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# Economic Crisis and Democratic Breakdown in the Interwar Years: A Reassessment

Jørgen Møller, Alexander Schmotz & Svend-Erik Skaaning\*

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**Abstract:** »Wirtschaftskrise und demokratischer Zusammenbruch in der Zwischenkriegszeit: Eine Neubewertung«. The 'Great Recession' has rekindled discussions about the relationship between economic crisis and democratic breakdown, frequently based on analogies with interwar experiences. However, while the notion that economic crisis in general and the Great Depression in particular caused democratic breakdowns in the interwar years is widespread, most comparative studies of the period between the two world wars have found no independent effect of crisis on democratic breakdown. In this study, we argue that the latter findings are premised on inappropriate standards of assessments and the exclusion of relevant cases. Based on an event history analysis including 33 countries with democratic spells in the interwar years, we find a significant, non-trivial relationship between economic crisis and interwar democratic breakdown. Our results corroborate the notion that economic crisis substantially increases the risk of breakdown in fragile democracies. But we also show that it is not last year's economic performance that matters but rather longer-term developments.

**Keywords:** Economic crisis, democratic breakdown, event history analysis, interwar period.

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## 1. Introduction<sup>1</sup>

A number of scholars and pundits have argued that the financial and economic crisis that began in 2008 has had negative repercussions for democracy (Diamond 2008, 2011; Krugman 2011; Puddington 2008; Schmitter 2012). The very phrase coined for the crisis, the "Great Recession," is a paraphrase of the "Great Depression" of 1929-1933, and these disheartening predictions have tended to be based on what Bordo and James (2010) have aptly termed the "Great Depression Anal-

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ogy.” That is, the interwar experience is highlighted to make the case that the Great Recession is likely to be conducive to democratic regression (see, e.g., Krugman 2011).

At first sight, this line of reasoning seems apt. In popular imagination and among most historians, the interwar democratic rollback is inexorably associated with economic crisis (e.g., Hobsbawm 1994; Mazower 2000; Overy 1994; Rotschild 1974). This view likewise pervades political science and sociology. Lipset (1981[1960], 64-70) famously argued – with direct reference to the democratic breakdowns in interwar Austria, Germany and Spain – that democratic survival depends on effective performance. Alongside welfare policies (health, education, and social security) and law and order, economic growth is one of the key parameters of such effectiveness. The argument is straightforward: Both elites and masses generally prefer high economic growth. In times of economic crisis they are negatively affected and therefore less inclined to support the political regime and more willing to back autocratic alternatives. Diamond (2011, 17), a former student of Lipset’s, has summarized the perspective as follows: “If no crisis supervenes, democracies with weak legitimacy may muddle along for some time, but when they lose their effectiveness, they collapse.”

The notion that poor economic performance undermines democratic stability is also supported by numerous large-N studies (e.g., Bernhard, Reenock and Nordstrom 2003; Gasiorowski 1995; Haggard and Kaufman 1997; Przeworski et al. 2000; Svobik 2008; Teorell 2010). Nonetheless, the clear majority of scholars who have actually carried out comparative analysis of the relationship between economic crisis and democratic breakdown in the interwar period have questioned or outright rejected that economic crisis had an independent effect on democratic breakdown (Berg-Schlosser 2002; Bermeo 2003; Ertman 1998; Linz and Stepan 1996, 80; Luebbert 1991, 307-8; Saalfeld 2002; Zimmermann and Saalfeld 1988).

It is not that these scholars completely dismiss the importance of economic crisis. Several of them argue that misery had a more conditional effect on democratic breakdown. For instance, Zimmermann (1987, 1988) and Zimmermann and Saalfeld (1988) use a matching logic, the premise of which is the observation that economic crisis had different effects in otherwise similar countries. This procedure makes it possible to identify the factors which conditioned the political repercussions of crisis. According to Zimmermann, the key factor is whether a national consensus formation took place in the face of crisis or not (see also Saalfeld 2002).

These nuances are important. But – as we show in more detail below – they do not alter the general conclusion that there was no independent effect of crisis on democratic breakdown. The importance of this cross-national non-finding is hard to overestimate. If the economic crisis of the interwar period – the deepest crisis of modern times, in a period where democracy was challenged in a more general sense – did not directly contribute to democratic breakdown, one would

be skeptical about economic crisis being conducive to democratic breakdown in other periods, including the present.

