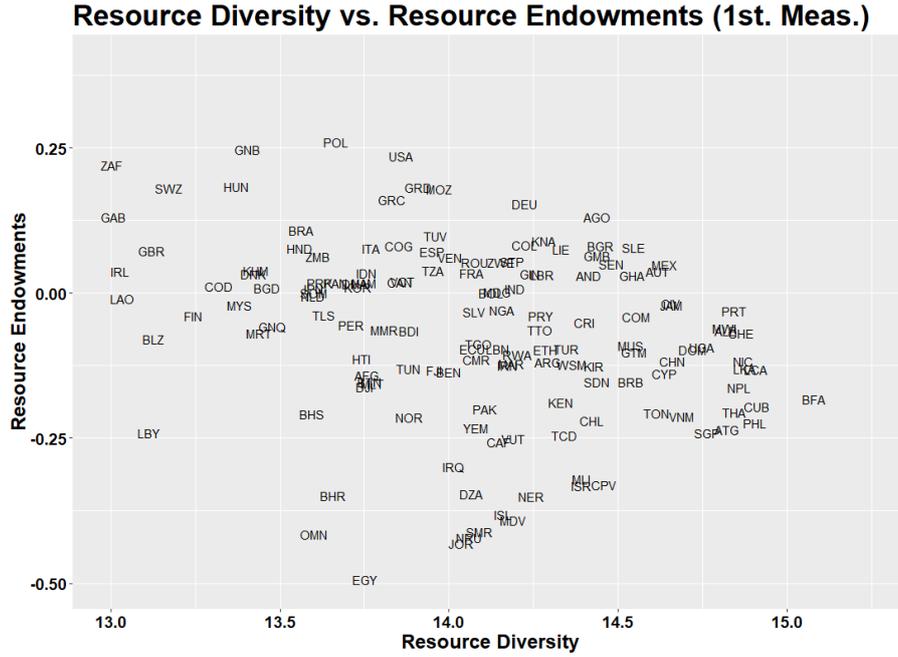


Figure 2: Resource Diversity and Resource Endowments (Zoom) (1st Meas.)

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 ($GDP\ PC\ (log.)$), to account for levels of economic development; the second one, the level of resource rents as percent of GDP ($Resource\ Rents\ (\% \ of\ GDP)$), 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 [subsection A.1.5](#)), 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 appendix ([subsection A.4.4](#)), we include settler mortality as measured by [Acemoglu, Johnson, and Robinson \(2001\)](#) as an additional/alternative instrument and discuss how it affects our results.

[Table A4](#) in the appendix ([subsection 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) on market concentration (x_i). In some specifications we also control for relevant countries' characteristics (W_i). Formally, we estimate the relationship between the instrument and market concentration using the following first stage model:

$$x_i = \gamma Z_i + \omega W_i + \varepsilon_i \quad (6)$$

The second stage is estimated using the following model:

$$Y_i = \alpha + \beta x_i + \lambda W_i + \varepsilon_i \quad (7)$$

where Y_i is the outcome of interest, the presence of power-sharing institutions measured as explained above and β is the coefficient of interest. A causal interpretation of β requires that resource diversity is relevant (i.e., γ predicts 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—they primarily affect political institutions through the actions of economic elites that control them. In the appendix, we further discuss and empirically examine the validity of the exclusion restriction ([subsection A.1.5](#)).²¹

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 on the first-stage

²¹As pointed out previously, a possible limitation of this argument is the international or transnational dimension of how resource configurations affect institutions. We believe that this research question requires a separate line of inquiry in a future research project on the issue.

relationship: Countries that have a higher 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 resource diversity variables 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 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.²²

Table 1: Stage 1: Resource Configurations and Market Concentration

	<i>Dependent variable:</i>		
	Market Concentration		
	(1)	(2)	(3)
Resource Diversity v1	-0.026** (0.012)		
Resource Endowment v1	-0.169*** (0.054)		
Resource Diversity v2		-0.022** (0.010)	
Resource Endowment v2		-0.146*** (0.046)	
Resource Diversity v3			-0.024* (0.012)
Resource Endowment v3			-0.170** (0.069)
Constant	1.245*** (0.158)	1.190*** (0.136)	1.222*** (0.168)
Covariates	Yes	Yes	Yes
Observations	147	168	138
R ²	0.074	0.064	0.054
Adjusted R ²	0.062	0.053	0.040
F Statistic	5.790*** (df = 2; 144)	5.665*** (df = 2; 165)	3.861** (df = 2; 135)

