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Dynamics of protest and electoral politics in the Great Recession

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ONLINE APPENDIX

Dynamics of protest and electoral politics in the Great Recession

Björn Bremer^{*}, Swen Hutter[†], and Hanspeter Kriesi[‡]

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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 events 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 groups: 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

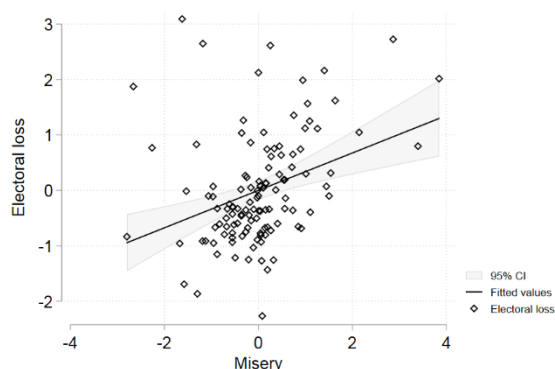
Table A-7: Correlation matrix of key variables for 118 European elections and 77 Western European elections

| 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 |

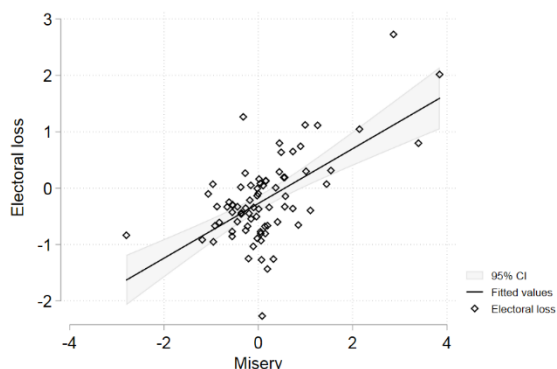
Note: The table shows the correlation matrix of our key variables. On the left, the table shows the results for all elections in our dataset; on the right, the table shows the results for all Western European elections. The corresponding scatterplots are also shown below in Figure A-1.

