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**ABSTRACT**

We examine the impact of the Great Depression on the share of votes for right-wing anti-system parties in elections in the 1920s and 1930s. We confirm the existence of a link between political extremism and economic hard times as captured by growth or contraction of the economy. What mattered was not simply growth at the time of the election but cumulative growth performance. But the effect of the Depression on support for right-wing anti-system parties was not equally powerful under all economic, political and social circumstances. It was greatest in countries with relatively short histories of democracy, with existing extremist parties, and with electoral systems that created low hurdles to parliamentary representation. Above all, it was greatest where depressed economic conditions were allowed to persist.

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## 1. Introduction

The impact of the global credit crisis and Great Recession has been more than just economic. In both parliamentary and presidential democracies, governments have been ousted. Hard economic times have increased political polarization and bred support for nationalist and right-wing political parties, including some that are actively hostile to the prevailing political system. All this gives rise to fears that economic hard times will feed political extremism, as it did in the 1930s.

Indeed, memories of the 1930s inform much contemporary political commentary, just as they have informed recent economic commentary. But exactly what impact the interwar depression and economic crisis had on political outcomes and the rise of right-wing anti-system parties in particular has not been systematically studied. To be sure, there are statistical studies linking unemployment to the rise of the National Socialists in Germany, and competing studies disputing that link (see for example King *et al.* 2008, O’Loughlin 2000 and Stögbauer 2001). Qualitative studies analyze the breakdown of democracy and the rise of authoritarianism in Germany and elsewhere (see inter alia Linz and Stepan 1978, Berg-Schlosser and Mitchell 2000, Saalfeld 2002). A few informal analyses of the 1930s have attempted to connect macroeconomic distress to political outcomes more broadly (see e.g. Berg-Schlosser and Mitchell 2000). But a systematic study that looks across countries and asks not just whether there was a link between the severity of the interwar Depression and the rise of right-wing anti-system parties, but also whether there were economic, political and social conditions under which that link was especially tight, has not been undertaken.<sup>1</sup>

That is our goal in the present paper. We study the share of votes for anti-system parties, defined as parties that explicitly advocate the overthrow of a country’s political system, in elections between World Wars I and II. We focus on right-wing rather than left-wing anti-system parties since it was right-wing parties, in particular, that made visible and troubling electoral progress in the 1930s.<sup>2</sup> And it is again right-wing extremist parties that have seemingly made the greatest electoral gains in response to recent economic hard times (Fukayama 2012).

We confirm the existence of a link between political extremism, so measured, and economic hard times as captured by the decline in GDP. But we also show that a year or two of contraction were not enough to produce a large increase in support for extremism: longer and deeper GDP contractions were what did the damage.

Furthermore, where the effect of the Depression on political outcomes was most pronounced depended on historical circumstances conducive to nationalist sentiment, such as whether a country had been on the losing side in

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<sup>1</sup> To our knowledge.

<sup>2</sup> However, we also briefly report the results of similar exercises examining votes for left-wing anti-system parties.

World War I. It depended on whether extremist right-wing parties had a pre-existing political base in parliament. It depended on whether a country had been a democracy prior to 1914.

We also find evidence that support for right-wing anti-system parties depended on the structure of the electoral system. Specifically, it depended on the minimum electoral threshold, defined in terms of the share of the vote that a party had to achieve in order to gain parliamentary representation. We confirm that the electoral threshold influenced the extent to which fascist parties were able to gain seats in parliament.

The conclusion is that while there was a link between economic hard times and political extremism in the 1930s, it was not a mechanical one.

## 2. Hypotheses

The rise in support for anti-system parties in the interwar years has attracted considerable attention. Understandably so, for the threats faced by democratic systems were real. While fully 24 European regimes can be considered democratic in 1920, this number had fallen to 11 by 1939 (Capoccia 2005). In the tumultuous conditions of the 1930s, National Socialist and Communist parties, both of which fall under the anti-system rubric, along with a number of less well known anti-system parties gained electoral support at the expense of parties committed to democracy.

Explanations for political extremism in this period fall into four broad categories: economic factors, social cleavages, external influences including the legacy of the First World War, and institutional characteristics. Authors from Lipset (1959) to Acemoglu and Robinson (2006) have suggested that the more economically developed (more “modern”) a nation, the greater the likelihood that democracy will not only be established but be secured. Attempts to capture modernization in the sense of Lipset have used measures such as GDP per capita, education, and urbanization. Urbanization is also related to the work of Moore (1966), who argued that democracy and agrarian society are a difficult marriage owing to the interest of large landowners in maintaining their monopoly of land ownership. Moore believed that the transition to democracy and the durability of its institutions were a function of the nature of the earlier transition from feudalism to democracy.<sup>3</sup>

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<sup>3</sup> Moore’s thesis was that capitalist authoritarianism emerges when politically powerful large landowners, the military and a bourgeoisie of medium strength form a coalition. Powerful landlords, an industrial bourgeoisie that is less powerful than the landed classes, and a strong military-industrial complex are conducive to authoritarianism, while traditional authoritarianism together with mass mobilization is a recipe for fascism. His view is consistent with the *Sonderweg* approach to German political development according to which a reactionary Junker-dominated elite slowed the development of liberal democracy before World War I. For a critique of the *Sonderweg* approach see Kocka (1988). Considerable controversy surrounds the question of whether these arguments can be applied to the interwar years and to just how they must be adapted in order to do so (see *inter alia* Luebbert 1987).

Support for extremist parties and the instability of democratic systems have also been linked to economic performance. The difficult economic conditions of the interwar years are widely cited as a factor in the rise of fascist parties (Frey and Weck 1983, Payne 1996). Arguments connecting unemployment to disaffection with democratic systems are widespread (see for example the contributions to Berg-Schlosser and Mitchell 2000). High inflation in the 1920s is seen as undermining confidence in the ability of mainstream parties to manage the economy. The collapse of prices, production and financial stability in the 1930s is seen as working in the same direction.<sup>4</sup>

A second set of explanations emphasizes social differentiation. In this view, ethnolinguistic, religious and class cleavages are fault lines complicating the development of social consensus and hindering the adoption of a concerted response to economic crisis (Gerritis and Wolfram 2005, Luebert 1987). This line of argument features prominently in the literature on post-World War I Europe, where new nations were created with little regard for ethnic and religious considerations. That the resulting populations were heterogeneous posed a challenge for newly-established democratic systems.<sup>5</sup>

Third, the legacy of the First World War receives considerable attention as a factor shaping the interwar political landscape (Holzer 2002). Warring nations suffered catastrophic losses of men and matériel as well as domestic hardship. The Allied blockade subjected the civilian populations of Germany and Austria-Hungary to painful shortages, and rather than ending with the Armistice these continued until Germany agreed under duress to sign the Treaty of Versailles. Combatants on both sides returned home feeling that their governments had failed to adequately protect them. Since they had been acclimatized by military service to authoritarian forms of organization, when they experienced economic hardships they blamed their governments for failing to provide adequate economic security and entertained authoritarian alternatives (James and Müller-Luckner 2002).

War also had a financial legacy. High levels of indebtedness placed countries on an unstable financial footing and limited the ability of governments to produce favorable economic outcomes (Berg-Schlosser and Mitchell 2000). More generally, the terms of the postwar settlement have been seen as contributing to the rise of fascism and political instability (Boemeke 1998). The Versailles Treaty dissolved the Austro-Hungarian Empire and arbitrarily redrew borders, fanning resentment, tension and instability. Ethnic groups were splintered by new borders, and many of the successor states of the Austro-Hungarian Empire were saddled with high levels of ethnic fractionalization. Reparations and limits on national autonomy were seen as excessively harsh by the defeated powers,

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<sup>4</sup> An important determinant of the rise of anti-system parties in the 1930s may thus have been how much economic policy space governments had to counter the slump. Borchardt (1991) famously emphasizes German Chancellor Brüning's lack of room for maneuver under the gold standard as resulting in deflationary overkill that contributed to the Nazi's rise to power. More broadly, Saalfeld (2002) is an example of an author who argues that an active economic policy was important for limiting the rise of political extremism.

<sup>5</sup> In a recent paper, Voigtlaender and Voth (2011) uncover a striking correlation between anti-Semitic pogroms during the Black Death and votes for the Nazis in the 1920s, suggesting a depressingly efficient cultural transmission mechanism preserving anti-Semitic attitudes over time.

assuring political support for nationalist campaigns for annulment. In extreme cases like Germany, the Versailles Treaty came to be identified with parliamentary democracy, ultimately posing a threat to the Weimar State itself (Berg-Schlusser and Mitchell 2002).

Fourth, certain political and constitutional systems created more scope for anti-system parties to gain influence. Hermens (1941) famously held that proportional representation electoral systems led to high levels of party fractionalism and government instability and fostered the rise of anti-system parties.<sup>6</sup> Lipset (1959) similarly suggested that proportional representation amplified the voice of narrow interests across the political spectrum. Lijphart (1994) influentially argued that the openness of the political system to new or small parties, whether due to the proportionality of the electoral system or to the effective threshold defined in terms of the share of total votes that a party had to attract in order to win parliamentary representation, was an important determinant of support for extremist parties.<sup>7</sup>

There may have been other institutional factors militating in favour of or against extremist right-wing parties in this period. An influential tradition associated with Almond and Verba (1989) argues that political culture is an important determinant of the durability of democracies. The “civic culture” which for these authors is a crucial ingredient of democratic stability is transmitted between generations in the home, in schools, and in the broader society, in part as a result of the exposure of people to the democratic system itself (Almond and Verba 1989, pp. 367-8). Diamond (1999) also stresses the role of political culture in consolidating democracy, arguing that the embrace of democratic values will be enhanced by exposure to successful democracy. In a similar vein, Putnam et al. (1993) argue that social capital is essential for making democracy work effectively. More recently, Persson and Tabellini (2009) have argued that countries with longer histories of democracy accumulate democratic capital, which increases the probability that they will remain democratic. These analyses suggest that extremists could have benefitted more from the Depression in countries without a well-developed political tradition and poorly endowed with social capital.

### **3. Previous Analyses**

The most extensive multivariate analysis of the survival of democracies in the interwar period of which we are aware is Berg-Schlusser and Mitchell (2000, 2002). The authors use qualitative-comparative analysis and event histories to

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<sup>6</sup> Karvonen and Quenter (2002) similarly focus on the impact of electoral and party systems; they too suggest that proportional representation leads to party fragmentation that in turn gives rise to political extremism, although not all their evidence is consistent with the hypothesis.

<sup>7</sup> The steps that incumbent governments took in defense of democracy can also explain the survival of some democratic systems and the failure of others (Capoccia 2005). In some cases the rise of extremist parties was countered by incumbent governments both through coercion of extremist groups and by the outright banning of political parties. In some cases democratic rights were suspended, it was claimed, in order to safeguard the political system.

analyze factors influencing the breakdown of democratic systems.<sup>8</sup> While they conclude that no single factor can explain the cross-country variance in regime survival, they find support for modernization theory as well as for the idea that the depth of social cleavages is positively associated with democratic breakdown.<sup>9</sup>

For additional studies using more familiar methods, one must look outside the period. Jackman and Volpert (1996) examine the determinants of the success of extreme right-wing parties between 1970 and 1990. They estimate a Tobit model and find that votes for extreme right-wing parties are negatively related to the electoral threshold and positively related to the unemployment rate, and that the effective number of parties (the degree of multi-partism) is positively associated with a higher extreme-right vote. Acknowledging that electoral thresholds and multi-partism may be interdependent, the authors also analyze the interaction of the two variables.<sup>10</sup> They find that while electoral thresholds have little impact on the vote for extreme right-wing parties when the effective number of parties is low, higher thresholds have a significant dampening effect on such votes when the effective number of parties is high. Similarly, while the effective number of parties does not have much effect on the extreme right-wing vote in the presence of high effective thresholds, it does have such an effect when electoral thresholds are low.<sup>11</sup>

Golder (2003) similarly estimates a Tobit model of the vote shares of extreme right-wing parties in Western Europe between 1970 and 2000. He finds that immigration and unemployment are important for explaining their electoral performance. However, his results suggest that unemployment has no effect on right-wing populist votes when the number of immigrants is low: it is the interaction between economic hard times and the presence of immigrants that boosts extremism. Knigge (1998), in contrast, rejects the hypothesis that unemployment breeds support for right-wing parties.

