Dynamics of protest and electoral politics in the Great Recession*

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Abstract

This paper links the consequences of the Great Recession on protest and electoral politics. It innovates by combining the literature on economic voting with social movement research and by presenting the first integrated, large-scale empirical analysis of protest mobilisation and electoral outcomes in Europe. The economic voting literature offers important insights on how and under what conditions economic crises play out in the short-run. However, it tends to ignore the closely connected dynamics of opposition in the two arenas and the role of protests in politicising economic grievances. More specifically, it is argued that economic protests act as a 'signalling mechanism' by attributing blame to decision-makers and by highlighting the political dimension of deteriorating economic conditions. Ultimately, massive protest mobilisation should, thus, amplify the impact of economic hardship on the electoral losses of incumbents and mainstream parties more generally. The empirical analysis to study this relationship relies on an original semi-automated protest event dataset combined with an updated dataset of electoral outcomes in 30 European countries from 2000 to 2015. The results indicate that the dynamics of economic protests and electoral punishment are closely related and point to a destabilisation of European party systems during the Great Recession.

Keywords: Protest politics, protest event analysis, economic crisis, electoral politics, economic voting, mainstream parties

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Introduction

Almost all European economies contracted in the first storm of the Great Recession, which hit the continent after the collapse of the investment bank Lehman brothers in fall 2008. Most economies recovered fairly quickly after the first 'shock', but the financial crisis soon developed into the so-called 'Euro crisis'. Especially the countries in Southern Europe have been caught in a spiral of stagnation, high unemployment, and public debt ever since. Ultimately, several crisis-ridden countries needed financial assistance and had to accept strong conditions by their international creditors. Cumulative research documents the political consequences of this crisis in Europe. Importantly, studying the link between economic grievances and political responses has been revived. Among others, social movement studies have examined the wave of anti-austerity protests and reconsidered the link between economic strains and protest mobilisation (e.g., Beissinger & Sasse 2014; della Porta 2015; Grasso & Giugni 2016; Klandermans & van Stekelenburg 2016; Quaranta 2016; Kurer et al. 2018), while electoral and party scholars have studied the massive punishment of incumbents and, in some cases, the breakdown of entire party systems and established lines of conflict (e.g., Bartels 2014; Costa Lobo & Lewis-Beck 2017; Hobolt & Tilley 2016; Hooghe & Marks 2018; Hutter and Kriesi 2019; Otjes & Katsanidou 2017).

However, the literature still lacks a systematic and large-scale comparative analysis that *connects* the political responses to the Great Recession in the electoral and the protest arena. As McAdam and Tarrow (2010, 2013) and Hutter (2014) have argued, the bifurcation of scholarly work on social movements and protest, on the one side, and political parties and elections, on the other, has hampered our understanding of the dynamics of political conflict in contemporary democracies. This is unsatisfactory as the Great Recession has yet again offered multiple examples of the manifold connections and interactions. As exemplified by the recent protest wave and the rise of so-called movement parties from both left and right

(e.g., Altiparmakis & Lorenzini 2018; della Porta et al. 2017), the dynamic interactions of protest and electoral politics may trigger profound changes. Such reinforcing spirals of movement and party mobilisation tend to be most likely in a context of shifting alignment in times of economic and political crises (e.g., Hutter et al. 2019; Roberts 2017).

To advance our understanding of aggregate links between economic grievances, electoral and protest politics, we build upon and refine the economic voting framework (e.g., Duch & Stevenson 2008; Lewis-Beck & Stegmaier 2007). Specifically, we ask: (1) Have the changing economic conditions during the Great Recession affected European protest politics in the same way and with the same intensity as electoral politics? (2) To what extent has protest mobilisation in the streets contributed to the massive electoral punishment of parties in times of economic crisis?

To answer these questions, we proceed in two steps. *First*, we borrow arguments from the economic voting literature on the conditional effects of macroeconomic factors on electoral punishment and test whether they also apply to the level of economic protest in a given society (this is our 'equivalence hypothesis'). We bring in research on economic voting because social movement studies have for a long time neglected the role of objective economic grievances (e.g., Buechler 2004) and, thus, lack equally established theoretical and empirical claims on the link between the economy and political protest.

Second, we aim to enrich the economic voting literature by introducing protest as a so-far neglected condition that may influence the extent of the economic vote. We start out from McAdam and Tarrow's (2010, 2013) insight that even if there are no opportunities for immediate electoral punishment, the electoral cycle is embedded in an ongoing process of political mobilisation that interacts with elections in complex ways. More precisely, we emphasize the role of protests in *politicising* grievances. We argue that protests may act as a 'signalling mechanism' by attributing blame to decision-makers and by highlighting the

political dimension of deteriorating economic conditions ('signalling hypothesis'). Ultimately, we do not expect a direct effect of protest on electoral punishment; rather, massive protests should amplify the impact of economic hardship on electoral losses of incumbents and mainstream parties more generally ('destabilisation hypothesis').

Overall, the paper innovates (i) by connecting social movement research with the economic voting literature, (ii) by suggesting a mechanism through which protest may contribute to the further destabilisation of European party systems, and (iii) by testing the plausibility of these argument based on the first analysis of aggregate shifts in protest mobilisation and electoral outcomes across a large set of European democracies. Specifically, the empirical analysis combines original protest event data with data on electoral outcomes in 30 European countries from 2000 to 2015.[1]

Theoretical framework and expectations

Borrowing insights from the economic voting literature to study protest politics

Social movement studies have neglected the role of objective economic conditions as an explanatory factor for increasing or declining protest levels for several decades. Based on the famous dictum of McCarthy and Zald (1977:1215) that "there is always enough discontent in any society to support the grassroots supply for a movement…", the field rather focused on the role of organisations, the political context, and discursive strategies to mobilise discontent in society (Buechler 2004). While (relative) economic grievances made their way back into social movement studies in the Great Recession (e.g., Beissinger & Sasse 2014; della Porta 2015; Grasso & Giugni 2016; Quaranta 2016; Kurer et al. 2018), the field still tends to lack a set of well-established arguments and findings on the relation between economic performance

[1] The data covers 27 EU member states plus Iceland, Norway, and Switzerland. It does not include Croatia which joined the EU in 2013.

and *aggregate* protest levels. That is why in this paper we resort to the economic voting framework.

The *raison d'être* of the economic voting literature is exactly the search for relations between economic indicators and political behaviour. It assumes instrumentally rational voters, who will reward the incumbents with their vote when the economy is good, and punish them when the economy is bad. Much of the literature conceives of economic voting as any change in the support for the chief executive, but some research also focuses on changes in support for the government coalition. According to most studies, it is not the personal financial situation, which is decisive for the economic vote, but the perception of the national economy (e.g., Duch & Stevenson 2008; Lewis-Beck & Stegmaier 2007). The literature thus shows that voting depends on the *economic context* and that economic voting is pervasive both in 'normal' and 'crisis' periods. Increasing work also documents how strongly incumbents were punished in the Great Recession and that the punishment varies in line with the predictions of the economic voting literature, i.e., according to how hard the economic crisis hit individual countries (e.g., Bartels 2014; Hernández and Kriesi 2016; Talving 2018).

Furthermore, the literature on economic voting shows that the effects are conditioned by the *political context*. Three points seem particularly important: *First*, Powell and Whitten's (1993) landmark study has documented for the first time that the *clarity of political responsibility* conditions economic voting: the voters' assessment of the government's economic performance plays a more decisive role if the national institutional context allows the voters to clearly attribute the responsibility for the economic performance to the government. Duch and Stevenson's (2008) much more detailed results confirm this evidence. *Second*, recent work also documents important differences depending on the *institutionalisation of the party system* (e.g., Hernández and Kriesi 2016). That is, economic voting presupposes a certain degree of structured and long-term interactions of the parties in a

given system. In our sample, this mainly differentiates the party systems in Western and Eastern Europe. Measured against several criteria, the latter are far less institutionalised (Casal Bértoa 2014), and as Neff Powell and Tucker (2013) show, the high level of volatility in these systems since the democratic transition has above all been due to the entry and exit of parties. *Finally*, research in the economic voting tradition has documented that, in times of increasing globalization, voters are less likely to punish national governments in bad economic times because they perceive the *constraints of national governments' influence* on economic developments (e.g., Hellwig & Samuels 2007; Costa Lobo & Lewis-Beck 2017).

As the current economic crisis brought to the fore the strong economic and political interdependencies in Europe, the previous arguments would lead us to expect that the impact of economic conditions on the punishment of incumbents should be weaker – or at least not stronger – in the Great Recession. This is also what some empirical studies show (e.g., Magalhães 2014; Talving 2018). However, other scholars in the economic voting field suggest being cautious here. For example, Lobo and Lewis-Beck (2017:616f.) emphasize that some of the negative findings might simply be methodological artefacts. That is, studies based on individual-level cross-sectional data are not able to grasp the effects of the economic vote because of restricted variance. In a context of a profound economic crisis, a large part of society – regardless of partisan attachments – acknowledges the economic problems.[2]

There is yet another reason for why scholars might have found differing results of the crisis on the economic vote in the Great Recession, namely *timing* (Hernández and Kriesi 2016). The current economic crisis unfolded in stages: while the initial economic shock affected almost all European countries, the economic prospects of most, but not all, improved fairly quickly thereafter. The voters in the countries where the economy continued to stagnate

[2] Thus, one needs to rely on other types of research designs: either focus on aggregate electoral outcomes in a large N-setting (e.g., Dassonneville and Lewis-Beck 2014) or on a pooled design of several surveys (e.g., Fraile and Lewis-Beck 2014), or structural equation modelling with individual-level panel data (e.g., Chzhen et al. 2014). Such designs indicate that the economic vote is stronger during an economic crisis.

or even experienced a pronounced double-dip recession are, therefore, likely to have perceived the incumbents' failure as particularly serious, not only compared to the pre-2008 situation, but also compared to other countries (on benchmarking, see Kayser & Peress 2012).

Taking these insights from research on economic voting and benchmarking as our starting point, we test in this paper whether the same dynamics are at play when looking at the ups and downs of protests over economic issues. As Piven and Cloward (1977:15) have already noted a long time ago, "ordinarily, defiance is first expressed in the voting booth simply because, whether defiant or not, people have been socialized within a political culture that defines voting as the mechanism through which political change can and should properly occur." Accordingly, first signs of popular discontent are sharp shifts in the voting patterns. However, as highlighted before, the movement literature also emphasizes that, in the absence of immediately available options in institutionalized arenas, discontented groups are likely to resort to the protest arena and try to force concessions from political elites by directly appealing to the public. In other words, we expect that protest mobilisation related to economic matters should also be driven by bad economic performance, especially in later stages of the crisis and under 'favourable' political conditions, such as clarity of responsibility and high party system institutionalisation (this is our *'equivalence hypothesis'*).

Enriching the economic voting literature: The signalling function of protest politics

In addition to establishing whether the same economic and political factors drive the ups and downs in protest politics as in electoral politics, we shall focus on the questions of whether and how protests might have aggravated electoral losses of incumbents in the Great Recession. More specifically, we emphasize the role of protest as a 'signalling mechanism' that attributes blame to decision-makers and highlights the *political* dimension of deteriorating economic conditions (see Lohmann 1993).

Regarding the dynamics of electoral and protest politics, we build on Schattschneider's (1960) idea of the 'expansion of conflict'. According to this idea, public protest is designed to unleash a public debate, to draw the attention of the public to the grievances of the actors in question, to create controversy where there was none, and to obtain the support of the public for the actors' concerns. Put differently, protest fulfils three essential functions which may drive the dynamic relation between protest and electoral politics: (a) protests draw attention to the public's grievances and may unleash a controversy (attention function); (b) protests attribute political responsibility for (economic) disparities (attribution function); and (c) protests can strengthen allies in the political system (spin function) (for a related discussion, see Gillion and Soule 2018:2ff.)

Such a view of political conflict is most prominent in the agenda-setting literature, and recent contributions from that tradition emphasize the power of protest to signal discontent and raise the salience of certain issues in more institutionalized arenas (e.g., Vliegenthart et al. 2016). The pressure from below tends to strengthen the opposition and other allies of the protesting groups in the political system, which may be the main reason why opposition parties support or even create such protest in the first place. The controversial public debates that result from the expansion of conflict by protest mobilisation increase the legitimacy of speakers and allies of movements with journalists and decision-makers, who tend to closely follow the public debates (Gamson & Meyer 1996:288). Wolfsfeld's (1997:47) 'principle of political resonance' formulates this relationship in a concise way: challengers who succeed in producing events, which resonate with the professional and political culture of important news media, can compete with much more powerful adversaries.

For our argument, it is important that such protest actions may set in motion contentious episodes involving a sequence of interactions between the government and its challengers (see Kriesi et al. 2019; McAdam et al. 2001). In this sequence, the challengers' protests attribute

responsibility for the problem at stake to the incumbents, i.e., it serves as a signal for the political dimension of the problem. This was also the case for the social movements and protest campaigns that emerged in the context of the Great Recession: they had a clear message, opposing austerity and calling for democratic renewal, which emphasized the responsibility of both national and European elites for mismanaging the economic crisis and for exacerbating problems of democratic representation (e.g., Altiparmakis & Lorenzini 2018; della Porta 2015). Given their structural constraints, incumbent parties have above all resorted to procedural concessions to accommodate the pressure from the streets: changes in leadership, reshuffles of the cabinet composition, calls for early elections, or ceding responsibility to a care-taker government composed of technocrats. The situation of governments in the countries that were most hardly hit by the crisis proved to be particularly uncomfortable in this respect. Not only were they exposed to domestic pressure in the streets, but they also faced pressure from international stakeholders who expected them to act responsibly and execute the measures deemed necessary by the 'markets'.

Consequently, the interaction dynamics between protest and electoral politics seem particularly closely coupled in a crisis context. A typical scenario for the interaction between protest and electoral politics in the countries most severely hit by the crisis may look like this: The discontented groups mobilize against austerity measures even before the next elections, and in response to the protests, the incumbents make some procedural concessions. Yet, the incumbents fail in satisfying the voters, who severely punish them in the first national elections after the crisis. In these elections, the established opposition parties win office. Once in charge, however, the new government is hardly able to adopt any other policy than the previous government, given the economic constraints imposed on them. Such a situation is likely to further boost protest in the streets, which emphasizes the responsibility of the government for the economic situation and increases electoral punishment in later crisis

elections. Partly because of the protests, the voters are bound to notice that the new government is forced to take the same measures as its predecessors, whom they had voted out of office, and they may resort to punishing the mainstream parties as a whole in the following elections – by turning to new challengers or by exiting from the established electoral channel altogether. The eventual result may be a profound destabilisation of the national party system (Roberts 2017).

While case studies of hard-hit countries in Southern Europe support this scenario (on Spain, see, e.g., Vidal 2018), we aim in this paper for an aggregate analysis and formulate two important expectations about the impact of protest mobilisation on electoral punishment in the Great Recession. *First*, while we do not expect a direct effect of protest on electoral punishment, we do expect that protests play an important role in attributing responsibility for the economic decline and the growing cross-national disparities to the national and European elites. Massive protests should thus *amplify* the connections between economic misery and the losses of governments in national elections. We suggest calling this the 'signalling mechanism' of protest and, empirically, we expect to find that economic voting is stronger in contexts of high protest mobilisation *('signalling hypothesis*).