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

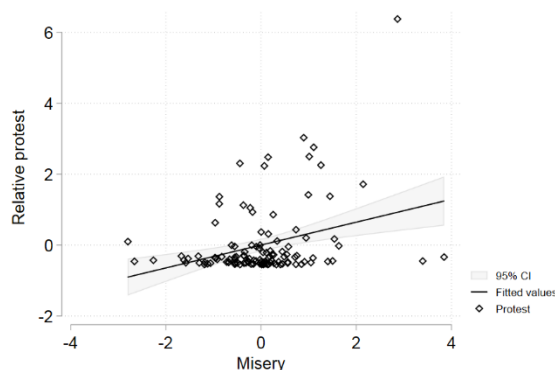
a) Electoral loss, all countries



b) Electoral loss, Western Europe only



a) Protest, all countries



b) Protest, Western Europe only

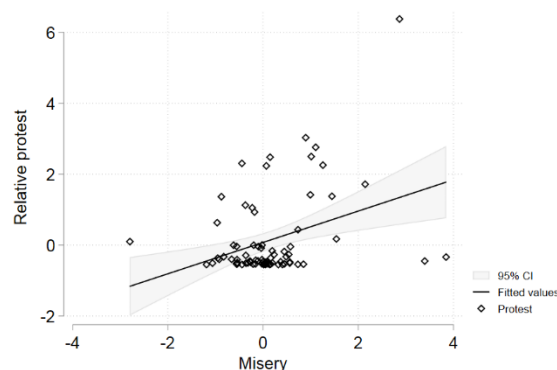


Figure A-2: Scatterplots of electoral loss and misery by election type

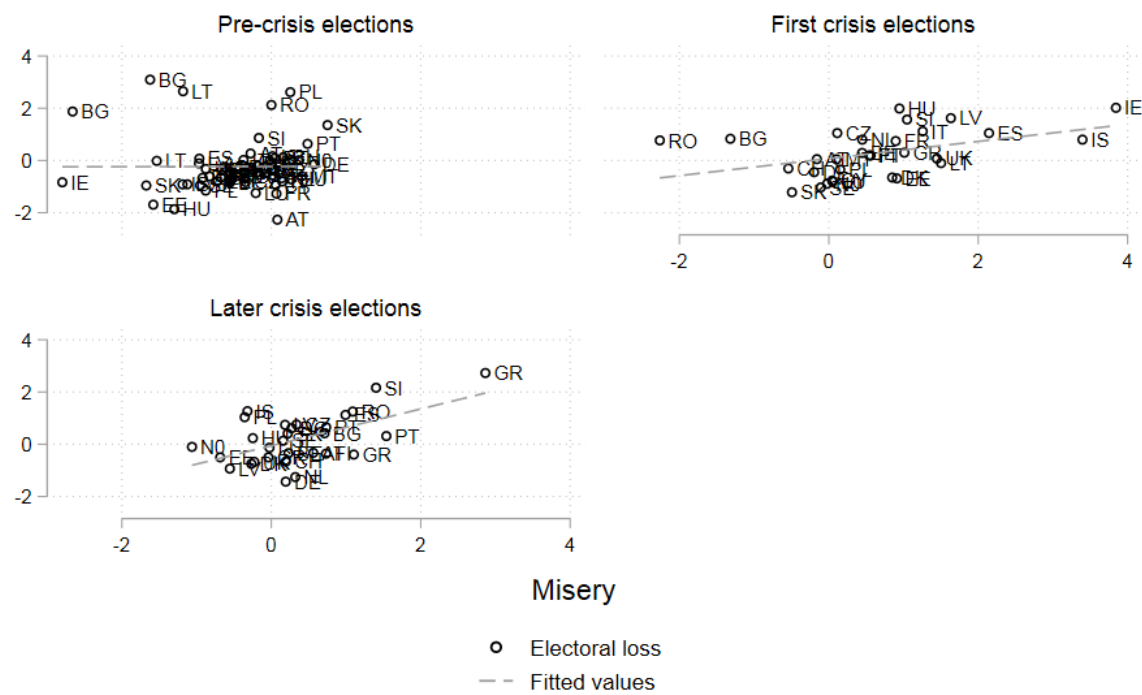


Figure A-3: Scatterplots of protest and misery by election type

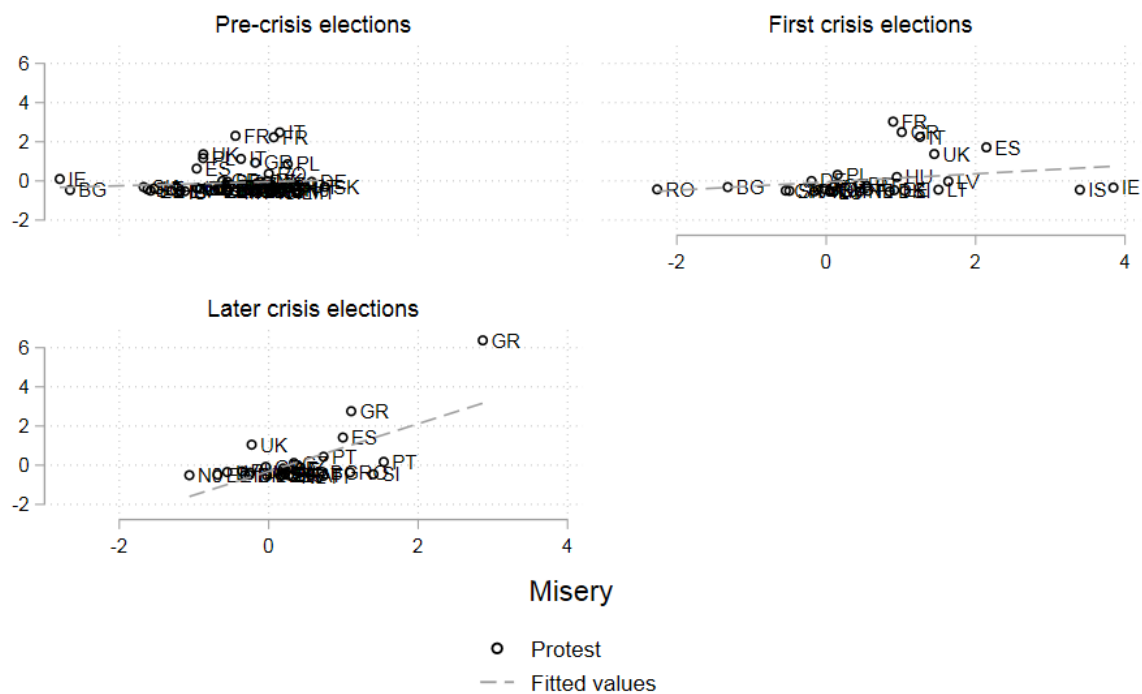
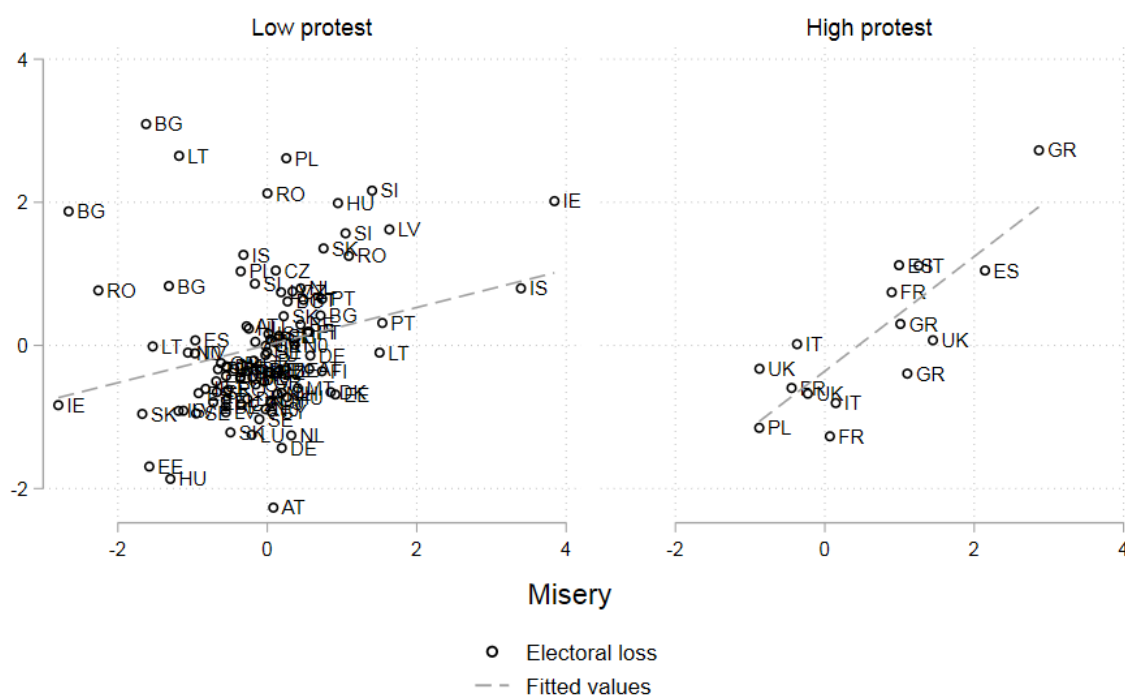


