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ANDREW YOUNG SCHOOL
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Extreme Events, Decentralization and the Number of Parties

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Abstract

An examination of elections in regions in nine western democracies reveals that widespread crises like the Great Recession and COVID-19 spurred increases in the number of parties, but Brexit decreased the number of parties in the United Kingdom. The relationship between the two broad-based crises and the number of parties was mediated strongly by decentralization. Though self-rule mitigated increases in the number of parties, shared rule exacerbated them. Decentralization is most strongly linked to the number of parties in minority regions, so the lack of self-rule or high levels of shared rule may prove more destabilizing to the party system in multiethnic countries. In contrast, though strongly related to the number of parties more generally, more permissive electoral systems do not substantially alter increases in the number of parties associated with crises.

Keywords: COVID-19, Great Recession, elections, decentralization

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I. Introduction

In retrospect, major crises like the Great Recession and the COVID-19 pandemic seemed well-positioned to cause political upheaval that threw up new political forces and propelled new parties into parliament. Yet that was not always the case. In the postwar period, party systems in Western democracies had been seen as having stabilized along recognizable lines. Simplifying the picture, Austria, Canada, Germany, Spain and the UK, for example, all had large center-left and center-right parties along with smaller centrist, liberal (Germany and the UK), left (Canada and Spain), and nationalist right parties. Norway and Sweden had dominant social-democratic parties that faced off against several center-right and small far-left parties. Belgium and the Netherlands had three dominant party families—Catholic, liberal and socialist. Regional parties, generally small on the national scale but varying in size, also played a role. Though government leaders and parties rotated, the basic party systems seemed stable and not particularly ripe for change.

Perhaps paradoxically, however, party systems may become more vulnerable rather than entrenched as time passes even if they appear stable. Realignment theory hypothesizes that previously strong cleavages grow weaker over time, allowing for new ones to emerge (Reichley 1993; Sundquist 1973). The seeming stability of party systems masked that many of the older cleavages had become stale or irrelevant to younger voters, particularly as distinctions between center-left and center-right parties declined in many countries. Historically, the arrival of new cleavages in the U.S. shifted the issues dividing the two major parties along with their social bases of support. More drastically, the rise of the powerful slavery cleavage resulted in the replacement of the Whigs by the Republicans (not to mention the U.S. Civil War).

The more proportional systems in Europe make it easier for new parties to emerge without completely displacing existing parties. In the 1980s, green parties sprouted first in Belgium and Germany. Ethnic parties gained strength in places like Scotland and Quebec with Belgium's party

system fracturing along linguistic lines. The emergence of populist or extreme right parties has further altered the political scene, especially in countries like Austria, Norway and the Netherlands where they have joined and supported governments.

Just as the decline in the salience of old cleavages may facilitate the emergence of new ones, crises may propel forward new parties. Put another way, the cleavages that animate older, leading parties no longer allow them to mobilize voters as effectively and new issues create demand for new parties. Crises may provide new cleavages that divide the electorate in new ways and provide a base for a new party. Even if not the source of new cleavages, the severe challenge posed by a crisis may provide juicy opportunities for new parties to make salient new underlying cleavages that had previously remained comparatively quiescent. Severe crises may also undermine the legitimacy of governing parties, making it easier for new parties that challenge previously accepted paradigms or articulate new issues to gain traction.

This paper explores the relationship of crises to the number of electoral parties in national elections in nine Western democracies but with the region serving as the unit of analysis. Using the region instead of the country as the unit of analysis makes sense because party systems may vary regionally even if the number of parties remains the same. In Belgium, the French and Dutch speaking regions have completely separate party systems, but many parties have analogues on both sides of the linguistic divide. Additionally, examining national results at the regional level facilitates pinpointing the impact of regionally based ethnic cleavages on party systems.

In the context of the nine countries examined here, crises augmented demand for already existing extreme or populist right-wing parties such as the Freedom Party of Austria, Alternative for Germany, Party for Freedom (Netherlands), Sweden Democrats, and Vox (Spain).¹

¹ Other smaller or shorter-lasting parties in a similar vein include Alliance for the Future of Austria, Team Stronach for Austria, and Forum for Democracy (Netherlands). Flemish Interest (Belgium) and the Progress Party (Norway) were well established before either the Great Recession or the COVID-19 pandemic and did not experience such clearcut gains in their wake.

These parties articulate a set of viewpoints generally eschewed by mainstream right and left parties, combining nationalism and traditional social values with hostility to immigration, globalization and the European Union. They appeal particularly to working class voters who perceive themselves as economically threatened by free trade and ignored by left-wing parties and culturally threatened by immigration, EU integration, and shifting values on issues like same-sex marriage.

While the rise of populist right parties has attracted the most attention, they were not the only set of parties to benefit from greater demand for parties that address these issues. Though smaller less noticed, new and existing liberal parties taking opposite stances on the same issues also made electoral gains. In contrast to populist right parties, liberal parties are highly supportive of free trade, the EU and social liberalism—more clearly so than traditional right-wing parties. New parties like the New Austria and Liberal Forum and Citizens (Spain) emerged and older liberal parties, such as the Free Democrats (Germany) and Democrats 66 (Netherlands), experienced gains.

Populist and far left parties also benefitted in some countries from opposition to austerity and demands for more radical economic restructuring the wake of crises. In Spain, Podemos made striking advances even if it failed to overtake the Socialists like Syriza in Greece. The previously minor Workers' Party has made sizeable gains in Belgium, especially among Francophones. Red (Norway), though still small, is also grabbing a larger share of the vote. All these gains tended to occur at the broad expense of previously dominant mainstream right and left parties.

Beyond looking at crises and the formation of additional parties, this paper examines how political institutions, specifically the electoral system and decentralization, mediate the impact of crises on the number of parties. Past work has consistently revealed that more permissive electoral systems facilitate the formation of additional political parties (Amorim Neto and Cox 1997; Clark

and Golder 2006; Filippov, Ordeshook, and Shvetsova 1999; Hicken and Stoll 2011; Jones 2004; Lago Peñas 2004; Lijphart 1994; Lublin 2017; Mylonas and Roussias 2008; Ordeshook and Shvetsova 1994; Powell 1982; Rae 1967; Sartori 1986; Selway 2010; Stoll 2008; Taagepera 2007; Taagepera and Shugart 1989). This study confirms these findings but produces little evidence that crises heighten their impact. Scholars have fiercely debated whether decentralization steadies or destabilizes political systems, particularly in ethnically divided societies (Brancati 2008; Brubaker 1996; Bunce 1999; Chhibber and Kollman 2004; Kollman and Worthington 2021; Kymlicka 1998; Lublin 2012; Lublin 2014; Lustick, Miodownik, and Eidelson 2004; Miodownik and Cartrite 2010; Riker 1964; Roeder 2007; Snyder 2000). This study indicates that giving regions greater autonomy greatly reduces the impact of crises on the number of parties but that providing regions with more control over the central government has the opposite effect.