Note: OLS

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

In the appendix (subsection A.4.2), we present further evidence directly linking

²²In all specifications of our reduced-form model, resource endowments are included as a covariate, since its exclusion 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. The full table can be found in the appendix (Table A10).

our instrument (resource diversity) with power-sharing institutions. In line with our theory, we find a positive association between these two variables using the preferred and alternative measurements 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 on [Table 2](#) and [Table 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 of *inclusive* institutions. Specifically, the results on Model (2) indicate that an increase of 0.1 in the market concentration index, which takes values between 0.2 and 1, is associated with a decrease of 0.83 standard deviations in the dispersive institutions index, which, following [Strøm et al. \(2017\)](#)'s is standardized (with 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 0.49 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 the emergence of an elite compromise to establish 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. These groups could decide against the core economic interests of the elites we consider.

Table 2: Market Concentration (IV1) and Power-Sharing Institutions

	<i>Dependent variable:</i>		
	Inclusive (1)	Dispersive (2)	Constraining (3)
Market Conc. (IV1)	0.611 (0.772)	-8.301*** (1.732)	-4.982*** (1.797)
Constant	-0.480 (0.652)	7.439*** (1.530)	4.709*** (1.583)
Observations	132	132	132
F-test	11.083	11.083	11.083
Note: IV, Robust SE	*p<0.1; **p<0.05; ***p<0.01		

Table 3 presents the results with covariates. The results remain statistically significant and the magnitude of the estimated effects increase slightly. In the appendix, we also show these results hold when using our two alternative measurements of resource diversity (see, Table A26, Table A27, Table A28, and Table A29).

Table 3: Market Concentration (IV1) and Power-Sharing Institutions (With Controls)

	<i>Dependent variable:</i>		
	Inclusive (1)	Dispersive (2)	Constraining (3)
Market Conc. (IV1)	-0.175 (1.280)	-11.932*** (3.096)	-7.305** (2.897)
GDP PC (Log.)	-0.035 (0.066)	-0.461*** (0.157)	-0.474*** (0.158)
Resource Rents (Pct.)	-0.003 (0.010)	0.009 (0.014)	-0.009 (0.013)
Constant	0.508 (1.490)	14.790*** (3.975)	11.171*** (3.874)
Observations	110	110	110
F-test	6.616	6.616	6.616
Note: IV, Robust SE	*p<0.1; **p<0.05; ***p<0.01		

Figure 5 and Figure 6 graphically illustrate the results from models (2) and (3) presented on Table 2 by, respectively, plotting the predicted values that the dispersive institutions and the constraining institutions indexes take at different values of market concentration, considering 90% confidence intervals. In both cases, and on line with our

argument, it can be observed that as market concentration increases, that is, as there are fewer competing groups within the economic elite, so does the level of power-sharing.