Ponticelli and Voth (2011) look not at electoral outcomes but at indicators of social unrest (demonstrations, assassinations, riots, general strikes and attempted revolutions), which they relate to changes in GDP and other variables (including measures of public expenditure and budget cuts, which are their particular focus) in a sample that encompasses the interwar years. While their measures of social unrest are not the same as the electoral outcomes of concern to us here, they are likely to be correlated. It is suggestive therefore that in most specifications they find a negative correlation between growth and social unrest even when controlling for other factors.

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<sup>8</sup> Formulated by Ragin (1987), QCA allows for the formal analysis of qualitative evidence using Boolean algebra rather than correlation. Event history analysis can be used to determine the factors that influence the probability of a certain event occurring, in this case the “event” being the breakdown of democracy.

<sup>9</sup> They do not find evidence supporting the hypothesis that the structure of the electoral system played an important role.

<sup>10</sup> This observation of potential interdependence draws on Lijpart’s (1994) study of post-World War II electoral systems.

<sup>11</sup> For example under proportional representation.

We conclude that while there are some studies of the link between economic conditions and support for anti-system parties in the 1930s, as well as related literature on other periods, a systematic investigation of the connections between the interwar slump and political extremism internationally has yet to be undertaken.

#### 4. Electoral Data

Our data set is made up of 171 elections in 28 countries between 1919 and 1939. The sample is weighted toward Europe, since interwar elections were disproportionately European, but we also include observations for North America, Latin America, Australia and New Zealand (all elections for which we could obtain information). The data on election results are compiled principally from Capoccia (2005), Mackie and Rose (1991), Nohlen (2005) and Nohlen and Stöver (2010), supplemented by Sternberger and Vogel (1969) for Yugoslavia and the Czech Statistical Office website for Czechoslovakia.

Anti-system parties are defined, following Sartori (1976), as parties that “would change, if it could, not the government, but the system of government.” They include fascist, monarchist and secessionist parties on the right and communist parties on the left. The main sources used to identify such parties are Capoccia (2002, 2005).<sup>12</sup> Right-wing parties classified as anti-system range from obvious cases like the NSDAP in Germany to the Arrow Cross in Hungary and the Iron Guard in Romania.<sup>13</sup> In what follows we focus on right-wing anti-system parties, since these are the principal anti-system parties that gained power in European countries in the interwar period and because this is the case that resonates most with current concerns. Where we find contrasting results for left-wing anti-system parties, however, we report these as well. While not all right-wing anti-system parties were fascist, strictly speaking, we will for the sake of brevity refer interchangeably to “fascists”, “extreme right-wing parties” and “right-wing anti-system parties” in what follows. Appendix Table 1 lists for each country the parties classified as anti-system on both the left and right.

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<sup>12</sup> Professor Capoccia was kind enough to provide us with the underlying data.

<sup>13</sup> The classification of parties is not always straightforward. An example is Ioannis Metaxas’ Free Thinkers’ Party in Greece. Although there is some debate as to whether this party should be defined as “fascist” or “ultra-nationalist”, its extremist nature justifies its inclusion as a far-right anti-system party in our analysis. As our classification is based on party ideologies which may not have been constant over time, some parties are classified as anti-system in specific periods only. This applies, for example, to the DNVP in Germany between 1929 and 1933, whose ideological shift to the right ultimately facilitated the seizure of power by the NSDAP in 1933.



**Table 1. Election results for anti-system parties**

	Last Pre 1929			Peak Post 1929			Coup/End Democ (post1929)	Year	Change seats	Change votes
	% seats	% votes	Year	% seats	% votes	Year				
Argentina	0	0	1928	0	0.5	1930	YES	1930	0	0.5
Australia	0	0	1929	0	1.3	1934	NO	-	0	1.3
Austria	7.2	8.5	*	10.8	9.8	1930	YES	1933	3.6	1.4
Belgium	6.4	8.2	1929	22.8	24.7	1936	NO	-	16.4	16.5
Bulgaria	0	2.5	1927	11.4	13	1931	YES	1934	11.4	10.5
Canada	0	0	1926	0	0.7	1935	NO	-	0	0.7
Chile	0	0	1925	8.2	7.7	1937	NO	-	8.2	7.7
Czechoslovakia	16	.	1929	32.4	25.5	1935	NO	-	16.4	NA
Denmark	0	0.3	1929	2.7	4.2	1939	NO	-	2.7	3.9
Finland	25.5	28	1929	21	19	1930	NO	-	-4.5	-9
France	8.9	.	1928	19.8	.	1936	NO	-	10.9	.
Germany	13.4	13.2	1928	59.6	58.3	1932	YES	1933	46.2	45.1
Greece	0.4	6.7	1928	7.3	9.7	1936	YES	1936	6.9	3
Hungary	0.8	3.8	1926	17.4	22.8	1939	NO	-	16.6	19
Ireland	0.7	1.1	1927	0	0.1	1932	NO	-	-0.7	-1
Italy	11	6.2	1921	NA	NA	1936	YES	-	NA	NA
The Netherlands	2	2	1929	7	7.6	1937	NO	-	5	5.6
New Zealand	0	0	1928	0	0.1	1935	NO	-	0	0.1
Norway	2	4	1927	0	4	1933	NO	-	-2	0
Poland	1.1	1.9	1928	NA	NA	1936	NO	-	NA	NA
Romania	0	1.2	1928	27.2	25.1	1937	YES	1938	27.2	23.9
Spain	.	.	1928	16.2	.	1936	YES	1936	NA	NA
Sweden	3.5	6.4	1928	3.5	8.9	1932	NO	-	0	2.5
Switzerland	1	1.8	1928	2.1	2.6	1939	NO	-	1.1	0.8
United Kingdom	0	0.2	1929	0.2	0.1	1935	NO	-	0.2	-0.1
United States	0	0	1928	0	0	1936	NO	-	0	0
Uruguay	0.8	1.3	1928	1.6	2	1931	YES	1933	0.8	0.7
Yugoslavia	0	0	1927	NA	NA	1936	No	-	NA	NA
MEAN	3.73	3.89		10.85	10.77				7.43	6.77
MEDIAN	0.8	1.8		7	7.6				2.7	1.4

Notes: \* Last votes data are for 1923, last seats data for 1927. "Pre-1929" elections include elections held in 1929. Coup/End Democ refers to any suspension of democracy, be it by physical force or by peaceful takeover by an authoritarian regime.

**Table 2. Election results for communist parties**

	Last Pre 1929			Peak Post 1929			Coup/End Democ (post1929)	Year	Change seats	Change votes
	% seats	% votes	Year	% seats	% votes	Year				
Argentina	0	0	1928	0	0.5	1930	YES	1930	0	0.5
Australia	0	0	1929	0	1.3	1934	NO	-	0	1.3
Austria	0	0.7	*	0	0.6	1930	YES	1933	0	-0.1
Belgium	0.5	1.9	1929	4.5	6.1	1936	NO	-	4	4.2
Bulgaria	0	2.5	1927	11.4	13	1931	YES	1934	11.4	10.5
Canada	0	0	1926	0	0.7	1935	NO	-	0	0.7
Chile	0	0	1925	4.2	4.2	1937	NO	-	4.2	4.2
Czechoslovakia	10	10.2	1929	10	10.32	1935	NO	-	0	0.12
Denmark	0	0.3	1929	2	2.4	1939	NO	-	2	2.1
Finland	11.5	13.5	1929	0	1	1930	NO	-	-11.5	-12.5
France	2.3	11.3	1928	11.8	15.3	1936	NO	-	9.5	4
Germany	11	10.6	1928	17.1	16.9	1932	YES	1933	6.1	6.3
Greece	0	1.4	1928	5	5.8	1936	YES	1936	5	4.4
Hungary	0	0	1926	0	0	1939	NO	-	0	0
Ireland	0.7	1.1	1927	0	0.1	1932	NO	-	-0.7	-1
Italy	2.8	4.6	1921	NA	NA	1936	YES	-	NA	NA
The Netherlands	2	2	1929	3	3.4	1937	NO	-	1	1.4
New Zealand	0	0	1928	0	0.1	1935	NO	-	0	0.1
Norway	2	4	1927	0	1.8	1933	NO	-	-2	-2.2
Poland	1.1	1.9	1928	NA	NA	1936	NO	-	NA	NA
Romania	0	0	1928	0	0	1937	YES	1938	0	0
Spain	.	.	1928	3.8	.	1936	YES	1936	NA	NA
Sweden	3.5	6.4	1928	3.5	8.3	1932	NO	-	0	1.9
Switzerland	1	1.8	1928	2.1	2.6	1939	NO	-	1.1	0.8
United Kingdom	0	0.2	1929	0.2	0.1	1935	NO	-	0.2	-0.1
United States	0	0	1928	0	0	1936	NO	-	0	0
Uruguay	0.8	1.3	1928	1.6	2	1931	YES	1933	0.8	0.7
Yugoslavia	0	0	1927	NA	NA	1936	No	-	NA	NA
MEAN	1.82	2.8		3.21	4.02				1.3	1.14
MEDIAN	0	1.3		1.6	1.9				0	0.7

Notes: \* Last votes data are for 1923, last seats data for 1927. "Pre-1929" elections include elections held in 1929. Coup/End Democ refers to any suspension of democracy, be it by physical force or by peaceful takeover by an authoritarian regime.

**Table 3. Election results for right-wing anti-system parties**

	Last Pre 1929			Peak Post 1929			Coup/End Democ (post1929)		Change	Change
	% seats	% votes	Year	% seats	% votes	Year		Year	seats	votes
Argentina	0	0	1928	0	0	1930		1930	0	0
Australia	0	0	1929	0	0	1934		-	0	0
Austria	0	0	*	4.8	9.2	1930		1933	4.8	9.2
Belgium	0	0	1929	18.3	18.6	1936		-	18.3	18.6
Bulgaria	0	0	1927	0	0	1931		1934	0	0
Canada	0	0	1926	0	0	1935		-	0	0
Chile	0	0	1925	4	3.5	1937		-	4	3.5
Czechoslovakia	6	.	1929	22.4	15.18	1935		-	16.4	NA
Denmark	0	0	1929	0.7	1.8	1939		-	0.7	1.8
Finland	14	14.5	1929	21	18	1930		-	7	3.5
France	6.6	.	1928	7.9	.	1936		-	1.3	NA
Germany	2.4	2.6	1928	43.9	43.2	1932		1933	41.5	40.6
Greece	0.4	5.3	1928	2.3	3.9	1936		1936	1.9	-1.4
Hungary	0.8	3.8	1926	17.4	22.8	1939		-	16.6	19
Ireland	0	0	1927	0	0	1932		-	0	0
Italy	8.2	1.6	1921	NA	NA			-	NA	NA
The Netherlands	0	0	1929	4	4.2	1937		-	4	4.2
New Zealand	0	0	1928	0	0	1935		-	0	0
Norway	0	0	1927	0	2.2	1933		-	0	2.2
Poland	0	0	1928	NA	NA			-	NA	NA
Romania	0	1.2	1928	27.2	25.1	1937		1938	27.2	23.9
Spain	.	.		3.5	.	1933		1936	NA	NA
Sweden	0	0	1928	0	0.7	1936		-	0	0.7
Switzerland	0	0	1928	0.5	1.5	1935		-	0.5	1.5
United Kingdom	0	0	1929	0	0	1935		-	0	0
United States	0	0	1928	0	0			-	0	0
Uruguay	0	0	1928	0	0	1931		1933	0	0
Yugoslavia	0	0	1927	NA	NA			-	NA	NA
MEAN	1.42	1.16		7.12	7.39				6.01	5.79
MEDIAN	0	0		0.7	1.8				0.6	1.1

Notes: \* Last votes data are for 1923, last seats data for 1927. "Pre-1929" elections include elections held in 1929. Coup/End Democ refers to any suspension of democracy, be it by physical force or by peaceful takeover by an authoritarian regime.