II. Database and Dependent Variable

For this project, I constructed a new database of the effective number of electoral parties (ENPV) in the sole or dominant national legislative chamber but calculated at the regional level for nine countries: Austria, Belgium, Canada, Germany, Netherlands, Norway, Spain, Sweden and the United Kingdom. While I make no claims for the representativeness of these countries, even among advanced industrialized economies, they contain a nice mix of countries with and without salient historic ethnic divisions as with varying electoral systems and levels of centralization.

The dependent variable in all models presented here, ENPV, is the commonly Laakso and Taagapera

(1979) measure: $\frac{1}{\sum_{i=1}^n p_i^2}$ where n is equal to the number of parties and p is each party's proportion

of the vote. The 117 different regions are the first level of subnational government in all countries: states in Austria and Germany, provinces in Canada and the Netherlands, counties in Norway and Sweden, regions in Belgium, autonomous communities in Spain, and countries in the

United Kingdom.² For Germany, the sole country with a mixed electoral system, the list or party vote is used to calculate ENPV.

The use of regions rather than countries allows for specific identification of minority regions and more accurate estimation of the threshold of exclusion for Belgium and Spain, where it is determined entirely by district magnitude and legal thresholds. It allows for the participating parties to vary by region—as they do in Belgium, Canada, Spain and the UK—even if the number of parties does not, which better reflects how scholars expect electoral systems to shape party entry and success.³ It also greatly increases the number of observations, though controls are also included for each country. Regions also serve as a happy medium between the national level allocation utilized in some countries and the sub-regional electoral district in others. Perhaps most crucially, the region remains the most crucial level of subnational identification regardless of how each country allocates mandates. The database includes the most recent set of elections as well as many previous contests for all countries. The number of elections included ranges from seven for Sweden to twenty-one for the UK with a median of twelve for Canada.⁴

III. Hypotheses and Independent Variables

Past work has heavily emphasized the impact of electoral system permissiveness—the ease of winning a legislative seat—and ethnic diversity on the number of parties (Amorim Neto and Cox

² The Belgium data does not include the three communities as they include the same people as the regions under the country's unique model of double federalism. The Canada data includes the territories. The Netherlands data excludes the special municipalities in the Caribbean (Bonaire, Saba and Sint Eustatius). The Spain data includes the autonomous cities of Ceuta and Melilla. Though the City of Stockholm is part of the county of the same name, it is a separate unit in the database. Unlike the other countries of the UK, England has no regional government. The database includes England as a single unit with no authority and excludes local authorities, which are the highest-level subnational governments within England. English local authorities have less self-rule and none of the shared rule powers held by regional governments elsewhere in the UK.

³ It also permits easier comparison to regional election results in future research.

⁴ The total number of elections for each country (with the earliest year in parentheses) are Austria, 11 (1986); Belgium, 10 (1985); Canada, 12 (1984); Germany, 10 (1990); Netherlands, 16 (1971); Norway, 18 (1953); Spain, 15 (1977); Sweden, 8 (1994); and the United Kingdom, 21 (1945). The unavailability of the number of votes received by “other” parties by county hampers accurate calculation of ENPV for Sweden prior to 1994.

1997; Clark and Golder 2006; Filippov, Ordeshook, and Shvetsova 1999; Hicken and Stoll 2011; Lago Peñas 2004; Lublin 2017; Mylonas and Roussias 2008; Ordeshook and Shvetsova 1994; Sartori 1986; Stoll 2008). Scholars have separately examined the impact of decentralization on the growth of ethnic and regional parties (Brancati 2008; Brancati 2009; Chhibber and Kollman 2004; Kollman and Worthington 2021; Lago-Peñas and Lago-Peñas 2011; Lublin 2012; Lublin 2014; Miodownik and Cartrite 2010). This paper builds on this body of work by modelling the impact of crisis events on the number of parties and how political institutions mediate their effects.

a. Electoral System Permissiveness

Previous work has heavily emphasized the role of thresholds determined by district magnitude and legal thresholds in constraining the ability of parties to enter parliament (Amorim Neto and Cox 1997; Clark and Golder 2006; Lago Peñas 2004; Lijphart 1994; Ordeshook and Shvetsova 1994). As district magnitudes increase, the maximum share of votes required for a party to gain a seat declines. Legal thresholds at either the national or constituency level can also limit entry. The common expectation remains that lower thresholds lead to more parties (H_1). Among the nine countries examined here, Canada and the UK elect the House of Commons by plurality. Exclusion thresholds—the maximum share of the vote needed to elect one legislator—for each region of Belgium and Spain are determined by a combination of provincial district magnitudes and a 5 percent district legal threshold that effectively applies only in large provinces.⁵ Five countries—Austria, Germany, Netherlands, Norway and Sweden—use systems of proportional representation in which the national legal threshold is the major barrier to entry.

⁵ Belgium has significantly tinkered with its electoral system, but provincial district magnitude and the 5% district legal thresholds have largely remained the key exclusion threshold determinants. The Province of Brabant was broken into three parts (Brussels-Capital, Flemish Brabant and Walloon Brabant) in 1995, but apparentment and the maintenance of the Brussels-Halle-Vilvoorde constituency spanning Brussels and part of Flemish Brabant resulted in the threshold remaining as if Brabant remained a single province until the division of Brussels-Halle-Vilvoorde in 2012.

That threshold is currently just 0.67 percent in the Netherlands, 4 percent in Austria, Norway and Sweden, and 5 percent in Germany.⁶ Though a higher share of the vote would be required to meet the national threshold within a single region, the threshold for each region is treated the same as the national threshold in these countries. The determinative nature of the national allocation significantly reduces or eliminates any disincentive from voting for a party that may not qualify for seats within the region. The national threshold may nevertheless discourage regional parties unable to meet it. Among these five countries, Friesland is the only region classified as ethnically distinct with a Frisian party requiring 18 percent of the region’s vote to win a seat under the low Dutch threshold. Of course, national thresholds may also discourage non-ethnic regional parties, as have emerged in Castilian-speaking Spanish regions, though they can also gain seats by winning constituency seats in all countries except the Netherlands.

Following Lublin (2017) the exclusion threshold for each region has been converted to exclusion magnitude—the district magnitude that produces the equivalent threshold. Exclusion magnitude equals: $\frac{100}{\text{Threshold of Exclusion}} - 1$. The natural log of exclusion magnitude serves as the measure of electoral system permissiveness, reflecting that the impact of one additional seat on system permissiveness is greater in smaller constituencies. As noted above, the same threshold in different constituencies does not, however, mean that the same set of parties necessarily overcome it. Maurice Duverger (1950) noted that majoritarian electoral systems promote a tendency towards two parties but that they do not have to be the same in each constituency.

⁶ The threshold for the Netherlands equals to one Hare quota. For the 1986 and 1990 elections in Austria, the Hare quotas in the states needed to qualify to receive a seat within one of the two upper tier constituencies determine the exclusion thresholds. In Germany, a party can also qualify to receive list mandates if it wins three constituency mandates, which aided the Party of Democratic Socialism (PDS) in 1994 and The Left in 2021. In 1990, the 5% threshold was applied separately in East and West Germany, which allowed the PDS to qualify for list seats. Norway did not have a national legal threshold until the 1989 election with district magnitude in each county determining the barrier to entry in earlier elections.