However, in what follows we argue that the comparative studies questioning the independent effect of crisis on breakdown are based on inappropriate (deterministic) standards of assessment, the exclusion of relevant cases, lack of data, and static rather than dynamic analyses. Addressing these shortcomings, we interrogate the relationship with event history analysis (aka survival analysis), include 33 countries with democratic spells in the interwar period, and enlist more comprehensive data on economic growth. Our analysis reveals a robust, statistically significant relationship between our main measure of economic crisis, a three-year moving average of economic growth, and democratic breakdown. We conclude with a brief discussion about what this finding tells us about the democratic consequences of the current economic crisis.

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## 2. Previous Comparative Studies

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Twenty-six years ago, Zimmermann and Saalfeld (1988, 305) noted that the relationship between the world economic crisis of the 1930s and interwar democratic breakdown has “been among the most under-researched areas in political science, at least in terms of cross-national analysis.” A direct consequence of the Great Recession is that the political repercussions of the interwar economic crisis have attracted renewed attention. But so far, it has been the electoral shifts unleashed by the crisis that have been placed under scrutiny (see, e.g., Bromhead, Eichengreen and O’Rourke 2013; Lindvall 2012). To our knowledge, only Berg-Schlosser (2002, 307-9) has carried out a comparative examination of the relationship between economic crisis and democratic breakdown in the interwar years using a dynamic, statistical analysis, and his study only includes 15 European countries and relies heavily on interpolated data. Virtually all other attempts to interrogate this research question cross-nationally have been based on simple bivariate comparisons of conditions and outcomes across some but not all relevant interwar cases.<sup>2</sup>

What unites these comparative analyses is their surprising conclusion: that there is no independent effect of economic crisis on interwar democratic breakdown.<sup>3</sup> The objections marshaled against the relationship can be summarized in two

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<sup>2</sup> See, e.g., Bermeo (2003, 22); Ertman (1998); Linz and Stepan (1996, 80); Luebbert (1991, 307-8); Mann (2004, 56-8); Saalfeld (2002); Zimmermann and Saalfeld (1988). All of these authors only include some of the democratic spells of the interwar period, mainly European ones.

<sup>3</sup> In most of the works referenced, this is only a secondary argument made to dismiss this factor and thereby pave the way for formulating an alternative explanation for interwar democratic stability.

points. First, as illustrated in Table 1, nine out of 23 interwar breakdowns – and five out of twelve breakdowns in Europe – occurred before the Great Depression.

**Table 1: Democratic Survivors and Breakdowns in the Interwar Years**

Survivors	Breakdowns
Australia, Belgium, Canada, Colombia, Costa Rica, Czechoslovakia, Denmark, Finland, France, Ireland, Luxembourg, New Zealand, Netherlands, Norway, Sweden, Switzerland, United Kingdom, USA	Argentina (1930), Austria (1933), Bulgaria (1920, 1934), Chile (1924, 1927), Dominican Republic (1928), Estonia (1934), Germany (1933), Greece (1935), Guatemala (1931), Honduras (1935), Italy (1922), Japan (1932), Latvia (1934), Lithuania (1926), Nicaragua (1936), Panama (1928), Poland (1926), Romania (1920, 1930), Spain (1936), Uruguay (1933), Yugoslavia (1929)

Note: The years in parentheses denote when the respective countries experienced democratic breakdown. This is based on Skaaning, Gerring and Bartusevicius (2014), using a threshold of  $\geq 4$  on their Lexical Index of Electoral Democracy, which signifies that the chief executive offices and the seats in the effective legislative body are – directly or indirectly – filled by elections characterized by uncertainty, meaning that the elections are, in principle, sufficiently free to enable the opposition to win government power.

Second, the economic crisis of the early 1930s not only hit the cases experiencing democratic breakdown but also the democratic survivors. In fact, in some democratic survivors, such as the Netherlands, Belgium, and Czechoslovakia, the crisis was almost as devastating as in breakdown cases such as Austria and Germany (Linz and Stepan 1996, 80; Luebbert 1991, 307-8; Mann 2004, 56-8; Saalfeld 2002, 210-5). Moreover, in some of the crisis-ridden countries, such as the UK, the Netherlands, and the Scandinavian countries, the vote share of anti-system parties hardly increased, and democracy was not seriously challenged from the inside (Capoccia 2001; Mann 2004, ch. 2).

As mentioned above, these objections are not used to outright dismiss the relevance of crisis. A number of scholars identify a conditional relationship, based on how political systems processed the crisis. Nonetheless, the studies reject the independent effect of crisis, which is striking considering that so much large-N evidence support the existence of such an effect (e.g., Bernhard, Reenock and Nordstrom 2003; Gasiorowski 1995; Haggard and Kaufman 1997; Przeworski et al. 2000; Svulik 2008; Teorell 2010).