Second, protest mobilisation is expected to intensify the feeling among voters that there is a more fundamental 'crisis of representation' as a change in government may not result in a change of policy. Therefore, we expect that protest mobilisation may act as an important trigger of the further destabilisation of European party systems by highlighting that mainstream parties (both in opposition and in government) no longer fulfil their representative functions and are, therefore, punished in national elections regardless of whether they are in government or not ('*destabilisation hypothesis'*). Note that both expectations depend on the power of the economic vote in the first place. That is, if electoral punishment is hardly related to economic developments, such as in less institutionalised and

highly volatile party systems, it is unlikely that protests may serve the signalling function envisioned in our ideal-typical scenario.

Data and operationalization

The empirical analysis is based on electoral outcomes and protest levels in 30 European countries and the years 2000 to 2015.[3] To the best of our knowledge, this is the first attempt to study aggregate shifts in electoral results and protest mobilisation in such a large-N setting. The analysis covers countries from Western and Eastern Europe, considering differences in party system institutionalization and the general extent of the economic vote. The sixteen-year time frame allows us to examine the relationship between electoral and protest politics during the Great Recession (2008-2015) and to compare it with the pattern from the pre-crisis period (2000-2008). To this end, we combine two datasets.

First, we use a novel and extensive dataset on protest events in the 30 countries from January 2000 until December 2015. The dataset was created using semi-automated content analysis of ten English-speaking international news agencies. We first developed a strategy of automated selection of news reports on protest events that enabled us to select the news documents that are most likely to report on protest events. Afterwards, we relied on a large team of human coders to retrieve information about protest events in each article (e.g. number of events and participants, action forms, issues, and actors). The action repertoire covered by our research mirrors the standard approach in protest event analysis, ranging from petitions, strikes and demonstrative forms to more confrontational and violent activities. Appendix A-1 explains how the dataset was created in more detail and provides some evaluations of the

[3] The countries included are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

quality of the data. In general, the semi-automated tools introduced some biases in terms of country coverage or action forms included in our dataset, but a careful evaluation of our tools and a comparison of our procedure with data based on the coding of national news shows that our dataset is of good quality (Kriesi et al. 2020). In total, our unique dataset includes 31,000 protest events on a variety of different issues. For the analysis in this paper we include protest on public economic issues only, i.e., protests about economic issues that concern the general public and not only selected individuals or companies. This leaves us with around 9,200 protest events that are included in our main analysis, but we also performed some 'placebo' tests with other non-economic protest events (see below).

Second, we collected information about the election results from the same 30 countries before and after the Great Recession. The dataset includes information on the performance of political parties in the two national legislative elections prior to the Great Recession and all elections that have taken place since then, up to and including the 2015 Spanish election. In total, the dataset includes 118 elections. Appendix A-2 lists all elections covered and provides further information about the sources of the data. Note that in our dataset we include parties that received at least three per cent of the vote in any given election and won representation in parliament. A list of all parties is also included in Appendix A-2.

In order to make the measures for electoral and protest politics as comparable as possible we combine the two datasets and focus on electoral changes and protests in the same time frame, i.e., in a given legislative period. To begin with, we calculate the level of electoral loss of the prime minister's party as the change in the vote share of that party between elections at time *t* and *t-1*. Table 1 shows the summary statistics of this variable. It is noteworthy that according to this measure the five elections with the largest loss for the incumbents are all from Eastern Europe with the exception of the Greek 2012 election, indicating the relatively high political volatility in Eastern European party systems.

Table 1: Summary statistics of key variables for 118 European elections

Variable	Mean	Std. Dev.	Min	Max	Average by election type: Pre-crisis	First-crisis	Later-crisis
Electoral loss	5.53	9.24	-15.40	34.10	3.60	8.41	7.75
Protest count	108.25	199.48	0.00	1043.00	83.41	146.80	118.93
Weighted protest count	2.67	4.86	0.00	33.65	2.23	3.02	3.20
Protest participants	879,615	1,672,655	75	9,204,266	733,742	1,054,611	979,697
Weighted protest participants	4,775	7,799	0	46,720	4,197	5,128	4,716
Economic misery	0.00	0.83	-2.33	3.20	-0.42	0.52	0.29

Note: On the left, the table shows summary statistics across all elections (for the measurements, see main text and Appendix A). On the right, it shows the averages by election type. It distinguishes between three types of elections: all elections that took place before October 2008 are coded as 'pre-crisis;' the first election in each country after October 2008 is coded as 'first-crisis'; and all later elections are coded as 'later-crisis'. The total of 118 elections includes 59 pre-crisis, 30 first-crisis, and 29 later-crisis elections.

Similarly, from our protest dataset we compute an indicator for the level of protest in each legislative period. More precisely, we study the total number of reported protest events for each legislative period, and we account for the differing length of the legislative periods by dividing the number of protest events with the duration in months. This 'weighted' measure of the relative number of protest events allows us to compare the development of protest over time in 30 different countries.[4] As a robustness check, we repeat our analysis with the number of protest participants (divided by the logged population size of each country). Data for the number of participants is more susceptible to outliers as individual large protest events may drive the results. Yet, the results are very similar (see Appendix B-1). Table 1 shows the summary statistics for both the count of protest events and protest participants by legislative period. In terms of the event count, the legislative periods with the

[4] The average number of protest events per month in a given country is shown in appendix A-1.

highest weighted amount of economic protest (above 500) are Greece (2009-2012), France (2007-2012), France (2002-2007), Italy (2008-2013), and UK (2005-2010). For our analysis, we combine the information about the weighted event count for each legislative period with the data on electoral outcomes and standardise both measures to make them more easily comparable.

To measure the change in economic conditions in a given country between the election at time *t-1* and *t*, we rely on three economic indicators that were especially prominent during the latest economic crisis: (i) change in the unemployment rate; (ii) change in the gross domestic product; (iii) and change in the level of government debt (as a percentage of GDP).[5] These measures refer to retrospective and objective assessments of the economy. To reduce the complexity of our analysis, we follow Hernández and Kriesi (2016) and use factor analysis to combine the three indicators. The results of the factor analysis are shown in Appendix A-3. They indicate that all three variables load strongly on a single factor, and therefore, we estimate a misery index based on the factor scores. This index is a single measure of a country's economic performance and it increases as economic conditions worsen. It is useful for evaluating the impact of the economy on electoral and protest politics because citizens are more likely to respond to general economic trends and not to the evolution of specific macroeconomic indicators. Table 1 also shows the summary statistics of this index and, as expected, the legislative periods with the highest change in economic misery are all from the post-2008 period. They include Ireland (2007-2011), Iceland (2007-2009), Greece (2009-2012), Spain (2008-2011), and Latvia (2006-2010).

Empirical findings

[5] Studies about economic voting also often include inflation. Given that inflation was extremely low during the period of our study, we excluded it from the analysis.

The drivers of electoral and protest politics in the Great Recession

Following the literature on economic voting, we start our analysis by assessing the importance of the economic context on electoral losses and protest levels. We compare the factors that drive economic voting and protest mobilisation during the 118 legislative periods included in our dataset. A descriptive analysis reveals that both electoral losses and protests are positively correlated with economic misery. Consequently, we also find that both the average electoral loss and average protests sharply increased in post-crisis Europe. As Table 1 shows, the average electoral loss of the incumbent increased from 3.60 percentage points in the pre-crisis period to 8.41 and 7.75 percentage points in first-crisis and later-crisis elections, respectively. At the same time, the average number of protest events increased from around 83 in the pre-crisis period to around 147 in the first-crisis period, while the average number of protesters increased from 733,742 in the pre-crisis period to 1,054,611 in the first-crisis period. A further look at the data with bivariate correlations and scatter plots reveals that economic misery is correlated with both electoral volatility and protests, but it already suggests that the electoral arena follows more closely the ups and downs of the economic cycle (see Appendix A-4). Moreover, the relationship between the economy and electoral and protest politics turns out to be significantly weaker in the less institutionalized party systems in Eastern Europe than in Western Europe.

These patterns are confirmed by the regression analysis presented in Table 2. We use simple ordinary least square (OLS) regressions with the electoral loss of the prime minister's party and the number of protest events in a given legislative period as dependent variables in separate analyses.[6] As expected, a larger change in economic misery is related to larger electoral losses. According to model 1, a one standard deviation increase in misery is

[6] Note that in most models we refrain from including further control variables due to the small amount of observations in our aggregate dataset. In additional analyses we also included several other control variables, which did not alter the results.

associated with a 0.34 standard deviation increase in electoral loss of the incumbent, which is equivalent to 3.14 percentage points.[7] Turning to protest, we find a similar pattern: a larger change in economic misery is related to a higher level of economic protests (model 2). This effect is a little smaller, but also significant: a one standard deviation increase in misery is associated with a 0.32 standard deviation increase in the number of protests. This is equivalent to an increase in protests by around 18.7 events per year or 27,000 people per 1 million inhabitants per year (see Appendix B-1).[8]

As expected, this relationship between misery and electoral loss and protest, respectively, becomes even stronger when we focus on Western Europe only. As models 5 and 6 in Table 2 show, both the regression coefficient and the r^2 increase significantly compared to model 1 and 2, respectively. This confirms that the electoral and protest arena are more closely associated with the ups and downs of the economy in Western Europe than in Eastern Europe.

Table 2: The impact of economic misery on electoral loss and protest

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.34***	0.32***	0.00	0.10	0.49***	0.44**	0.17	-0.05
	(3.86)	(3.67)	(0.02)	(0.62)	(6.74)	(3.31)	(1.05)	(-0.16)
First crisis elec.			0.30	-0.01			0.11	0.07
			(1.26)	(-0.06)			(0.58)	(0.21)
Later crisis elec.			0.17	-0.27			0.06	-0.24

[7] To illustrate the magnitude of this change, Table A-5 lists all legislative periods by the associated change in misery. A one-standard deviation change is roughly equal to moving from France's pre-crisis election (2002-2007) to its first crisis election (2007-2012), implying a difference in the change of unemployment by 1.2 percentage points, a difference in the change of GDP by roughly 15 percentage points, and a difference in the increase in government debt (to GDP) by roughly 17 percentage points.

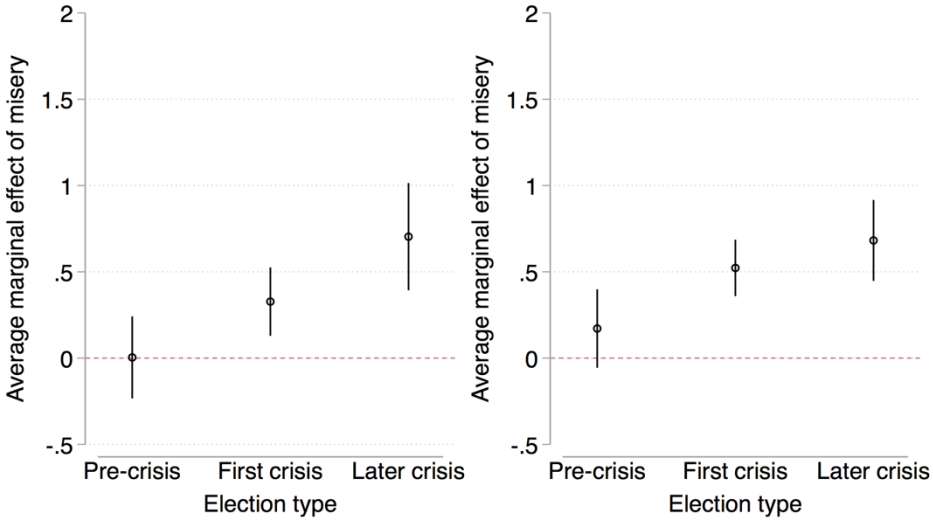
[8] As robustness checks, we also re-estimated the analysis with unemployment instead of the misery index as the key independent variable. The results are very similar to the results shown in the main analysis (see Appendix B-1): a one standard deviation increase in unemployment (which is equivalent to an increase in unemployment by 3.8 percentage points) is associated with a 0.34 standard deviation increase in the electoral loss of the incumbent and a 0.21 increase in protest. In substantive terms, this is equal to an electoral loss of 3.14 percentage points and an increase in protest by roughly 20,000 people per million inhabitants and year.

			(0.72)	(-1.17)			(0.32)	(-0.75)
First crisis elec. # Misery			0.32	0.11			0.35+	0.29
			(1.44)	(0.50)			(1.74)	(0.86)
Later crisis elec. # Misery			0.70*	1.11***			0.51*	1.63***
			(2.47)	(4.11)			(2.17)	(4.10)
Constant	0.00	-0.00	-0.23	-0.04	-0.27***	0.07	-0.39***	-0.04
	(0.00)	(-0.00)	(-1.56)	(-0.30)	(-3.90)	(0.58)	(-3.60)	(-0.22)
Observations	118	118	118	118	77	77	77	77
R^2	0.11	0.10	0.17	0.24	0.38	0.13	0.42	0.33

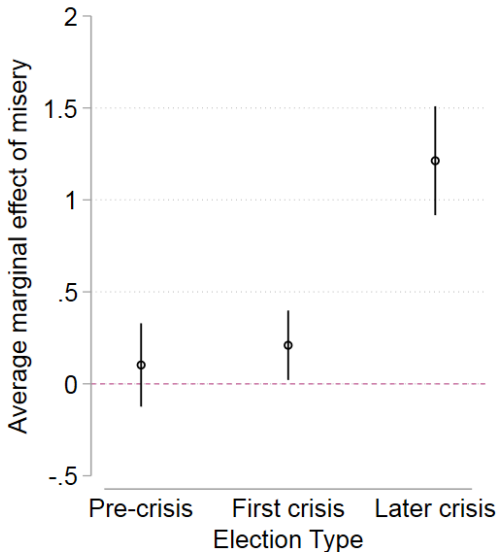
t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Figure 1: Average marginal effect of a change in misery on electoral loss and protest by election type

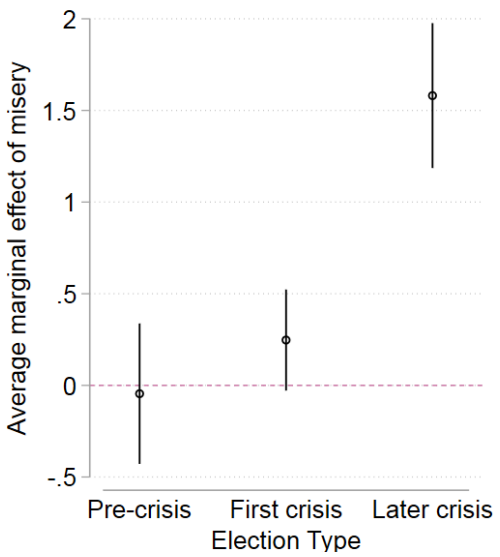
a) Electoral loss (all countries) *b) Electoral loss (Western Europe)*



c) *Protest (all countries)*



d) *Protest (Western Europe)*



Note: The average marginal effects are calculated based on models 3, 4, 7, and 8 in Table 2, respectively. For each period, they are obtained by calculating the marginal effect of misery for each observation and then taking the average across all observations for a given period.