Beyond differences in the effects caused by different thresholds, variations in cleavages across regions may also lead to additional or fewer parties.

b. Ethnic Difference

The political science literature on party systems demonstrates that ethnic diversity leads to more political parties (Amorim Neto and Cox 1997; Clark and Golder 2006; Lago Peñas 2004; Lijphart 1994; Lublin 2017; Ordeshook and Shvetsova 1994). In general, the presence of additional cleavages has been theorized to spur party creation with ethnic identity cleavages forming one of the easier ways to garner political support. Ethnicity is used here as a less unwieldy term for linguistic, religious, racial, and regional as well as ethnic identities. Minority nationalist or regional parties have emerged in variety of ethnically or linguistically distinct regions, such as Scotland and Wales in the UK, Catalonia and the Basque Country in Spain, and Quebec in Canada. The party systems of Belgium and Northern Ireland are organized entirely along ethnic lines.

Most analyses of the impact of ethnic diversity on the number of parties at the national level utilize one of several fractionalization measures (e.g. Fearon 2003; Roeder 2001). This paper takes a simpler approach with *minority region* coded one for ethnically distinct regions and zero otherwise with the expectation that minority regions have more parties (H_2). Using ethnic fractionalization does not make sense at the regional level as it is the ethnic distinctiveness of the region that should stimulate party formation, rather than the level of ethnic diversity within the region. The fuzziness of ethnic community boundaries within key regions (e.g. Catalonia and Scotland) further recommends against attempting to calculate a fractionalization measure.

Regions coded as minority regions include Quebec and Nunavut in Canada; the Basque Country, the Balearic Islands, Catalonia, Galicia, Navarre and Valencia in Spain; and Friesland in the Netherlands. All possess languages distinct from the national or majority language.

Scotland, Wales and Northern Ireland, all recognized as distinct nations within in the UK, are also coded as minority regions. Each has a distinct regional language but all are little used compared to English even if they remain touchstones of distinctiveness. Following Hooghe and Marks (2016), all three regions of Belgium are classified as minority regions. Though Dutch-speaking Flanders contains a majority of Belgium's population, Dutch speakers were historically subjugated by the state. The Francophone minority dominates Brussels and Wallonia.

Whether a minority region has additional parties may depend on the electoral system. Many past studies the have found that ethnic diversity has a more sizeable impact on the number of parties in countries with permissive electoral systems (Amorim Neto and Cox 1997; Clark and Golder 2006; Filippov et al. 1999; Lublin 2017; Mylonas and Roussias 2008; Ordeshook and Shvetsova 1994; Powell 1982; Stoll 2008), leading to the expectation that *minority region x ln(exclusion magnitude)* should have a positive coefficient (H₃). However, other studies suggest the opposite relationship (H₄) because regionally concentrated minorities can fare quite well under majoritarian electoral systems Party (Harmel and Robertson, 1985; Montabes Pereira et al., 2006), as shown by the Bloc Québécois (BQ) and Scottish National Party (SNP).

c. Decentralization

There is a fierce and ongoing debate about the impact of decentralization on ethnic party formation and party formation more generally (Brancati 2008; Chhibber and Kollman 2004; Kollman and Worthington 2021; Lago-Peñas and Lago-Peñas 2011; Lublin 2012). Though decentralization is often seen to assuage ethnic divisions within a state, it also makes capturing a subnational government more desirable by endowing it with resources in the form of money or power over selected policy areas. This incentivizes ethnic minority parties, which find it much easier to enter government in a region where their co-ethnics compose a majority than in the country as a whole.

These parties can opt to compete in only regional elections, like the Parti Québécois, but there are also potential advantages to running in national contests. Regional parties can hold the balance of power and use their leverage to extract more resources or power from the center for their region, which they may also govern, as in the cases of Catalan and Basque nationalist parties. Campaigning in national elections also serves to promote the party brand and blame the center for regional problems. Virtually all these incentives may stimulate the creation of non-ethnic regional parties, as has occurred in various Spanish autonomous communities like Cantabria and La Rioja.

Despite the strength of this argument, it is far from clear that decentralization stimulates the creation of successful new parties (Lago-Peñas and Lago-Peñas 2011; Lublin 2012). National parties adopt regional identities to blur differences with regional parties, as with the PSOE's (Socialists) many regional branches or affiliates in Spain. Swiss parties frequently attach cantonal names to their party lists in national elections. Of course, not only national parties can attempt to use labels to their advantage. In Scotland, Labour brands itself as Scottish Labour but the Scottish National Party frequently references it as London Labour.

Decentralization varies across countries in its depth and in the type of powers possessed by regions. The Regional Authority Index (RAI) developed by Hooghe et al. (2016) highlights “self-rule” powers that give regions more autonomous control over their internal affairs as opposed to “shared rule” powers that enhance regional influence over the central government. Due to expanded opportunities for political influence at the center, shared rule should encourage regional parties to participate in national elections (H₅). This effect should be especially pronounced in minority regions, where it is easier to form identity-based ethnic or regional parties (H₆). Self-rule should not have the same effect. If it works as advocates for decentralization hope, greater autonomy should satisfy regional aspirations (H₇), especially in minority regions with a distinct identity (H₈).

Hooghe et al. (2016) assess five factors to calculate their measure of *self-rule*. Regions with

autonomous decision-making power have more *institutional depth* than regions that merely administer central government decisions or do not possess any regional administration. *Policy autonomy* captures the range of regional policy responsibilities. *Fiscal autonomy* increases with independent regional taxation powers, while *borrowing autonomy* increases with the ability to take on debt independently of the central government. Regions that have their own assembly and executive receive higher scores for *representation*. Self-rule can range from 0 to 18, but it currently spans only from 10 to 18 in the great majority of regions, though many regions had lower scores at the time of earlier elections also included in the dataset.⁷

Shared rule similarly has five components and ranges from 0 to 12. Regions score higher in *law-making* power to the extent that regional representatives determine national legislation. They hold more *executive control* when they help make national policy, and *fiscal control* when they negotiate with the central government over the distribution of its revenues. *Borrowing control* stems from the ability to help set subnational and national borrowing constraints. Regional governments also rate higher the more control that they have over *constitutional reform*. Currently, regions in Norway and Sweden along with England are rated 0 for shared rule. German states take on the highest values at 12 with Belgian regions not far behind at 11.5.⁸ Interactions of self-rule and shared rule with minority region assess the relationship between decentralization and the number of parties in ethnically distinct regions as compared to other regions.

a. Crisis Events

Major crises challenge existing party systems and provide opportunities for new parties.

⁷ England is the only region without self-rule in 2018. Regions in Belgium, Canada, the Netherlands, Norway and Spain had scores below 10 at the time of earlier elections included in the dataset.