Figure 3: Market Concentration (IV1) and Dispersive Institutions

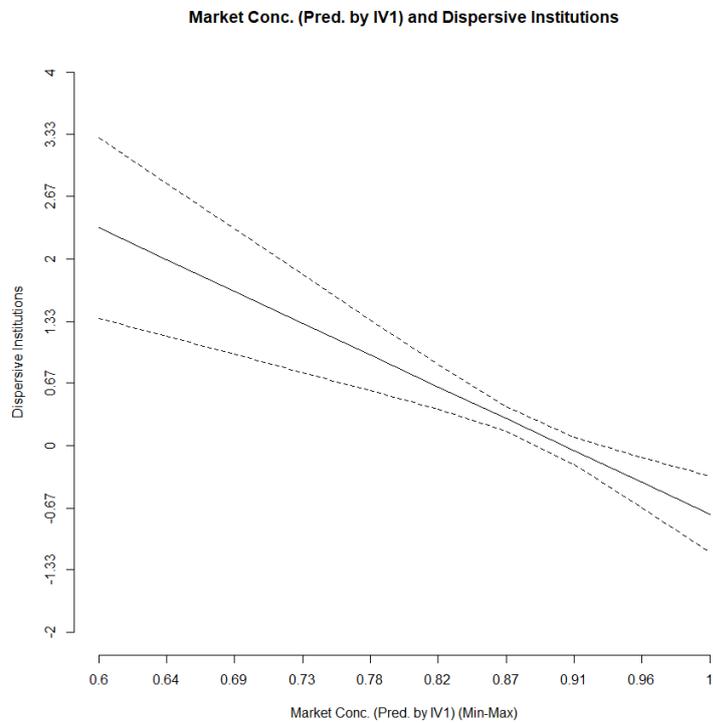
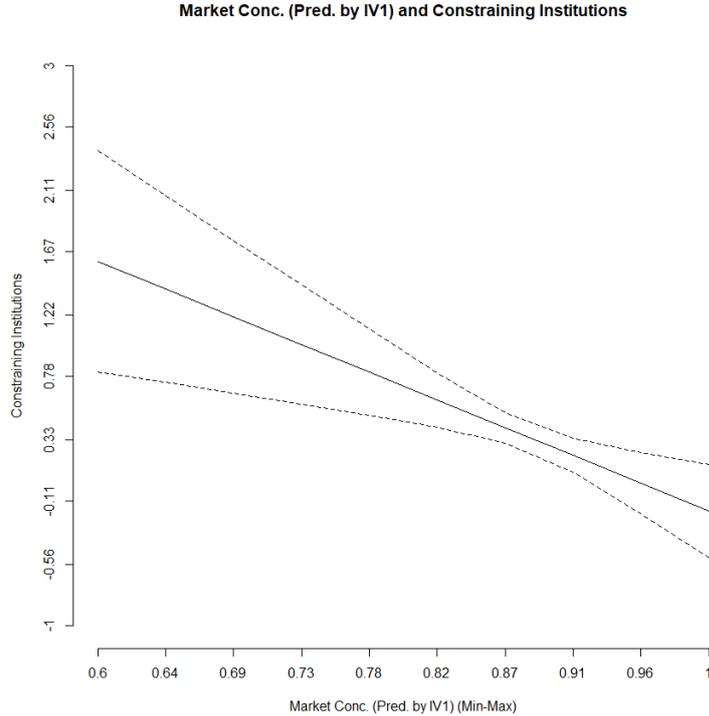


Figure 4: Market Concentration (IV1) and Constraining Institutions



4.1 Other Robustness Tests

The results shown so far are consistent with the idea that a less monolithic, more fragmented economic elite—as indicated by lower market concentration—increases the likelihood of putting in place power-sharing institutions. In the Appendix (subsection A.5), we illustrate these dynamics with three historical narratives (Argentina, Germany and Saudi Arabia) that better illustrate the mechanisms we argued work behind this relationship and 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 a specific 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 Figure 5 and Figure 6. As expected, we again observe a strongly negative relationship between market concentration and the

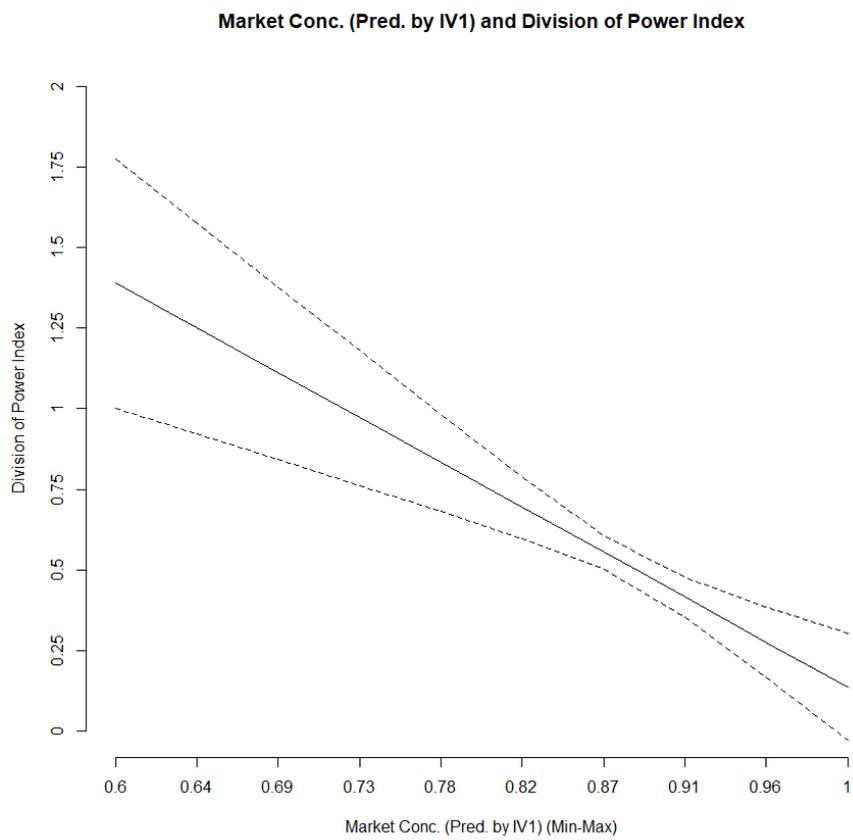
five alternative measures of power-sharing institutions. This indicates that our main results are robust to using different measurements of power-sharing institutions. In the appendix, we show that these results are robust to including controls (Table A30) and using both of our alternative measurements of results diversity (subsubsection A.4.8 and subsubsection A.4.9).