The results presented in Table 2 also suggest that timing matters for both electoral and protest dynamics. To test this, we considered an interaction effect of economic misery and the timing variable (model 3 and 4 for all countries and 7 and 8 for Western Europe only). The results are best interpreted with the help of Figure 1, which plots the marginal effect of misery by election type. Figure 1a and 1b suggest that economic misery and electoral loss correlated more closely over time: a change in the prevailing economic conditions was not associated with electoral losses in the pre-crisis period, but it had a positive marginal effect during the crisis. In later-crisis elections especially, citizens perceived the worsening economic conditions as a failure of the incumbent parties and punished them at the voting booth. In other words, as the crisis progressed, the fate of governments tended to be increasingly tied to the economic performance of their country. Figure 1c and 1d show the same relationship for protest. They indicate that a change in economic misery neither predicted whether citizens took to the streets before the crisis nor whether they did so in the immediate aftermath of the

collapse of Lehman Brothers. However, we find a strong positive effect of economic misery on the level of economic protest during later stages of the economic crisis. This is well exemplified by the massive protests and electoral turmoil in countries like Greece or Portugal, which only erupted after the first 'crisis' elections in 2009.

To test the robustness of these results, which suggest that the Great Recession affected the electoral and the protest arena in a relatively similar way, we conducted several additional analyses. First, we re-estimated the regressions with country-clustered standard errors to account for a possible correlation of errors from the same country (Appendix B-3). The results are very similar to the ones shown above, indicating that our results are robust to possible country-level clusters. Second, we tested whether our results are driven by outliers given the relatively small number of cases in two different ways (Appendix B-3): we estimated quantile (median) regression and robust regressions to reduce the importance of outliers.[9] Using these techniques, the coefficients for protest become smaller, but they are still significant and generally support the patterns that we found above. Finally, in the spirit of a 'placebo' test, we used the number of protest events in cultural and political protests as the dependent variable (Appendix C-1). For these *non*-economic protests, economic misery and the crisis did not systematically affect the number of events. In other words, only economic protests are positively associated with misery, increasing our confidence that the uncovered relationship between misery and economic protests is, indeed, meaningful.

[9] We also checked for influential cases based on the scatter plots presented in Appendix A-4. Most importantly, we re-estimated all analysis excluding the Greek elections from May 2012 which saw the perfect storm of skyrocketing economic misery, high protest, and extreme electoral punishment. Note that the substantive results reported in the main text are not affected by this choice.

Protest and the economic vote

As suggested above, both arenas are interwoven with national and international political dynamics and there is reason to believe that protest politics and electoral politics are closely related. Consequently, we try to move beyond the search for equivalent relations and test the importance of protest mobilisation as a signalling mechanism that may reinforce electoral punishment. Again using OLS regression, we repeat the analysis from the first step with electoral losses as the dependent variable, but we now include our measure of protests as an independent variable. To test whether there is a signalling mechanism, we include an interaction between protests and our economic misery indicator. Otherwise this analysis mirrors the analysis from the first step.

Table 3 shows the results of this exercise. The analysis confirms that a change in misery has a strong effect on the electoral performance of incumbents (see model 1). Looking at results from all 30 European countries, however, the interaction effect of protest and misery is only statistically significant at the 10 percent significance level (see model 3). When we repeat the analysis for Western Europe only (see models 4 to 6), the results become stronger: there is now a positive and clearly statistically significant interaction effect of protest and economic misery. Following the recommendation of Brambor et al. (2006), we plot the average marginal effect in Figure 2 to illustrate this interaction. The plot shows how the average marginal effect of economic misery on the electoral loss of the incumbent changes across the observed range of protest. It demonstrates that this effect varies over the range of protest, but the interaction effect is only significant when we focus on Western Europe (Figure 2b). In this region, a change in misery has only a small effect on electoral punishment when protests are low, but as protests increase the average marginal effect of misery also increases. Protests thus seem to amplify the impact of an increase in economic misery on the electoral performance of incumbents, supporting our expectations about the signalling effect

of protest in Western Europe.[10] As theorised above, opposing austerity and linking that opposition to a fundamental critique of representative democracy – 'real democracy now' as the battle cry of the Indignados went – was key for the most recent wave of protest in Southern Europe. For Eastern Europe, where party systems are less institutionalised, Hernández and Kriesi (2016) already showed that voters are *less* likely to punish governments for worsening economic conditions than in Western Europe. Hence, and as outlined above, it is not surprising that we do not find a strong signalling effect of protest on electoral punishment in Eastern Europe, either.[11]

Table 3: The impact of economic misery and protest on electoral loss

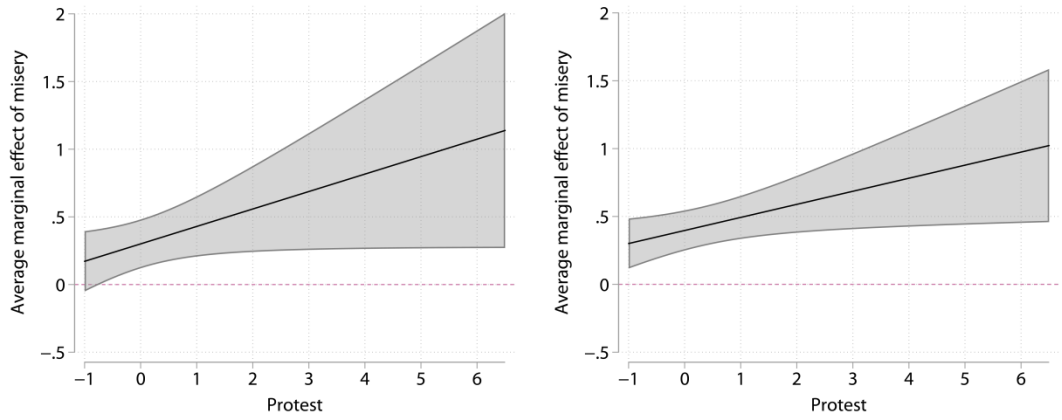
	All countries (n=30)			Western Europe (n=20)		
	(1)	(2)	(3)	(4)	(5)	(6)
	Electoral loss	Electoral loss	Electoral loss	Electoral loss	Electoral loss	Electoral loss
Misery	0.34***	0.30**	0.30**	0.49***	0.42***	0.40***
	(3.86)	(3.27)	(3.30)	(6.74)	(5.65)	(5.35)
Protest		0.11	-0.05		0.14*	0.01
		(1.24)	(-0.41)		(2.28)	(0.16)
Misery # Protest			0.13+			0.10*
			(1.95)			(2.19)
Constant	0.00	0.00	-0.04	-0.27***	-0.28***	-0.30***
	(0.00)	(0.00)	(-0.47)	(-3.90)	(-4.15)	(-4.51)
Observations	118	118	118	77	77	77
R^2	0.11	0.13	0.15	0.38	0.42	0.45

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Figure 2: Average marginal effect of a change in misery on electoral loss across the range protest

a) all countries *b) Western Europe only*

[10] This is also indicated when plotting misery and electoral loss separately for low and high levels of protest (Figure A-4 in the Appendix).
[11] To fully interpret the signalling effect of protest, we also plotted the average marginal effect of protest conditioned by economic misery, following the recommendations by Berry et al. (2012). The resulting plot shows that the signalling effect of protests is not about protest per se, but that it is about the amplification of economic misery.



Note: The average marginal effects are calculated based on models 3 and 6 in Table 3, respectively.

Additional analyses shown in the appendix suggest that this signalling effect of protest is robust. When we use the number of protest participants instead of the number of events to measure protest levels (Appendix B-1), the signalling effect is marginally smaller but remains statistically significant. Quantile median and robust regression models show that our results are again robust to potential outliers (Appendix B-3). Moreover, there is no signalling effect for protests that address non-economic issues as shown in Appendix C-1. We again treat this as a 'placebo' test, which indicates that it is not any kind of protest that has an impact on economic voting. Only economic protests act as a signal for economic discontent and attribute blame for misery to the government. This is also supported by an analysis, in which we tested whether higher economic voting is associated with higher economic protests afterwards (Appendix C-2). Generally, we find that the punishment of incumbents tends to dampen economic protests in the legislative period after a given election. Although we expect that the effect of elections on protest might be different in the short-term (given that citizens sometimes express their dissatisfaction with the electoral contest by protesting), we treat this as evidence indicating that economic protests trigger the punishment of incumbents and not vice versa.

Protest and the decline of mainstream parties

These results give us reason to believe that the economic crisis and the resulting mobilisation in the streets have had deeper consequences for political competition in Europe than the short-term punishment of incumbents. Therefore, in the final step of our analysis we turn to a more careful analysis of whether the crisis has also accelerated the decline of mainstream parties and how this decline is related to political contestation in the protest arena. To this end, we move to the party-level and analyse the electoral losses of all parties (and not exclusively incumbents), i.e., we calculate the level of electoral loss for each individual party as the change in its vote share between a given election at time *t* and *t-1*. Given our results so far, we restrict our analysis to Western Europe only and study electoral results from 77 elections in 20 Western countries from 2000 to 2015.

In order to analyse the impact of protest on the dynamics of party competition we classify the parties in two ways. First, we code parties as mainstream vs. non-mainstream parties according to their party family, as indicated by the Chapel Hill Expert Survey: parties from the conservative, Christian democratic, social democratic, and liberal party families are classified as mainstream, whereas parties from all other party families are classified as non-mainstream. Second, we classify parties according to their left-right ideology: parties that are social democratic, green, or far left are classified as left parties, whereas all other parties are classified as non-left parties.[12]

The summary statistics for each party family are shown in Table 4. On average, mainstream parties lose 0.75 percentage points in an election during our period of study, but there are important differences across time. In the pre-crisis period, mainstream and non-mainstream parties, on average, hardly experienced electoral gains or losses. Yet, this

[12] In total our dataset includes 548 observations: 276 observations for mainstream parties, 272 observations for non-mainstream parties, 296 observations for left parties, and 252 observations for non-left parties.

changed during the crisis: in the 20 first-crisis elections in Western Europe, mainstream parties on average lost 1.73 percentage points, while they lost 1.25 percentage points in later-crisis elections. At the same time, non-mainstream parties benefited from the crisis: on average, they increased their vote share by 1.83 percentage points in first-crisis elections and by 0.87 percentage points in later-crisis elections. The average vote share of left-wing parties remained relatively stable across our period of study, but it changed from one period to the other: the left gained votes in pre- and first-crisis elections, but lost votes in later-crisis elections.

Table 4: Electoral losses by party type in Western Europe

Party type	Mean	Std. Dev.	Min	Max	Average by election type		
					Pre-crisis election	First-crisis election	Later-crisis election
Mainstream	0.75	5.80	-18.40	30.72	-0.01	1.73	1.25
In government	2.96	6.08	-15.40	30.72	1.40	3.97	4.98
In opposition	-1.52	4.48	-18.40	9.41	-1.34	-1.28	-2.15
Non-mainstream	-0.69	4.26	-25.56	16.89	0.04	-1.83	-0.87
Left	-0.01	5.33	-25.56	30.72	-0.23	-0.57	0.92
Non-left	0.07	5.03	-18.40	24.16	0.16	0.38	-0.47

Note: The data shows the electoral loss of different types of parties, i.e., the difference in the vote share of parties between elections at times *t* and *t+1*. Positive values indicate a loss in vote share; negative values indicate a gain.

To assess the gains and losses of the different types of parties more systematically, we again resort to OLS regressions, but we now use the electoral losses of individual parties as our dependent variable. We use the same independent variables as in the previous steps of our analysis, but following the literature on economic voting, we also include two dummy variables that capture whether a party was in government, and whether the prime minister was from that particular party during a given legislative period. In the baseline model we then include a dummy variable for mainstream parties and test the differential effect of a change in economic misery and protests on mainstream versus non-mainstream parties by including an

interaction effect with this dummy variable. Similarly, we repeat the analysis and examine the differential effect of economic misery and protest punishment for left- and right-wing parties in separate models.

The results of these analyses are shown in Table 5. Model 1 confirms our earlier finding that governing parties are punished more consistently at polls than other parties, but in general, there is no negative effect for mainstream parties. These parties are not losing consistently during our period of study, shedding some doubt on the general thesis of the long-term decline of mainstream parties. Yet, the results suggest that the electoral fortunes of mainstream parties are related to the level of protest in a given legislative period. The interaction effect between mainstream parties and protests is positive and statistically significant, indicating that the electoral punishment of mainstream parties increases as protests become larger. To interpret this interaction effect, it is useful to plot the marginal effect of protest by party type (Figure 3). The results indicate that the marginal effect of protest for non-mainstream parties is negative, while the effect is positive for mainstream parties. Put differently, protests increase the electoral losses of mainstream parties, while non-mainstream parties fare better in elections after such protests. As we expected, this results in the fragmentation of the party system and highlights the need to integrate the study of protest into analyses of party competition.

Model 2 in Table 5 goes one step further and investigates whether the signalling effect of protest also holds at the level of individual parties, thereby contributing to the restructuring of the party system in Western Europe. It includes a three-way interaction between party type, protest, and economic misery to test whether the impact of a change in economic misery on the electoral support for mainstream parties is amplified by protest. To interpret the results, we again visualise the interaction effect by showing the average marginal effect of a change in misery on the electoral losses of different party types over the observed range of protest

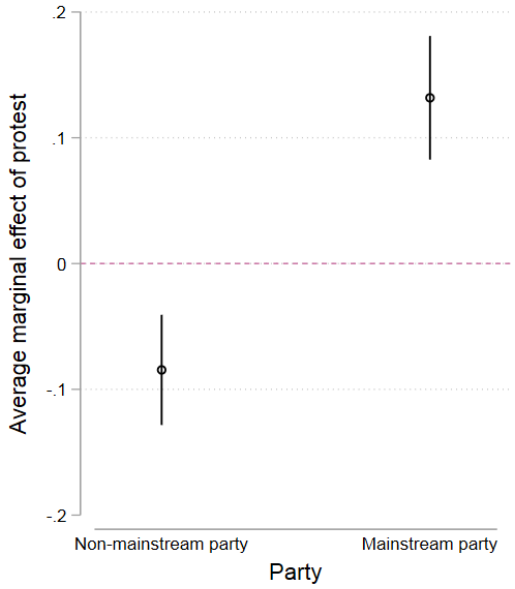
(Figure 4). When the level of protest is low, misery has no significant effect on the economic performance of different types of parties. Yet, as the level of protest increases, the average marginal effect of misery becomes positive for mainstream parties but negative for non-mainstream parties. This suggests that the relationship between the prevailing economic conditions and the punishment of mainstream parties is not direct. Instead, citizens are more likely to defect from mainstream parties when there is a relatively large amount of economic protest, which, as we posit, politicizes the fact that the economy is doing poorly.