Tables 1-3 show the changes in seats and votes across the Great Depression divide for all anti-system parties, for communist parties and for right-wing anti-system parties. In each case we compare the last election prior to 1929 with the post-1929 election in which the relevant party or parties achieved their peak vote share.<sup>14</sup>

Table 1 shows that the number of seats and votes for anti-system parties rose significantly following the onset of the Depression in 1929. The means rose from fewer than 4 per cent to almost 11 per cent, and the medians from less than 2 per cent to over 7 per cent. The same increases are evident for communist and fascist parties separately (Tables 2 and 3), although the increase across the 1929 breakpoint is more pronounced for the fascist parties in Table 3.<sup>15</sup>

A considerable variety of country experience is summarized in the tables. In countries like Germany and Czechoslovakia, a relatively high pre-Depression anti-system vote rose even higher after 1929. In Germany roughly 13 per cent of votes and seats went to anti-system parties in 1928, while anti-system parties took almost 60 per cent of all votes and seats in November 1932, a huge increase.<sup>16</sup>

<sup>14</sup> For Germany we consider the July and November 1932 elections, depending on the party or parties being considered, since these were more accurate expressions of popular opinion than the 1933 election.

<sup>15</sup> Suggesting where we are likely to see the largest effects in the multivariate analysis that follows.

<sup>16</sup> Tables 1-3 rely on Capocchia's classification, according to which the DNVP was not anti-system in 1928 but had become so by 1932 (see above). This switch obviously increases the measured electoral gains of anti-system parties. Alternatively, one could classify not only the DNVP but the DVP as well as anti-system throughout. In this case, the increase in the total anti-system vote in Germany was from 36.1 per cent in 1928 to 60.2 per cent in November 1932, a still sizeable 24

By contrast, in Finland, the country in our sample with the highest anti-system vote before the Depression (28 per cent in 1928), the anti-system vote declined to 19 per cent in 1930. In Bulgaria and Romania, anti-system parties that had garnered almost no votes and seats before the Depression won large numbers of votes in its wake. In Ireland and Norway, in contrast, small anti-system parties remained small.

Although fascist and other right-wing parties were often most successful in harnessing anti-system support, this was not uniformly the case. While the extreme right saw its support rise dramatically in Romania, the Communist Party benefited the most from the Depression in neighbouring Bulgaria. Although Austria, Belgium, Czechoslovakia, Germany and Hungary all saw substantial increases in the extreme right vote, it was Communists that gained support in Chile, Greece and France. In Finland, the overall decline in anti-system votes masked a big decline in the Communist vote and an increase in the fascist vote.

## 5. Methods

Our aim is to estimate the determinants of vote shares in interwar elections.<sup>17</sup> The explanatory variable of special interest is the change in real GDP. GDP data are from Maddison (2010) supplemented by Ivanov (forthcoming) for Bulgaria.

In some regressions we consider, in addition, the effective electoral threshold (the minimum share of the vote a party had to attract in order to gain parliamentary representation), the percentage of the population urbanized, ethnolinguistic and religious fractionalization, for how long a country had been a democracy, whether it had an agrarian elite prior to 1914, whether it was on the losing side in World War I, and whether it had its borders redrawn as a result. Data on electoral thresholds are from Boix (1999), while urbanization is constructed using data from Banks (2011). Polity scores are from the Polity IV database (2009). Dummy variables relating to World War I are constructed using individual country histories. Our measures of ethnolinguistic and religious cleavages and the existence of a prewar agrarian elite are based on classifications in Berg-Schlosser and Mitchell (2002).<sup>18</sup>

Many of our explanatory variables are available only at an annual frequency. This is satisfactory insofar as there was only one election per year for the vast majority of countries.<sup>19</sup> One explanatory variable that we *can* measure

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percentage point increase; while the increase in the anti-system extreme right-wing vote was from 25.5 per cent to 44.4 per cent in July 1932, a 19 percentage point increase.

<sup>17</sup> We use the entire sample of interwar elections, not just those in Tables 1 through 3.

<sup>18</sup> For countries not covered in their analysis, variables were constructed based on country-specific sources.

<sup>19</sup> However, in a very small number of cases there was more than one election in a given year: Bulgaria in 1923 (elections in April and November); Denmark in 1924 (April, July and September); Ireland in 1927 (June and September); and Germany in 1924 (May and December) and 1932 (July and November). Famously, the Nazi share of the vote declined in November 1932 when economic conditions were improving, suggesting that any negative correlations which we

at a higher frequency is time since the last election: we measure this in units of four months, since there was never more than one election in a trimester (i.e. January-April, May-August, September-December).<sup>20</sup>

Because the vote share of anti-system parties was sometimes zero, rendering ordinary least squares or a logit transformation of vote shares inappropriate, we follow Jackman and Volpert (1996) and Golder (2003) in using a Tobit model.<sup>21</sup> We consider both the semi-parametric fixed effects Tobit estimator proposed by Honoré (1992) and the maximum likelihood fixed effects Tobit estimator (MLE) discussed in Greene (2004), since there may have been country-specific factors not captured by our model that led to the anti-system vote being systematically higher in some countries than in others. While Honoré's semi-parametric estimator yields estimates of the slope coefficients and is robust to the non-normality of the error term, the maximum likelihood estimator permits the computation of marginal effects. We therefore present both sets of results throughout.<sup>22</sup> Owing to our fixed-effects approach, we exclude from the regressions time-invariant variables such as whether a country had been on the winning or losing side in World War I, although we can still interact those time-invariant variables with, *inter alia*, the change in GDP growth since the last election.

## 6. Average voting patterns and country characteristics

We start in Table 4 with tabulations of the shares of the fascist and communist vote in countries with different characteristics. (Appendix Table 2 lists the values of these variables for each country.) We look at both the interwar period as a whole and the 1920s and 1930s separately (more precisely, at the periods before 1929 and between 1929 and 1939).

The first panel shows that the share of the fascist vote in the period as a whole was higher in countries on the losing side in World War I and that experienced boundary changes as a result and where a long-standing democratic tradition was absent. Not surprisingly, the average vote share was also higher in countries where fascists had been represented in parliament prior to the Depression.<sup>23</sup> These patterns are consistent with the arguments cited earlier concerning both the impact of World War I and the importance of political culture and democratic capital.<sup>24</sup> The share of votes going to fascist parties was also higher in countries with a pre-war agricultural elite, but the difference is not

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may uncover between growth and support for extremism would be strengthened if we could account for intra-year fluctuations in GDP.

<sup>20</sup> Our data set thus consists of an unbalanced panel, whose time units are successive four-month periods, in which most observations are missing, and in which most independent variables take on the same value in each four-month period within a given year (the exception being time since the last election).

<sup>21</sup> As Wooldridge (2010, Chapter 17) emphasizes, Tobit models are appropriate not just when the data are censored, but when there are corner solutions.

<sup>22</sup> The Honoré estimator is implemented using the `pantob` command in Stata, the MLE estimator using `Limdep`. The MLE estimator estimates country fixed effects by "brute force." Greene (2004) argues that the incidental parameters problem is overstated in the context of this model.

<sup>23</sup> The reason for including this variable will become apparent later.

<sup>24</sup> They are also robust to the exclusion of Germany, although the effects relating to World War I and its aftermath lose statistical significance (results not reported here).

statistically significant.<sup>25</sup> The existence of a religious divide does not seem to be associated with the extreme right-wing vote, while countries with ethno-linguistic divides and a lower urban share had slightly lower fascist vote shares, which does not accord with our priors; these effects are, however, statistically insignificant.<sup>26</sup>

**Table 4. Votes for anti-system parties, 1919-39**

Panel A. Votes for right-wing anti-system parties								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy?	Pre-29 fascist seats?	Agricultural elite?	Religious divide?	Ethno-linguistic divide?	WW1 loser?	WW1 boundary change?	Above-median urban?
Mean if 'Yes'	.6411765	8.718571	3.9775	2.998154	1.693	8.499259	4.342963	3.310256
Mean if 'No'	5.082162	.5504273	1.657471	2.507447	3.323232	1.523485	1.010256	2.128148
Difference	-4.440986***	8.168144***	2.320029	.4907071	-1.630232	6.975774*	3.332707**	1.182108
Standard error	(1.243395)	(1.964868)	(1.293812)	(1.376746)	(1.09017)	(2.91865)	(1.171652)	(1.229025)
N	159	159	159	159	159	159	159	159
Panel B. Votes for right-wing anti-system parties 1919-1928								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy?	Pre-29 fascist seats?	Agricultural elite?	Religious divide?	Ethno-linguistic divide?	WW1 loser?	WW1 boundary change?	Above-median urban?
Mean if 'Yes'	0	2.222727	.6477273	.3128205	.1648649	.9823529	1.012245	.3225
Mean if 'No'	1.078261	.01	.4395833	.7056604	.7909091	.4386667	0	.7057692
Difference	-1.078261*	2.212727*	.2081439	-.3928399	-.6260442	.5436863	1.012245*	-.3832692
Standard error	(.4072521)	(.7890825)	(.4149365)	(.3877223)	(.3630444)	(.517862)	(.3838761)	(.3911217)
N	92	92	92	92	92	92	92	92
Panel C. Votes for right-wing anti-system parties 1929-1939								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy?	Pre-29 fascist seats?	Agricultural elite?	Religious divide?	Ethno-linguistic divide?	WW1 loser?	WW1 boundary change?	Above-median urban?
Mean if 'Yes'	1.397436	15.864	9.21	7.026154	4.151304	21.278	9.443125	6.455263
Mean if 'No'	11.66	1.355319	3.15641	4.836585	6.488636	2.950877	2.251429	4.678621
Difference	-10.26256***	14.50868***	6.05359	2.189569	-2.337332	18.32712*	7.191697**	1.776643
Standard error	(2.794132)	(3.415588)	(2.979767)	(3.195812)	(2.391574)	(6.042253)	(2.632037)	(2.496408)
N	67	67	67	67	67	67	67	67
Panel D. Votes for Communist parties								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy?	Pre-29 fascist seats?	Agricultural elite?	Religious divide?	Ethno-linguistic divide?	WW1 loser?	WW1 boundary change?	Above-median urban?
Mean if 'Yes'	1.588889	5.460851	2.072432	3.694769	2.551	6.936552	3.722529	2.043038
Mean if 'No'	4.348056	1.733913	3.439773	2.225773	2.970588	1.916541	1.762667	3.55012
Difference	-2.759167***	3.726938***	-1.36734	1.468996	-.4195883	5.02001***	1.959862**	-1.507082*
Standard error	(.7641638)	(.914155)	(.7233018)	(.8138933)	(.7949059)	(1.377868)	(.6968147)	(.7245282)
N	162	162	162	162	162	162	162	162
Panel E. Votes for Communist parties 1919-1928								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy?	Pre-29 fascist seats?	Agricultural elite?	Religious divide?	Ethno-linguistic divide?	WW1 loser?	WW1 boundary change?	Above-median urban?
Mean if 'Yes'	1.2	4.470769	1.405333	3.485263	2.687222	6.118889	3.177255	1.17
Mean if 'No'	3.978667	1.788235	3.563265	1.882143	2.432759	1.680263	1.762791	3.537778
Difference	-2.778667***	2.682534*	-2.157932*	1.60312	.2544635	4.438626*	1.414464	-2.367778**
Standard error	(.9774559)	(1.193331)	(.9450391)	(1.096681)	(1.114117)	(1.842623)	(.9447184)	(.888014)
N	94	94	94	94	94	94	94	94
Panel F. Votes for Communist parties 1929-1939								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy?	Pre-29 fascist seats?	Agricultural elite?	Religious divide?	Ethno-linguistic divide?	WW1 loser?	WW1 boundary change?	Above-median urban?
Mean if 'Yes'	2.053659	6.686667	3.107586	3.98963	2.346667	8.274545	4.495	2.938462
Mean if 'No'	4.963704	1.655319	3.284615	2.695122	3.679545	2.231579	1.7625	3.573103
Difference	-2.910045*	5.031348**	-.1770292	1.294508	-1.332879	6.042966*	2.7325*	-.6346419
Standard error	(1.224047)	(1.384165)	(1.173132)	(1.222935)	(1.075001)	(2.06595)	(1.028736)	(1.110582)
N	68	68	68	68	68	68	68	68

Source: see text. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

The next two panels, which distinguish the 1920s and 1930s, suggest that the impact of being on the losing side in World War I on support for fascist parties is attributable to elections in the post-1928 period, when the fascist vote was a full 18 percentage points higher in the defeated powers. The impact of a pre-war democratic tradition and having experienced boundary changes, in contrast, shows up in both the 1920s and 1930s. Both effects become larger after

<sup>25</sup> Nor is it robust to the exclusion of Germany. Throughout we report two-tailed t-tests of differences between means, assuming unequal variances between groups.