Figure A-4: Scatterplots of electoral loss and misery by intensity of protest



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*** (3.86) | 0.29** (3.31) | 0.00 (0.02) | 0.15 (0.89) | 0.49*** (6.74) | 0.43** (3.24) | 0.17 (1.05) | 0.26 (0.92) |
| First crisis elec. | | | 0.30 (1.26) | 0.03 (0.12) | | | 0.11 (0.58) | -0.08 (-0.23) |
| Later crisis elec. | | | 0.17 (0.72) | -0.15 (-0.67) | | | 0.06 (0.32) | -0.21 (-0.64) |
| First crisis elec. # Misery | | | 0.32 (1.44) | -0.07 (-0.34) | | | 0.35+ (1.74) | -0.10 (-0.27) |
| Later crisis elec. # Misery | | | 0.70* (2.47) | 1.07*** (3.99) | | | 0.51* (2.17) | 1.21** (2.96) |
| Constant | 0.00 (0.00) | 0.00 (0.00) | -0.23 (-1.56) | -0.05 (-0.36) | -0.27*** (-3.90) | 0.06 (0.50) | -0.39*** (-3.60) | 0.06 (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*** (3.86) | 0.30** (3.27) | 0.29** (3.22) | 0.49*** (6.74) | 0.43*** (5.75) | 0.42*** (5.66) |
| Protest | | 0.14 (1.52) | 0.10 (0.85) | | 0.12+ (1.95) | 0.03 (0.35) |
| Misery # Protest | | | 0.04 (0.64) | | | 0.09* (2.02) |
| Constant | 0.00 (0.00) | 0.00 (0.00) | -0.01 (-0.15) | -0.27*** (-3.90) | -0.28*** (-4.08) | -0.30*** (-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+ (1.92) | 0.22* (2.18) | 0.22* (2.11) | 0.20+ (1.93) |
| Government (1=yes) | 0.52*** (6.84) | 0.50*** (6.66) | 0.49*** (6.58) | 0.49*** (6.63) |
| Protest | -0.07* (-2.22) | -0.00 (-0.07) | 0.00 (0.03) | 0.02 (0.60) |
| Mainstream party (1=yes) | -0.07 (-1.10) | -0.12+ (-1.96) | | |
| Mainstream party # Protest | 0.18*** (4.01) | 0.01 (0.17) | | |
| Misery | -0.01 (-0.26) | -0.11* (-2.38) | -0.01 (-0.36) | 0.03 (0.78) |
| Protest # Misery | | -0.03 (-1.25) | | -0.03 (-1.35) |
| Mainstream party # Misery | | 0.20** (3.17) | | |
| Mainstream party # Protest # Misery | | 0.11** (2.97) | | |
| Left party (1=yes) | | | 0.01 (0.20) | 0.00 (0.07) |
| Left party # Protest | | | 0.03 (0.60) | -0.03 (-0.50) |
| Left party # Misery | | | | -0.11 (-1.63) |
| Left party # Protest # Misery | | | | 0.08* (2.09) |
| Constant | -0.14*** (-3.45) | -0.12** (-2.90) | -0.18*** (-4.30) | -0.17*** (-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*** (3.90) | 0.24** (2.72) | 0.20 (1.33) | -0.12 (-0.84) | 0.51*** (5.97) | 0.50** (3.29) | 0.16 (0.88) | -0.36 (-1.27) |
| First crisis elec. | | | 0.24 (1.00) | 0.09 (0.39) | | | 0.26 (1.36) | 0.14 (0.45) |
| Later crisis elec. | | | 0.41+ (1.87) | 0.32 (1.52) | | | 0.32+ (1.80) | 0.34 (1.20) |
| First crisis elec. # Unempl. | | | 0.15 (0.67) | 0.29 (1.37) | | | 0.37 (1.61) | 0.68+ (1.87) |
| Later crisis elec. # Unempl. | | | 0.25 (1.07) | 1.04*** (4.65) | | | 0.48* (2.03) | 1.83*** (4.82) |
| Constant | 0.00 (0.00) | -0.00 (-0.00) | -0.18 (-1.38) | -0.12 (-1.00) | -0.24** (-3.38) | 0.10 (0.76) | -0.42*** (-4.08) | -0.09 (-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*** (3.90) | 0.31*** (3.43) | 0.28** (3.03) | 0.51*** (5.97) | 0.44*** (4.91) | 0.40*** (3.91) |
| Protest | | 0.14 (1.52) | 0.05 (0.49) | | 0.15* (2.40) | 0.12 (1.48) |
| Unempl. # Protest | | | 0.07 (1.29) | | | 0.03 (0.77) |
| Constant | 0.00 (0.00) | 0.00 (0.00) | -0.02 (-0.19) | -0.24** (-3.38) | -0.26*** (-3.68) | -0.26*** (-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* (2.04) | 0.23* (2.24) | 0.22* (2.12) | 0.20+ (1.93) |
| Government (1=yes) | 0.52*** (6.87) | 0.49*** (6.63) | 0.49*** (6.58) | 0.50*** (6.71) |
| Protest | -0.08** (-2.61) | -0.02 (-0.56) | 0.01 (0.40) | 0.05 (1.34) |
| Mainstream party (1=yes) | -0.08 (-1.28) | -0.10 (-1.56) | | |
| Mainstream party # Protest | 0.22*** (4.69) | 0.07 (1.11) | | |
| Unempl. | -0.00 (-0.12) | -0.09 (-1.58) | -0.02 (-0.48) | 0.04 (0.65) |
| Protest # Unempl. | | -0.02 (-0.83) | | -0.04+ (-1.80) |
| Mainstream party # Unempl. | | 0.16+ (1.85) | | |
| Mainstream party # Protest # Unempl. | | 0.07* (2.32) | | |
| Left party (1=yes) | | | 0.02 (0.27) | 0.01 (0.13) |
| Left party # Protest | | | -0.00 (-0.00) | -0.11+ (-1.71) |