Table 5: The effect of misery and protest on the electoral loss of different parties in Western Europe

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.21*	0.23*	0.22*	0.20+
	(2.05)	(2.27)	(2.14)	(1.94)
Government (1=yes)	0.52***	0.49***	0.49***	0.50***
	(6.88)	(6.65)	(6.57)	(6.73)
Protest	-0.08**	0.01	0.01	0.06
	(-2.65)	(0.13)	(0.35)	(1.24)
Mainstream party (1=yes)	-0.08	-0.12*		
	(-1.28)	(-1.97)		
Mainstream party # Protest	0.22***	0.00		
	(4.71)	(0.01)		
Misery	-0.00	-0.10*	-0.01	0.04
	(-0.12)	(-2.04)	(-0.33)	(0.80)
Protest # Misery		-0.04		-0.04+
		(-1.47)		(-1.71)
Mainstream party # Misery		0.17**		
		(2.59)		
Mainstream party # Protest # Misery		0.12**		
		(3.18)		
Left party (1=yes)			0.02	0.01
			(0.27)	(0.09)
Left party # Protest			-0.00	-0.13+
			(-0.01)	(-1.65)
Left party # Misery				-0.11
				(-1.59)
Left party # Protest # Misery				0.10**
				(2.67)
Constant	-0.14***	-0.12**	-0.18***	-0.18***
	(-3.39)	(-2.87)	(-4.32)	(-4.20)
Observations	548	548	548	548
R^2	0.18	0.21	0.15	0.16

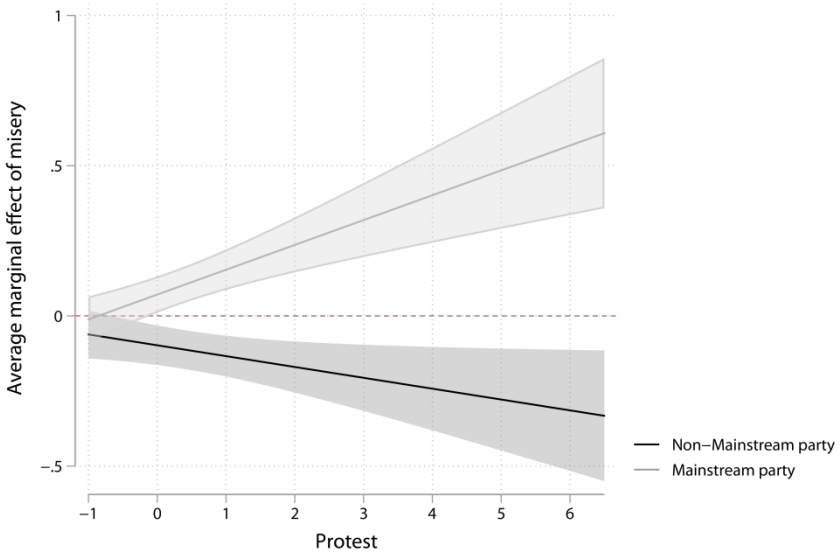
t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Figure 3: Average marginal effect of protest on electoral loss of mainstream vs. non-mainstream parties



Note: The average marginal effects are calculated based on model 1 in Table 5.

Figure 4: Average marginal effect of misery on electoral loss of mainstream vs. non-mainstream parties across the range of protest



Note: The average marginal effects are calculated based on model 2 in Table 5.

Model 3 and 4 of Table 5 repeat this analysis, but we now distinguish between left-wing parties and all other parties. The results indicate that there is only a weak interaction

between protests politics and the fortunes of left-wing parties. Left-wing parties do not generally benefit from protests which is also illustrated by the descriptive results shown in Table 4 and the marginal effects plot (included in Appendix C-4). This questions the general idea of a close alliance between social movements and parties from the left in Europe.[13] Yet, when we include a three-way interaction between left-wing parties, misery, and protests, an interesting pattern emerges: generally left-wing parties somewhat gain during economic downturns, but this effect ceases to exist as protest increase. In fact, the results in Appendix C-4 show that left-wing parties only benefit from a worsening of economic misery when there is little economic protest. Taken together models 3 and 4 indicate that the effect of protest did not systematically move Western European party systems in one direction or the other in terms of the traditional left-right spectrum during the Great Recession. This supports earlier findings by Bartels (2014), who could not find clear-cut ideological shifts to the left or right in the electoral arena during the Great Recession.

Finally, these results are also supported by our robustness tests. First, when we consider the number of participants instead of events, we also find that mainstream parties lose more in elections that follow a high level of protest in a given legislative period (Appendix B-1). Second, the analysis is also robust to outliers, as indicated by the results from quantile median and robust regressions models (Appendix B-3). Third, the results are very similar if we study relative losses, taking into account the differing vote shares of the parties (Appendix B-4). Finally, the 'placebo test' in Appendix C-1 shows that mainstream parties are not punished following non-economic protest. Overall, these results suggest that economic protests tend to be an important factor that has driven the destabilisation of Western European party systems during the Great Recession.

[13] We do not find that protests have a statistically significant effect on the electoral fortune of only far left parties, either.

Conclusion

In the Great Recession, incumbents were heavily punished in the electoral arena. However, this punishment was not limited to the electoral arena; instead, citizens also punished government by voicing their grievances in the street. By and large our analyses show that electoral losses and protest were both driven by the poor economic performance of a given country, confirming the economic voting model. This relationship between economic performance and economic voting as well as protests was particularly strong in later stages of the crisis, as the economic fate of countries in Europe diverged and citizens mobilised against governments in countries that remained mired in the economic stagnation.

Still, it is misleading to treat punishment in the electoral and protest dynamics as independent from each other. The analyses in this paper suggest that these protests were coupled with electoral punishment in the sense that larger protests were also associated with stronger electoral punishment of incumbents. We present evidence that protests can amplify the importance of economic conditions for electoral punishment – at least in the more institutionalized party systems of Western Europe: by attributing responsibility, mobilising citizens, and channelling their grievances into the electoral arena, protest increases the importance of economic conditions for the next general election. Thus, protest may be an indicator of an emerging public sphere, which can make politicians responsible and accountable especially in crisis situations. The 'placebo test' with non-economic protests underlines that this effect is driven by economic protests that target public policies and institutions.

Our analysis further suggests that this kind of signalling effect of protest is not only limited to the punishment of incumbents, but it tends to extend to all mainstream parties: during the crisis, as economic conditions worsened, citizens were more likely to defect from

mainstream parties when there was a relatively large amount of economic protest. The beneficiaries of this destabilisation of the party system were non-mainstream parties. They feed off the discontent that citizens voiced in the streets and were likely to win more votes in the next election following large protests. In sum, our analyses point to a destabilising effect of the Great Recession on political competition in Europe but this destabilisation has not been resolved in one way or the other: the political system across Europe has not systematically swung in one direction, as different parties have benefited in different regions. Importantly, we do not observe a close connection between the electoral fortunes of the political left and economic protests in the streets.

More research, however, is needed to further disentangle the complex relationship between electoral behaviour and protests. In this paper, we have taken an important step by providing the first large-scale comparative study of the dynamics of protest and electoral politics. Yet, we have only established aggregate empirical relations and suggested a potential mechanism linking protest and electoral politics. Future research needs to either zoom-in on specific contentious episodes or use an experimental set-up to properly assess the mechanisms at work and to answer several open questions. How are protests embedded into the electoral cycle? What kind of sequences can we observe between objective economic indicators (as we studied them), protests, and perceived grievances? Do protests that occur shortly before an election have a greater impact than other protests? How is the effect of protests moderated by economic and political features of individual countries? How can some parties ride protest waves while others get swept aside by them? How closely – in terms of time – is the occurrence of protest related to the decline of some parties and the rise of others? We hope that the findings of our study will encourage others to tackle some of these questions in the future.

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ONLINE APPENDIX

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APPENDIX A: DATA

Appendix A-1: Data on protest events

The protest event database was jointly created by political scientists and computational linguists at the European University Institute (EUI) and the University of Zurich. The database includes more than 30,000 protest events and covers 30 European countries over a six-teen year period. The countries covered by the dataset are Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom. The protest events were retrieved from ten European news agencies that public English-speaking newswires and coded using semi-automated content analysis.[1]

We got access to the relevant newswires from the Lexis Nexis data service by using a list of more than 40 keywords that describe different protest actions in the search query. Still, we were left with an extremely large corpus of 5.2 million documents and, hence, we developed natural language processing (NLP) tools to identify newswires that report about protest evens in the countries and during the time period that we are interested in. First, we removed documents that were exact or near duplicates and used a meta-data filter that discarded documents not reporting about any of our countries of interest. Afterwards, we developed tools to attribute a probability score to each document, indicating whether this document actually reports about protest events. For this purpose, we combined two different classifiers (i.e. algorithms that identify documents or words as probably indicators of a protest event): a supervised document classifier that uses a bag-of-words approach and a supervised anchor classifier that uses event-mention detection tools.

A detailed evaluation of these classifiers by Wüest and Lorenzini (2019) shows that the classifiers are reliable and, thus, we used them to calculate a single probability score for each document. This score indicates the likelihood that both classifiers indicate that a document is relevant. Afterwards, we manually coded a sample of documents to establish the optimal threshold for the probability score above which we are relatively confident that a document reports about protest without excluding too many relevant documents. In other words, we attempted to find the optimal level of the probability score, which would reduce the amount of documents that are false positives and false negatives. In the end, we classified slightly more than 100,000 documents as relevant, thereby substantially reducing the amount of documents that are relevant for our analysis.

Afterwards, we employed manual coding to retrieve information on all protest events in our selected countries and time period. For this purpose, we used a simplified version of the protest event analysis (PEA) approach that was first established by Kriesi et al. (1995). An important advantage of the semi-automated process was that it significantly reduced the amount of time and resources required for coding protest events. By using the classifiers, we were able to provide coders with documents that were more likely to report about protest event. In total only 22 per cent of the documents that we submitted to coders were irrelevant (compared to 95 per cent of documents from our entire corpus that are irrelevant). Tests to

[1] The following news agencies were included: AFP, AP, APA, BBC, BNS, CTK, DPA, MTI, PA, and PAP. The goal was to include not only the major news European agencies (AFP, DPA, PA) but also regional ones covering Eastern and Southern Europe in more depth.

evaluate the content of the documents that we excluded from the analysis show that most of the documents that we excluded do not contain any protest events. Moreover, when documents report protest events, these events have the same attributes as the events included in the sample. Thus, we are confident that the articles, which we coded manually, are a good representation of all articles published by the ten newswires.

However, to implement PEA we still relied on an additional sampling strategy because the corpus of relevant documents remained too large to be coded manually. Therefore, we categorised countries into three group: for countries with a large sample of documents, we coded 25 per cent of the relevant documents; for countries with an average number of documents, we coded 50 per cent; and for small countries with only a few hundred news reports, we coded all the documents identified as relevant by our classifiers. Afterwards, coders were asked to identify all mentions of protest events in the documents. To this end, coders did not rely on a theoretical definition of relevant protest actions, which might be conceptually precise but practically very difficult to implement. Instead, coders identified relevant events based on a detailed list of unconventional or non-institutionalized action forms. In addition to demonstrative, confrontational, and violent actions, coders were asked to also identify strikes and other forms of industrial action as protest.

A document may contain references to one or to more than one protest event and coders recorded the following variables for each event: date, location, action form, issue of the protest, the actors participating or organizing the protest, and the number of participants. To measure the level of inter-coder agreement, we presented fourteen coders with the same 65 documents at different times during their coding. For the identification of the events – assessing whether two coders agree on the data, country, and action form of all the events that they identify in the same document – the averaged F1-score was 0.60 with a standard deviation of 0.06. For the identification of event attributes, the average Cohen's Kappa varies by event attribute. It was 0.57 (with a standard deviation of 0.13) for actors, 0.53 (with a standard deviation of 0.45) for issues and 0.45 (with a standard deviation of 0.06) for the number of participants. These values show that our coders have a relatively high level of agreement given that values from 0.40 to 0.60 are commonly defined as fair to good.

A more detailed test of our data is provided by Wüest and Lorenzini. (2019). This also includes a comparison between our data with existing protest event datasets, which only cover a small amount of countries during a limited time period. This analysis indicates that our data is comparable to these existing, smaller datasets, which are based on manual coding and national news sources.

The data allows us to measure the monthly number of protest events and participants for 30 different countries from January 2000 to December 2015. The average number of protest events and participants for each country is shown below in table A-1.

Table A-1: Average number of protest events and participants by country (monthly)

Country	**Events**	**Participants**
AT	0.29	14387.54
BE	1.63	20268.10
CH	0.39	2230.52
CY	0.43	1258.46
DE	2.94	18564.90
DK	0.31	858.90
ES	6.69	35449.84
FI	0.10	180.09
FR	12.45	98464.84
GR	12.37	67441.52
IE	1.09	1690.88
IS	0.11	1347.30
IT	10.92	82582.12
LU	0.05	35.94
MT	0.04	0.39
N0	0.44	5396.14
NL	0.16	768.80
PT	2.27	30721.41
SE	0.38	2328.34
UK	7.04	80705.80
BG	0.74	8710.10
CZ	1.80	19999.96
EE	0.31	659.80
HU	1.51	1679.82
LT	0.51	1259.41
LV	1.20	2491.06
PL	5.09	14869.18
RO	0.90	21710.16
SI	0.24	8397.63
SK	0.64	7492.15

Appendix A-2: Data on electoral results

We also collected information on election results from 30 European countries before and after the Great Recession. The database extends and updates previous data from Hernández and Kriesi (2016) and it is based on data from the "Parties and Elections in Europe" database (http://www.parties-and-elections.eu/) and the "NSD European Election Database" (http://www.nsd.uib.no/european_election_database/). It includes information on the performance of political parties in the two national legislative elections prior to the outbreak of the Great Recession and all elections that have taken place since then. The dataset includes all elections until the end of 2015, up to and including the 2015 Spanish election. In total, the dataset includes 118 elections, which are listed below in table A-2.

All elections are classified according to their temporal relationship to the Great Recession: elections that occurred before October 2008 are classified as pre-crisis election; the first election in each country that took place after October 2008 is classified as 'first-crisis election'; and all elections that occurred afterwards are classified as 'later-crisis election'. The total of 118 elections includes 59 pre-crisis elections, 30 first-crisis elections and 29 later-crisis elections.

Table A-2: List of all elections covered

Country	Election date	Election classification
AT	24-Nov-02	Pre-crisis
AT	01-Oct-06	Pre-crisis
AT	29-Sep-08	First crisis
AT	29-Sep-13	Later crisis
BE	18-May-03	Pre-crisis
BE	10-Jun-07	Pre-crisis
BE	13-Jun-10	First crisis
BE	25-May-14	Later crisis
BG	17-Jun-01	Pre-crisis
BG	11-Jul-05	Pre-crisis
BG	14-Jul-09	First crisis
BG	12-May-13	Later crisis
BG	05-Oct-14	Later crisis
CH	19-Oct-03	Pre-crisis
CH	21-Oct-07	Pre-crisis
CH	23-Oct-11	First crisis
CH	18-Oct-15	Later crisis
CY	27-May-01	Pre-crisis
CY	21-May-06	Pre-crisis
CY	22-May-11	First crisis
CZ	15-Jun-02	Pre-crisis
CZ	02-Jun-06	Pre-crisis
CZ	28-May-10	First crisis
CZ	26-Oct-13	Later crisis
DE	22-Sep-02	Pre-crisis
DE	16-Sep-05	Pre-crisis

DE	27-Sep-09	First crisis
DE	22-Sep-13	Later crisis
DK	08-Feb-05	Pre-crisis
DK	13-Nov-07	Pre-crisis
DK	15-Sep-11	First crisis
DK	18-Jun-15	Later crisis
EE	02-Mar-03	Pre-crisis
EE	04-Mar-07	Pre-crisis
EE	06-Mar-11	First crisis
EE	01-Mar-15	Later crisis
ES	14-Mar-04	Pre-crisis
ES	09-Mar-08	Pre-crisis
ES	04-Dec-11	First crisis
ES	20-Dec-15	Later crisis
FI	16-Mar-03	Pre-crisis
FI	18-Mar-07	Pre-crisis
FI	17-Apr-11	First crisis
FI	19-Apr-15	Later crisis
FR	09-Jun-02	Pre-crisis
FR	10-Jun-07	Pre-crisis
FR	10-Jun-12	First crisis
GR	07-Mar-04	Pre-crisis
GR	16-Sep-07	Pre-crisis
GR	04-Oct-09	First crisis
GR	06-May-12	Later crisis
GR	25-Jan-15	Later crisis
GR	20-Sep-15	Later crisis
HU	07-Apr-02	Pre-crisis
HU	09-Apr-06	Pre-crisis
HU	11-Apr-10	First crisis
HU	06-Apr-14	Later crisis
IE	17-May-02	Pre-crisis
IE	24-May-07	Pre-crisis
IE	25-Feb-11	First crisis
IS	10-May-03	Pre-crisis
IS	12-May-07	Pre-crisis
IS	25-Apr-09	First crisis
IS	27-Apr-13	Later crisis
IT	04-Apr-06	Pre-crisis
IT	13-Apr-08	Pre-crisis
IT	24-Feb-13	First crisis
LT	10-Oct-04	Pre-crisis
LT	12-Oct-08	Pre-crisis
LT	28-Oct-12	First crisis
LU	13-Jun-04	Pre-crisis
LU	07-Jun-09	First crisis
LU	20-Oct-13	Later crisis
LV	05-Oct-02	Pre-crisis