There might be a rather simple explanation for this surprising disjunction in findings on the relationship between economic crisis and democratic breakdown. Notice that in the comparative work on crisis in the interwar period reviewed above, the independent effect of economic crisis on democratic breakdown is basically rejected because the relationship only fits some, not all cases. This is exemplified by Saalfeld’s remark that the problem with the crisis variables is that they “leave a considerable proportion of the variation unexplained” (Saalfeld 2002, 212; see also Bermeo 2003, 230; Linz and Stepan 1996, 80; Luebbert 1991, 308). Based on these almost deterministic inferential

standards, scholars have concluded that “the severity of the Depression as such is not a sufficient condition of democratic regime breakdown” (Saalfeld 2002, 215),<sup>4</sup> just as the hyperinflations of the 1920s were not sufficient (or necessary) for breakdown in the 1920s – and that, “an experience with hyperinflation, alone or in conjunction with the subsequent depression, does not account for much” (Luebbert 1991, 308).

There are two problems with basing the analysis of the relationship on deterministic notions of necessity and/or sufficiency assessed by a simple matching of scores on the condition (economic crisis) and the outcome (democratic breakdown) in some but not all of the relevant cases. First, the use of such demanding standards makes it very difficult to compare the findings for the interwar years with the more general findings about the political effects of economic crisis. The extant large-N statistical evidence indicating that economic crisis is conducive to breakdown is, after all, based on probabilistic statistical assessments. But most of these studies have not covered the interwar years (see, e.g., Bernhard, Reenock and Nordstrom 2003; Gasiorowski 1995; Haggard and Kaufman 1997; Przeworski et al. 2000; Teorell 2010).<sup>5</sup>

The second problem is empirical but also has to do with comparing chalk and cheese. The objections against the relationship between economic crisis and democratic breakdown referred to above ignore that the countries on the Atlantic Seaboard of Europe and their settler colonies in North America and Oceania entered the interwar period with very resilient democracies. Mann accordingly distinguish between “two Europes” (Mann 2004, ch. 2), the northwest where democracy was inherently stable throughout the interwar period and the east, south, and center where democracy was inherently fragile. Scholars have singled out the presence of a legacy of free democratic competition and structured party systems in the northwest and the absence of such a legacy in the rest of Europe as the most important reason for this disjunction (Bromhead, Eichengreen and O’Rourke 2013; Ertman 1998; Guzy 2008; Mann 2004, ch. 2). This political legacy was further reinforced by higher levels of socio-economic development, something that we also know to be propitious for democratic survival (Lipset 1959; Przeworski et al. 2000).

Recall from the Introduction that Diamond, in his summary of Lipset’s thoughts about economic crisis and democratic breakdown, singled out democracies with weak legitimacy as the place we would expect crisis to hurt politically. The presence of a cluster of resilient democracies in Northwestern Europe means

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<sup>4</sup> Needless to say, concluding that X is not a sufficient condition of Y is the opposite of a deterministic argument. But our point is that the sufficiency-relationship is rejected based on a deterministic standard.

<sup>5</sup> For more comprehensive studies, see Svobik (2008) and Bernhard, Nordstrom, and Reenock (2001). The interwar period has also been included in more general tests of modernization theory (Boix and Stokes 2003; Boix 2011; Svobik 2008).

that it is implausible to expect economic crisis to be a sufficient cause of democratic breakdown in the interwar period.<sup>6</sup> Crisis might of course still be necessary for breakdown. However, the very fact that the new democracies in Latin America and Southern, Central, and Eastern Europe were fragile also makes this proposition rather implausible. The interwar period was one of almost endemic crisis. Each of these crises – over the Bolshevik revolution of 1917, the controversial treaties ending World War I, economic downturns, the rise of totalitarian movements, government instability, and a contested international order (see Mann 2004, 23-4; Mazower 2000; Overy 1994) – might have triggered breakdown in fragile democratic regimes, which were not bolstered by a legacy of electoral competition for government offices and/or high levels of development.<sup>7</sup>

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### 3. Model and Data

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Based on the above considerations, the relationship between economic crisis and democratic breakdown in the interwar period is best analyzed using a standard probabilistic assessment, including as many instances of democracy as possible. To be sure, there is a tradeoff between our general perspective and the depth of analyses such as those of Zimmermann (1987, 1988; Zimmermann and Saalfeld 1988). Widening the scope of the investigation by enlisting more countries makes the problem of controlling for alternative explanations much more acute. We have therefore rerun our analysis with different batteries of relevant control variables for which data are available. It is heartening to note that our main findings, more on which below, are robust to these different specifications. Nonetheless, the tradeoff cannot be completely escaped and it is obvious that the some of the advantages of, for instance, Zimmermann's more focused comparisons are lost when opting for a more general analysis. Our results are of course no better than the data we have been able to compile but, then again, they have the advantage of being based on a broader range of countries.