Table 4: Market Concentration (IV1) and Alternative Measures of Power-Sharing Institutions

	<i>Dependent variable:</i>				
	Div. of Pow. (1)	EMB Aut. (2)	Pol. Civ. Lib. (3)	Horiz. Acc. (4)	Vert. Acc. (5)
Market Conc. (IV1)	-3.005*** (0.861)	-8.528*** (2.771)	-2.004*** (0.743)	-5.307*** (1.746)	-4.113*** (1.268)
Constant	3.170*** (0.758)	8.453*** (2.426)	2.474*** (0.652)	5.227*** (1.527)	4.412*** (1.114)
Observations	125	131	131	131	131
F-test	9.741	10.562	10.562	10.562	10.562

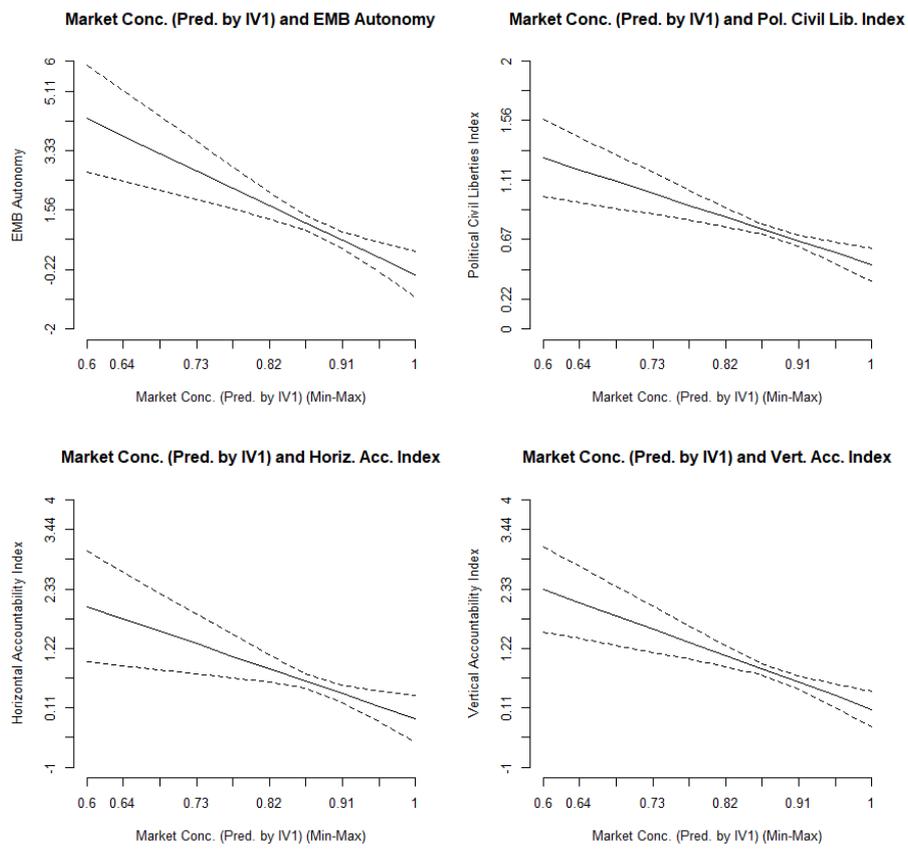
Note: IV, Robust SE *p<0.1; **p<0.05; ***p<0.01

Figure 5: Market Concentration (IV1) and Division of Power Index



Note: 90%-confidence intervals.