LV	07-Jun-06	Pre-crisis
LV	02-Oct-10	First crisis
LV	17-Sep-11	Later crisis
LV	04-Oct-14	Later crisis
MT	12-Apr-03	Pre-crisis
MT	08-Mar-08	Pre-crisis
MT	09-Mar-13	First crisis
N0	09-Sep-01	Pre-crisis
N0	11-Sep-05	Pre-crisis
N0	13-Sep-09	First crisis
N0	08-Sep-13	Later crisis
NL	22-Jan-03	Pre-crisis
NL	22-Nov-06	Pre-crisis
NL	09-Jun-10	First crisis
NL	12-Sep-12	Later crisis
PL	25-Sep-05	Pre-crisis
PL	21-Oct-07	Pre-crisis
PL	09-Oct-11	First crisis
PL	25-Oct-15	Later crisis
PT	17-Mar-02	Pre-crisis
PT	25-Sep-05	Pre-crisis
PT	27-Sep-09	First crisis
PT	05-Jun-11	Later crisis
PT	04-Oct-15	Later crisis
RO	26-Nov-00	Pre-crisis
RO	28-Nov-04	Pre-crisis
RO	30-Nov-08	First crisis
RO	09-Dec-12	Later crisis
SE	15-Sep-02	Pre-crisis
SE	17-Sep-06	Pre-crisis
SE	19-Sep-10	First crisis
SE	14-Sep-14	Later crisis
SI	03-Oct-04	Pre-crisis
SI	21-Sep-08	Pre-crisis
SI	04-Dec-11	First crisis
SI	13-Jul-14	Later crisis
SK	21-Sep-02	Pre-crisis
SK	17-Jun-06	Pre-crisis
SK	12-Jun-10	First crisis
SK	10-Mar-12	Later crisis
UK	07-Jun-01	Pre-crisis
UK	05-May-05	Pre-crisis
UK	06-May-10	First crisis
UK	07-May-15	Later crisis

On the party-level, our data-set includes all elections in Western Europe. In the dataset we only include parties that that received at least three per cent of the vote in any given election and are represented in parliament. A list of all parties and their classification is also included is shown below in table A-3.

Table A-3: List of all parties included

Country	**Party name**	**Party family**
AT	BZÖ	Populist right
AT	FPÖ	Populist right
AT	Team Stronach	Others
AT	The Greens	Greens
AT	NEOS	Liberals
AT	ÖVP	Conservatives/Christian Democrats
AT	SPÖ	Social democrats
AT	Others	Others
BE	Christian Democrats	Conservatives/Christian Democrats
BE	Ecolo & Groen	Greens
BE	Liberals	Liberals
BE	Others	Others
BE	Socialists-Social democrats	Social democrats
BE	VU (VU-ID21)	Others
BE	Workers Party of Belgium (PVDA-PTB)	Radical left
BE	NPR and Flemish regionalists	Populist right
CH	BDP	Conservatives/Christian Democrats
CH	CVP+CSP	Conservatives/Christian Democrats
CH	FDP+LP	Liberals
CH	GLP	Greens
CH	GP	Greens
CH	SP	Social democrats
CH	SVP	Populist right
CH	Others	Others
CY	AKEL	Radical left
CY	Democratic Rally	Conservatives/Christian Democrats
CY	Democratic Party (DIKO)	Conservatives/Christian Democrats
CY	European Party	Liberals
CY	New Horizons	Populist right
CY	Movement for Social Democracy	Social democrats
CY	United Democrats	Liberals
CY	Others	Others
DE	B90/Grüne	Greens
DE	CDU/CSU	Conservatives/Christian Democrats
DE	FDP	Liberals
DE	PDS-Linkspartei	Radical left
DE	SPD	Social democrats
DE	Others	Others
DK	Conservative People's Party	Conservatives/Christian Democrats

DK	Danish People's Party	Populist right
DK	Liberal Alliance	Liberals
DK	Liberals (Venstre)	Liberals
DK	Red-Green Alliance	Greens
DK	Danish Social Liberal Party	Liberals
DK	Social Democrats	Social democrats
DK	Socialist People's Party	Radical left
DK	The Alternative	Greens
DK	Others	Others
ES	CiU Regional Party	Others
ES	Ciudadanos	Liberals
ES	PP	Conservatives/Christian Democrats
ES	PSOE	Social democrats
ES	Podemos	Radical left
ES	Union, Progress, and Democracy	Radical left
ES	United Left	Radical left
ES	Others	Others
FI	Centre Party	Conservatives/Christian Democrats
FI	Left Alliance	Radical left
FI	National Coalition Party	Conservatives/Christian Democrats
FI	Swedish People's Party	Others
FI	True Finns	Populist right
FI	Christian Democrats	Conservatives/Christian Democrats
FI	Greens	Greens
FI	Left Alliance	Radical left
FI	Others	Others
FI	Social Democratic Party of Finland	Social democrats
FR	The Centrists, New Centre	Conservatives/Christian Democrats
FR	MoDEM, UDF	Conservatives/Christian Democrats
FR	The Republicans, UMP	Conservatives/Christian Democrats
FR	Greens	Liberals
FR	Others	Others
FR	Front National	Populist right
FR	Parti Socialiste	Social democrats
FR	Radical Left	Radical left
GR	Democratic Left (DIMAR)	Social democrats
GR	Golden Dawn	Populist right
GR	Independent Greeks (ANEL)	Populist right
GR	KKE	Radical left
GR	Liberal Alliance (XA-DRASI-FS)	Liberals
GR	New Democracy	Conservatives/Christian Democrats
GR	New Democracy-DISY	Conservatives/Christian Democrats
GR	PASOK	Social democrats
GR	PASOK-Dimar	Social democrats
GR	POTAMI	Social democrats
GR	Popular Orthodox Rally (LAOS)	Populist right
GR	Syriza	Radical left
GR	Union of Centrists (EK)	Social democrats

GR	Others	Others
IE	Fianna Fail	Conservatives/Christian Democrats
IE	Fine Gael	Conservatives/Christian Democrats
IE	Greens	Greens
IE	Labour	Social democrats
IE	Progressive Democrats	Liberals
IE	Sinn Fein	Radical left
IE	Others	Others
IS	Bright future	Liberals
IS	Citizens' Movement	Radical left
IS	Independence Party	Conservatives/Christian Democrats
IS	Left-Green Movement	Greens
IS	Liberal Party	Liberals
IS	Pirate Party	Others
IS	Progressive Party	Conservatives/Christian Democrats
IS	Social Democratic Party	Social democrats
IS	Others	Others
IT	Greens	Greens
IT	IdV	Liberals
IT	Left alliances (PRC and others)	Radical left
IT	Lega	Populist right
IT	M5S	Radical left
IT	PD	Social democrats
IT	PdL (Forza italia+AN)	Conservatives/Christian Democrats
IT	SC (Monti)	Liberals
IT	SEL	Radical left
IT	Unione di Centro	Conservatives/Christian Democrats
IT	Others	Others
LU	Christian Social People's Party	Conservatives/Christian Democrats
LU	Greens	Greens
LU	Democratic Party	Liberals
LU	Others	Others
LU	Alternative Democratic Reform Party	Conservatives/Christian Democrats
LU	The Left	Radical left
LU	Luxembourg Socialist Workers' Party	Social democrats
MT	Labour Party	Social democrats
MT	Nationalist Party	Conservatives/Christian Democrats
MT	Others	Conservatives/Christian Democrats
N0	Progress Party	Populist right
N0	Centre Party	Others
N0	Christian Democratic Party	Conservatives/Christian Democrats
N0	Conservative Party	Conservatives/Christian Democrats
N0	Liberal Party	Liberals
N0	Others	Others
N0	Social Democrats	Social democrats
N0	Labour Party	Radical left
NL	CDA	Conservatives/Christian Democrats
NL	Christian Union	Conservatives/Christian Democrats

NL	D66	Liberals
NL	Groen-Links	Greens
NL	LPF (Pim Fortuyn)	Populist right
NL	PVV	Populist right
NL	PvdA	Social democrats
NL	SP	Radical left
NL	VVD	Liberals
NL	Others	Others
PT	CDS/PP	Conservatives/Christian Democrats
PT	PCP-Greens	Radical left
PT	Left Bloc	Radical left
PT	PSD	Liberals
PT	PSD-CDS	Liberals
PT	Socialist Party	Social democrats
PT	Others	Others
SE	Centre	Conservatives/Christian Democrats
SE	Christian Democrats	Conservatives/Christian Democrats
SE	Green Party	Greens
SE	Left Party	Radical left
SE	Liberals	Liberals
SE	Moderate Party	Conservatives/Christian Democrats
SE	Social Democratic Party	Social democrats
SE	Swedish Democrats	Populist right
SE	Others	Others
UK	Conservatives	Conservatives/Christian Democrats
UK	Greens	Greens
UK	Labour	Social democrats
UK	Liberals	Liberals
UK	SNP	Others
UK	UKIP	Populist right
UK	Others	Others

Appendix A-3: Economic misery index

The misery index was created from three different individual macroeconomic variables, following the analysis from Hernández and Kriesi (2016). It provides a single measure of a country's economic performance over a legislative term. It is useful for evaluating the impact of the economy on electoral and protest politics because citizens are more likely to respond to general economic trends and not the evolution of specific macroeconomic indicators. The individual macroeconomic variables used for the factor analysis are real GDP, the unemployment rate and government debt. For each variable, the change over a legislative period is measured and then used for a factor analysis. The results from this analysis are shown below.

Table A-4: Factor loadings

Variable	**Factor 1**	**Uniqueness**
GDP change	-0.6646	0.5583
Unemployment change	0.6223	0.6127
Debt change	0.7534	0.4325

The factor loadings in table A-4 indicate that all three variables load on one factor.
From the factor analysis, we predict one common factor, as shown in table A-5 below. The factor is positively associated with higher unemployment and debt and negatively associated with higher growth.

Table A-5: Predicted factor

Variable	**Factor 1**
GDP change	-0.30227
Unemployment change	0.26226
Debt change	0.43743

Table A-6: Change in economic conditions by legislative period

Country	Election	Previous election	Change in misery	Change in unempl.	Change in GDP	Change in debt
IE	17-May-02	06-Jun-97	-2.33	-5.90	82.3	-37.6
BG	11-Jul-05	17-Jun-01	-2.22	-9.90	49.5	-38.5
RO	30-Nov-08	28-Nov-04	-1.88	-2.30	128.9	-8.7
SK	17-Jun-06	21-Sep-02	-1.39	-3.40	71.3	-14.7
BG	17-Jun-01	19-Apr-97	-1.35	8.60	73.9	-42.3
EE	04-Mar-07	02-Mar-03	-1.32	-5.20	84.2	-1.3
LT	12-Oct-08	10-Oct-04	-1.28	-4.70	77.7	-4.2
BG	14-Jul-09	11-Jul-05	-1.10	-3.70	50.2	-12.9
HU	07-Apr-02	10-May-98	-1.08	-3.10	64.9	-7
IS	12-May-07	10-May-03	-0.99	-2.20	53.8	-11.1
LT	10-Oct-04	08-Oct-00	-0.98	-6.80	46.6	-2.6
LV	07-Jun-06	05-Oct-02	-0.94	-3.70	62.8	-1.1
N0	08-Sep-13	13-Sep-09	-0.88	0.20	41.3	-19.1
LV	05-Oct-02	03-Oct-98	-0.81	-4.00	58.8	2.5
ES	14-Mar-04	12-Mar-00	-0.80	-3.40	33.6	-10.6
SE	15-Sep-02	20-Sep-98	-0.79	-3.90	17.4	-16.5
ES	09-Mar-08	14-Mar-04	-0.77	-2.90	29.3	-12.5
PL	21-Oct-07	25-Sep-05	-0.73	-8.50	27.2	2
UK	07-Jun-01	01-May-97	-0.73	-1.83	35.9	-10.8
IE	24-May-07	17-May-02	-0.69	0.10	45.1	-9.9
EE	02-Mar-03	07-Mar-99	-0.60	0.80	62.8	-0.3
EE	01-Mar-15	06-Mar-11	-0.57	-7.70	22.8	3.8
SI	21-Sep-08	03-Oct-04	-0.56	-1.90	36.8	-4.1
BE	10-Jun-07	18-May-03	-0.55	0.00	21.6	-15.5
GR	07-Mar-04	08-Apr-00	-0.52	-1.40	34.3	-4.8
LV	04-Oct-14	17-Sep-11	-0.46	-4.90	17.1	-2
BE	18-May-03	13-Jun-99	-0.46	-0.50	15.6	-13.8
FI	16-Mar-03	21-Mar-99	-0.46	-2.60	19.0	-6.9
FI	18-Mar-07	16-Mar-03	-0.46	-3.70	23.6	-1.9
DK	13-Nov-07	08-Feb-05	-0.46	-1.80	9.7	-13
CH	23-Oct-11	21-Oct-07	-0.45	0.60	44.2	-2.9
RO	28-Nov-04	26-Nov-00	-0.43	0.90	50.2	-0.2
SK	12-Jun-10	17-Jun-06	-0.41	0.20	48.1	1.4
FR	09-Jun-02	25-May-97	-0.37	-2.84	23.0	-1.1
MT	08-Mar-08	12-Apr-03	-0.37	-0.20	28.5	-5.1
IT	04-Apr-06	13-May-01	-0.31	-2.00	18.9	-2.9
N0	09-Sep-01	15-Sep-97	-0.30	-0.33	36.8	1.5
CH	21-Oct-07	19-Oct-03	-0.30	-0.50	11.1	-9.9
PL	25-Oct-15	09-Oct-11	-0.30	-2.90	12.5	-3.1