⁸ The values for Belgian regions have gradually risen over the years. In 2018, the weighted mean values for shared rule for regions in other countries were 6.1 in Canada, 6.5 in for other UK regions,

Such crises may have no major impact on the party system (H₉) even as they result in an electoral wave with voters temporarily repudiating the ins and giving the outs a chance at power. The first election held after the Great Recession began in Spain largely exhibited this sort of outcome with the governing PSOE losing 15.1 percent of the vote with gains by the well-established conservative People's Party (PP) of 4.5 percent and by the far-left United Left (IU) of 3.0 percent. The relatively new centrist Union, Progress and Democracy (UPyD) also gained 3.5 percent but remained a small force electorally with a total vote share of 4.7 percent and seat share of 1.4 percent.

But crises may also cause substantial dislocation to the party system. Voters may hold existing parties responsible for mistakes that led to the crisis or view them as unable to handle it.

Dissatisfaction with existing parties may arise due to a crisis's ongoing severity undermining the images of past and present government parties. Discontent may also magnify the impact of problems previously seen as tolerable on voting behavior. In line with realignment theory in the U.S. (Reichley 1993; Sundquist 1973), crises may also exacerbate new issue cleavages that split existing parties and provide a strong basis for organizing support for a new party.

The strength of older cleavages declined with the end of the Cold War and general dominance of neoliberal economic policies. Differences between mainstream right and left parties narrowed.

Movement even closer towards the center by Christian Democrats and Social Democrats in Germany perhaps exemplified this trend. Yet new cleavages surrounding globalization, national identity and traditional values began to emerge with populist right and left as well as liberal parties giving voice to voter demands related to these issues even prior to the Great Recession or the COVID-19 pandemic. Yet these crises may have accelerated their growth.

7.5 in the Netherlands, 9 in Austria and 9.8 in Spain. Leaving aside the three Canadian territories, shared rule varied only a little, if at all, within a country.

Neither mainstream right or left parties had quick solutions to the economic pain felt by many voters. Populist right and left parties were quick to frame these issues around globalization, immigration and a decline in traditional social mores with liberal parties taking the other side.

The 2015 Spanish election seemingly exemplifies these trends and suggests that crises may roil the party system even if the effect is not immediate. Continuing discontent with the economy and with harsh measures adopted by the PP to address the budget deficit and banking crisis combined with increased frustration with long-time corruption by both the PP and PSOE. Two new national parties channeled this deep frustration among voters to break Spain's political duopoly.

Populist left-wing Podemos (and allies) garnered 20.7 percent of the vote. Citizens, a centrist, liberal party founded in opposition to Catalan nationalism, won 13.9 percent. Meanwhile, the governing PP's vote share tumbled by 16.3 percent and the PSOE vote share fell by a further 6.8 percent.

Echoing a Francoist or Trumpian approach, extreme-right populist Vox emerged in two 2019 elections, taking 10.1 percent in April and 15.1 percent in November.

This paper models the impact of three crisis events on the number of parties: the Great Recession, the COVID-19 pandemic, and Brexit. The national *proportion drop in GDP* from the first quarter of GDP decline to its nadir before growth resumed measures the impact of the Great Recession. This variable is coded with this value for all elections held starting with the first quarter that GDP fell and zero for all earlier elections. The Great Recession may generally create conditions favorable to the emergence of new parties, but the effect should be stronger in countries that experienced more severe drops in GDP (H_{10}).⁹

⁹ A dummy variable coded 1 for all elections held during or after the Great Recession also proved related to the number of parties, but the proportion GDP drop ties in more strongly with the theory of why crises should have an impact and has a greater empirical effect. The recession started in the first quarter of 2008 in Norway and Sweden, the second quarter in Belgium, Germany and the UK, the third quarter in Austria, the Netherlands and Spain, and the fourth quarter in Canada.

The effect of *COVID* is modelled through a dummy variable coded one for elections held after March 1, 2020 and zero for earlier elections. Like the Great Recession, the disruptions and new cleavages generated by COVID should make new parties more likely to appear (H₁₁). While Brexit was a major event for the European Union, its impact was far greater on the United Kingdom than other EU countries. Consequently, *Brexit* is coded one only for UK elections held after the June 2016 Brexit vote and zero for all other elections. Unlike the Great Recession and COVID, Brexit should reduce the number of parties (H₁₂). By eliminating the division within the Conservative Party and converting its leadership into a pro-Brexit party, it also eliminated the cleavage over Brexit that animated the UK Independence Party (UKIP), leading to its quick collapse even as the major parties continued to grapple with Brexit.¹⁰

Major crises do not operate isolated from political institutions, which may mediate the extent that crises result in party proliferation. If shared rule heightens divisions between regions and the center and produces more parties generally, crises may exacerbate its effect (H₁₃). Similarly, if self-rule tamps down the emergence of new regional cleavages, its effect may prove especially important in dampening the impact of major crises on the number of parties (H₁₄). Separate interactions of *proportion GDP drop* and *COVID* with *self-rule* and *shared rule* model how decentralization shapes the effect of crisis events.¹¹ More permissive electoral systems may also facilitate the creation of new parties in the wake of crises (H₁₅). Models containing separate interactions of *proportion GDP drop* and *COVID* with *ln(exclusion magnitude)* test this hypothesis.

¹⁰ Though UKIP never became a significant force in Scotland or Northern Ireland, Brexit is coded one for all four countries that compose the UK.

¹¹ Similar interactions are not examined for Brexit. England is the only region without decentralized institutions and only two elections have occurred since Brexit, so it demands too much of the data to add these interactions to the model.

Table 1 summarizes the 15 hypotheses examined here.

Table 1. Hypotheses

1. Regions with lower thresholds have more parties.
2. Minority regions have more parties.
3. Lower thresholds have a greater effect in minority regions.
4. Lower thresholds do not have a greater effect in minority regions.
5. Regions with higher levels of shared rule have more parties.
6. Higher levels of shared rule have a greater impact in minority regions.
7. Regions with higher levels of self-rule have fewer parties.
8. Higher levels of self-rule have a greater impact in minority regions.
9. Crises do not significantly impact the number of parties.
10. The number of parties increased in elections held after the start of the Great Recession in proportion to the size of the drop in a country's GDP.
11. The number of parties increased in elections held after the start of the COVID-19 pandemic.
12. Brexit reduced the number of parties in the UK.
13. Higher levels of shared rule heighten the positive association between crises and the number of parties.
14. Higher levels of self-rule heighten the negative association between crises and the number of parties.
15. The Great Recession and the COVID-19 pandemic resulted in more parties in regions with lower thresholds.

IV. Models and Analysis

Table 2 presents six cross-sectional time series generalized least squares models with clustered standard errors of the effective number of electoral parties. Country fixed effects are not shown but included in all models with the UK as the base term. Treating each region as a panel takes into account that the number of parties at time t is not independent of the number of parties at time $t-1$. Successive models progressively include more variables or interaction terms to build more complex models of the number of parties. These show the stability of coefficients even as the model becomes more complicated.