| Left party # Unempl. | | | | -0.13 (-1.53) |
| Left party # Protest # Unempl. | | | | 0.09** (2.85) |
| Constant | -0.14*** (-3.41) | -0.13** (-3.21) | -0.18*** (-4.34) | -0.18*** (-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** (3.19) | 0.29** (3.19) | 0.05 (0.29) | 0.10 (0.60) | 0.37*** (4.75) | 0.34* (2.16) | 0.20 (1.31) | 0.01 (0.02) |
| Vote share (t-1) | 0.04*** (4.31) | 0.02 (1.51) | 0.04*** (4.26) | 0.01 (1.10) | 0.03*** (3.52) | 0.02 (1.12) | 0.03** (3.19) | 0.02 (1.06) |
| Coalition (1=yes) | -0.42* (-2.36) | 0.15 (0.74) | -0.45* (-2.30) | 0.29 (1.43) | -0.22 (-1.55) | 0.20 (0.70) | -0.21 (-1.46) | 0.18 (0.68) |
| Switzerland | -0.18 (-0.41) | -0.39 (-0.81) | -0.15 (-0.35) | -0.37 (-0.81) | 0.08 (0.28) | -0.42 (-0.73) | 0.10 (0.35) | -0.43 (-0.83) |
| Bailout (1=yes) | 0.63** (2.83) | 0.17 (0.67) | 0.46+ (1.85) | 0.03 (0.11) | 0.50* (2.15) | 0.39 (0.81) | 0.44 (1.47) | -0.37 (-0.68) |
| First crisis elec. | | | 0.19 (0.86) | 0.01 (0.06) | | | 0.15 (0.82) | 0.07 (0.21) |
| Later crisis elec. | | | 0.24 (0.99) | -0.33 (-1.31) | | | 0.05 (0.23) | -0.14 (-0.37) |
| First crisis elec. # Misery | | | 0.23 (1.09) | 0.07 (0.32) | | | 0.19 (0.93) | 0.26 (0.70) |
| Later crisis elec. # Misery | | | 0.41 (1.52) | 1.11*** (4.01) | | | 0.26 (1.10) | 1.63*** (3.77) |
| Constant | -1.27*** (-4.31) | -0.58+ (-1.74) | -1.46*** (-4.43) | -0.48 (-1.39) | -1.19*** (-4.57) | -0.63 (-1.19) | -1.24*** (-4.31) | -0.63 (-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) | (2) | (3) | (4) | (5) | (6) |
| | Electoral loss | Electoral loss | Electoral loss | Electoral loss | Electoral loss | Electoral loss |
| Misery | 0.26** (3.19) | 0.24** (2.89) | 0.25** (2.94) | 0.37*** (4.75) | 0.34*** (4.23) | 0.32*** (4.06) |
| Vote share (t-1) | 0.04*** (4.31) | 0.04*** (4.18) | 0.04*** (4.16) | 0.03*** (3.52) | 0.03** (3.31) | 0.03** (3.22) |
| Coalition (1=yes) | -0.42* (-2.36) | -0.43* (-2.39) | -0.40* (-2.20) | -0.22 (-1.55) | -0.24+ (-1.72) | -0.19 (-1.37) |
| Switzerland | -0.18 (-0.41) | -0.16 (-0.37) | -0.20 (-0.46) | 0.08 (0.28) | 0.12 (0.43) | 0.08 (0.29) |
| Bailout (1=yes) | 0.63** (2.83) | 0.62** (2.78) | 0.57* (2.55) | 0.50* (2.15) | 0.46* (2.00) | 0.44+ (1.91) |
| Protest | | 0.05 (0.53) | -0.07 (-0.57) | | 0.10+ (1.77) | -0.00 (-0.01) |
| Misery # Protest | | | 0.09 (1.42) | | | 0.08+ (1.87) |
| Constant | -1.27*** (-4.31) | -1.25*** (-4.15) | -1.26*** (-4.23) | -1.19*** (-4.57) | -1.13*** (-4.34) | -1.12*** (-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. Bertrand 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* (2.17) | 0.32 (1.59) | 0.00 (0.01) | 0.10 (1.00) | 0.49*** (6.82) | 0.44 (1.39) | 0.17 (1.42) | -0.05 (-0.33) |
| First crisis elec. | | | 0.30 (1.18) | -0.01 (-0.16) | | | 0.11 (0.62) | 0.07 (0.50) |
| Later crisis elec. | | | 0.17 (0.94) | -0.27 (-1.30) | | | 0.06 (0.26) | -0.24 (-0.77) |
| First crisis elec. # Misery | | | 0.32 (0.99) | 0.11 (0.72) | | | 0.35+ (2.08) | 0.29 (0.99) |
| Later crisis elec. # Misery | | | 0.70+ (1.72) | 1.11+ (1.87) | | | 0.51 (1.61) | 1.63** (2.88) |
| Constant | 0.00 (0.00) | -0.00 (-0.00) | -0.23 (-1.51) | -0.04 (-0.25) | -0.27*** (-4.26) | 0.07 (0.39) | -0.39** (-3.77) | -0.04 (-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) | (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*** |
| | (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 (1.62) | 0.23+ (1.77) | 0.22 (1.69) | 0.20 (1.58) |
| Government (1=yes) | 0.52*** (6.21) | 0.49*** (6.01) | 0.49*** (5.81) | 0.50*** (5.60) |
| Protest | -0.08** (-3.81) | 0.01 (0.18) | 0.01 (0.59) | 0.06** (3.57) |
| Mainstream party (1=yes) | -0.08 (-1.36) | -0.12* (-2.20) | | |
| Mainstream party # Protest | 0.22** (3.20) | 0.00 (0.02) | | |
| Misery | -0.00 (-0.44) | -0.10*** (-5.40) | -0.01+ (-1.82) | 0.04 (1.17) |
| Protest # Misery | | -0.04* (-2.68) | | -0.04*** (-4.26) |
| Mainstream party # Misery | | 0.17*** (5.05) | | |