CZ	02-Jun-06	15-Jun-02	-0.29	0.90	41.9	1.3
IS	27-Apr-13	25-Apr-09	-0.27	-2.40	26.8	3.4
AT	01-Oct-06	24-Nov-02	-0.23	0.50	28.2	-2
DK	08-Feb-05	20-Nov-01	-0.22	0.40	15.7	-7.3
DK	18-Jun-15	15-Sep-11	-0.22	-1.40	8.2	-6.2
HU	06-Apr-14	11-Apr-10	-0.21	-3.60	1.8	-3
UK	07-May-15	06-May-10	-0.19	-2.20	41.7	12.6
LU	13-Jun-04	13-Jun-99	-0.17	2.70	38.0	-0.9
DE	27-Sep-09	16-Sep-05	-0.16	-3.50	6.7	0.6
GR	16-Sep-07	07-Mar-04	-0.15	-3.50	20.5	7.5
SI	03-Oct-04	15-Oct-00	-0.14	-0.50	26.4	3.1
AT	29-Sep-08	01-Oct-06	-0.13	-0.80	9.2	-4
CY	27-May-01	26-May-96	-0.13	0.90	46.8	9.4
SE	19-Sep-10	17-Sep-06	-0.09	1.50	10.0	-7.8
DE	22-Sep-02	27-Sep-98	-0.08	-1.30	9.5	-0.7
GR	20-Sep-15	25-Jan-15	-0.03	-2.60	0.0	0
LU	20-Oct-13	07-Jun-09	-0.02	-0.20	27.8	7.3
N0	13-Sep-09	11-Sep-05	-0.02	-1.30	11.6	2.6
UK	05-May-05	07-Jun-01	-0.02	0.00	12.5	-0.2
SE	17-Sep-06	15-Sep-02	0.00	3.10	19.3	-4.3
RO	26-Nov-00	03-Nov-96	0.00	-0.72	40.1	15.1
NL	22-Nov-06	22-Jan-03	0.01	-0.10	13.3	1.3
IS	10-May-03	08-May-99	0.01	1.70	18.5	-0.6
CZ	15-Jun-02	19-Jun-98	0.03	1.80	45.7	12.6
PT	17-Mar-02	10-Oct-99	0.04	-0.20	18.5	5
CY	22-May-11	21-May-06	0.04	1.60	21.9	2.1
LU	07-Jun-09	13-Jun-04	0.04	0.70	29.6	8.2
CY	21-May-06	27-May-01	0.05	2.10	36.9	8.2
FR	10-Jun-07	09-Jun-02	0.06	0.10	22.3	6.8
AT	24-Nov-02	03-Oct-99	0.07	0.10	10.7	1.8
MT	09-Mar-13	08-Mar-08	0.09	-0.80	21.8	9.9
CZ	28-May-10	02-Jun-06	0.09	0.20	26.7	10
NL	22-Jan-03	15-May-02	0.12	0.10	2.5	-0.2
IT	13-Apr-08	04-Apr-06	0.12	0.50	5.5	0.4
PL	09-Oct-11	21-Oct-07	0.13	0.40	19.2	7.2
SE	14-Sep-14	19-Sep-10	0.13	0.00	16.7	7.2
CH	19-Oct-03	24-Oct-99	0.13	1.20	15.3	3.6
LV	17-Sep-11	02-Oct-10	0.15	-0.70	12.0	7.6
DE	22-Sep-13	27-Sep-09	0.16	-2.60	15.3	14.2
CH	18-Oct-15	23-Oct-11	0.16	0.70	5.4	1.3
SK	10-Mar-12	12-Jun-10	0.18	-1.20	7.9	8
BE	25-May-14	13-Jun-10	0.19	0.10	7.6	4.9

PL	25-Sep-05	23-Sep-01	0.21	0.20	15.1	8.9
HU	09-Apr-06	07-Apr-02	0.22	2.10	27.1	10
BG	05-Oct-14	12-May-13	0.23	-2.40	2.0	9.9
NL	12-Sep-12	09-Jun-10	0.27	0.20	2.1	4.9
CZ	26-Oct-13	28-May-10	0.28	-1.20	-0.3	7.8
N0	11-Sep-05	09-Sep-01	0.31	1.00	28.1	16.4
MT	12-Apr-03	05-Sep-98	0.34	1.10	32.3	19.3
BE	13-Jun-10	10-Jun-07	0.37	0.90	5.9	8.7
NL	09-Jun-10	22-Nov-06	0.37	1.30	8.6	9
PT	25-Sep-05	17-Mar-02	0.40	3.50	9.7	5.1
PT	27-Sep-09	25-Sep-05	0.45	2.20	9.2	9.8
FI	17-Apr-11	18-Mar-07	0.47	1.90	5.0	9.2
AT	29-Sep-13	29-Sep-08	0.47	1.00	10.7	14.2
DE	16-Sep-05	22-Sep-02	0.48	2.80	4.3	7.1
BG	12-May-13	14-Jul-09	0.59	7.40	14.3	4.3
FI	19-Apr-15	17-Apr-11	0.61	1.90	5.3	14.6
PT	04-Oct-15	05-Jun-11	0.61	0.10	1.8	17.6
SK	21-Sep-02	26-Sep-98	0.63	6.50	30.2	15.2
DK	15-Sep-11	13-Nov-07	0.71	3.50	5.7	14.3
FR	10-Jun-12	10-Jun-07	0.75	1.20	7.7	22.5
EE	06-Mar-11	04-Mar-07	0.76	8.10	0.8	2.3
HU	11-Apr-10	09-Apr-06	0.79	4.20	7.4	16.3
ES	20-Dec-15	04-Dec-11	0.83	-1.70	1.0	29.7
GR	04-Oct-09	16-Sep-07	0.84	1.40	3.5	23.6
SI	04-Dec-11	21-Sep-08	0.87	3.80	-2.9	15.6
RO	09-Dec-12	30-Nov-08	0.91	1.30	-5.9	21.9
GR	25-Jan-15	17-Jun-12	0.92	2.90	-7.9	17.3
IT	24-Feb-13	13-Apr-08	1.05	4.60	-1.0	20.9
SI	13-Jul-14	04-Dec-11	1.17	1.30	-2.4	33
UK	06-May-10	05-May-05	1.20	3.40	-7.2	26.8
LT	28-Oct-12	12-Oct-08	1.25	7.80	1.6	21.5
PT	05-Jun-11	27-Sep-09	1.28	2.30	1.5	36.5
LV	02-Oct-10	07-Jun-06	1.36	10.30	12.9	24.4
ES	04-Dec-11	09-Mar-08	1.79	13.00	-3.8	25.4
GR	06-May-12	04-Oct-09	2.39	13.40	-16.3	40.6
IS	25-Apr-09	12-May-07	2.83	5.40	-41.9	65.1
IE	25-Feb-11	24-May-07	3.20	10.20	-14.3	79.5

Note: Higher/positive values for misery mean a worsening of economic conditions.

Appendix A-4: Scatterplots of economic misery and electoral loss/protest

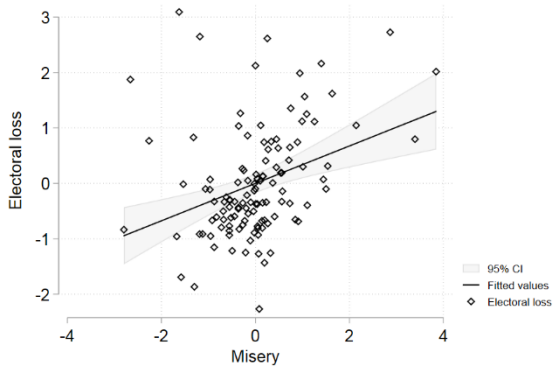
Table A-7: Correlation matrix of key variables for 118 European elections and 77 Western European elections

Variable	All countries (n=30)			Western Europe (n=20)		
	Electoral loss	Weighted protest	Economic misery	Electoral loss	Weighted protest	Economic misery
Electoral loss	1			1		
Weighted protest	0.21	1		0.41	1	
Economic misery	0.34	0.32	1	0.61	0.36	1

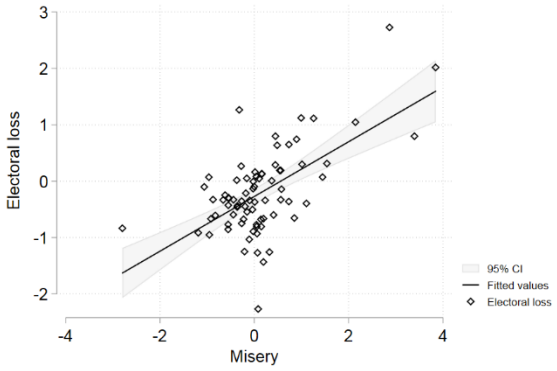
Note: The table shows the correlation matrix of our key variables. On the left, the table shows the results for all elections in our dataset; on the right, the table shows the results for all Western European elections. The corresponding scatterplots are also shown below in Figure A-1.

Figure A-1: Scatterplots of misery and electoral loss/protest

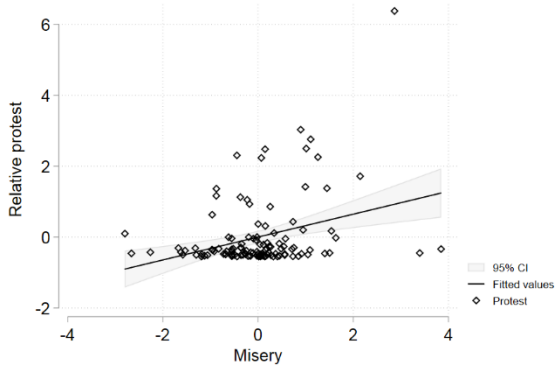
a) Electoral loss, all countries



b) Electoral loss, Western Europe only



a) Protest, all countries



b) Protest, Western Europe only

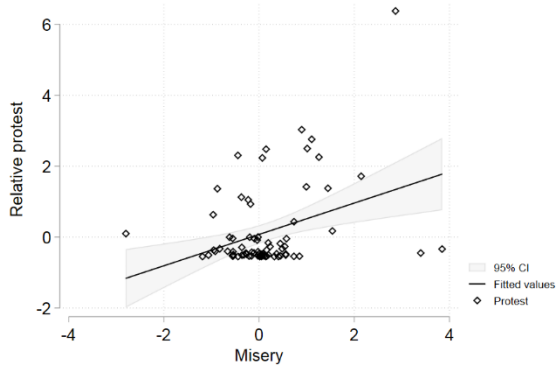


Figure A-2: Scatterplots of electoral loss and misery by election type

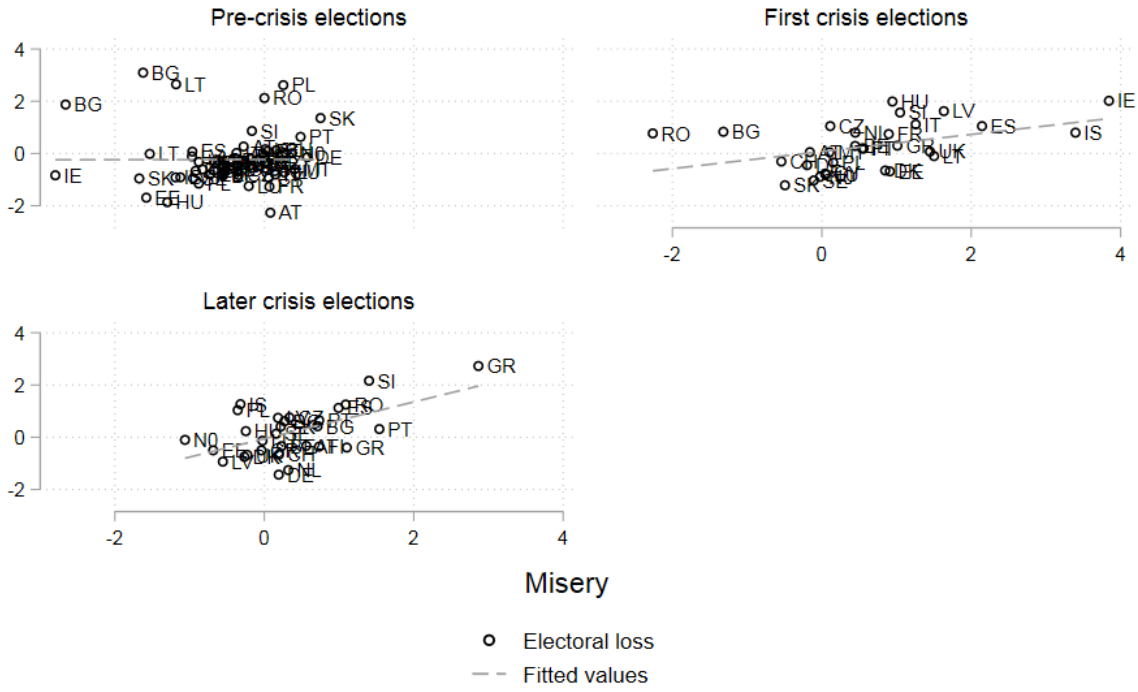


Figure A-3: Scatterplots of protest and misery by election type

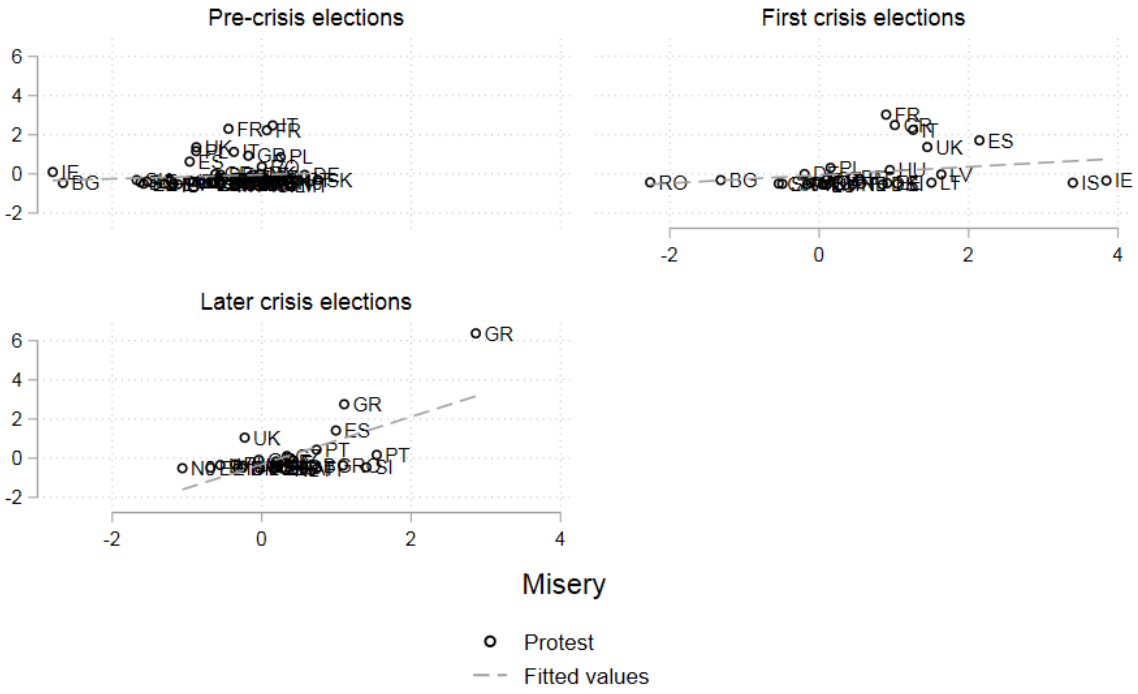
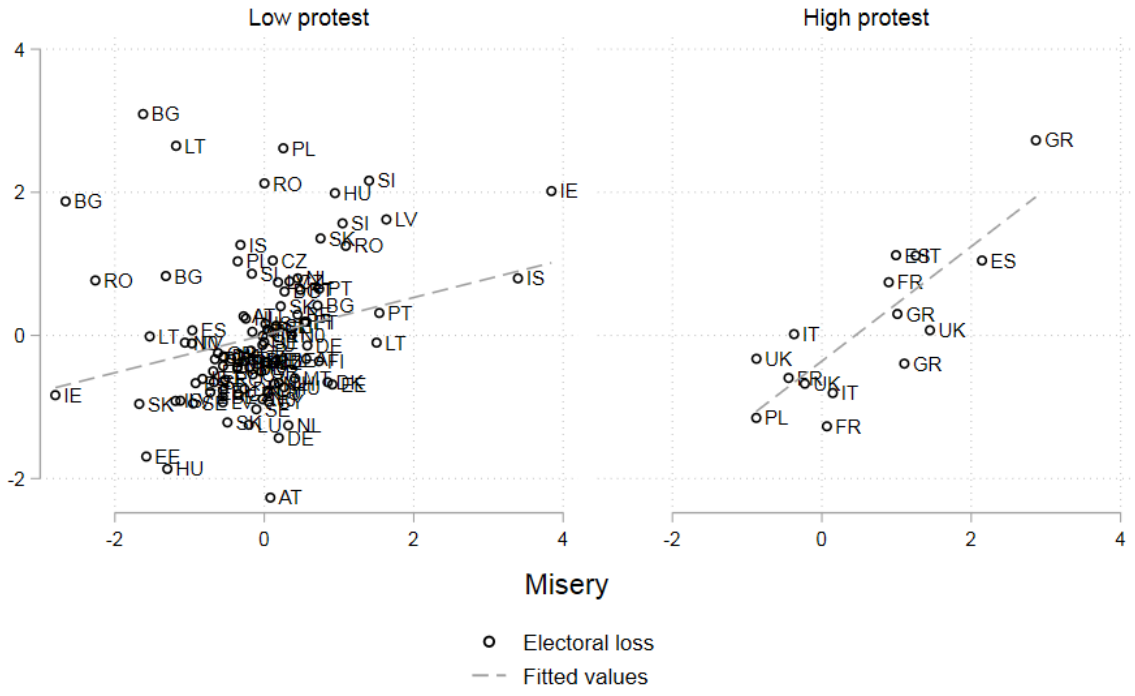


Figure A-4: Scatterplots of electoral loss and misery by intensity of protest



Note: Cases with a high level of protest are defined as those that are at least one standard deviation above the average.