<sup>26</sup> The urban variable differs from the others used in this table, since some countries switched from having a below-median to an above-median urbanization rate during the period. See Appendix 2 for details.

1929 however: on average, the fascist vote share after 1929 was over 10 percentage points lower in countries with a pre-1913 democratic tradition. Similarly, while fascist parties' share of the vote was just 2 percentage points higher in countries where they were represented in parliament before 1929, their share of the vote was 14.5 percentage points higher in those same countries afterwards.<sup>27</sup>

Panels D through F repeat the exercise for the communist vote share. Communist parties received more votes in countries on the losing side in World War I and that did not have a pre-war democratic tradition; these effects are consistent across sub-periods. The communist vote share was higher in countries that experienced boundary changes after the war, with the effect being due to elections held after 1929. It was lower in more urbanized countries, and in countries with a pre-war agricultural elite. The latter two effects, which may seem surprising, are attributable to elections held in the 1920s. Finally, the communist vote was higher before 1929 in countries where fascists were already represented in parliament, and it was even higher after the onset of the crisis.

Our major interest is the impact of the Depression on voting patterns and hence how voting shares changed after 1929. Table 5 presents the results of a series of difference-in-difference analyses in which voting shares are regressed on a post-1929 dummy, country characteristics (one per column), and the interaction between these two variables. It thus offers a more nuanced look at the patterns in Table 4.

**Table 5. Determinants of anti-system party vote share, 1919-39**

Panel A. Votes for extreme right-wing anti-system parties, 1919-39								
Country characteristic	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy	Pre-1929 fascist seats	Pre-war agricultural elite	Religious divide	Ethno-linguistic divide	WW1 loser	WW1 boundary changes	Above median urban share
Country characteristic	-1.078** (0.523)	2.213** (0.959)	0.208 (0.536)	-0.393 (0.522)	-0.626 (0.472)	0.544 (0.646)	1.012* (0.494)	-0.383 (0.522)
Post-1929	10.58** (4.718)	1.345* (0.770)	2.717 (1.668)	4.131** (1.609)	5.698 (3.405)	2.512* (1.277)	2.251 (1.655)	3.973* (2.048)
Post-1929 * country characteristic	-9.184* (4.801)	12.30** (5.946)	5.845 (5.134)	2.582 (5.725)	-1.711 (3.893)	17.78* (8.796)	6.179 (4.666)	2.160 (4.272)
Constant	1.078** (0.523)	0.01000 (0.01000)	0.440 (0.452)	0.706 (0.429)	0.791* (0.447)	0.439 (0.305)	-0 (6.30e-08)	0.706 (0.437)
Observations	159	159	159	159	159	159	159	159
R-squared	0.299	0.438	0.175	0.119	0.121	0.420	0.207	0.117
Panel B. Votes for Communist parties, 1919-39								
Country characteristic	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Pre-war democracy	Pre-1929 fascist seats	Pre-war agricultural elite	Religious divide	Ethno-linguistic divide	WW1 loser	WW1 boundary changes	Above median urban share
Country characteristic	-2.779* (1.497)	2.683 (1.797)	-2.158 (1.465)	1.603 (1.705)	0.254 (1.786)	4.439* (2.501)	1.414 (1.498)	-2.368 (1.414)
Post-1929	0.985 (1.463)	-0.133 (0.658)	-0.279 (0.907)	0.813 (0.610)	1.247 (0.822)	0.551 (0.477)	-0.000291 (0.479)	0.0353 (0.855)
Post-1929 * country characteristic	-0.131 (1.514)	2.349 (1.512)	1.981 (1.436)	-0.309 (1.579)	-1.587 (1.391)	1.604 (2.803)	1.318 (1.239)	1.733 (1.124)
Constant	3.979*** (1.406)	1.788** (0.867)	3.563*** (1.253)	1.882** (0.741)	2.433*** (0.810)	1.680*** (0.581)	1.763** (0.855)	3.538*** (1.173)
Observations	162	162	162	162	162	162	162	162
R-squared	0.095	0.147	0.036	0.029	0.013	0.181	0.054	0.043

Source: see text. Robust standard errors clustered by country in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

<sup>27</sup> Again, these results are robust to the exclusion of Germany, although in one or two instances the standard errors increase sufficiently that the differences are no longer statistically significant at conventional levels.

Panel A looks at votes for right-wing extremist parties. In all regressions, the post-1929 dummy variable is positive, and it is usually statistically significant: as we saw earlier, the Depression was good for fascists. It was especially good for fascists (based on the interaction effects between the period dummy and country characteristics) in countries that had not enjoyed democracy before 1914;<sup>28</sup> where fascist parties already had a parliamentary base; and in countries on the losing side in World War 1.

Since Germany ticks each of these boxes and saw a particularly large increase in the fascist vote, one may ask whether these interaction effects are driven by the German experience alone. The answer is that they are not. Furthermore, all results in Tables 4 and 5 are robust to dropping the 1933 German election from the sample.<sup>29</sup>

Finally, the table confirms that the fascist vote was higher, irrespective of period, in countries without a pre-war history of democracy, in countries where fascists had held seats prior to 1929, and in countries that experienced boundary changes after 1918.<sup>30</sup> Note that there is no such effect for countries that were defeated in World War I: here, the higher vote share for fascists is entirely driven by an increase after 1929. Once again, the importance of democratic traditions and the experience of the war comes across in the data.

In contrast, there is no evidence here that ethno-linguistic or religious cleavages increased either the average size of the fascist vote or its responsiveness to the Depression.

Panel B considers the communist vote. The contrast with the previous results is striking. In no case are the post-1929 dummies statistically significant. They are always small and in three cases even negative. None of the interaction terms is statistically significant either, and all are quite small. Evidently, the Depression was of no great help to Communist parties on average. In addition, the Communist vote was higher in countries without a pre-war democratic tradition and in countries that had been defeated in World War I.<sup>31</sup>

In sum, while the Depression clearly benefitted extreme right-wing parties, there is little evidence of it having favoured Communist parties. The two country characteristics that were most obviously important in determining extremist support were political tradition and recent military history. Extremists

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<sup>28</sup> Indeed, comparing the positive coefficient on the post-1929 dummy, and the negative interaction effect, suggests that there was almost no Depression effect in countries which had been democratic prior to World War 1.

<sup>29</sup> Results without Germany are available on request.

<sup>30</sup> All three results are robust to the exclusion of Germany, although first and the third are no longer statistically significant at conventional levels, with p-values of 0.110 and 0.111.

<sup>31</sup> Excluding Germany only changes these coefficients a little, but increases the standard errors to the point where the coefficients become statistically insignificant, with p-values of 0.147 and 0.236. On the other hand, excluding Germany, the communist vote share was statistically significantly lower in countries without a pre-war agricultural elite, and in more urbanized countries. The communist vote share was also higher in countries where fascists had been represented in parliament prior to 1929, in in countries without a pre-war agricultural elite, and in less urbanized countries, although these results are not statistically significant at conventional levels.

of all sorts had lower vote shares in countries with a pre-war democratic tradition, and in these countries fascists hardly increased their vote shares after 1929.

Similarly, extremists of all kinds fared better in countries where fascists had been elected to parliament before 1929, and fascists were able to increase their support by more after 1929 in these same countries. The evidence is consistent with the arguments of Persson and Tabellini (2009) and other authors emphasising the influence of political culture and democratic capital on the durability of democracy.

Finally, the legacy of the war also comes through in the data: countries on the losing side in 1918 had higher Communist votes throughout and saw a higher increase in the fascist vote after 1929.

## 7. Regression results

Thus far we have explored changes in voting after 1929, a watershed year for the world economy. But to firmly establish the relationship between economic hard times and extremist voting, we need to go further. Some countries experienced more severe depressions than others: is it the case that extremist voting increased by more where the Depression was worst? Different countries entered the Depression and began recovering at different dates. Simply comparing pre- and post-1929 experience does not allow us to account for this. And, of course, other forces at work after 1929 could have contributed to the fascist vote.

We therefore turn to multiple regression. As mentioned earlier, we report fixed effects Tobit estimates, which means that we are relying on within-country variation to identify our results. This may be asking a lot of our data, given that in a typical regression we have between 125 and 150 observations and around 25 countries. But there were surely unobserved country-specific factors for which it is important to control, justifying the method.

The dependent variable in Table 6 is the share of the vote going to right-wing anti-system parties.<sup>32</sup> Successive columns explore the relationship between this variable and GDP growth in the previous one, two and three-year periods using both the semi-parametric and MLE fixed effects Tobit estimators. As can be seen, GDP growth was negatively related to the vote for extreme right-wing parties, and the effect grows larger as we extend the time period. But when we use the MLE estimator, only growth over the previous three years, as opposed to shorter intervals, turns out to be significantly related to the fascist vote share. Intuitively, while societies can generally weather even large one-off shocks, when economic bad news continues beyond a certain period of time and negative expectations become firmly entrenched people reach for extreme solutions.

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<sup>32</sup> As a reminder, this includes not just fascist, but also other extreme right-wing anti-system parties, although for brevity's sake we will occasionally refer to "fascist" parties.



In what follows, we therefore concentrate on the relationship between growth over the previous three years and voting behaviour.<sup>33</sup>

**Table 6. Determinants of right-wing anti-system vote share, 1919-39**

Period	1 year	1 year	2 years	2 years	3 years	3 years
Method	Semi-parametric	MLE	Semi-parametric	MLE	Semi-parametric	MLE
Growth	-58.79** (27.37)	-21.72 (23.26)	-63.39 (50.08)	-17.66 (19.66)	-109.6*** (39.95)	-37.08*** (13.25)
Observations	148	148	136	136	125	125

Source: see text. Fixed effects panel Tobit estimators. Fixed effects not estimated by semi-parametric estimator, and not reported for MLE. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Marginal effects estimated at means of the independent variables and fixed effects.