Table 2. GLS Models of Effective Number of Parties in National Elections by Region

	1	2	3	4	5	6
ln(Exclusion Magnitude)	.93 (.07)	1.00 (.07)	1.02 (.07)	.91 (.06)	.91 (.06)	.89 (.06)
Minority Region	.56 (.17)	.65 (.17)	.69 (.23)	.78 (.20)	.96 (.23)	.82 (.22)
ln(Exclusion Magnitude) x Minority Region	-.08 (.14)	-.09 (.14)	-.15 (.14)	-.25 (.10)	-.32 (.08)	-.31 (.08)
Self-Rule (0-18)		-.04 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)	-.02 (.01)
Self-Rule x Minority Region			-.06 (.02)	-.06 (.02)	-.07 (.02)	-.07 (.02)
Shared Rule (0-12)		.06 (.02)	.01 (.02)	-.01 (.02)	-.03 (.02)	-.02 (.02)
Shared Rule x Minority Region			.12 (.03)	.11 (.03)	.12 (.03)	.13 (.03)
Brexit x UK				-.74 (.19)	-.62 (.25)	-.54 (.22)
Proportion GDP Drop in Great Recession				16.07 (.68)	42.54 (5.21)	15.20 (5.35)
Proportion GDP Drop x Self-Rule					-2.66 (.41)	-1.12 (.37)
Proportion GDP Drop x Shared Rule					1.39 (.17)	1.00 (.16)
Proportion GDP Drop x ln(Exclusion Magnitude) COVID						3.34 (.58)
COVID				.79 (.07)	4.00 (.45)	4.25 (1.99)
COVID x Self Rule					-.25 (.03)	-.27 (.13)
COVID x Shared Rule					.06 (.02)	.06 (.03)
COVID x ln(Exclusion Magnitude)						-.03 (.16)
Constant	2.61 (.17)	2.58 (.18)	2.59 (.21)	2.51 (.15)	2.09 (.27)	2.42 (.23)
N	1476	1476	1476	1476	1476	1476
Groups	117	117	117	117	117	117
Wald chi squared	790.25	870.50	996.52	1882.20	2386.80	2380.40

Note: All models include country fixed effects with the UK as the base term. Each region is treated as a panel.

Clustered standard errors. Each model shows the coefficients with the standard errors in parentheses; together, they estimate the impact of a one unit change in the independent variable on ENPV.

a. Electoral System Permissiveness and Minority Regions

Model 1 includes only electoral system permissiveness as measured by $\ln(\text{exclusion magnitude})$ and minority region as independent variables. Model 2 adds self-rule and shared rule to look at the relationship of decentralization types to the number of parties with Model 3 also including interactions of minority region with each of these terms. Model 4 adds the three crisis variables with Model 5 also containing interactions of each with self-rule and shared rule, and Model 6 further includes interactions with $\ln(\text{exclusion magnitude})$.

Confirming a consistent finding of past work on electoral systems (Amorim Neto and Cox 1997; Clark and Golder 2006; Filippov, Mylonas and Roussias 2008; Ordeshook, and Shvetsova 1999; Hicken and Stoll 2011; Lago Peñas 2004; Lijphart 1994; Lublin 2017; 1994; Powell 1982; Rae 1967; Sartori 1986; Stoll 2008; Taagepera and Shugart 1989), all models indicate that there are more permissive systems result in more electoral parties (H_1), reflecting that lower thresholds reduce the barriers to electoral success and encourage the formation of additional parties. At the same time, in contrast to H_2 , the results do not suggest that minority regions have more parties. Graphing the relationship between $\ln(\text{exclusion magnitude})$ and the number of parties based on model 1 (not shown here) reveals that there is no statistically significant difference in the impact of $\ln(\text{exclusion magnitude})$ in minority and non-minority regions, which contradicts H_3 (lower thresholds have a greater effect in minority regions) but confirms H_4 (the null hypothesis). Examination of descriptive statistics reveal that minority regions have only slightly more parties than non-minority regions—an average of only 0.20 higher across all elections in countries with majoritarian systems and 0.12 in countries with proportional systems.

The smaller difference in countries with PR may reflect that the only minority region without a distinct regional party, Friesland, is in the Netherlands, the country with the most permissive electoral system.¹²

a. Decentralization and Minority Regions

Though the results seemingly do not conform to the common conclusion that ethnically diverse regions produce more parties, especially in countries in with more permissive electoral systems, the effect of decentralization on the number of parties is greater in minority regions. Model 2 confirms, more generally, that regions with higher levels of shared rule have more parties (H₅), but that the opposite is true in regions with greater self-rule (H₇).

Interactions of self-rule and shared rule with minority region in model 3 indicate that each relationship relies heavily on the impact in minority regions, as expected by H₆ and H₈. According to this model, a 4.2-point increase in self-rule—one standard deviation—predicts no significant change (0.07 fewer parties) in non-minority regions but 0.35 fewer parties in minority regions. But the difference between the number of parties in minority and non-minority regions is not statistically significant at any level of self-rule. The difference in the predicted number of parties between minority and non-minority regions is especially small for the values of self-rule ranging from 10 to 18 that cover all regions other than England in the dataset.

Similarly, a 4.4-point increase in shared rule, also one standard deviation, predicts no real change (0.11 fewer parties) in non-minority regions but 0.47 more in minority regions. These findings align with past studies that show that increases in self-rule weaken ethnoregional parties, but that

¹² The Frisian National Party runs in provincial but not national elections. The Netherlands has a permissive electoral system but a Frisian regional party would need to win a substantial share of the Friesland vote—roughly 17% in 2017—to exceed even the minimal Dutch threshold.

Though Wallonia's party system is separate from that of Flanders, the only seat-winning Walloon parties without analogs across the linguistic divide were two small right-wing populist parties (National Front and People's Party). The previously successful Walloon Rally declined prior to the first election in the dataset.

Looking closely at the results from model 6 reveals there is a significant difference in the number of parties in minority and non-minority regions only in countries with majoritarian electoral systems, which produce an estimated 0.7 more parties in minority regions.

shared rule has the opposite effect (Brancati 2008; Lublin 2014). The difference in the predicted number of parties between minority and non-minority regions, however, is significantly different only for levels of shared rule at the higher end of scale between 9.8 and 12.

b. Crises and Decentralization

Model 4 adds variables controlling for the basic impact of the three crises assessed here: Brexit, the Great Recession and COVID. In contrast to H₉—crises do not systematically increase or decrease the number of parties—each has a significant relationship to the number of parties. As expected by H₁₂, Brexit reduced the number of parties in the UK due to the collapse of UKIP as the Conservatives united to support Brexit in the wake of the vote. In contrast, the number of parties rose after the Great Recession and COVID, as predicted by H₁₀ and H₁₁. The effect of the Great Recession is modeled as proportionate to its severity with a one standard deviation decrease of 1.7 percent in GDP associated with 0.27 more parties. The most severe fall in GDP in the dataset—7.0 percent in Germany—predicts a rise of 1.12 parties. The challenges posed by the COVID-19 pandemic are associated with a further rise of 0.79 parties.