APPENDIX B: ROBUSTNESS TESTS

Appendix B-1: Alternative operationalization of protest and misery

To test the robustness of our results based on protest events, we calculate the same regression models using *the number of protest participants*. The results are shown below, and they are very similar to the ones shown in the main analysis, i.e. in terms of significance and substance they confirm our results from the main analysis.

Table B-1: The impact of economic misery and timing on electoral loss and protest (protest participants)

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.34***	0.29**	0.00	0.15	0.49***	0.43**	0.17	0.26
	(3.86)	(3.31)	(0.02)	(0.89)	(6.74)	(3.24)	(1.05)	(0.92)
First crisis elec.			0.30	0.03			0.11	-0.08
			(1.26)	(0.12)			(0.58)	(-0.23)
Later crisis elec.			0.17	-0.15			0.06	-0.21
			(0.72)	(-0.67)			(0.32)	(-0.64)
First crisis elec. # Misery			0.32	-0.07			0.35+	-0.10
			(1.44)	(-0.34)			(1.74)	(-0.27)
Later crisis elec. # Misery			0.70*	1.07***			0.51*	1.21**
			(2.47)	(3.99)			(2.17)	(2.96)
Constant	0.00	0.00	-0.23	-0.05	-0.27***	0.06	-0.39***	0.06
	(0.00)	(0.00)	(-1.56)	(-0.36)	(-3.90)	(0.50)	(-3.60)	(0.31)
Observations	118	118	118	118	77	77	77	77
R^2	0.11	0.09	0.17	0.25	0.38	0.12	0.42	0.29

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-2: The impact of economic misery and protest on electoral loss (protest participants)

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Misery	0.34***	0.30**	0.29**	0.49***	0.43***	0.42***
	(3.86)	(3.27)	(3.22)	(6.74)	(5.75)	(5.66)
Protest		0.14	0.10		0.12+	0.03
		(1.52)	(0.85)		(1.95)	(0.35)
Misery # Protest			0.04			0.09*
			(0.64)			(2.02)
Constant	0.00	0.00	-0.01	-0.27***	-0.28***	-0.30***
	(0.00)	(0.00)	(-0.15)	(-3.90)	(-4.08)	(-4.46)
Observations	118	118	118	77	77	77
R^2	0.11	0.13	0.13	0.38	0.41	0.44

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-3: The effect of misery and protest on the electoral loss of different parties in Western Europe (protest participants)

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.20+	0.22*	0.22*	0.20+
	(1.92)	(2.18)	(2.11)	(1.93)
Government (1=yes)	0.52***	0.50***	0.49***	0.49***
	(6.84)	(6.66)	(6.58)	(6.63)
Protest	-0.07*	-0.00	0.00	0.02
	(-2.22)	(-0.07)	(0.03)	(0.60)
Mainstream party (1=yes)	-0.07	-0.12+		
	(-1.10)	(-1.96)		
Mainstream party # Protest	0.18***	0.01		
	(4.01)	(0.17)		
Misery	-0.01	-0.11*	-0.01	0.03
	(-0.26)	(-2.38)	(-0.36)	(0.78)
Protest # Misery		-0.03		-0.03
		(-1.25)		(-1.35)
Mainstream party # Misery		0.20**		
		(3.17)		
Mainstream party # Protest # Misery		0.11**		
		(2.97)		
Left party (1=yes)			0.01	0.00
			(0.20)	(0.07)
Left party # Protest			0.03	-0.03
			(0.60)	(-0.50)
Left party # Misery				-0.11
				(-1.63)
Left party # Protest # Misery				0.08*
				(2.09)
Constant	-0.14***	-0.12**	-0.18***	-0.17***
	(-3.45)	(-2.90)	(-4.30)	(-4.11)
Observations	548	548	548	548
R^2	0.17	0.20	0.15	0.16

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

In order to test whether our results hold with a different operationalization of economic misery, we also run all estimations with *unemployment* as the key independent variable. The results are shown below. They indicate that generally the results are very similar to the ones shown in the main analysis.

Table B-4: The impact of unemployment on electoral loss and protest

	All countries (n=30)				Western Europe (n=30)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Unempl.	0.34***	0.24**	0.20	-0.12	0.51***	0.50**	0.16	-0.36
	(3.90)	(2.72)	(1.33)	(-0.84)	(5.97)	(3.29)	(0.88)	(-1.27)
First crisis elec.			0.24	0.09			0.26	0.14
			(1.00)	(0.39)			(1.36)	(0.45)
Later crisis elec.			0.41+	0.32			0.32+	0.34
			(1.87)	(1.52)			(1.80)	(1.20)
First crisis elec. # Unempl.			0.15	0.29			0.37	0.68+
			(0.67)	(1.37)			(1.61)	(1.87)
Later crisis elec. # Unempl.			0.25	1.04***			0.48*	1.83***
			(1.07)	(4.65)			(2.03)	(4.82)
Constant	0.00	-0.00	-0.18	-0.12	-0.24**	0.10	-0.42***	-0.09
	(0.00)	(-0.00)	(-1.38)	(-1.00)	(-3.38)	(0.76)	(-4.08)	(-0.55)
Observations	118	118	118	118	77	77	77	77
R^2	0.12	0.06	0.15	0.22	0.32	0.13	0.39	0.36

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-5: The impact of unemployment and protest on electoral loss

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Unempl.	0.34***	0.31***	0.28**	0.51***	0.44***	0.40***
	(3.90)	(3.43)	(3.03)	(5.97)	(4.91)	(3.91)
Protest		0.14	0.05		0.15*	0.12
		(1.52)	(0.49)		(2.40)	(1.48)
Unempl. # Protest			0.07			0.03
			(1.29)			(0.77)
Constant	0.00	0.00	-0.02	-0.24**	-0.26***	-0.26***
	(0.00)	(0.00)	(-0.19)	(-3.38)	(-3.68)	(-3.70)
Observations	118	118	118	77	77	77
R^2	0.12	0.13	0.15	0.32	0.37	0.38

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-6: The effect of unemployment and protest on the electoral loss of different parties in Western Europe

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.21*	0.23*	0.22*	0.20+
	(2.04)	(2.24)	(2.12)	(1.93)
Government (1=yes)	0.52***	0.49***	0.49***	0.50***
	(6.87)	(6.63)	(6.58)	(6.71)
Protest	-0.08**	-0.02	0.01	0.05
	(-2.61)	(-0.56)	(0.40)	(1.34)
Mainstream party (1=yes)	-0.08	-0.10		
	(-1.28)	(-1.56)		
Mainstream party # Protest	0.22***	0.07		
	(4.69)	(1.11)		
Unempl.	-0.00	-0.09	-0.02	0.04
	(-0.12)	(-1.58)	(-0.48)	(0.65)
Protest # Unempl.		-0.02		-0.04+
		(-0.83)		(-1.80)
Mainstream party # Unempl.		0.16+		
		(1.85)		
Mainstream party # Protest # Unempl.		0.07*		
		(2.32)		
Left party (1=yes)			0.02	0.01
			(0.27)	(0.13)
Left party # Protest			-0.00	-0.11+
			(-0.00)	(-1.71)
Left party # Unempl.				-0.13
				(-1.53)
Left party # Protest # Unempl.				0.09**
				(2.85)
Constant	-0.14***	-0.13**	-0.18***	-0.18***
	(-3.41)	(-3.21)	(-4.34)	(-4.27)
Observations	548	548	548	548
R^2	0.17	0.20	0.15	0.16

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Appendix B-2: Additional control additional variables to explain electoral loss and protest

To account for the clarity of responsibility, we included *additional control variables* to explain the electoral loss of incumbents. These variables are not statistically significant as shown below, and given the relatively small number of observations in our dataset, we excluded them from the regression models shown in the main text.

Table B-7: The impact of economic misery on electoral loss and protest with additional control variables

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.26**	0.29**	0.05	0.10	0.37***	0.34*	0.20	0.01
	(3.19)	(3.19)	(0.29)	(0.60)	(4.75)	(2.16)	(1.31)	(0.02)
Vote share (t-1)	0.04***	0.02	0.04***	0.01	0.03***	0.02	0.03**	0.02
	(4.31)	(1.51)	(4.26)	(1.10)	(3.52)	(1.12)	(3.19)	(1.06)
Coalition (1=yes)	-0.42*	0.15	-0.45*	0.29	-0.22	0.20	-0.21	0.18
	(-2.36)	(0.74)	(-2.30)	(1.43)	(-1.55)	(0.70)	(-1.46)	(0.68)
Switzerland	-0.18	-0.39	-0.15	-0.37	0.08	-0.42	0.10	-0.43
	(-0.41)	(-0.81)	(-0.35)	(-0.81)	(0.28)	(-0.73)	(0.35)	(-0.83)
Bailout (1=yes)	0.63**	0.17	0.46+	0.03	0.50*	0.39	0.44	-0.37
	(2.83)	(0.67)	(1.85)	(0.11)	(2.15)	(0.81)	(1.47)	(-0.68)
First crisis elec.			0.19	0.01			0.15	0.07
			(0.86)	(0.06)			(0.82)	(0.21)
Later crisis elec.			0.24	-0.33			0.05	-0.14
			(0.99)	(-1.31)			(0.23)	(-0.37)
First crisis elec. # Misery			0.23	0.07			0.19	0.26
			(1.09)	(0.32)			(0.93)	(0.70)
Later crisis elec. # Misery			0.41	1.11***			0.26	1.63***
			(1.52)	(4.01)			(1.10)	(3.77)
Constant	-1.27***	-0.58+	-1.46***	-0.48	-1.19***	-0.63	-1.24***	-0.63
	(-4.31)	(-1.74)	(-4.43)	(-1.39)	(-4.57)	(-1.19)	(-4.31)	(-1.20)
Observations	118	118	118	118	77	77	77	77
R^2	0.32	0.15	0.34	0.29	0.51	0.18	0.53	0.36

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-8: The impact of economic misery, protest and additional variables on electoral loss

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Misery	0.26**	0.24**	0.25**	0.37***	0.34***	0.32***
	(3.19)	(2.89)	(2.94)	(4.75)	(4.23)	(4.06)
Vote share (t-1)	0.04***	0.04***	0.04***	0.03***	0.03**	0.03**
	(4.31)	(4.18)	(4.16)	(3.52)	(3.31)	(3.22)
Coalition (1=yes)	-0.42*	-0.43*	-0.40*	-0.22	-0.24+	-0.19
	(-2.36)	(-2.39)	(-2.20)	(-1.55)	(-1.72)	(-1.37)
Switzerland	-0.18	-0.16	-0.20	0.08	0.12	0.08
	(-0.41)	(-0.37)	(-0.46)	(0.28)	(0.43)	(0.29)
Bailout (1=yes)	0.63**	0.62**	0.57*	0.50*	0.46*	0.44+
	(2.83)	(2.78)	(2.55)	(2.15)	(2.00)	(1.91)
Protest		0.05	-0.07		0.10+	-0.00
		(0.53)	(-0.57)		(1.77)	(-0.01)
Misery # Protest			0.09			0.08+
			(1.42)			(1.87)
Constant	-1.27***	-1.25***	-1.26***	-1.19***	-1.13***	-1.12***
	(-4.31)	(-4.15)	(-4.23)	(-4.57)	(-4.34)	(-4.39)
Observations	118	118	118	77	77	77
R^2	0.32	0.32	0.33	0.51	0.54	0.56

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Appendix B-3: Alternative regression models

Given that we have rather few observations from 30 different countries, disturbances might be correlated within countries and the standard errors from the OLS models reported in the main analysis can be biased. As a robustness test, we report *country-clustered standard errors*, which require the weaker assumption that errors are independent across countries but not necessarily across every observation within a country. Note that we do not use country-clustered standard errors in the main analysis because there is evidence that they introduce different biases if the number of clusters is relatively small (e.g. Betrand et al. 2004, Cameron et al. 2008). This is especially true if the panel is unbalanced and the number of observations is small, both of which is true for our data. Still, the results shown below are similar to the ones shown in the main text; some effects even become stronger.