We apply Cox's (1972, 1975) proportional hazards survival model and include all independent countries with democratic spells in the interwar period for which we have been able to collect data on economic growth, i.e., all but the

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<sup>6</sup> The most telling illustration of the robustness of the old democracies is to be found before the interwar period, during World War One. As Payne (1995, 73-5) points out, the Western European belligerent democracies were so stable that they could deal with the massive strain of the war within the political system, e.g. via the creation of 'national unity governments'. This stands in stark contrast to the situation in the weaker political systems in Central, Southern, and Eastern Europe where the similar strain either produced outright regime collapse (Russia) or some kind of *de facto* military dictatorship (Germany).

<sup>7</sup> Svobik (2008) shows that consolidated democracies are not vulnerable to crisis but that fledgling democracies are. The greatest vulnerability is in the early phases. See also Bernhard, Reenock and Nordstrom (2003).

Dominican Republic, Panama, Latvia, Lithuania, Luxembourg, and Poland. Our sample includes 37 democratic spells in 33 countries between 1919 and 1939, 18 of which ended in a democratic breakdown (see Table 1). Follow-up time equals the continuous democratic years of a country in the interwar period.<sup>8</sup>

Regarding the classification of regime type presented in Table 1, we have used the Lexical Index of Electoral Democracy compiled by Skaaning, Gerring and Bartusevicius (2014) to identify democratic spells and breakdowns. Countries are considered democracies if they are characterized by contested elections for executive and legislative offices (Przeworski et al. 2000, 15-8), meaning that they score at least 4 on the Lexical Index. Some of the cases in Table 1 are borderline cases in the sense that many scholars would not accept them as instances of democracy. We maintain that they achieve this status based on a minimalist definition, which solely emphasizes genuine electoral competition for leadership (Møller and Skaaning 2013). However, the fact that their democratic qualities differ substantially is something that has to be taken into consideration when analyzing the effect of crisis. We do so by entering a variable measuring democratic legacy, the purpose of which is to isolate the effect of crisis on the new democracies. Together with a control variable measuring socio-economic development, this also serves to take into account the presence of the resilient “Northwestern” democracies.

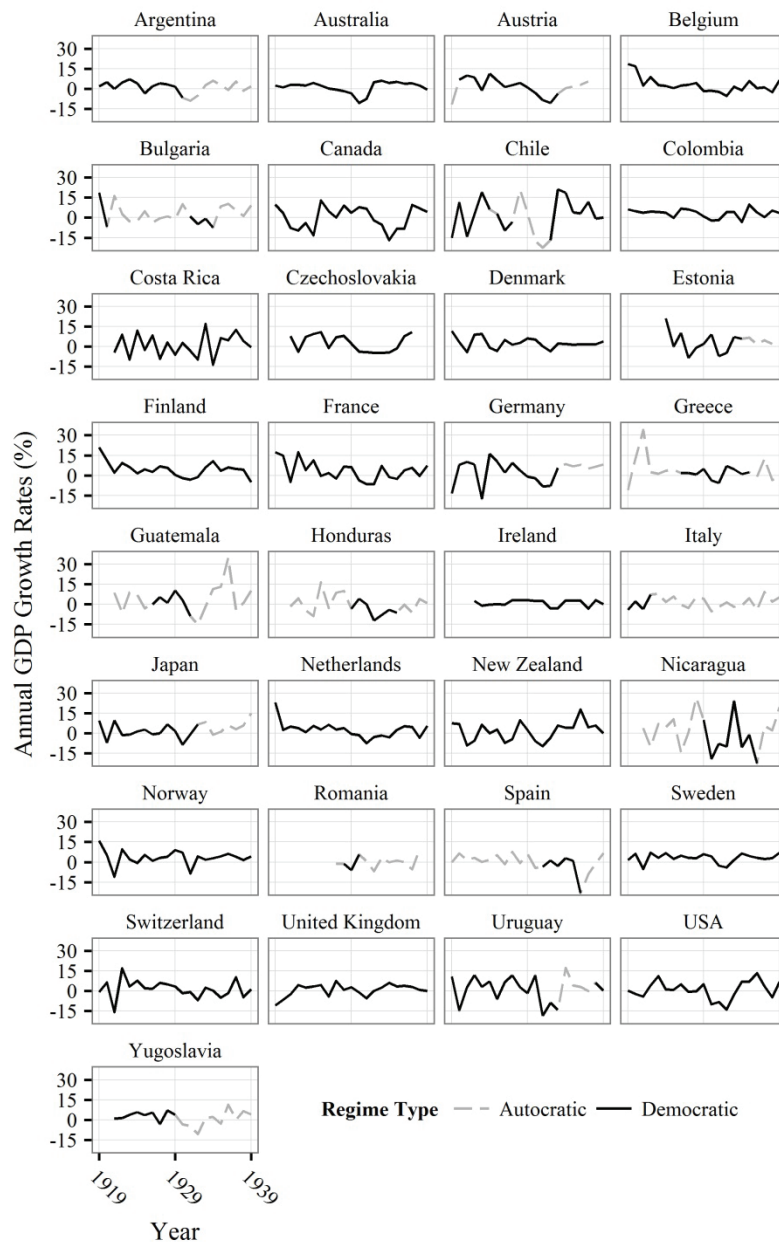
The two major crisis episodes of the interwar period – the “post-War” slump of 1919-1923 and the Great Depression of 1929-1933 – represented exogenous shocks which the target regimes had to respond to. What we set out to assess is basically whether democratic regimes proved resilient in this regard or not. In our analyses, we use the GDP per capita figures from an updated version of Maddison’s historical statistics of the world economy to measure economic crisis (Bolt and van Zanden 2013). We supplement these figures with data for Estonia from Klesment (2010) and for Bulgaria from Ivanov (2012). We run our models with three different specifications of the economic growth variable: one where growth is lagged one-year and two specifications measuring the moving average of growth over the two and three years preceding the event, respectively (cf. Przeworski et al. 2000, 113).