Neither the onset of the Great Recession nor COVID resulted in major changes to the relationship of electoral system permissiveness to the number of parties based on model 6. Figure 1 shows the predicted link between $\ln(\text{exclusion magnitude})$ and the number of parties in a country with a very weak drop in GDP of 1.8 percent equivalent to that of Norway compared to that of a country with a severe fall in GDP like experienced by Germany. Figure 2 shows the expected number of parties in countries before and after COVID-19. The general relationship between system permissiveness and the number of parties overwhelms any impact of either crisis on that relationship—even as each crisis increases the number of parties leaving aside electoral system permissiveness. Across the entire range of $\ln(\text{exclusion magnitude})$ from 0 to 5—equivalent to the difference between a single-member district and 149-member constituency with no legal threshold—

the number of parties rises by a minimum of 4.3 parties. The gap between the two lines in figure 1 grows slightly from 0.39 to 1.27, suggesting that stronger recessions may somewhat increase the impact of electoral system permissiveness. In figure 2, the gap shrinks by a statistically unmeaningful 0.16, indicating that the association between COVID-19 and the number of parties remains relatively constant regardless of electoral system permissiveness.

Figure 1. Exclusion Magnitude and ENPV Conditional on Recession

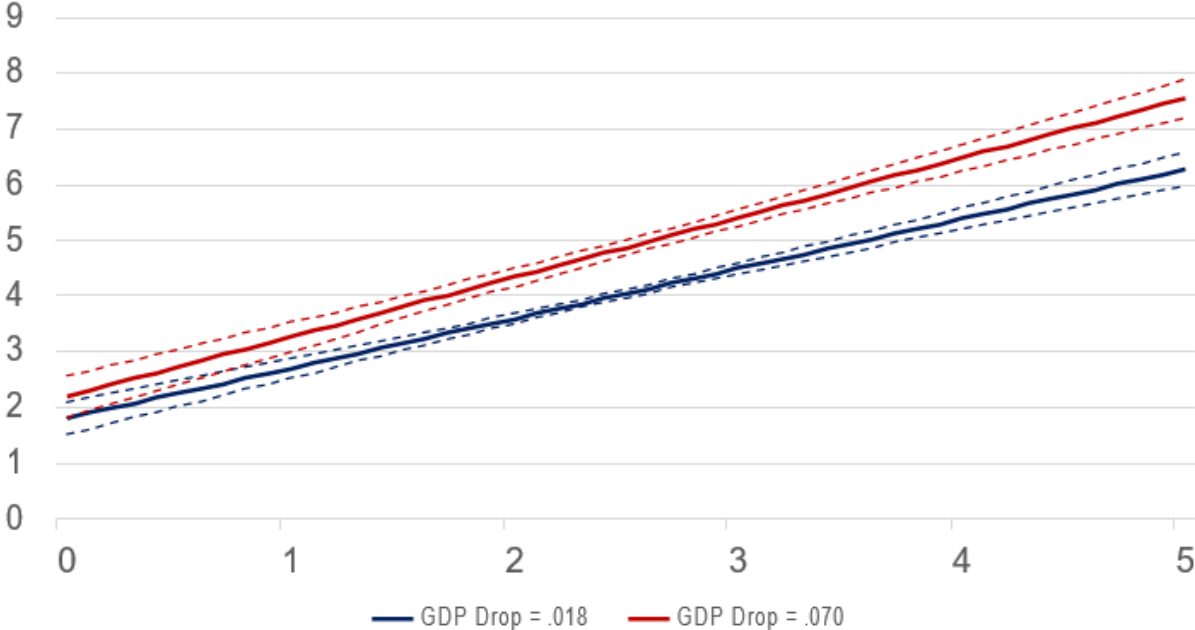
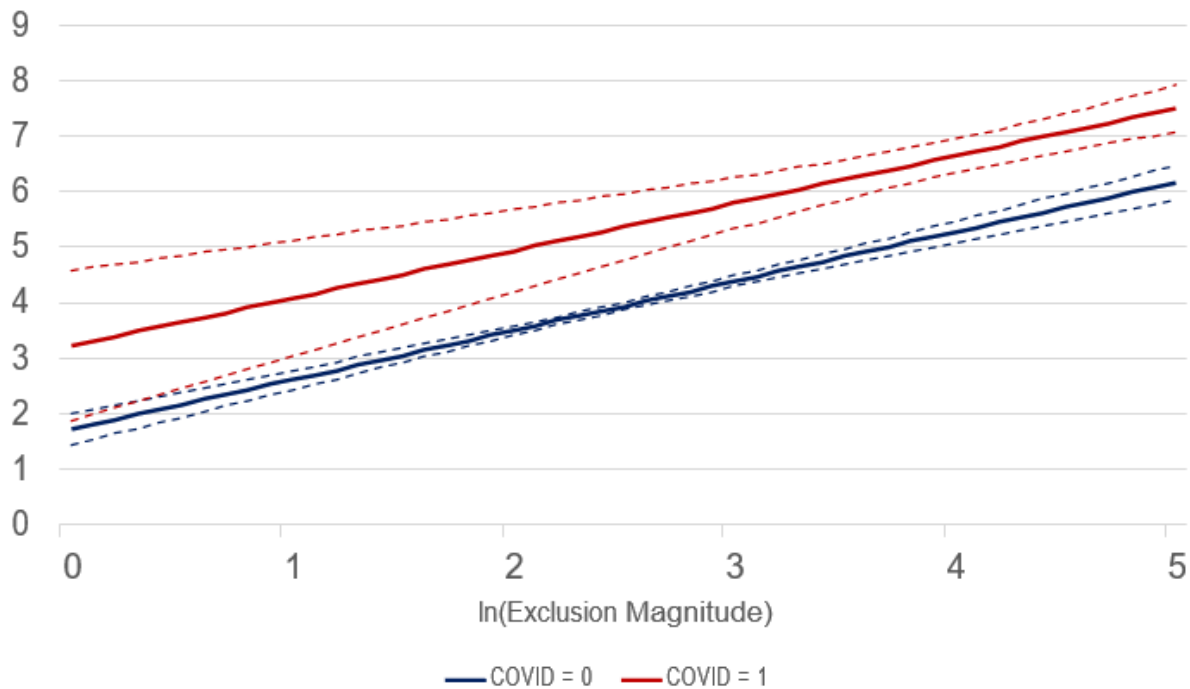


Figure 2. Exclusion Magnitude and ENPV Conditional on COVID



In contrast, models 5 and 6 reveal that the crises of the Great Recession and COVID-19 greatly alter the association between decentralization and the number of parties. Figures 3 and 4, based on model 6, show that self-rule mitigates the impact of impact of crises on the effective number of parties. Normally, self-rule has a mild reductive relationship with the number of parties 0.34 lower in a region with maximal self-rule (i.e. self-rule = 18) compared to a region in a comparatively low levels of self-rule in the database (i.e. self-rule = 10), as shown by the line in figure 4 before COVID-19 (i.e. COVID = 0). Both the COVID pandemic and the Great Recession seemingly amplified the number of parties in regions with less self-rule. After the start of the pandemic, the model indicates that regions with lower levels of self-rule (i.e. self-rule = 10) had 1.8 more parties than prior to the pandemic. Similarly, the model predicts that regions in countries that experienced a very strong recession with a maximal drop in GDP of .070 had 0.9 more parties than regions in countries where GDP fell by only .018. But regions with maximal self-rule saw no statistically

significant increase in the number of parties compared to prior to the crisis. If self-rule undermines the impact of crises, a causal link that would require underpinning by qualitative analysis not conducted here, it would indicate that this type of decentralization could serve as a powerful antidote to party multiplication resulting from political upheaval during system-challenging crises.