Table B-9: The impact of economic misery, timing, and bailouts on electoral loss and protest with country-clustered SEs

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.34*	0.32	0.00	0.10	0.49***	0.44	0.17	-0.05
	(2.17)	(1.59)	(0.01)	(1.00)	(6.82)	(1.39)	(1.42)	(-0.33)
First crisis elec.			0.30	-0.01			0.11	0.07
			(1.18)	(-0.16)			(0.62)	(0.50)
Later crisis elec.			0.17	-0.27			0.06	-0.24
			(0.94)	(-1.30)			(0.26)	(-0.77)
First crisis elec. # Misery			0.32	0.11			0.35+	0.29
			(0.99)	(0.72)			(2.08)	(0.99)
Later crisis elec. # Misery			0.70+	1.11+			0.51	1.63**
			(1.72)	(1.87)			(1.61)	(2.88)
Constant	0.00	-0.00	-0.23	-0.04	-0.27***	0.07	-0.39**	-0.04
	(0.00)	(-0.00)	(-1.51)	(-0.25)	(-4.26)	(0.39)	(-3.77)	(-0.19)
Observations	118	118	118	118	77	77	77	77
R^2	0.11	0.10	0.17	0.24	0.38	0.13	0.42	0.33

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-10: The impact of economic misery and protest on electoral loss with country-clustered SEs

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Misery	0.34*	0.30+	0.30+	0.49***	0.42***	0.40***
	(2.17)	(1.87)	(1.94)	(6.82)	(9.06)	(8.36)
Protest		0.11	-0.05		0.14*	0.01
		(1.50)	(-0.53)		(2.61)	(0.20)
Misery # Protest			0.13*			0.10**
			(2.44)			(3.53)
Constant	0.00	0.00	-0.04	-0.27***	-0.28***	-0.30***
	(0.00)	(0.00)	(-0.40)	(-4.26)	(-4.45)	(-4.71)
Observations	118	118	118	77	77	77
R^2	0.11	0.13	0.15	0.38	0.42	0.45

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-11: The effect of misery and protest on the electoral loss of different parties in Western Europe with country-clustered SEs

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.21	0.23+	0.22	0.20
	(1.62)	(1.77)	(1.69)	(1.58)
Government (1=yes)	0.52***	0.49***	0.49***	0.50***
	(6.21)	(6.01)	(5.81)	(5.60)
Protest	-0.08**	0.01	0.01	0.06**
	(-3.81)	(0.18)	(0.59)	(3.57)
Mainstream party (1=yes)	-0.08	-0.12*		
	(-1.36)	(-2.20)		
Mainstream party # Protest	0.22**	0.00		
	(3.20)	(0.02)		
Misery	-0.00	-0.10***	-0.01+	0.04
	(-0.44)	(-5.40)	(-1.82)	(1.17)
Protest # Misery		-0.04*		-0.04***
		(-2.68)		(-4.26)
Mainstream party # Misery		0.17***		
		(5.05)		
Mainstream party # Protest # Misery		0.12***		
		(4.52)		
Left party (1=yes)			0.02	0.01
			(0.52)	(0.16)
Left party # Protest			-0.00	-0.13***
			(-0.01)	(-4.28)
Left party # Misery				-0.11
				(-1.38)
Left party # Protest # Misery				0.10***
				(4.94)
Constant	-0.14***	-0.12***	-0.18***	-0.18***
	(-7.56)	(-5.80)	(-7.48)	(-6.60)
Observations	548	548	548	548
R^2	0.18	0.21	0.15	0.16

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

To account for the influence of individual outliers, we test the robustness of our results in two different ways: we use 1) use *quantile median regression*, and 2) *robust regressions*. These regression models are less efficient than standard OLS regression, but they are more robust against outliers. The main results yielded from both models are again similar to the ones shown in the main text.

Table B-12: The impact of economic misery, timing, and bailouts on electoral loss and protest (quantile regression)

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.55***	0.03	0.30+	0.03	0.48***	0.02	0.18	-0.16
	(6.87)	(0.79)	(1.71)	(0.36)	(5.88)	(0.19)	(0.98)	(-0.61)
First crisis elec.			0.25	-0.04			0.21	0.02
			(1.05)	(-0.31)			(0.94)	(0.05)
Later crisis elec.			0.25	0.05			-0.16	0.16
			(1.03)	(0.36)			(-0.73)	(0.53)
First crisis elec. # Misery			0.17	-0.01			0.36	0.18
			(0.74)	(-0.12)			(1.54)	(0.58)
Later crisis elec. # Misery			0.68*	0.20			0.33	0.86*
			(2.39)	(1.30)			(1.24)	(2.31)
Constant	-0.13	-0.37***	-0.31*	-0.37***	-0.22**	-0.41***	-0.32*	-0.46**
	(-1.58)	(-9.33)	(-2.12)	(-4.61)	(-2.82)	(-4.28)	(-2.58)	(-2.66)
Observations	118	118	118	118	77	77	77	77

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-13: The impact of economic misery and protest on electoral loss (quantile regression)

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Misery	0.55***	0.44***	0.44***	0.48***	0.36***	0.37***
	(6.87)	(5.09)	(5.30)	(5.88)	(3.82)	(4.25)
Protest		0.14	-0.03		0.18*	-0.01
		(1.63)	(-0.25)		(2.45)	(-0.05)
Misery # Protest			0.10+			0.11*
			(1.69)			(2.10)
Constant	-0.13	-0.13	-0.23**	-0.22**	-0.27**	-0.30***
	(-1.58)	(-1.65)	(-2.83)	(-2.82)	(-3.16)	(-3.87)
Observations	118	118	118	77	77	77

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-14: Explaining the electoral loss of mainstream and left-wing parties in Western Europe (quantile regression)

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.16*	0.17+	0.15+	0.18*
	(2.02)	(1.95)	(1.81)	(2.27)
Government (1=yes)	0.33***	0.34***	0.29***	0.30***
	(5.45)	(5.15)	(4.91)	(5.13)
Protest	-0.05*	0.01	0.00	0.04
	(-2.11)	(0.23)	(0.15)	(1.05)
Mainstream party (1=yes)	-0.04	-0.07		
	(-0.75)	(-1.22)		
Mainstream party # Protest	0.11**	0.02		
	(3.03)	(0.36)		
Misery	-0.03	-0.04	-0.03	0.03
	(-0.97)	(-1.04)	(-1.12)	(0.78)
Protest # Misery		-0.05*		-0.07***
		(-2.09)		(-3.40)
Mainstream party # Misery		0.07		
		(1.24)		
Mainstream party # Protest # Misery		0.13***		
		(4.04)		
Left party (1=yes)			0.03	-0.01
			(0.64)	(-0.23)
Left party # Protest			-0.02	-0.08
			(-0.41)	(-1.33)
Left party # Misery				-0.09+
				(-1.70)
Left party # Protest # Misery				0.09**
				(2.89)
Constant	-0.08*	-0.07+	-0.10**	-0.09**
	(-2.58)	(-1.95)	(-3.02)	(-2.69)
Observations	548	548	548	548

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-15: The impact of economic misery, timing, and bailouts on electoral loss and protest (robust regression)

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.51***	0.01	0.38**	0.01	0.43***	-0.01	0.23	-0.11+
	(7.32)	(0.64)	(2.71)	(0.17)	(6.50)	(-0.27)	(1.53)	(-1.89)
First crisis elec.			0.29	-0.01			0.05	-0.01
			(1.45)	(-0.21)			(0.29)	(-0.16)
Later crisis elec.			0.23	-0.00			-0.04	0.02
			(1.15)	(-0.10)			(-0.21)	(0.22)
First crisis elec. # Misery			-0.01	0.00			0.30	0.13+
			(-0.05)	(0.10)			(1.65)	(1.74)
Later crisis elec. # Misery			0.36	0.05			0.06	0.30**
			(1.54)	(0.76)			(0.23)	(2.83)
Constant	-0.14*	-0.40***	-0.29*	-0.40***	-0.26***	-0.42***	-0.33**	-0.44***
	(-2.01)	(-23.95)	(-2.42)	(-13.29)	(-4.02)	(-17.93)	(-3.30)	(-10.92)
Observations	118	117	118	117	77	76	76	76
R^2	0.32	0.00	0.34	0.01	0.36	0.00	0.38	0.12

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-16: The impact of economic misery and protest on electoral loss (robust regression)

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Misery	0.51***	0.48***	0.48***	0.43***	0.42***	0.39***
	(7.32)	(6.52)	(6.51)	(6.50)	(5.93)	(5.62)
Protest		0.09	-0.03		0.16**	0.02
		(1.21)	(-0.26)		(2.72)	(0.30)
Misery # Protest			0.09			0.09*
			(1.65)			(2.22)
Constant	-0.14*	-0.14+	-0.17*	-0.26***	-0.25***	-0.28***
	(-2.01)	(-1.93)	(-2.39)	(-4.02)	(-3.99)	(-4.44)
Observations	118	118	118	77	77	77
R^2	0.32	0.32	0.33	0.36	0.46	0.48

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table B-17: Explaining the electoral loss of mainstream and left-wing parties in Western Europe (robust regression)

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.15+	0.18*	0.13+	0.14+
	(1.79)	(2.12)	(1.66)	(1.70)
Government (1=yes)	0.37***	0.37***	0.33***	0.34***
	(6.04)	(6.02)	(5.72)	(5.78)
Protest	-0.02	0.06	0.02	0.08*
	(-0.79)	(1.34)	(0.68)	(2.17)
Mainstream party (1=yes)	-0.06	-0.08		
	(-1.24)	(-1.61)		
Mainstream party # Protest	0.05	-0.03		
	(1.46)	(-0.51)		
Misery	-0.06*	-0.07+	-0.07**	-0.02
	(-2.43)	(-1.76)	(-2.63)	(-0.59)
Protest # Misery		-0.06**		-0.08***
		(-2.83)		(-3.87)
Mainstream party # Misery		0.06		
		(1.16)		
Mainstream party # Protest # Misery		0.16***		
		(5.15)		
Left party (1=yes)			0.02	0.00
			(0.39)	(0.07)
Left party # Protest			-0.04	-0.08
			(-1.03)	(-1.32)
Left party # Misery				-0.06
				(-1.05)
Left party # Protest # Misery				0.06+
				(1.87)
Constant	-0.09**	-0.08*	-0.12***	-0.10**
	(-2.76)	(-2.33)	(-3.60)	(-3.07)
Observations	548	548	548	547
R^2	0.13	0.22	0.12	0.15

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Appendix B-4: Explaining the electoral loss of parties relative to their size

In order to account for the fact that parties greatly vary in size, we also analysed the *relative electoral loss of parties*. In this analysis, the dependent variable is the electoral loss of a given as relative to the vote share of this party in the previous election. The results are similar to the ones shown in the main analysis, even though the interaction effect is now more strongly driven by smaller non-mainstream protest (who greatly gain from protest relative to their previous size) parties than by mainstream parties (who somewhat lose from protest relative to their previous size).

Table B-18: The effect of misery and protest on the relative electoral loss of different parties in Western Europe

	(1) Relative electoral loss	(2) Relative electoral loss	(3) Relative electoral loss	(4) Relative electoral loss
Prime minister (1=yes)	-0.12	-0.12	-0.05	-0.15
	(-0.78)	(-0.82)	(-0.31)	(-1.01)
Government (1=yes)	0.35**	0.35**	0.37**	0.46***
	(2.93)	(3.08)	(3.19)	(4.13)
Protest	-0.33***	0.11	-0.26***	0.12+
	(-6.33)	(1.45)	(-5.16)	(1.77)
Mainstream party (1=yes)	0.10	0.03		
	(1.04)	(0.29)		
Mainstream party # Protest	0.39***	-0.09		
	(5.07)	(-0.79)		
Misery	-0.04	-0.02	-0.07	0.01
	(-0.84)	(-0.24)	(-1.25)	(0.18)
Protest # Misery		-0.29***		-0.31***
		(-7.30)		(-8.15)
Mainstream party # Misery		0.04		
		(0.41)		
Mainstream party # Protest # Misery		0.30***		
		(4.92)		
Left party (1=yes)			0.06	0.00
			(0.62)	(0.01)
Left party # Protest			0.25**	-0.10
			(3.21)	(-0.88)
Left party # Misery				-0.05
				(-0.46)
Left party # Protest # Misery				0.29***
				(4.65)
Constant	-0.16*	-0.10	-0.16*	-0.11+
	(-2.46)	(-1.54)	(-2.35)	(-1.75)
Observations	521	521	521	521
R^2	0.12	0.21	0.09	0.20

APPENDIX C: ADDITIONAL RESULTS

Appendix C-1: Regression models for non-economic protest as a 'placebo' test

In the spirit of a 'placebo' test, we repeat the analysis for cultural and political protest as the dependent variable. For these non-economic protests, we neither expect that they are influenced by economic misery nor that they influence how the economy conditions electoral behaviour. This is shown below in table A-20 to A-22. In table A-20 misery only has an influence on electoral loss but not on (cultural protest). Interestingly, according to model 5 in table A-20, protest is negatively related to electoral loss in Western Europe, indicating that incumbents might even perform better at elections following a large amount of non-economic protest. However, the result is not significant at the five per cent significance level and, as expected, there is no interaction between economic misery and non-economic protest, as shown in model 6 of table A-21.

Table C-1: The impact of economic misery and timing on electoral loss and non-economic protest

	All countries (n=30)				Western Europe (n=20)			
	(1) Electoral loss	(2) Protest	(3) Electoral loss	(4) Protest	(5) Electoral loss	(6) Protest	(7) Electoral loss	(8) Protest
Misery	0.34***	0.10	0.00	0.09	0.49***	0.04	0.17	-0.21
	(3.86)	(1.07)	(0.02)	(0.51)	(6.74)	(0.29)	(1.05)	(-0.66)
First crisis elec.			0.30	-0.04			0.11	-0.06
			(1.26)	(-0.15)			(0.58)	(-0.15)
Later crisis elec.			0.17	-0.34			0.06	-0.42
			(0.72)	(-1.30)			(0.32)	(-1.12)
First crisis elec. # Misery			0.32	0.03			0.35+	0.34
			(1.44)	(0.13)			(1.74)	(0.87)
Later crisis elec. # Misery			0.70*	0.14			0.51*	0.55
			(2.47)	(0.45)			(2.17)	(1.19)
Constant	0.00	-0.00	-0.23	0.08	-0.27***	0.13	-0.39***	0.16
	(0.00)	(-0.00)	(-1.56)	(0.48)	(-3.90)	(1.00)	(-3.60)	(0.73)
Observations	118	118	118	118	77	77	77	77
R^2	0.11	0.01	0.17	0.03	0.38	0.00	0.42	0.04

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table C-2: The impact of economic misery and non-economic protest on electoral loss

	All countries (n=30)			Western Europe (n=20)		
	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss	(5) Electoral loss	(6) Electoral loss
Misery	0.34***	0.34***	0.35***	0.49***	0.48***	0.47***
	(3.86)	(3.89)	(4.03)	(6.74)	(6.69)	(6.49)
Protest		-0.05	-0.05		0.04	0.04
		(-0.58)	(-0.61)		(0.61)	(0.59)
Misery # Protest			0.14			0.06
			(1.54)			(0.96)
Constant	0.00	0.00	-0.01	-0.27***	-0.28***	-0.28***
	(0.00)	(0.00)	(-0.15)	(-3.90)	(-3.93)	(-3.95)
Observations	118	118	118	77	77	77
R^2	0.11	0.12	0.13	0.38	0.38	0.39

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table C-3: The effect of misery and non-economic protest on the electoral loss of different parties in Western Europe

	(1) Electoral loss	(2) Electoral loss	(3) Electoral loss	(4) Electoral loss
Prime minister (1=yes)	0.22*	0.24*	0.22*	0.21*
	(2.15)	(2.32)	(2.16)	(2.05)
Government (1=yes)	0.50***	0.49***	0.49***	0.49***
	(6.57)	(6.58)	(6.57)	(6.63)
Protest	-0.01	0.00	0.02	0.03
	(-0.38)	(0.07)	(0.77)	(0.82)
Mainstream party (1=yes)	-0.05	-0.10		
	(-0.84)	(-1.64)		
Mainstream party # Protest	0.04	0.01		
	(0.91)	(0.27)		
Misery	-0.01	-0.12**	-0.01	0.03
	(-0.20)	(-2.83)	(-0.21)	(0.66)
Protest # Misery		-0.05		-0.04
		(-1.49)		(-1.10)
Mainstream party # Misery		0.25***		
		(4.07)		
Mainstream party # Protest # Misery		0.16**		
		(3.17)		
Left party (1=yes)			0.02	0.03
			(0.38)	(0.47)
Left party # Protest			-0.04	-0.05
			(-0.77)	(-0.91)
Left party # Misery				-0.08
				(-1.35)
Left party # Protest # Misery				0.10*
				(2.01)
Constant	-0.15***	-0.13**	-0.18***	-0.18***
	(-3.65)	(-3.06)	(-4.37)	(-4.40)
Observations	548	548	548	548
R^2	0.15	0.20	0.15	0.16

t statistics in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001