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<sup>8</sup> Only with the end of World War I does a country enter the risk set relevant to our question (Box-Steffensmeier and Jones 1997, 1422). However, our results are robust to using continuous democratic years as follow-up time (see: Jørgen Møller, Alexander Schmotz, and Svend-Erik Skaaning, 2015, Online Appendix to Economic Crises and the Breakdown of Democracy in the Interwar Years: A Reassessment, *HSR-Trans* 25. doi: 10.12759/hsr.trans.25.v01.2015).



Figure 1: Economic Growth in Interwar Democracies



The kind of crisis we are attempting to gauge is a situation where the persistence of the regime is threatened (see Svensson 1986, 133). The one-year lag is included to appreciate the standard measure of economic crisis in previous large-N analyses (e.g., Teorell 2010). Its relevance for breakdown can be buttressed by several different arguments. First, if it is predominantly elites that come together to terminate democracy, they may take their cue from the immediate growth experience. Second, research on the economic voting shows that the effect of changes in economic trends is normally instantaneous; voters seemingly respond very fast to crisis (Lindvall 2012). Third, and reinforcing the two former points, we do not know if other events may have undercut efficacy, effectiveness, and legitimacy in the past. Given a poor track record, one year of crisis might be enough to topple the regime.

These are all plausible arguments. However, we expect that it takes more than one year of disappointing economic performance to undercut “the capacity of a political system to engender and maintain the belief that existing political institutions are the most appropriate or proper ones for the society” (Lipset 1959, 86) – for example, via the kind of political overload seminally described by Huntington (1968). Likewise, we expect that it takes some time for pressure against the regime to be organized to the extent that toppling the regime becomes a practical possibility, given a collapse of performance-based legitimacy (Brady 2009). Mann (2004, 58) makes this point succinctly with respect to interwar Europe:

Why should we expect last year’s trade or unemployment figures to generate this year’s coup? Political movements take a few years to build up steam. Maybe the general aura of economic crisis in the period is what matters more in weakening regimes and giving authoritarians, including fascists, the chance to air their solutions and get organized.

Seen from this vantage point, even a fragile regime should be able to weather a one-off shock, possibly due to exogenous shift in economic conjectures. As demonstrated in Figure 1 above, year-to-year growth rates fluctuate wildly in the period we investigate and the single year’s experience is unlikely to provide a general political compass for citizens and elites. Regime breakdown is most plausible in a situation where a large part of the citizens and/or elites perceives the disappointing economic performance as a protracted attribute of the regime *and* where citizens and/or elites have time to mobilize against the regime. Hence, we expect to find more pronounced statistical effects of specifications capturing the growth experience of several years. It is this intuition which is behind the use of moving averages covering the two and three years, respectively, preceding the event (see Bromhead, Eichengreen and O’Rourke 2013). These specifications – and especially the three-year moving average – also have the virtue of easing out the fluctuations illustrated in Figure 1.