Table 7 adds control variables to the basic specification. The independent variables are now growth in the previous three years; urbanization; and the effective electoral threshold. Although Honoré's method does not permit us to use annual dummies, we want to take account of the possibility that the early and late 1920s were different from the early and late 1930s. We therefore divide our time period into four segments: 1919-24, 1925-8, 1929-33, and 1934-9, representing the years of postwar turmoil and hyperinflation; the period of recovery and reconstruction of the international economy; the Great Depression; and the gradual recovery from the nadir of 1933, respectively. We construct dummy variables for each of these four periods with the last as the omitted alternative. In each case we report the results produced by both Honoré's semi-parametric estimator and the MLE estimator. In connection with the latter, we also report the estimated marginal effect, decomposed as follows (McDonald and Moffitt 1980):

$$\frac{\delta E[y|x]}{\delta x} = Prob(y > 0) \times \frac{\delta E(y|x, y > 0)}{\delta x} + E[y|x, y > 0] \times \frac{\delta Prob(y > 0)}{\delta x}$$

The marginal effect is in two parts. "Part 1" is the change in the expected value of  $y$ , given that it is greater than zero, multiplied by the probability that  $y$  is greater than zero. "Part 2" is the change in the probability that  $y$  is greater than zero, multiplied by the conditional mean. These two effects can be calculated as  $p1*\beta$  and  $p2*\beta$ , where  $\beta$  is the regression coefficient, and  $p1$  and  $p2$  are as reported in the table.<sup>34</sup> To calculate the marginal impact of a change in an independent variable on the expected value of  $y$ , conditional on  $y$  being non-censored (i.e. positive),  $p1*\beta$  is divided by  $Prob(y > 0)$ . To calculate the

<sup>33</sup> The effect remains large and statistically significant when we extend the horizon to four, five or six years, but the strongest relationship is between three-year growth rates and voting behaviour.

<sup>34</sup> Formally we have:

$$\frac{\delta E[y|x]}{\delta x} = [\Phi \left( 1 - \left( \frac{\Phi}{\phi} \right) \left( \frac{\beta'x}{\sigma} + \frac{\Phi}{\phi} \right) \right) + \Phi \left( \frac{\beta'x}{\sigma} + \frac{\Phi}{\phi} \right)] \beta$$

where  $\Phi$  represents the cumulative distribution function,  $\phi$  represents the probability density function,  $\beta$  is the tobit coefficient and  $\sigma$  is the standard deviation of the error term; with the

scaling factors being calculated as  $p1 = \Phi \left( 1 - \left( \frac{\Phi}{\phi} \right) \left( \frac{\beta'x}{\sigma} + \frac{\Phi}{\phi} \right) \right)$  and  $p2 = \Phi \left( \frac{\beta'x}{\sigma} + \frac{\Phi}{\phi} \right)$ .

marginal impact of a change in an independent variable on the probability that  $y$  will be greater than zero,  $p2*\beta$  is divided by  $E[y|x, y > 0]$ .

**Table 7. Determinants of right-wing anti-system vote share, 1919-39**

Fixed Effects Tobit Model	Semi-parametric FE Tobit		MLE FE Tobit			McDonald & Moffitt Decomposition						
	Coefficient	Std. Error	Coefficient (beta)	Std. Error	Marginal Effect $\delta E[y x]/\delta x$	Part 1	Part 2					
						$Prob(y > 0) \times \frac{\delta E[y x, y > 0]}{\delta x}$	$E[y x, y > 0] \times \frac{\delta Prob(y > 0)}{\delta x}$	$E[y x, y > 0]$	$Prob[y > 0 x]$	p1	p2	No. Obs.
<b>Model 1</b>								8.29	0.52	0.19	0.32	125
Growth in last three years	-108.6***	39.95	-37.08***	13.25	-19.23	-7.20	-12.05					
<b>Model 2</b>								7.13	0.53	0.20	0.33	125
Growth in last three years	-77.32***	24.21	-34.08***	12.37	-17.96	-6.80	-11.16					
Urbanisation	4.41	2.85	4.06***	0.88	2.14	0.81	1.33					
Effective Electoral Threshold	-0.53***	0.21	-0.06	0.31	-0.03	-0.01	-0.02					
<b>Model 3</b>								4.82	0.34	0.10	0.24	125
Growth in last three years	-79.03**	37.51	-30.12**	13.33	-10.19	-2.87	-7.31					
Urbanisation	-1.19	1.28	-0.30	1.04	-0.10	-0.03	-0.07					
Effective Electoral Threshold	-0.202	0.20	0.12	0.27	0.04	0.01	0.03					
1919-24	-42.15***	10.13	-39.69***	9.07	-13.43	-3.79	-9.63					
1925-28	-20.00	13.50	-20.15***	6.02	-6.82	-1.92	-4.89					
1929-33	-15.40***	4.18	-11.91***	4.24	-4.03	-1.14	-2.89					

Source: see text. Fixed effects panel Tobit estimators. Fixed effects not estimated by semi-parametric estimator, and not reported for MLE. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Marginal effects estimated at means of the independent variables and fixed effects.

Consistent with Tables 4 and 5, the results lend little support to the hypothesis that urbanization (as a proxy for modernization) reduced votes for right-wing anti-system parties. The variable has the wrong sign in Model 2 and is statistically significant when the MLE estimator is used, while in Model 3 the coefficient has the right sign but is in both cases small and statistically insignificant. A possible objection to this negative finding is that by including fixed effects, we are stripping out differences in average levels of urbanization across countries and relying entirely on within-country variation. However, simple pooled Tobit regressions similarly find no impact of urbanization.

The estimates are more supportive of the hypothesis that higher effective electoral thresholds reduced votes for extremist parties; the coefficient on this variable is negative and significant in the specification without period dummies when the semi-parametric estimator is used.<sup>35</sup> There may have been a reluctance to throw away one's vote: where an anti-system party had to garner a minimum share of the vote in order to gain parliamentary representation, it was less likely to attract support. This suggests that the structure of the political system mattered for the ability of anti-system parties to attract electoral support.<sup>36</sup> Finally, the period dummies capture other aspects of the deteriorating political

<sup>35</sup> The coefficients are however extremely small and insignificant both when the MLE estimator is used, and when period dummies are introduced into the specification in Model 3.

<sup>36</sup> In additional regressions not reported here, we added a further measure of the structure of the electoral system, whether representation was proportional or majoritarian, authors like Lipset (1959) and Lijphart (1994) having argued that this is likely to have been important (see above). The proportional representation dummy, constructed mainly from data in Berg-Schlosser and Mitchell (2002) never showed up as statistically significant or economically important, in contrast to the electoral threshold variable.

climate of the interwar period insofar as they become steadily less negative over time.

As noted earlier, the MLE estimator allows us to calculate marginal effects. We are interested in the marginal impact of a change in GDP growth on the share of the popular vote going to fascists. The coefficients in Model 1 imply a marginal effect of growth on the fascist vote share of -13.87 (= -7.20/0.52) in countries where this vote was non-zero: a one standard deviation decline in growth (0.1265) increases the fascist vote share by 1.75%.

The point estimates imply that the deterioration in growth in Germany between 1928 (0.181) and 1932 (-0.158) is associated with an increase in the fascist vote of 4.7%. This compares with a total increase of 40 percentage points (or 19 percentage points if the DVP and DNVP are classified as fascist throughout). Evidently, then, our results so far can only explain a limited share of the increase in the right-wing anti-system vote in cases like Germany between 1928 and 1932.

Similarly, Model 1 yields a marginal impact of growth on the probability of there being a fascist party in the first place of -1.45 (= -12.05/8.29). This implies that a one standard deviation increase in growth lowers the probability of there being a fascist party by 18%.<sup>37</sup>

We saw evidence earlier that the extent to which the fascist vote increased after 1929 depended on country characteristics. Did the impact of economic growth depend on these same factors? To explore this possibility, we estimated regressions similar to those in Table 7 but interacting growth with the country-specific variables in Tables 4 and 5.

**Table 8. Determinants of right-wing anti-system vote share, 1919-39**

Fixed Effects Tobit Model	Semi-parametric FE Tobit		MLE FE Tobit			McDonald & Moffitt Decomposition						
	Coefficient	Std. Error	Coefficient (Beta)	Std. Error	Marginal Effect $\frac{\partial E[y x]}{\partial x}$	Part 1	Part 2					No. Obs.
						$\frac{\partial Prob(y > 0) \times E[y x, y > 0]}{\partial x}$	$\frac{\partial E[y x, y > 0]}{\partial x}$	$E[y x, y > 0]$	$Prob[y > 0 x]$	p1	p2	
<b>Model 1</b>								6.87	0.51	0.19	0.32	125
Growth in last three years	-127.1***	33.86	-103.2***	20.33	-52.54	-19.35	-33.18					
Growth*pre-war democracy	113.8***	39.38	96.09***	24.20	48.90	18.01	30.89					
<b>Model 2</b>								6.35	0.54	0.21	0.33	125
Growth in last three years	-95.66***	25.53	-82.94***	19.12	-44.42	-17.05	-27.41					
Growth*pre-war democracy	84.43***	22.99	75.52***	23.85	40.45	15.53	24.95					
Urbanisation	3.62	2.87	3.12***	0.79	1.67	0.64	1.03					
Effective Electoral Threshold	-0.48**	0.21	-0.01	0.28	0.00	0.00	0.00					
<b>Model 3</b>								4.28	0.34	0.10	0.24	125
Growth in last three years	-97.74***	25.56	-79.79***	19.88	-27.31	-7.75	-19.54					
Growth*pre-war democracy	86.51***	26.33	68.80***	22.25	23.54	6.68	16.85					
Urbanisation	-1.30	1.04	-0.57	0.89	-0.19	-0.06	-0.14					
Effective Electoral Threshold	-0.17	0.12	0.15	0.24	0.05	0.01	0.04					
1919-24	-38.01***	6.32	-34.87***	8.07	-11.93	-3.39	-8.54					
1925-28	-17.18**	7.92	-16.24***	5.15	-5.56	-1.58	-3.98					
1929-33	-14.00***	3.19	-11.96***	3.72	-4.09	-1.16	-2.93					

Source: see text. Fixed effects panel Tobit estimators. Fixed effects not estimated by semi-parametric estimator, and not reported for MLE. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Marginal effects estimated at means of the independent variables and fixed effects.

<sup>37</sup> Note that this last statement is about the probability that the vote will be positive (i.e. non-zero, i.e. that a fascist party will exist in the first place); the 1.75 per cent rise referred to earlier is a statement about the vote share of fascist parties, given that they already existed.

Table 8 shows that while growth had a large impact on voting for right-wing extremist parties in countries which had not been democratic prior to World War I, a history of prewar democracy almost completely eliminates this effect. (That is to say, the interaction term between growth and prewar democracy is positive, almost as large as the coefficient measuring the direct impact of growth, and strongly significant.) According to Model 1, in countries without a prewar history of democracy and with a pre-existing fascist party, a one standard deviation increase in growth is associated with a decline in the extreme right-wing vote share of 4.8%. In such countries, a decline in growth on the order of that experienced by Germany between 1928 and 1932 is associated with an increase in the fascist vote share of 12.9%. In countries that had not been democratic prior to 1914, a one standard deviation rise in growth is associated with a 61% decline in the probability of observing a positive fascist vote. These are large effects.