Figure 3. Self Rule and ENPV Conditional on the Great Recession

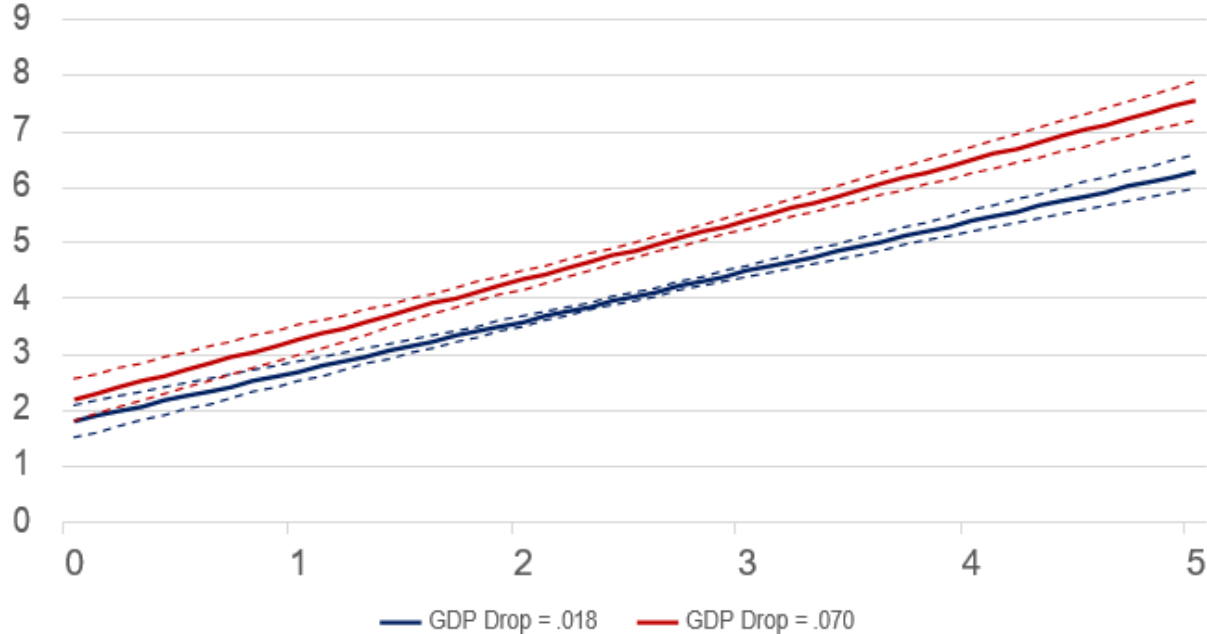
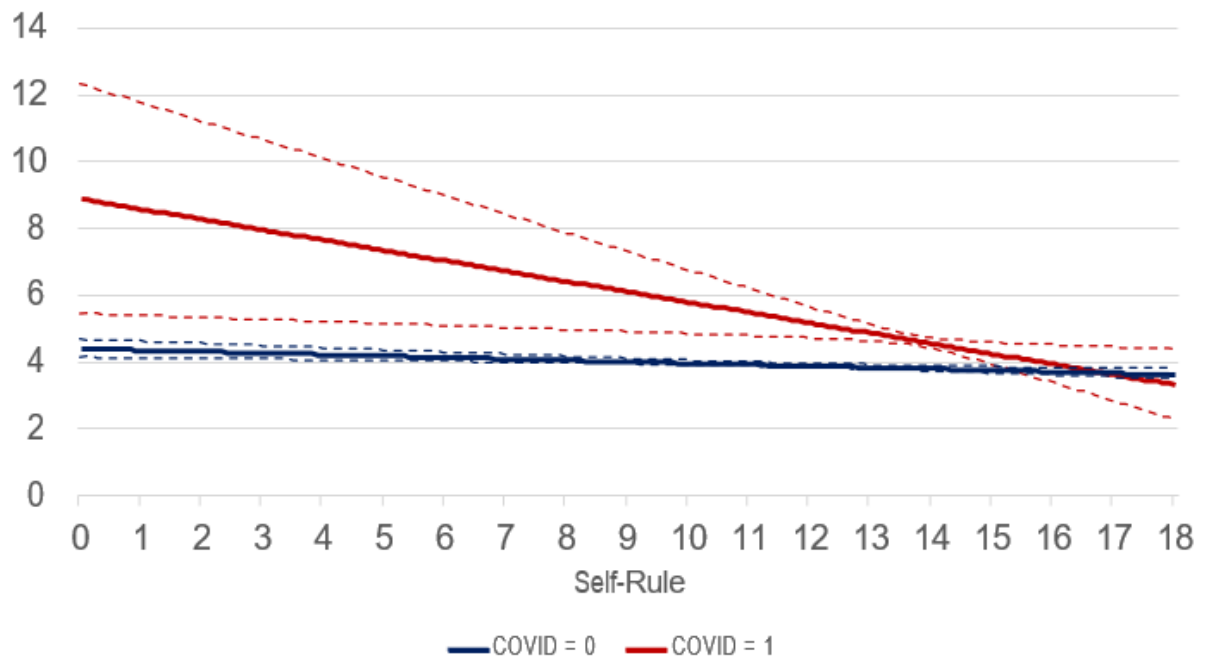


Figure 4. Self Rule and ENPV Conditional on COVID



Shared rule has the opposite effect. It magnifies the association between crises and the number of parties. As revealed in figures 5 and 6, based on model 6, regions in countries with high levels of shared rule (e.g. Belgium and Germany) have more parties than regions in countries without shared rule (e.g. Norway and Sweden). The number of parties in countries with maximal shared rule (i.e. shared rule = 12) is an estimated 0.14 higher than countries with no shared rule in normal, non-crisis periods, as shown by the line in Figure 6 prior to COVID-19. That gain jumped to 0.84 in a region with a recession equivalent to Germany's and 0.85 in the wake of COVID-19, though the gain after COVID-19 does not appear statistically significant.

The two types of decentralization have different relationships to the number of parties. In times of crisis, regions with high levels of shared rule, or power by regions at the center, exhibit greater party proliferation than regions in unitary states. But growth in the number of parties associated with crises is minimized, even eliminated, in regions with high levels of self-rule, or autonomy within the region. Both findings comport with past studies on ethnic and regional parties indicating that shared rule stimulates while self-rule undercuts their success (Brancati 2008; Lublin 2012).