We include seven control variables in our models. First, as mentioned above, we enter a measure of democratic experience, operationalized as the number of

years of uninterrupted democratic experience (+1 and then logged) based on the Lexical Index of Electoral Democracy (Skaaning, Gerring and Bartusevicius 2014).<sup>9</sup> To measure socio-economic development (GDP per capita), we rely on the sources for economic growth rates mentioned above. Furthermore, we include three dummy variables indicating whether a country was among the losers of World War I, whether there were strong landlords after World War I, and whether there is a high level of ethnic diversity (see Bromhead, Eichengreen and O'Rourke 2013).<sup>10</sup> We also include two variables to hold institutional factors constant, one measuring whether the country has a presidential system, the other the character of the electoral system (see Hermens 1941; Linz 1990). Finally, we have rerun our model with a different specification of the Agrarian Elite<sup>11</sup> variable and with an additional control variable distinguishing between old countries, which existed prior to World War I, and the new countries brought into existence in the aftermath of the war. These additional results, which were very similar to the ones achieved using our baseline models, are reported in an online appendix. In the appendix included at the end of this paper, we present the scores for the time-invariant control variables included in the baseline model.

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#### 4. Event History Analysis

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Table 2 below presents the results of the Cox regressions for each of the three specifications of economic crisis and the control variables.<sup>12</sup> As expected, we do not find a statistically significant effect of the one-year lag of the economic growth rate (Model 1). Similarly, the two-year moving average has only a mar-

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<sup>9</sup> We code Ireland based on the UK score because Ireland was a constituent unit in the United Kingdom – Irish representatives sat in Westminster and had experience with democratic competition – before its independence in 1921 (see Mann 2004, 42).

<sup>10</sup> See, e.g., Lipset (1959); Przeworski et al. (2000); Holzer (2002); Overy (1994); Moore (1991 [1966]); Stephens (1989); Kopstein and Wittenberg (2010).

<sup>11</sup> Our preferred version of this variable measures whether there were strong landlords after World War I, thereby taking into account that the landholding of the agrarian elite in a number of countries was significantly reduced after World War I – especially where the big landowners had primarily been of foreign nationality (see Rotschild 1974). Some accounts emphasizing the impact of agrarian elites, however, argue that the most important distinction is whether strong agrarian elites were present until the interwar period – and not necessarily during these years – which is captured by the alternative version of the Agrarian Elite variable.

<sup>12</sup> We tested the proportional hazards assumption of the Cox model using the Grambsch and Therneau (1994) numerical test and found evidence of non-proportional hazards for the variables measuring the continuous democratic years and marking World War I losers. Test results can be found in the appendix below. Following established best practice (Golub 2007, 2008; Box-Steffensmeier and Zorn 2001) we adjusted for non-proportionality by including interaction terms of the violating covariates with functions of survival time. We tested models with combinations of linear, logarithmic, and square function of time and report the ones fitting the data best according to Akaike's Information Criterion.

ginally significant effect on democratic breakdown (Model 2). However, the effect of the three-year moving average is significant at the one percent level and it has a substantial effect on breakdown. Translated into likelihood ratios a one percentage point drop in the average level of growth in the three years preceding the current year (Model 3) results in a 11.6 percent higher risk of democratic breakdown (between 3.0 and 20.9 percent with 95 percent confidence).

**Table 2: Cox Proportional Hazards Survival Models of Interwar Democratic Breakdown**

	Democratic Breakdown		
	(1)	(2)	(3)
Growth $t-1$	-0.004 (0.017)		
Average Growth (Two Years Preceding)		-0.065* (0.035)	
Average Growth (Three Years Preceding)			-0.110*** (0.041)
GDP/cap. (ln) $t-1$	-1.317* (0.771)	-1.378* (0.704)	-1.391** (0.684)
Continuous Years Democratic + 1 (ln)	-0.506 (0.619)	-1.765 (1.464)	-1.776 (1.441)
Presidential System	-0.753 (0.558)	-0.551 (0.553)	-0.522 (0.525)
Proportional System	-0.983 (0.846)	-0.392 (0.690)	-0.312 (0.613)
Agrarian Elite	1.325** (0.590)	0.934* (0.494)	0.868* (0.499)
Ethnic Fractionalization	0.220 (0.453)	0.157 (0.495)	0.235 (0.469)
World War I Loser	2.646 (2.066)	1.725 (1.958)	1.868 (1.811)
Continuous Years Democratic * T <sup>2</sup>	-0.026** (0.012)		
World War I Loser * ln(T)	-1.159 (0.906)	-0.688 (0.940)	-0.758 (0.902)
Events	18	18	18
Spells	37	37	37
Observations	502	494	486
Log Likelihood	-42.267	-43.233	-42.339
LR Test	32.638*** (df=10)	30.188*** (df=9)	31.299*** (df=9)

Entries are Cox regression coefficients with robust standard errors (clustered on countries) in parentheses. Significance levels: \* < .1, \*\* < .05, \*\*\* < .01.