| Mainstream party # Protest # Misery | | 0.12*** (4.52) | | |
| Left party (1=yes) | | | 0.02 (0.52) | 0.01 (0.16) |
| Left party # Protest | | | -0.00 (-0.01) | -0.13*** (-4.28) |
| Left party # Misery | | | | -0.11 (-1.38) |
| Left party # Protest # Misery | | | | 0.10*** (4.94) |
| Constant | -0.14*** (-7.56) | -0.12*** (-5.80) | -0.18*** (-7.48) | -0.18*** (-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) *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*** (6.87) | 0.03 (0.79) | 0.30+ (1.71) | 0.03 (0.36) | 0.48*** (5.88) | 0.02 (0.19) | 0.18 (0.98) | -0.16 (-0.61) |
| First crisis elec. | | | 0.25 (1.05) | -0.04 (-0.31) | | | 0.21 (0.94) | 0.02 (0.05) |
| Later crisis elec. | | | 0.25 (1.03) | 0.05 (0.36) | | | -0.16 (-0.73) | 0.16 (0.53) |
| First crisis elec. # Misery | | | 0.17 (0.74) | -0.01 (-0.12) | | | 0.36 (1.54) | 0.18 (0.58) |
| Later crisis elec. # Misery | | | 0.68* (2.39) | 0.20 (1.30) | | | 0.33 (1.24) | 0.86* (2.31) |
| Constant | -0.13 (-1.58) | -0.37*** (-9.33) | -0.31* (-2.12) | -0.37*** (-4.61) | -0.22** (-2.82) | -0.41*** (-4.28) | -0.32* (-2.58) | -0.46** (-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*** (6.87) | 0.44*** (5.09) | 0.44*** (5.30) | 0.48*** (5.88) | 0.36*** (3.82) | 0.37*** (4.25) |
| Protest | | 0.14 (1.63) | -0.03 (-0.25) | | 0.18* (2.45) | -0.01 (-0.05) |
| Misery # Protest | | | 0.10+ (1.69) | | | 0.11* (2.10) |
| Constant | -0.13 (-1.58) | -0.13 (-1.65) | -0.23** (-2.83) | -0.22** (-2.82) | -0.27** (-3.16) | -0.30*** (-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* (2.02) | 0.17+ (1.95) | 0.15+ (1.81) | 0.18* (2.27) |
| Government (1=yes) | 0.33*** (5.45) | 0.34*** (5.15) | 0.29*** (4.91) | 0.30*** (5.13) |
| Protest | -0.05* (-2.11) | 0.01 (0.23) | 0.00 (0.15) | 0.04 (1.05) |
| Mainstream party (1=yes) | -0.04 (-0.75) | -0.07 (-1.22) | | |
| Mainstream party # Protest | 0.11** (3.03) | 0.02 (0.36) | | |
| Misery | -0.03 (-0.97) | -0.04 (-1.04) | -0.03 (-1.12) | 0.03 (0.78) |
| Protest # Misery | | -0.05* (-2.09) | | -0.07*** (-3.40) |
| Mainstream party # Misery | | 0.07 (1.24) | | |
| Mainstream party # Protest # Misery | | 0.13*** (4.04) | | |
| Left party (1=yes) | | | 0.03 (0.64) | -0.01 (-0.23) |
| Left party # Protest | | | -0.02 (-0.41) | -0.08 (-1.33) |
| Left party # Misery | | | | -0.09+ (-1.70) |
| Left party # Protest # Misery | | | | 0.09** (2.89) |
| Constant | -0.08* (-2.58) | -0.07+ (-1.95) | -0.10** (-3.02) | -0.09** (-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*** (7.32) | 0.01 (0.64) | 0.38** (2.71) | 0.01 (0.17) | 0.43*** (6.50) | -0.01 (-0.27) | 0.23 (1.53) | -0.11+ (-1.89) |
| First crisis elec. | | | 0.29 (1.45) | -0.01 (-0.21) | | | 0.05 (0.29) | -0.01 (-0.16) |
| Later crisis elec. | | | 0.23 (1.15) | -0.00 (-0.10) | | | -0.04 (-0.21) | 0.02 (0.22) |
| First crisis elec. # Misery | | | -0.01 (-0.05) | 0.00 (0.10) | | | 0.30 (1.65) | 0.13+ (1.74) |
| Later crisis elec. # Misery | | | 0.36 (1.54) | 0.05 (0.76) | | | 0.06 (0.23) | 0.30** (2.83) |
| Constant | -0.14* (-2.01) | -0.40*** (-23.95) | -0.29* (-2.42) | -0.40*** (-13.29) | -0.26*** (-4.02) | -0.42*** (-17.93) | -0.33** (-3.30) | -0.44*** (-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*** (7.32) | 0.48*** (6.52) | 0.48*** (6.51) | 0.43*** (6.50) | 0.42*** (5.93) | 0.39*** (5.62) |
| Protest | | 0.09 (1.21) | -0.03 (-0.26) | | 0.16** (2.72) | 0.02 (0.30) |
| Misery # Protest | | | 0.09 (1.65) | | | 0.09* (2.22) |
| Constant | -0.14* (-2.01) | -0.14+ (-1.93) | -0.17* (-2.39) | -0.26*** (-4.02) | -0.25*** (-3.99) | -0.28*** (-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+ (1.79) | 0.18* (2.12) | 0.13+ (1.66) | 0.14+ (1.70) | |
| Government (1=yes) | 0.37*** (6.04) | 0.37*** (6.02) | 0.33*** (5.72) | 0.34*** (5.78) | |
| Protest | -0.02 (-0.79) | 0.06 (1.34) | 0.02 (0.68) | 0.08* (2.17) | |
| Mainstream party (1=yes) | -0.06 (-1.24) | -0.08 (-1.61) | | | |