Table 9 focuses on countries where fascists were represented in parliament prior to 1929. Model 1 implies that a one standard deviation rise in growth is associated with a decline in the fascist vote share of 4.7 per cent. A decline in growth on the order of that experienced by Germany between 1928 and 1932 is associated with a 12.5 per cent increase in the fascist vote share. This is over half the increase in the extreme right-wing anti-system vote share observed in Germany in the period if one adopts the alternative definition of the extreme right-wing vote in Germany mentioned earlier (DVP+DNVP+NSDAP).<sup>38</sup>

**Table 9. Determinants of right-wing anti-system vote share, 1919-39**

Fixed Effects Tobit Model	Semi-parametric FE Tobit		MLE FE Tobit			McDonald & Moffitt Decomposition						
	Coefficient	Std. Error	Coefficient (beta)	Std. Error	Marginal Effect $\frac{\partial E[y x,y]}{\partial x}$	Part 1	Part 2					
						$Prob(y > 0) \times \frac{\partial E[y x,y > 0]}{\partial x}$	$E[y x,y > 0] \times \frac{\partial Prob(y > 0)}{\partial x}$	$E[y x,y > 0]$	$Prob(y > 0   x)$	p1	p2	No. Obs.
<b>Model 1</b>								6.89	0.50	0.18	0.32	125
Growth in last three years	-21.78	18.73	-9.98	13.14	-4.98	-1.81	-3.17					
Growth*pre-1929 Fascist Seat	-105.6***	38.56	-91.72***	24.84	-45.73	-16.61	-29.16					
<b>Model 2</b>								6.39	0.53	0.20	0.33	125
Growth in last three years	-14.82	9.33	-11.08	13.74	-5.82	-2.20	-3.63					
Growth*pre-1929 Fascist Seat	-80.24**	32.28	-69.10***	24.59	-36.31	-13.73	-22.61					
Urbanisation	3.69	2.72	3.19***	0.81	1.68	0.63	1.04					
Effective Electoral Threshold	-0.48	0.20	-0.01	0.28	-0.00	-0.00	-0.00					
<b>Model 3</b>								4.25	0.34	0.09	0.24	125
Growth in last three years	-11.21	10.30	-10.92	13.79	-3.67	-1.03	-2.64					
Growth*pre-1929 Fascist Seat	-84.75***	26.57	-67.96***	22.04	-22.83	-6.42	-16.41					
Urbanisation	-1.40	0.95	-0.65	0.89	-0.22	-0.06	-0.16					
Effective Electoral Threshold	-0.19	0.12	0.16	0.24	0.05	0.02	0.04					
1919-24	-38.77***	6.05	-35.51***	7.98	-11.93	-3.36	-8.58					
1925-28	-18.40***	6.99	-17.23***	5.15	-5.79	-1.63	-4.16					
1929-33	-14.08***	3.42	-12.01***	3.73	-4.03	-1.13	-2.90					

Source: see text. Fixed effects panel Tobit estimators. Fixed effects not estimated by semi-parametric estimator, and not reported for MLE. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Marginal effects estimated at means of the independent variables and fixed effects.

Evidently, then, the impact of the Great Depression on the fortunes of right-wing extremist parties was greatest where pre-existing conditions – most importantly, the absence of a long-standing democratic tradition – made the political soil fertile for those seeking to undermine the existing system.

<sup>38</sup> See footnote 16.

## 8. Robustness

Table 10 provides some robustness checks for our basic specification, which includes as controls the effective electoral threshold and period dummies. Column 1 shows the baseline specification, using Honoré’s semi-parametric fixed effects Tobit estimator. As before, growth during the previous three years has a strong negative impact on the share of the fascist vote. Column 2 shows that this is also the case when a random effects Tobit estimator is used instead. Column 3 replaces the period dummies which we have used thus far with year dummies; again, the results continue to go through. Column 4 shows that the results still hold when we use the standard fixed effects OLS estimator with year dummies and standard errors clustered by country.

Column 5 tests whether the impact of growth is non-linear by introducing a squared growth term. The coefficient on this term is negative but statistically insignificant. Finally, column 6 tests whether the impact of growth is asymmetrical, in the sense that that impact depends on whether growth is positive or negative. This does not appear to be the case.

**Table 10. Determinants of right-wing anti-system vote share, 1919-39**

Model	(1)	(2)	(3)	(4)	(5)	(6)
	Semi-parametric FE Tobit	RE Tobit, period dummies	RE Tobit, year dummies	FE OLS, year dummies	Semi-parametric FE Tobit	Semi-parametric FE Tobit
Effective electoral threshold	-0.247 (0.216)	-0.366* (0.209)	-0.284 (0.215)	-0.117 (0.0724)	-0.224 (0.219)	-0.246 (0.214)
Growth in last three years	-80.72*** (30.79)	-33.33** (13.53)	-29.70** (14.25)	-11.34* (6.256)	-72.68 (46.53)	
Growth in last three years squared					-220.5 (195.8)	
Growth in last three years if growth>0						-82.82** (34.73)
Growth in last three years if growth<0						-78.27** (34.85)
Constant		(1.101) 9.818** (4.612)	(1.014) -10.38 (9.952)	3.220* (1.868)		
Observations	125	125	125	125	125	125

Source: see text. Fixed effects not estimated by semi-parametric estimator. Period and year dummies not reported. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Table 11 interacts growth with our other country-specific variables. It excludes urbanization from the basic specification since the performance of this variable is disappointing throughout; however, in the final column it interacts urbanization with growth to see if urbanization influenced the impact of recessions on the fascist vote (as opposed to having a direct impact).<sup>39</sup> Panel A shows that the signs of these interaction effects for our full sample are as one might expect: a bad growth experience led to a greater increase in the fascist vote not only in countries without a pre-1914 democratic tradition or where fascists were represented in parliament prior to the Depression but also in countries with a religious divide, that had been on the losing side in World War I and experienced boundary changes as a result of that conflict. However, Panel B shows that only the first of these results, along with our basic result relating growth to the fascist vote (in column 1), is robust to excluding Germany.

<sup>39</sup> Since the urbanization rate is time-varying, we also include the urbanization rate on its own in these regressions.

**Table 11. Determinants of the vote share of extreme right-wing and fascist parties, 1919-39**

**Panel A. Full sample**

	Semi-parametric fixed effects Tobit								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	-80.72*** (30.79)	-97.58*** (24.67)	-14.52 (10.95)	-42.31 (29.19)	-16.87 (28.55)	-84.46*** (32.47)	-27.88 (30.25)	-38.13 (41.25)	36.70 (54.71)
Effective electoral threshold	-0.247 (0.216)	-0.224 (0.164)	-0.252* (0.144)	-0.231 (0.233)	-0.211 (0.153)	-0.240 (0.171)	-0.203 (0.206)	-0.252 (0.217)	-0.113 (0.218)
1919-24	-35.74*** (6.665)	-31.50*** (7.767)	-31.82*** (8.400)	-31.56** (13.83)	-26.98*** (6.266)	-35.36*** (6.660)	-29.71*** (11.31)	-32.61*** (11.41)	-39.18*** (11.30)
1925-28	-16.04 (11.94)	-12.94 (9.913)	-14.28 (10.25)	-13.63 (15.42)	-11.61 (8.356)	-15.81 (10.15)	-12.77 (13.16)	-14.59 (13.32)	-19.56* (10.52)
1929-33	-13.72** (6.573)	-12.08* (6.672)	-11.93* (7.016)	-11.50 (9.498)	-10.06 (6.591)	-13.91** (6.608)	-11.82 (9.032)	-12.22 (9.449)	-15.19*** (2.839)
Growth*Pre-war democracy		83.38*** (26.71)							
Growth*Pre-1929 fascist seat			-80.06*** (27.51)						
Growth*Pre-1914 agricultural elite				-51.17 (67.19)					
Growth*religious divide					-101.6*** (33.60)				
Growth*ethno-linguistic divide						35.54 (32.79)			
Growth*WW1 loser							-79.67 (48.71)		
Growth*Post-WW1 boundary change								-53.19 (56.17)	
Urbanisation									-1.736 (2.655)
Growth*urbanisation									-3.005** (1.484)
Observations	125	125	125	125	125	125	125	125	125
MLE fixed effects Tobit									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	-29.88** (13.38)	-78.45*** (20.00)	-10.65 (14.15)	-38.51 (24.61)	-13.85 (13.12)	-28.56** (13.57)	-15.21 (12.95)	-15.38 (13.80)	27.61 (36.68)
Effective electoral threshold	0.11 (0.27)	0.13 (0.24)	0.13 (0.24)	0.12 (0.27)	0.06 (0.24)	0.11 (0.27)	0.06 (0.24)	0.14 (0.25)	0.08 (0.26)
1919-24	-37.91*** (6.67)	-31.60*** (6.22)	-31.86*** (6.15)	-38.53*** (6.88)	-31.29*** (5.89)	-38.08*** (6.68)	-30.90*** (5.99)	-32.43*** (6.20)	-36.44*** (8.47)
1925-28	-18.98*** (4.45)	-14.12*** (3.88)	-14.81*** (3.90)	-19.27*** (4.56)	-15.24*** (3.83)	-18.98*** (4.49)	-14.49*** (3.81)	-14.92*** (3.98)	-18.73*** (5.64)
1929-33	-11.16*** (3.36)	-10.54*** (2.97)	-10.37*** (2.98)	-11.60*** (3.56)	-10.34*** (2.92)	-11.21*** (3.36)	-10.65*** (2.94)	-11.01*** (3.07)	-11.48*** (4.00)
Growth*Pre-war democracy		67.82*** (22.50)							
Growth*Pre-1929 fascist seat			-66.32*** (22.62)						
Growth*Pre-1914 agricultural elite				10.83 (25.76)					
Growth*religious divide					-71.41*** (22.72)				
Growth*ethno-linguistic divide						-35.02 (55.46)			
Growth*WW1 loser							-74.26*** (23.70)		
Growth*Post-WW1 boundary change								-61.94*** (23.56)	
Urbanisation									-0.20 (0.98)
Growth*urbanisation									-1.73* (1.03)
Observations	125	125	125	125	125	125	125	125	125

Source: see text. Fixed effects not estimated by semi-parametric estimator. Period and year dummies not reported. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

## Panel B. Excluding Germany

Semi-parametric fixed effects Tobit									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	-53.66** (22.46)	-82.97*** (26.05)	-37.14 (23.21)	-76.25*** (29.21)	-56.09** (22.49)	-52.03 (38.44)	-59.26* (33.32)	-81.21** (35.96)	-173.1*** (45.96)
Effective electoral threshold	-0.157 (0.192)	-0.152 (0.134)	-0.168 (0.175)	-0.166 (0.233)	-0.156 (0.184)	-0.158 (0.189)	-0.171 (0.181)	-0.147 (0.148)	-0.185 (0.188)
1925-28	-5.467 (8.924)	-5.974 (6.307)	-6.007 (8.700)	-6.448 (9.668)	-5.335 (7.949)	-5.423 (9.251)	-5.734 (8.465)	-6.526 (7.423)	-5.797 (9.137)
1929-33	-7.219 (7.272)	-8.426 (6.514)	-7.473 (7.124)	-8.080 (7.654)	-7.181 (7.694)	-7.079 (8.035)	-6.831 (7.024)	-8.475 (6.741)	-7.700 (5.299)
Growth*Pre-war democracy		53.58** (25.48)							
Growth*Pre-1929 fascist seat			-33.74 (43.52)						
Growth*Pre-1914 agricultural elite				65.86*** (24.86)					
Growth*religious divide					43.61 (28.74)				
Growth*ethno-linguistic divide						-3.650 (41.69)			
Growth*WW1 loser							36.11 (61.99)		
Growth*Post-WW1 boundary change								44.99 (37.39)	
Urbanisation									-0.190 (1.084)
Growth*urbanisation									4.870*** (1.748)
Observations	118	118	118	118	118	118	118	118	118
MLE fixed effects Tobit									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	-24.89** (12.56)	-69.99*** (26.32)	-20.40 (12.62)	-59.08*** (19.68)	-25.87** (12.67)	-16.60 (13.51)	-24.92** (12.59)	-19.54 (13.73)	-147.78*** (55.38)
Effective electoral threshold	-0.00 (0.26)	0.06 (0.25)	0.04 (0.26)	0.05 (0.25)	-0.00 (0.26)	-0.02 (0.26)	-0.00 (0.26)	0.02 (0.26)	-0.01 (0.24)
1925-28	-7.84** (3.86)	-7.51** (3.61)	-7.61** (3.72)	-8.19** (3.67)	-7.91** (3.81)	-7.49** (3.81)	-7.83** (3.87)	-7.89** (3.79)	-2.90 (3.97)
1929-33	-6.13** (3.05)	-7.23** (2.99)	-6.63** (3.01)	-7.85** (3.10)	-5.97* (3.05)	-5.67* (2.98)	-6.10* (3.15)	-6.32** (3.05)	-4.09 (3.18)
Growth*Pre-war democracy		51.77* (26.51)							
Growth*Pre-1929 fascist seat			-36.61 (28.17)						
Growth*Pre-1914 agricultural elite				57.42** (23.55)					
Growth*religious divide					29.02 (52.78)				
Growth*ethno-linguistic divide						-52.60 (40.86)			
Growth*WW1 loser							1.30 (45.46)		
Growth*Post-WW1 boundary change								-23.76 (25.33)	
Urbanisation									1.09 (0.82)
Growth*urbanisation									4.43** (1.87)
Observations	118	118	118	118	118	118	118	118	118

Source: see text. Fixed effects not estimated by semi-parametric estimator. Period and year dummies not reported. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

An interesting contrast emerges regarding the results for urbanization. Including Germany, which was relatively urbanized, the impact of growth on the fascist vote is larger in more urban societies. Excluding Germany, however, the impact of growth on the fascist vote was smaller in more urban societies.<sup>40</sup>

A possible objection is that we are, by definition, only observing elections in countries that held them. When countries ceased being democracies, contested elections were no longer held. It is possible and indeed likely that some of the same factors that led to higher votes for anti-system parties, such as poor economic performance, resulted in their becoming non-democratic – although Table 3 suggests no systematic relationship between the extreme right-wing vote and the end of democracy, the German example notwithstanding.