These results are robust to a number of different specifications (see the online appendix). First, since most of the non-findings reported above are only based on comparative analyses of European countries, we have also run separate analyses for the European spells only. These analyses are somewhat problematic due to the low number of cases. Nonetheless, the results reported in Table

2 are consistently reproduced. Second, our findings are robust to continuous democratic years as follow-up time, and to exchanging event history analysis with logistic regressions analysis, including iterations with both random and fixed effects. Third, the results are also robust to changing specifications of the Agrarian Elite variable and to adding yet another control variable, measuring the distinction between old and new countries.

Next, in spite of the fact that the interwar economic crises were exogenous to most countries, some would probably be concerned about problems of endogeneity due to different regime responses having different effects on the depth and spread-out of the crisis (cf. Zimmermann and Saalfeld 1988; Saalfeld 2002). Yet, if problems of simultaneity were to occur we would expect the one-year lag to be better predictors of breakdown than the moving averages.<sup>13</sup> The fact that it is the three-year moving average specification which is statistically significant thus further mitigates concerns about endogeneity.

Regarding the control variables, there is so high collinearity between democratic legacy and the level of economic development that only the latter becomes statistically significant when both are included in the same model. However, the tally of continuous years as a democracy is statistically significant when dropping GDP per capita (see the online appendix). Both variables exert a negative effect on the risk of democratic breakdown in all models. This corroborates the notion that some countries entered the interwar period with strongly consolidated democracies, based on prior democratic legacy and high levels of development. The presence of agrarian elites, in turn, consistently increases the risk of democratic breakdown throughout all models. Ethnic fractionalization and having been on the losing side in WWI do not have statistically significant effects. The two variables measuring institutional factors (proportional electoral system and presidential system) also produce insignificant coefficients.

Can we conclude that a longer lasting economic downturn spurs democratic breakdown via the crisis mechanisms we have proposed above?<sup>14</sup> This would

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<sup>13</sup> Tellingly, in all models a crisis specification based on the current year becomes statistically significant. We have not reported this because here endogeneity would be massively present almost by definition. For instance, if a democratic breakdown occurred in the first half of a year, the growth rate would predominantly capture the performance after – and thus affected by – the breakdown.

<sup>14</sup> As mentioned above, seven interwar cases are not included in the analysis despite democratic spells because we lack data on economic growth rates. Considering the pivotal role played by European developments in the debate, we are most worried about the exclusion of three new democracies in East-Central Europe: those of Lithuania and Poland, which broke down in 1926, and that of Latvia, which broke down in 1934. However, descriptions of economic trends by historians indicate that the inclusion of these cases would not undermine the results but rather strengthen them. First, Poland was severely hit by the post-war economic crisis of the early 1920s (Saalfeld 2002) and the trigger of the breakdown in 1926 is normally identified as the economic crisis unleashed by hyperinflation, including the breakdown of the zloty in the spring of 1926 (Rothschild 1966, 20-1, 73; Rothschild 1974,

probably be somewhat premature. The most important crisis episode – the Great Depression – began in 1929 but as Table 1 shows the highest incidence of breakdown is found in the years 1933-1936. This finding of course fits well with our expectations about the effect of crisis building up over a couple of years before triggering breakdown. But it also means that most breakdowns follow in the wake of what is arguably the emblematic regime change in the interwar period: the 1933 Nazi takeover in Germany. Especially in the relatively tight-knit European setting, such a crisis-triggered breakdown in a focal case could quickly increase the propensity of breakdown in neighboring countries (see Møller, Skaaning and Tolstrup 2013). Given the near-simultaneity of especially the 1929-1933 crisis, this might plausibly have reinforced the negative political effects of crisis, particularly in Europe. This would represent yet another way in which crisis translated into breakdown – but, if so, it would also serve to undercut the independence of the cases and hence weaken our statistical test.

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## 5. Conclusions

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We have attempted to shed light on the puzzle that, on the one hand, there are strong theoretical arguments for why economic crisis is conducive to democratic breakdown but, on the other hand, scholars carrying out comparative analysis of the interwar period, arguably *the* most important historical concatenation of economic crisis and democratic breakdown, have tended to reject this relationship. This surprising non-finding seems to be an artifact of a particular set of methodological standards of assessment centered on necessity and sufficiency, the lack of good time-series data for the interwar period, the failure to measure crisis using longer-term specifications, and the exclusion of relevant cases. Correcting for these problems, we find a robust, negative effect of economic growth rates on democratic breakdown.