Figure 5. Shared Rule and ENPV Conditional on the Great Recession

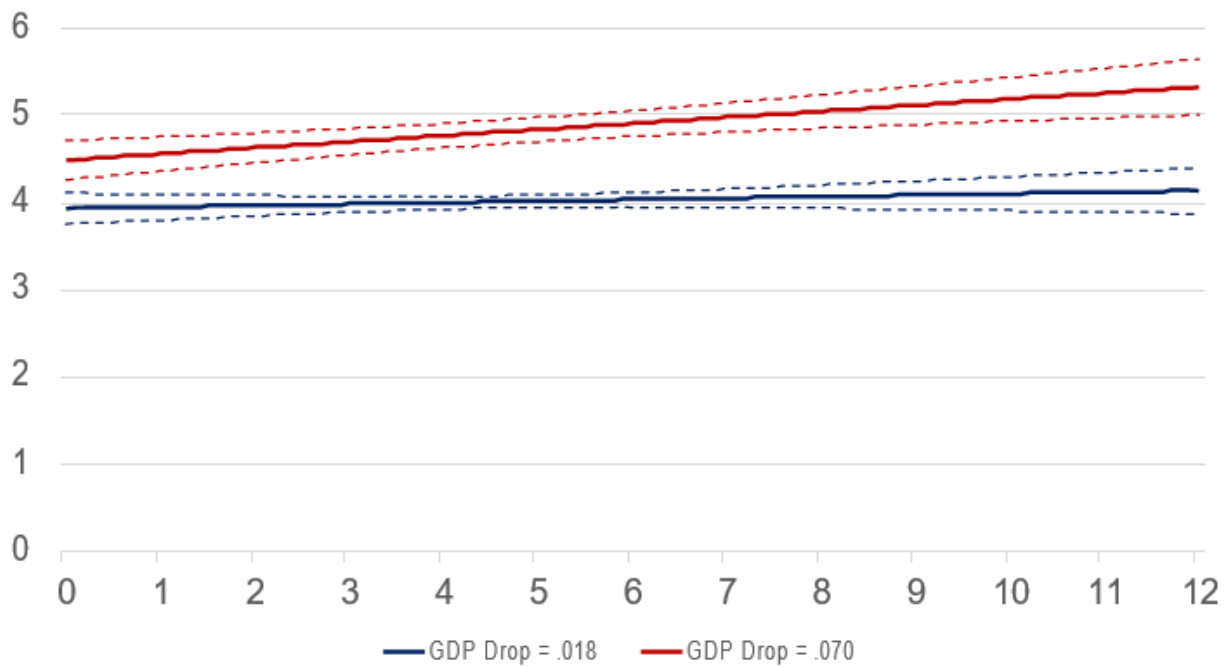
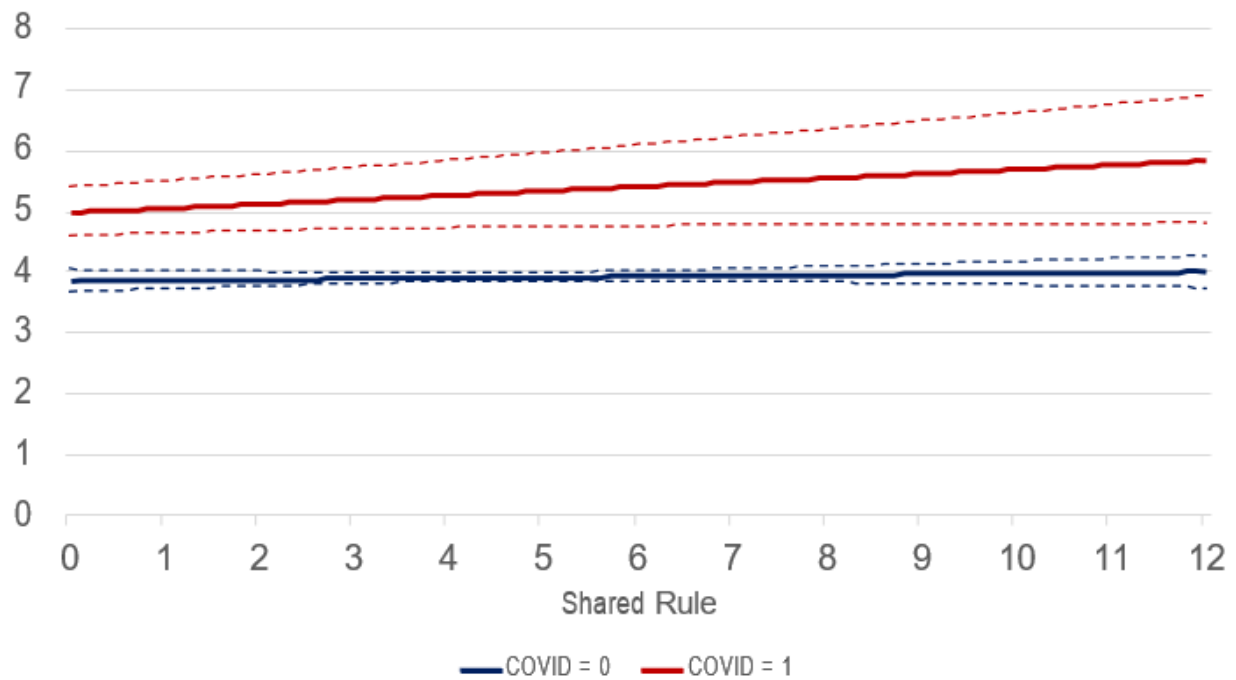


Figure 6. Shared Rule and ENPV Conditional on COVID



V. Conclusion

Broad-based crises like the Great Recession and COVID-19 spurred increases in the number of parties across regions. The nine western democracies may have been especially vulnerable to party system upheaval due to the relative staleness of cleavages that defined postwar party systems, as exhibited by the rise of green, ethnoregional and populist right parties. The challenges posed by the Great Recession and COVID-19 made establishment parties all the more vulnerable to challenge and propelled new cleavages to the forefront.

The relationship between crises and the number of parties, however, was mediated strongly by decentralization but not electoral system permissiveness. More permissive electoral systems have a strong positive relationship to the number of parties that changes little in times of crisis. In contrast, high levels of self-rule (i.e. autonomy) tended to mitigate increases in the number of parties associated with the Great Recession or COVID-19. But shared rule (i.e. power over the center) exacerbated the impact of the two crises on the number of parties. As decentralization is most strongly linked to the number of parties in minority regions, the lack of self-rule or high levels of shared rule may prove more destabilizing, at least to the party system, in multiethnic countries. This study provided a cross-regional, quantitative overview of the relationships between crises, decentralization, electoral systems and the number of parties. Making more solid causal inferences about these links requires more close examination and qualitative analysis of patterns within individual regions and countries. Nevertheless, the strong impact of crises and the mediating relationship of decentralization remains striking and provides strong clues as to why the number of parties increased significantly more in some regions but not others.

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