Figure 6: Market Concentration (IV1) and Division of Power Index (With Controls)



Note: 90%-confidence intervals.

Finally, all of our instrumented results pass the relevant tests for weak instrument, and the standard Wu-Hausman, and Sargan tests. These results are discussed in the appendix ([subsection A.3](#)).

5 Conclusion

The field of CPE has provided much evidence for the crucial role that constraints on political power play for the survival of democracy and citizens' political freedom. Such constraints are also at the heart of Arendt Lijphart's work on consociationalism. We bring together insights from both literatures with recent work in political economy that emphasizes the role of economic elites in institutional design.

Specifically, we contribute to this literature by advancing a theory aimed at explaining variation in the establishment of institutions that put limits to the ability of ruling groups in society to use the state as a vehicle for their own factional purposes. Different from previous works focused on how power-sharing institutions emerge in societies that are deeply segmented across ethnic or religious divides, we ask if and why power-sharing mechanisms can also come into being in settings where other types of conflict are present.

We propose that the character of disputes within the economic elite can explain investments in political power-sharing institutions. Our argument is compatible with a growing literature on the political economy of institution building, which suggests that the configuration of domestic economic elites has consequences for the design of legal frameworks, tax regimes, and electoral systems. Yet, different from existing elite-based arguments that underscore the importance of competition between sectoral elites, we propose that it is the *balance of power* between groups within the elite rather than intra-elite competition that explains the establishment of power-sharing mechanisms. Specifically, we argue that when competition between groups of the economic elite is balanced, that is, different groups have relatively similar economic power, the economic elite as a whole has incentives to support the establishment of power-sharing institutions that enable different factions to protect their interests by participating in political decision making.

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 to estimate the latter's effect on the design of power-sharing mechanisms. Specifically, we posit that the exogenous presence of different types of natural resources in similar quantities is often associated with the presence of comparably powerful factions within the economic elite. Using this instrumental variable 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 the establishment of power-sharing mechanisms. In particular, elites invest in the type of power-sharing institutions that allow them to control the decision making process at the subnational level and to put limits to the power of the central government coalition. However, we find that elite agreements do not include the type of arrangements that take the interest of multiple societal actors into account (including those of minority or vulnerable groups). Ultimately, these actors could act against the elites' economic interests.

This paper makes three broad contributions to the existing literatures in comparative institutions and the political economy of institution building. First, to the extent of our knowledge, it is the first study to provide a systematic cross-country analysis on the determinants of power-sharing institutions in a broad variety of settings, including settings where civil conflict is unlikely. In this regard, our findings advance our understanding of how power-sharing institutions are viable solutions to solve or prevent various types of domestic disputes—and not only those associated with ethnic/religious cleavages. Second, and related to the first point, the theory we propose here allows us to explain extensive variation in power-sharing institutions. Regardless of which are the salient cleavages in any specific society, most countries have some form of intra-economic elite competition at their core. We make it clear that more symmetric elite configurations often lead to the establishment of power-sharing mechanisms. Third, differently from existing works in political economy that posit intra-elite competition as a key variable to explain the emergence of different types of institutional arrangements, we propose that the balance

of power within the elite has to be taken into account. Intra-elite competition is important but so is the extent to which this competition is balanced. As we have explained in detail throughout the paper, balanced and unbalanced intra-elite competition lead to very different institutional results.

While this study has shed light on an important issue—namely, the origins of power-sharing institutions—and provided a novel perspective on the relationship between elite competition and power-sharing mechanisms, many areas for future research on the topic remain open. 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 time-series dynamics of resource diversity, considering within-country variation, or exploring whether our results can be generalized to other types of political-economic institutions. A combination of the joint effects of resource configurations with ruggedness (as another key environmental factor of influence) would also be desirable (Nunn & Puga, 2012). Additionally, future contributions could combine the insights we have gained here with an investigation of the *international* and *transnational* dimension of how resource configurations affect political institutions. Despite these avenues for future research, the study at hand makes a key contribution to our understanding of how economic elites influence the design of political institutional arrangements.

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