| Mainstream party # Protest | 0.05 (1.46) | -0.03 (-0.51) | | | |
| Misery | -0.06* (-2.43) | -0.07+ (-1.76) | -0.07** (-2.63) | -0.02 (-0.59) | |
| Protest # Misery | | -0.06** (-2.83) | | -0.08*** (-3.87) | |
| Mainstream party # Misery | | 0.06 (1.16) | | | |
| Mainstream party # Protest # Misery | | 0.16*** (5.15) | | | |
| Left party (1=yes) | | | 0.02 (0.39) | 0.00 (0.07) | |
| Left party # Protest | | | -0.04 (-1.03) | -0.08 (-1.32) | |
| Left party # Misery | | | | -0.06 (-1.05) | |
| Left party # Protest # Misery | | | | 0.06+ (1.87) | |
| Constant | -0.09** (-2.76) | -0.08* (-2.33) | -0.12*** (-3.60) | -0.10** (-3.07) | |
| Observations | 548 | 548 | 548 | 547 | |
| R^2 | 0.13 | 0.22 | 0.12 | 0.15 | 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 party 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 (-0.78) | -0.12 (-0.82) | -0.05 (-0.31) | -0.15 (-1.01) |
| Government (1=yes) | 0.35** (2.93) | 0.35** (3.08) | 0.37** (3.19) | 0.46*** (4.13) |
| Protest | -0.33*** (-6.33) | 0.11 (1.45) | -0.26*** (-5.16) | 0.12+ (1.77) |
| Mainstream party (1=yes) | 0.10 (1.04) | 0.03 (0.29) | | |
| Mainstream party # Protest | 0.39*** (5.07) | -0.09 (-0.79) | | |
| Misery | -0.04 (-0.84) | -0.02 (-0.24) | -0.07 (-1.25) | 0.01 (0.18) |
| Protest # Misery | | -0.29*** (-7.30) | | -0.31*** (-8.15) |
| Mainstream party # Misery | | 0.04 (0.41) | | |
| Mainstream party # Protest # Misery | | 0.30*** (4.92) | | |
| Left party (1=yes) | | | 0.06 (0.62) | 0.00 (0.01) |
| Left party # Protest | | | 0.25** (3.21) | -0.10 (-0.88) |
| Left party # Misery | | | | -0.05 (-0.46) |
| Left party # Protest # Misery | | | | 0.29*** (4.65) |
| Constant | -0.16* (-2.46) | -0.10 (-1.54) | -0.16* (-2.35) | -0.11+ (-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*** (3.86) | 0.10 (1.07) | 0.00 (0.02) | 0.09 (0.51) | 0.49*** (6.74) | 0.04 (0.29) | 0.17 (1.05) | -0.21 (-0.66) |
| First crisis elec. | | | 0.30 (1.26) | -0.04 (-0.15) | | | 0.11 (0.58) | -0.06 (-0.15) |
| Later crisis elec. | | | 0.17 (0.72) | -0.34 (-1.30) | | | 0.06 (0.32) | -0.42 (-1.12) |
| First crisis elec. # Misery | | | 0.32 (1.44) | 0.03 (0.13) | | | 0.35+ (1.74) | 0.34 (0.87) |
| Later crisis elec. # Misery | | | 0.70* (2.47) | 0.14 (0.45) | | | 0.51* (2.17) | 0.55 (1.19) |
| Constant | 0.00 (0.00) | -0.00 (-0.00) | -0.23 (-1.56) | 0.08 (0.48) | -0.27*** (-3.90) | 0.13 (1.00) | -0.39*** (-3.60) | 0.16 (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) | (2) | (3) | (4) | (5) | (6) |
| | Electoral loss | Electoral loss | Electoral loss | Electoral loss | Electoral loss | Electoral loss |
| Misery | 0.34*** (3.86) | 0.34*** (3.89) | 0.35*** (4.03) | 0.49*** (6.74) | 0.48*** (6.69) | 0.47*** (6.49) |
| Protest | | -0.05 (-0.58) | -0.05 (-0.61) | | 0.04 (0.61) | 0.04 (0.59) |
| Misery # Protest | | | 0.14 (1.54) | | | 0.06 (0.96) |
| Constant | 0.00 (0.00) | 0.00 (0.00) | -0.01 (-0.15) | -0.27*** (-3.90) | -0.28*** (-3.93) | -0.28*** (-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* (2.15) | 0.24* (2.32) | 0.22* (2.16) | 0.21* (2.05) |
| Government (1=yes) | 0.50*** (6.57) | 0.49*** (6.58) | 0.49*** (6.57) | 0.49*** (6.63) |
| Protest | -0.01 (-0.38) | 0.00 (0.07) | 0.02 (0.77) | 0.03 (0.82) |
| Mainstream party (1=yes) | -0.05 (-0.84) | -0.10 (-1.64) | | |
| Mainstream party # Protest | 0.04 (0.91) | 0.01 (0.27) | | |
| Misery | -0.01 (-0.20) | -0.12** (-2.83) | -0.01 (-0.21) | 0.03 (0.66) |
| Protest # Misery | | -0.05 (-1.49) | | -0.04 (-1.10) |
| Mainstream party # Misery | | 0.25*** (4.07) | | |
| Mainstream party # Protest # Misery | | 0.16** (3.17) | | |
| Left party (1=yes) | | | 0.02 (0.38) | 0.03 (0.47) |
| Left party # Protest | | | -0.04 (-0.77) | -0.05 (-0.91) |
| Left party # Misery | | | | -0.08 (-1.35) |
| Left party # Protest # Misery | | | | 0.10* (2.01) |
| Constant | -0.15*** (-3.65) | -0.13** (-3.06) | -0.18*** (-4.37) | -0.18*** (-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