To address this selection problem in the simplest possible manner, we employ a two-stage Heckman-style approach. In the first stage, we run a simple fixed effects probit model in which the dependent variable is whether or not we observe an election in a country in a trimester.<sup>41</sup>

The results are in Table 12. The first explanatory variable is growth in the last three years. Its coefficient is negative, suggesting that higher growth made it less likely that an election would be observed in a given trimester. However, the effect is statistically insignificant. Bad economic times may cause governments to fall and snap elections to be held, in addition to causing departures from democracy; the insignificant coefficient suggests that the two effects cancel out.

The second explanatory variable is trimesters since the last election. As expected, the longer since the last election, the more likely it is that a new one will be held. The third explanatory variable is regime durability from the Polity IV data base. Regime durability is measured as the number of years since the most recent regime change, defined by a three point change in the POLITY score over a period of three years or less. Evidently, elections are more likely in more durable regimes, while less durable regimes are more likely to lapse into non-democracy.

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<sup>40</sup> Panel B also shows that, excluding Germany, growth had very little impact on the fascist vote in countries with a pre-1914 agricultural elite. We are unsure how to interpret this finding. For the sake of completeness, Appendix Table 3 repeats the exercise for communist votes. Recall from the earlier analysis that communists did not systematically increase their share of the vote after 1929, and that this was true no matter what kind of country is considered. Not surprisingly, therefore, no strong results emerge from these tables, apart from the suggestion (in three out of four specifications in column 9) that growth may have increased the communist vote in less urban societies, and lowered it in more urban ones.

<sup>41</sup> The fixed effects probit regression is estimated using `Limdep`, which proceeds by using “brute force” to estimate the country dummies.



**Table 12. Probit analysis of the determinants of the probability of an election, 1919-39**

Growth in last 3 years	-0.546 (0.469)
Time since the last election	0.0786*** (0.0109)
Regime durability	0.0236*** (0.00712)
1919-24	0.766*** (0.164)
1925-28	0.628*** (0.151)
1929-33	0.465*** (0.146)
Constant	-3.090*** (0.396)
Observations	1,460

Source: see text. Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

In the second stage we compute the inverse Mills ratio associated with the regression in Table 12 and enter this as an explanatory variable in our Tobit analysis of voting shares. Here we focus on the results showing the impact of being a democracy prior to 1914 on the relationship between growth and voting. The results, in Table 13, suggest that our earlier findings are little affected; the implied marginal effects are very similar to those in Table 8.

**Table 13. Determinants of right-wing anti-system vote share, 1919-39**

Fixed Effects Tobit Model	Semi-parametric FE Tobit		MLE FE Tobit			McDonald & Moffitt Decomposition						
	Coefficient	Std. Error	Coefficient (Beta)	Std. Error	Marginal Effect $\frac{\partial E[y x]}{\partial x}$	Part 1	Part 2	p1	p2	No. Obs.		
						$Prob(y > 0) \times \frac{\partial E[y x, y > 0]}{\partial x}$	$E[y x, y > 0] \times \frac{\partial Prob(y > 0)}{\partial x}$					
<b>Model 1</b>								5.36	0.38	0.12	0.27	124
Growth in last three years	-111.4***	31.97	-94.04***	18.65	-35.94	-10.89	-25.04					
Growth*pre-war democracy	88.46**	34.72	66.98***	23.86	25.60	7.75	17.83					
Inverse Mills ratio	13.01**	5.43	16.76***	4.49	6.41	1.94	4.46					
<b>Model 2</b>								5.60	0.46	0.16	0.30	124
Growth in last three years	-94.66***	27.31	-83.02***	18.51	-37.83	-12.87	-24.99					
Growth*pre-war democracy	76.39***	25.57	63.40***	24.17	28.89	9.83	19.08					
Urbanisation	3.02	3.45	2.29***	0.84	1.04	0.36	0.69					
Effective Electoral Threshold	-0.51**	0.23	-0.05	0.27	-0.02	-0.01	-0.02					
Inverse Mills ratio	5.15	6.73	9.54*	5.02	4.35	1.48	2.87					
<b>Model 3</b>								4.08	0.31	0.09	0.23	124
Growth in last three years	-95.91***	24.35	-79.64***	19.51	-25.03	-6.78	-18.23					
Growth*pre-war democracy	68.13**	26.47	62.55***	22.73	19.66	5.32	14.32					
Urbanisation	-1.98	3.68	-0.59	0.86	-0.19	-0.05	-0.14					
Effective Electoral Threshold	-0.21	0.19	0.10	0.24	0.03	0.01	0.02					
1919-24	-38.74***	13.97	-32.31***	8.22	-10.16	-2.75	-7.40					
1925-28	-14.95**	7.63	-13.60**	5.53	-4.28	-1.16	-3.11					
1929-33	-14.24***	2.14	-10.48***	3.88	-3.29	-0.89	-2.40					
Inverse Mills ratio	10.20**	4.26	5.13	4.81	1.61	0.44	1.17					

Source: see text. Fixed effects panel Tobit estimators. Fixed effects not estimated by semi-parametric estimator, and not reported for MLE. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Marginal effects estimated at means of the independent variables and fixed effects.

Finally, how did votes for extreme right-wing parties translate into seats? The more votes a party got, the more seats it got, other things equal, but in practice the relevant other things could vary. Table 14 presents the results of fixed-effects panel Tobit regressions of seat shares as a function of vote shares and the electoral threshold. It shows that the higher the threshold, the lower the seat share for fascist parties, controlling for their share of the popular vote. Given this, it is not surprising that we found some evidence earlier that voters were less inclined to support these parties in the first place in countries with a higher electoral threshold (since their votes were correspondingly less likely to translate into parliamentary representation). There is therefore a role for political institutions in determining the relative fate of fascist parties – and democracy – across countries during the interwar period.

**Table 14. Determinants of right-wing anti-system seat share, 1919-39**

Fixed Effects Tobit Model	Pantob FE Tobit (Stata)		Limdep FE Tobit			McDonald & Moffitt Decomposition						
	Coefficient	Std. Error	Coefficient (beta)	Std. Error	Marginal Effect $\frac{\partial E[y x]}{\partial x}$	Part 1	Part 2					
						$Prob(y > 0) \times$ $\frac{\partial E[y x, y > 0]}{\partial x}$	$E[y x, y > 0] \times$ $\frac{\partial Prob(y > 0)}{\partial x}$	$E[y x, y > 0]$	$Prob[y > 0]$	p1	p2	No. Obs.
<b>Model 1</b>								4.44	1.00	0.99	0.01	159
Effective Electoral Threshold	-0.13***	0.01	-0.10*	0.05	-0.10	-0.10	0.00					
Vote Share	1.06***	0.03	1.06***	0.02	1.06	1.05	0.01					
<b>Model 2</b>								4.26	1.00	0.98	0.02	159
Effective Electoral Threshold	-0.13***	0.02	-0.10*	0.05	-0.10	-0.10	0.00					
Vote Share	1.06***	0.04	1.05***	0.03	1.05	1.03	0.02					
1919-24	0.76	0.62	-0.97	1.17	-0.96	-0.95	-0.02					
1925-28	0.39	0.58	-0.58	0.81	-0.58	-0.57	-0.01					
1929-33	0.33	0.97	-0.35	0.67	-0.35	-0.34	-0.01					

Source: see text. Fixed effects panel Tobit estimators. Fixed effects not estimated by semi-parametric estimator, and not reported for MLE. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Marginal effects estimated at means of the independent variables and fixed effects.

## 9. Conclusions

We have examined the impact of the Great Depression on the share of votes for right-wing anti-system parties in elections in the 1920s and 1930s. Our results confirm the existence of a link between right-wing political extremism and economic hard times as captured by the rate of growth or contraction of the economy. What mattered, however, was not simply growth at the time of the election but cumulative growth performance. One year of contraction was not enough to significantly boost extremism, in other words, but a depression that persisted for years generally was.

At the same time, the effect of the Depression on support for right-wing anti-system parties was not equally powerful under all economic, political and social circumstances. It was greater in the presence of factors conducive to nationalist sentiment, such as whether a country had been on the losing side in World War I. It was greater in countries where right-wing extremists were already represented in parliament. It was greater in countries with shorter experience with democracy.

Indeed, extremists of all stripes fared better in countries without a history of pre-war democracy. Communists as well as fascists found it easier to gain further support in countries where the latter had been represented in parliament before the onset of the Depression. The Communist vote was similarly higher in countries that had been on the losing side in World War I. All this suggests that the Great War bequeathed a toxic political legacy. Our results are also consistent with the claims of authors such as Almond and Verba (1989) that political culture mattered, and specifically with the argument of Persson and Tabellini (2009) that countries with a longer history of democracy accumulate social and political capital that increases the probability that they will be able to resist threats to the prevailing political system.

Finally, the electoral success of right-wing anti-system parties was shaped by the structure of the electoral system. A higher minimum share of the vote needed in order for a party to gain parliamentary representation, by making it more difficult for fringe parties to translate votes into seats, rendered voters more reluctant to cast their ballots for such parties.

Our analysis thus suggests that the danger of political polarization and extremism is greater in some national circumstances than others. It is greatest in countries with relatively recent histories of democracy, with existing right-wing extremist parties, and with electoral systems that create low hurdles to parliamentary representation of new parties.

Above all, it is greatest where depressed economic conditions are allowed to persist.