Determining whether there is a relationship between economic crisis and democratic breakdown in the interwar period is intriguing in itself. But the question has recently become particularly pertinent to pose because of the focus on the potentially delegitimizing consequences of the Great Recession. Scholars, pundits, and politicians all have a natural tendency to use particular episodes of the past to understand the present – *in casu* via the “Great Depression Analogy.” Exactly for this reason, it is crucial that these key historical episodes are understood better. Our findings support the notion that economic crisis *is* conducive to democratic breakdowns.

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52). Second, the Latvian experience strongly mirrors that of neighboring Estonia. In both countries democracy broke down in 1934, following the Great Depression. Third, the Lithuanian breakdown of 1926 is normally construed as relatively similar to that of neighboring Poland in the same year (Rothschild 1974).

However, there are also two caveats. First, if we had corroborated the non-findings of prior comparative analyses, this would have seriously undermined the plausibility of the current economic crisis spurring breakdowns. Yet the extent to which our results can be generalized to other periods, with less deep economic crisis and fewer challenges to democracy as a regime form, is more circumscribed. Second, our results show that a high level of socio-economic development and a long democratic legacy mitigate the risk of democratic breakdown, even in the face of crisis. Thus, we would – *pace* some recent warnings (see, e.g., Krugman 2011; Schmitter 2012) – not expect the current economic crisis to be capable of triggering breakdown in developed countries with a long legacy of democracy (see Svobik 2013). It is first and foremost fragile, new democracies which are put under stress by crisis, especially when crisis is building up steam over several years. This might be the most important lesson that can be inferred from interwar Europe.

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## Appendix

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Table A1: Values of Time-Invariant Control Variables

	Presidential System	Proportional System	Agrarian Elite	Ethnic Fractionalization	World War I Loser
Argentina	1	1	1	0	0
Australia	0	0	1	0	0
Austria	0	1	1	0	1
Belgium	0	1	0	1	0
Bulgaria	0	1	0	1	1
Canada	0	0	0	1	0
Chile	1	1	1	0	0
Colombia	1	0	1	1	0
Costa Rica	1	1	0	0	0
Czechoslovakia	0	1	0	1	1
Denmark	0	1	0	0	0
Dominican Rep.	1	0	1	1	0
Estonia	0	1	0	1	0

*Table A1 continued...*

Finland	1	1	0	0	0
France	0	0	0	0	0
Germany	1	1	1	0	1
Greece	1	0	0	0	0
Guatemala	1	0	1	1	0
Honduras	1	0	1	0	0
Ireland	0	0	0	0	0
Italy	0	0	1	0	0
Japan	0	1	1	0	0
Latvia	0	1	0	1	0
Lithuania	0	1	0	1	0
Luxembourg	0	0	0	0	0
New Zealand	0	0	1	1	0
Netherlands	0	1	0	0	0
Nicaragua	1	0	1	1	0
Norway	0	1	0	0	0
Panama	1	1	0	1	0
Poland	0	1	1	1	0
Romania	0	1	0	1	0
Spain	0	1	1	1	0
Sweden	0	1	0	0	0
Switzerland	0	1	0	1	0
United Kingdom	0	0	1	0	0
Uruguay	1	1	1	0	0
USA	1	0	0	1	0
Yugoslavia	0	1	0	1	0

**Table A2: Proportional Hazards Tests for Table 2**

	Democratic Breakdown		
	Model 1	Model 2	Model 3
Growth $t_{-1}$	-0.232		
Average Growth (Two Years Preceding)		-0.258	
Average Growth (Three Years Preceding)			-0.131
GDP/cap. (ln) $t_{-1}$	0.159	0.215	0.221
Continuous Years Democratic + 1 (ln)	-0.159*	-0.167	-0.156
Presidential System	-0.053	-0.037	0.02
Proportional System	-0.112	-0.066	-0.075
Agrarian Elite	0.257	0.265	0.314
Ethnic Fractionalization	0.001	0.041	0.003
World War I Loser	-0.251*	-0.327**	-0.37**
Global Test	8.098	8.482	8.237

Note: Proportionality test following Grambsch and Therneau (1994). Entries depict correlations of Schoenfeld (1982) residuals with scaled survival time, thereby signaling time-dependence. Significance levels: \* $<.1$ , \*\* $<.05$ .