Appendix C-2: The impact of electoral loss and misery on protest

In theory, electoral outcomes could also influence protests. To account for this possible relationship, we test whether higher electoral losses of the incumbent are associated with higher economic protests afterwards. The results of this exercise are shown below.

Table C-4: The impact of economic misery and electoral loss on protest

| | All countries (n=30) | | | Western Europe (n=20) | | |
|-------------------------|----------------------|------------------|------------------|-----------------------|------------------|------------------|
| | (1) Protest | (2) Protest | (3) Protest | (4) Protest | (5) Protest | (6) Protest |
| Misery | 0.13 (1.21) | 0.15 (1.36) | 0.20 (1.59) | 0.14 (0.84) | 0.21 (0.98) | 0.22 (1.00) |
| Electoral loss | | -0.08 (-0.75) | -0.10 (-0.93) | | -0.15 (-0.52) | -0.06 (-0.18) |
| Misery # Electoral loss | | | -0.07 (-0.83) | | | -0.09 (-0.53) |
| Constant | 0.02 (0.15) | 0.01 (0.14) | 0.04 (0.36) | 0.12 (0.75) | 0.08 (0.42) | 0.14 (0.64) |
| Observations | 88 | 88 | 88 | 57 | 57 | 57 |
| R^2 | 0.02 | 0.02 | 0.03 | 0.01 | 0.02 | 0.02 |

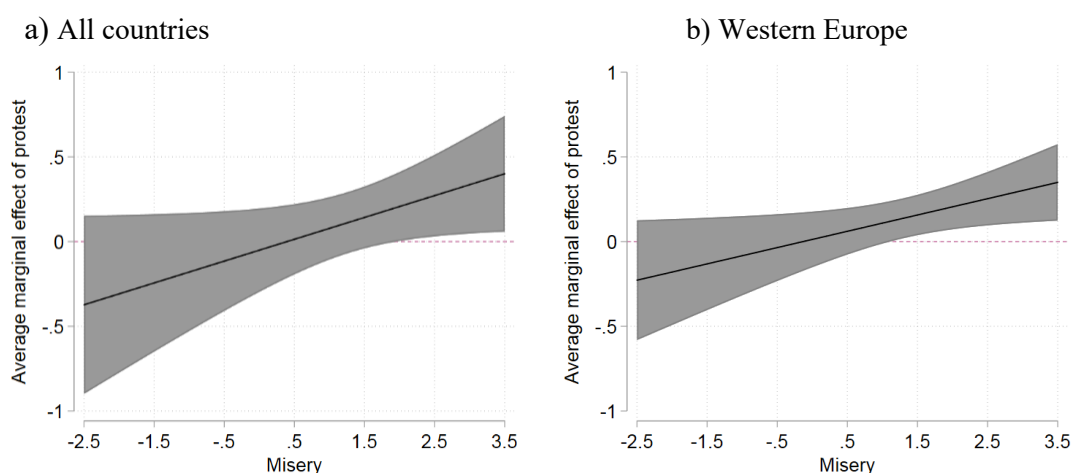
t statistics in parentheses

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix C-3: Alternative marginal effect plots to control for the symmetric interaction effect

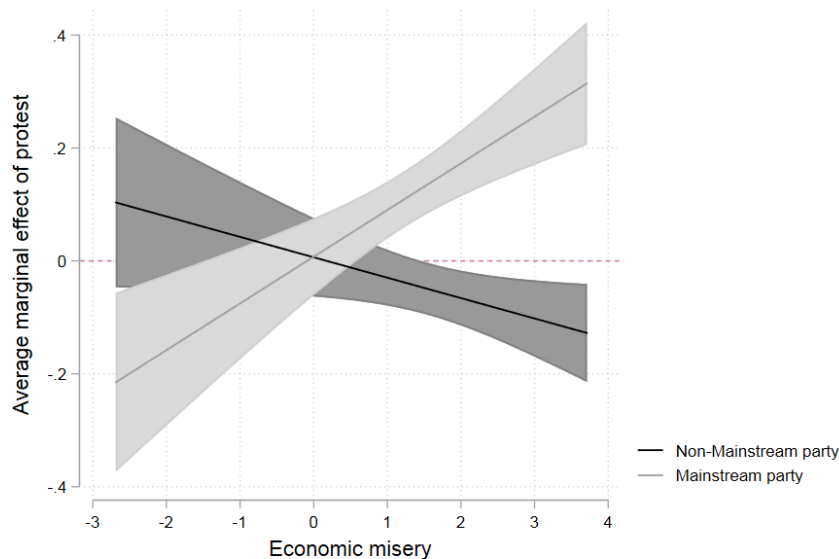
Following the recommendations of Berry et al. (2015), below we present a second set of marginal effect plots. They show the marginal effect of protest across the range of economic misery in order to account for the inherent symmetry of interactions.