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## Appendix Table 1. Parties classified as anti-system

<b>Argentina</b>	Communist Party (C)
<b>Australia</b>	Communist Party of Australia (C)
<b>Austria</b>	German Nationalists (S), Greater German's People's Party (S), Heimatbloc (F), National Socialists - NSDAP (F), Communist Party (C)
<b>Belgium*</b>	Rexists (F), Flemish Nationalists (S/F), Communist Party (C)
<b>Bulgaria</b>	Communists (C)
<b>Canada</b>	Communist Party (C)
<b>Chile</b>	PCCh - Communists (C), Partido Nacista (F)
<b>Czechoslovakia*</b>	DNSAP (F) - 1920-33, DNP (F) - 1920-33, BdL (S) 1920-22, DCVP (S) - 1920-22, DSAP (S) - 1920-22, SdP (F) - 1933-38, KSC (C) - 1921 -38, NOF (F) - 1929-38, NS (F) - 1935-38, Smaller Ethnic Parties (S) - 1920-38.
<b>Denmark</b>	Communists (C), National Socialists (F)
<b>Finland*</b>	National Coalition (F) (1929-1935), Patriotic People's Movement (F) (1933-1939), Communists under the Socialist Worker's Party (C) (excluded from 1930 onwards)
<b>France</b>	Communists (C) Independents Right Wing (F)
<b>Germany*</b>	National Socialists (F), Communists (C), National People's Party (F) - 1929-33
<b>Greece</b>	Communists (C), Free Thinkers' Party (F) (Metaxas)
<b>Hungary</b>	Arrow Cross (F), National Socialists (F), Hungarian National Independence Party (F), Extreme right Independents and smaller parties (F)
<b>Ireland</b>	Communists (C)
<b>Italy</b>	Communists (C), Fascists (F), Ex-Servicemen Party (F)
<b>The Netherlands</b>	Communist Party (C), National Socialist Party (F).
<b>New Zealand</b>	Communist Party (L)
<b>Norway</b>	Communist Party (C), National Socialist Party (F).
<b>Poland</b>	Communist Party (C)
<b>Romania</b>	Iron Guard (F), League of National Christian Defence (F), National Christian Party (F)
<b>Spain</b>	Communists (C), Marxist POUM (C), Falange (F), Bloque Nacional (F), Catalan & Basque Nationalists (S)
<b>Sweden</b>	Communists (C), National Socialists (F)
<b>Switzerland</b>	Communists (C), Front Party (F)
<b>United Kingdom</b>	Communist Party (C),
<b>USA</b>	No electorally successful parties identified
<b>Uruguay</b>	Communist Party (C)
<b>Yugoslavia</b>	Communist Party (C), Croatian People's (Republican) Peasant Party (S) 1919-1925

(F) = Extreme Right Wing Parties. (C) = Communist Parties. (S) = Secessionist Parties

\* Classification from Capoccia (2005)



**Appendix Table 2. Values of country-specific dummy variables**

	Pre-war Democracy	Pre 1929 Fascist Seat	Agricultural Elite	Religious Divide	Ethnic/Ling. Divide	WWI Loser	Boundary Change	Above Median Urban
Argentina	YES	NO	YES	NO	NO	NO	NO	YES
Australia	YES	NO	YES	YES	NO	NO	NO	YES
Austria	NO	NO	YES	NO	NO	YES	YES	YES
Belgium	YES	NO	NO	NO	YES	NO	YES	SOMETIMES
Bulgaria	NO	NO	NO	YES	YES	YES	YES	NO
Canada	YES	NO	NO	YES	YES	NO	NO	YES
Chile	YES	NO	YES	NO	NO	NO	NO	SOMETIMES
Czech.	NO	YES	YES	YES	YES	YES	YES	NO
Denmark	YES	NO	NO	NO	NO	NO	YES	SOMETIMES
Finland	NO	YES	NO	NO	NO	NO	NO	NO
France	YES	YES	NO	NO	NO	NO	YES	SOMETIMES
Germany	NO	YES	YES	YES	NO	YES	YES	YES
Greece	NO	YES	NO	NO	NO	NO	YES	NO
Hungary	NO	YES	YES	NO	NO	YES	YES	SOMETIMES
Ireland	NO	NO	NO	NO	NO	NO	YES	NO
Italy	NO	YES	YES	NO	NO	NO	YES	SOMETIMES
Ned.	YES	NO	NO	YES	NO	NO	NO	YES
New Zea.	YES	NO	YES	YES	YES	NO	NO	YES
Norway	YES	NO	NO	NO	NO	NO	NO	NO
Poland	NO	NO	YES	YES	YES	NO	YES	NO
Romania	NO	YES	YES	NO	YES	NO	YES	NO
Spain	NO	NO	YES	NO	YES	NO	NO	SOMETIMES
Sweden	YES	NO	NO	NO	NO	NO	NO	NO
Switz.	YES	NO	NO	YES	YES	NO	NO	NO
UK	YES	NO	YES	NO	NO	NO	YES	YES
USA	YES	NO	NO	YES	YES	NO	NO	YES
Uruguay	NO	NO	YES	NO	NO	NO	NO	SOMETIMES
Yugoslavia	NO	NO	NO	YES	YES	NO	YES	NO

Sources and notes: sources are as listed in the text. The dummy variable indicating whether a country has an urbanization rate higher than the sample median (29.5 per cent) is time-varying in the countries marked 'sometimes', since their urbanization rates were sometimes below and sometimes above this level. The other variables are time-invariant.

**Appendix Table 3. Determinants of the vote share of extreme left-wing anti-system parties, 1919-39**

**Panel A. Full sample**

	Semi-parametric fixed effects Tobit								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	0.329 (2.443)	6.637 (10.07)	-1.392 (3.060)	1.942 (5.649)	0.215 (2.105)	-0.898 (2.411)	0.118 (2.110)	1.510 (4.109)	26.46** (12.41)
Effective electoral threshold	0.0211 (0.0203)	0.00594 (0.0288)	0.0213 (0.0267)	0.0210 (0.0229)	0.0211 (0.0201)	0.0209 (0.0193)	0.0210 (0.0198)	0.0209 (0.0175)	0.00820 (0.0212)
1919-24	-1.572* (0.931)	-1.817* (0.934)	-1.801** (0.917)	-1.682* (0.975)	-1.584* (0.944)	-1.820* (0.956)	-1.607 (0.996)	-1.432 (0.940)	-2.444 (1.628)
1925-28	-1.812 (1.120)	-2.178* (1.160)	-2.007* (1.054)	-1.795 (1.105)	-1.830 (1.170)	-2.080* (1.122)	-1.850 (1.194)	-1.749 (1.088)	-2.466 (1.652)
1929-33	-1.251 (0.938)	-1.374 (0.906)	-1.410 (0.971)	-1.231 (0.945)	-1.257 (0.929)	-1.535** (0.748)	-1.279 (0.962)	-1.144 (0.899)	-2.213* (1.293)
Growth*Pre-war democracy		-8.584 (10.60)							
Growth*pre-1929 fascist seat			5.036 (6.591)						
Growth*pre-1914 agricultural elite				-2.351 (5.876)					
Growth*religious divide					0.536 (7.172)				
Growth*ethno-linguistic divide						6.581 (9.748)			
Growth*WW1 loser							1.194 (8.976)		
Growth*post WW1 boundary change								-2.296 (5.732)	
Urbanisation									0.0401 (0.134)
Growth*urbanisation									-0.857** (0.342)
Observations	127	127	127	127	127	127	127	127	127
	MLE fixed effects Tobit								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	-0.75 (2.51)	6.87 (4.67)	-2.78 (2.86)	1.88 (3.95)	-0.86 (2.96)	-1.22 (2.89)	-1.28 (2.70)	-0.66 (3.18)	16.35** (6.47)
Effective electoral threshold	0.02 (0.08)	0.01 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.01 (0.07)
1919-24	-1.82** (0.85)	-2.06** (0.85)	-2.12** (0.87)	-1.99** (0.87)	-1.82** (0.85)	-1.84** (0.85)	-1.91** (0.86)	-1.81** (0.88)	-2.78** (1.24)
1925-28	-1.86** (0.79)	-2.13** (0.79)	-2.07** (0.80)	-1.86** (0.79)	-1.86** (0.79)	-1.88** (0.79)	-1.93** (0.80)	-1.85** (0.79)	-2.49** (1.04)
1929-33	-1.02 (0.79)	-1.13 (0.78)	-1.21 (0.80)	-1.04 (0.79)	-1.02 (0.79)	-1.06 (0.80)	-1.08 (0.80)	-1.01 (0.81)	-1.73** (0.87)
Growth*Pre-war democracy		-9.84* (5.12)							
Growth*pre-1929 fascist seat			7.34 (4.97)						
Growth*pre-1914 agricultural elite				-4.01 (4.65)					
Growth*religious divide					0.30 (4.54)				
Growth*ethno-linguistic divide						1.61 (4.97)			
Growth*WW1 loser							3.21 (5.97)		
Growth*post WW1 boundary change								-0.20 (4.62)	
Urbanisation									-0.02 (0.17)
Growth*urbanisation									-0.50*** (0.18)
Observations	127	127	127	127	127	127	127	127	127

## Panel B. Excluding Germany

	Semi-parametric fixed effects Tobit								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	1.308 (3.097)	19.79* (11.06)	-2.291 (3.383)	0.631 (5.188)	-0.438 (1.965)	0.209 (1.719)	-1.056 (1.941)	0.641 (3.877)	27.10 (18.35)
Effective electoral threshold	0.0226 (0.0226)	-0.0205 (0.0283)	0.0236 (0.0403)	0.0225 (0.0220)	0.0226 (0.0203)	0.0226 (0.0217)	0.0228 (0.0204)	0.0227 (0.0241)	0.00829 (0.0219)
1919-24	-1.361 (0.880)	-1.912** (0.960)	-1.823** (0.870)	-1.313 (0.836)	-1.557 (0.957)	-1.528* (0.892)	-1.696* (0.983)	-1.445 (0.965)	-2.323 (1.671)
1925-28	-1.735 (1.062)	-2.467** (1.150)	-2.061** (1.011)	-1.746 (1.066)	-2.035* (1.163)	-1.933* (1.090)	-2.133* (1.156)	-1.766* (1.047)	-2.556 (1.786)
1929-33	-1.418 (0.921)	-2.029** (0.988)	-1.850* (0.970)	-1.436 (0.930)	-1.654* (0.999)	-1.624** (0.818)	-2.014** (0.978)	-1.488* (0.794)	-2.289* (1.355)
Growth*Pre-war democracy		-22.93** (11.04)							
Growth*pre-1929 fascist seat			11.44 (7.056)						
Growth*pre-1914 agricultural elite				1.288 (5.306)					
Growth*religious divide					9.369 (7.170)				
Growth*ethno-linguistic divide						4.893 (9.527)			
Growth*WW1 loser							16.42*** (6.257)		
Growth*post WW1 boundary change								1.420 (5.574)	
Urbanisation									0.0388 (0.122)
Growth*urbanisation									-0.891 (0.587)
Observations	120	120	120	120	120	120	120	120	120
Standard errors in parentheses	MLE fixed effects Tobit								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Growth in last three years	-0.15 (2.58)	14.46*** (5.26)	-3.29 (2.85)	1.29 (4.03)	-1.21 (3.00)	-0.27 (3.01)	-1.91 (2.69)	-1.13 (3.23)	14.94** (6.92)
Effective electoral threshold	0.02 (0.08)	-0.00 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.02 (0.08)	0.01 (0.08)
1919-24	-1.67* (0.87)	-2.00** (0.84)	-2.14** (0.88)	-1.78* (0.91)	-1.62* (0.87)	-1.67* (0.88)	-1.99** (0.87)	-1.80** (0.91)	-2.69** (1.28)
1925-28	-1.79** (0.80)	-2.14*** (0.78)	-2.08*** (0.79)	-1.80** (0.80)	-1.80** (0.80)	-1.79** (0.81)	-2.01** (0.80)	-1.82** (0.80)	-2.49** (1.07)
1929-33	-1.10 (0.81)	-1.35* (0.77)	-1.49* (0.80)	-1.10 (0.81)	-1.09 (0.80)	-1.11 (0.81)	-1.46* (0.81)	-1.20 (0.83)	-1.73* (0.89)
Growth*Pre-war democracy		-17.82*** (5.70)							
Growth*pre-1929 fascist seat			13.42** (5.50)						
Growth*pre-1914 agricultural elite				-2.27 (4.85)					
Growth*religious divide					3.39 (4.91)				
Growth*ethno-linguistic divide						0.38 (5.08)			
Growth*WW1 loser							15.02** (7.62)		
Growth*post WW1 boundary change								2.52 (4.98)	
Urbanisation									-0.04 (0.17)
Growth*urbanisation									-0.45** (0.20)
Observations	120	120	120	120	120	120	120	120	120