Figure C-1: Marginal effect of protest on electoral loss across the range of economic misery



Note: Marginal effects are based on model 6 in Table 3 (from the main analysis).

Figure C-2: Average marginal effect of protest on electoral loss of mainstream vs. non-mainstream parties across the range of economic misery

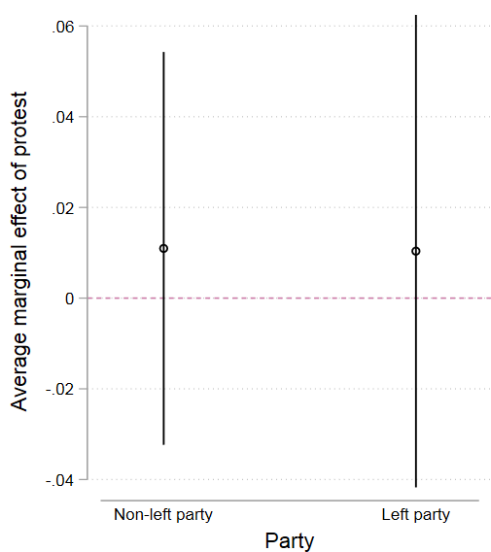


Note: Marginal effects are calculated based on model 2 in Table 5 (from the main analysis).

Appendix C-4: Marginal effect plots for left vs. non-left parties

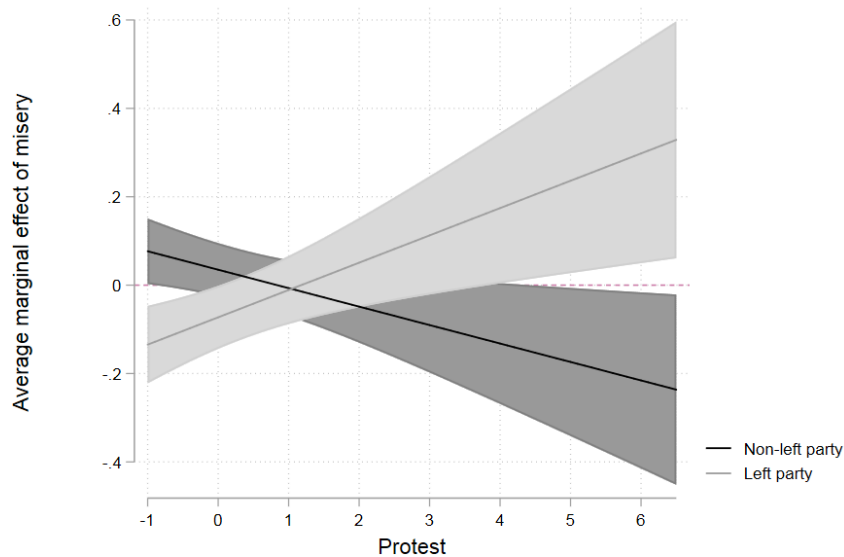
The plots below show the interaction effect between party type and protest as well as party type, protest, and misery based on model 3 and 4 from table 3 in the main analysis. They show the effect that protest, in interaction with misery, has on the performance of left vs. non-left parties.

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



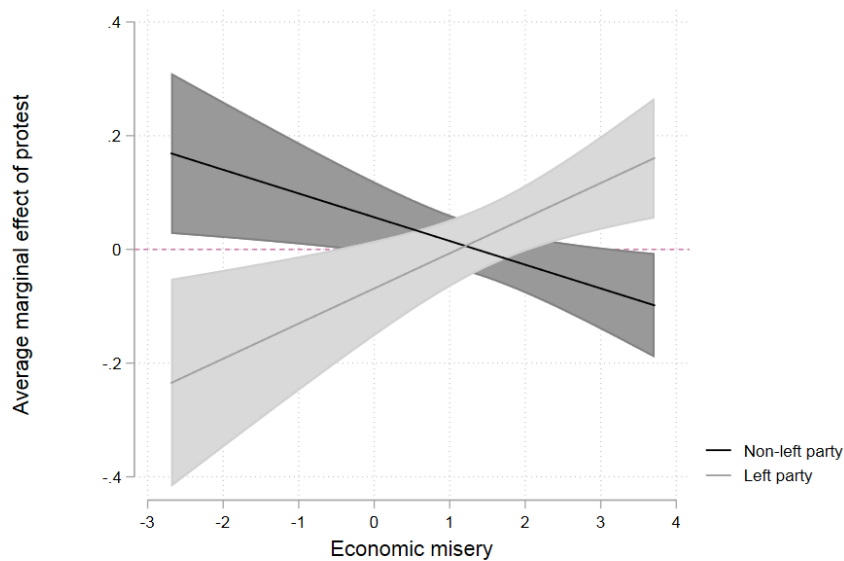
Note: Average marginal effects are calculated based on model 3 in Table 5 (from the main analysis).

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



Note: Marginal effects are calculated based on model 4 in Table 5 (from the main analysis).

Figure C-5: Average marginal effect of protest on electoral loss of left vs. non-left parties across the range of economic misery



Note: Marginal effects are calculated based on model 4 in Table 5 (from the main analysis).

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