ONLINE APPENDIX

Dynamics of protest and electoral politics in the Great Recession

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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

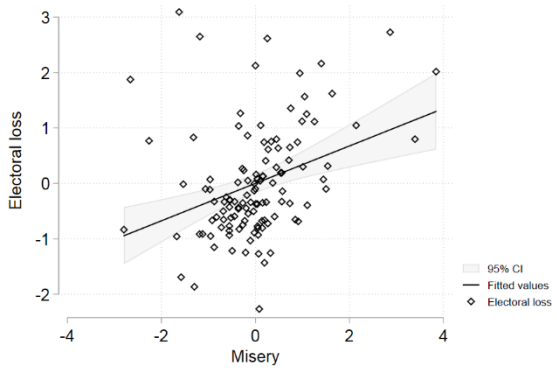
Table A-7: Correlation matrix of key variables for 118 European elections and 77 Western European elections

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

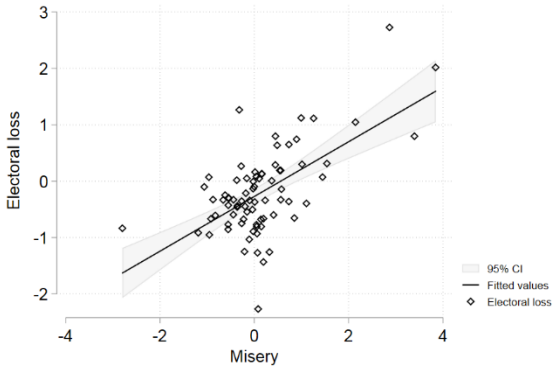
Note: The table shows the correlation matrix of our key variables. On the left, the table shows the results for all elections in our dataset; on the right, the table shows the results for all Western European elections. The corresponding scatterplots are also shown below in Figure A-1.

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

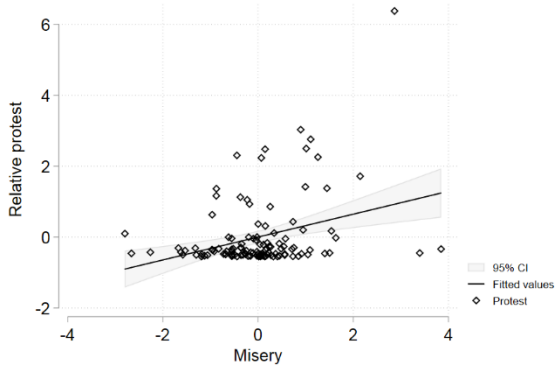
a) Electoral loss, all countries



b) Electoral loss, Western Europe only



a) Protest, all countries



b) Protest, Western Europe only

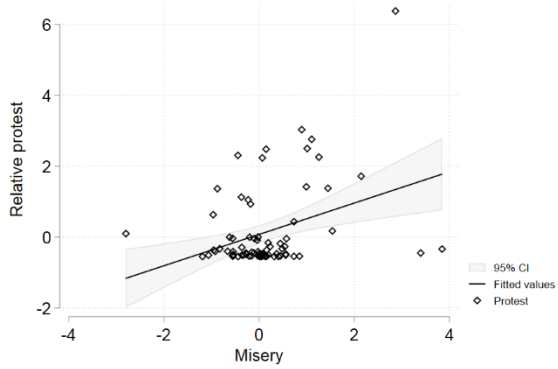


Figure A-2: Scatterplots of electoral loss and misery by election type

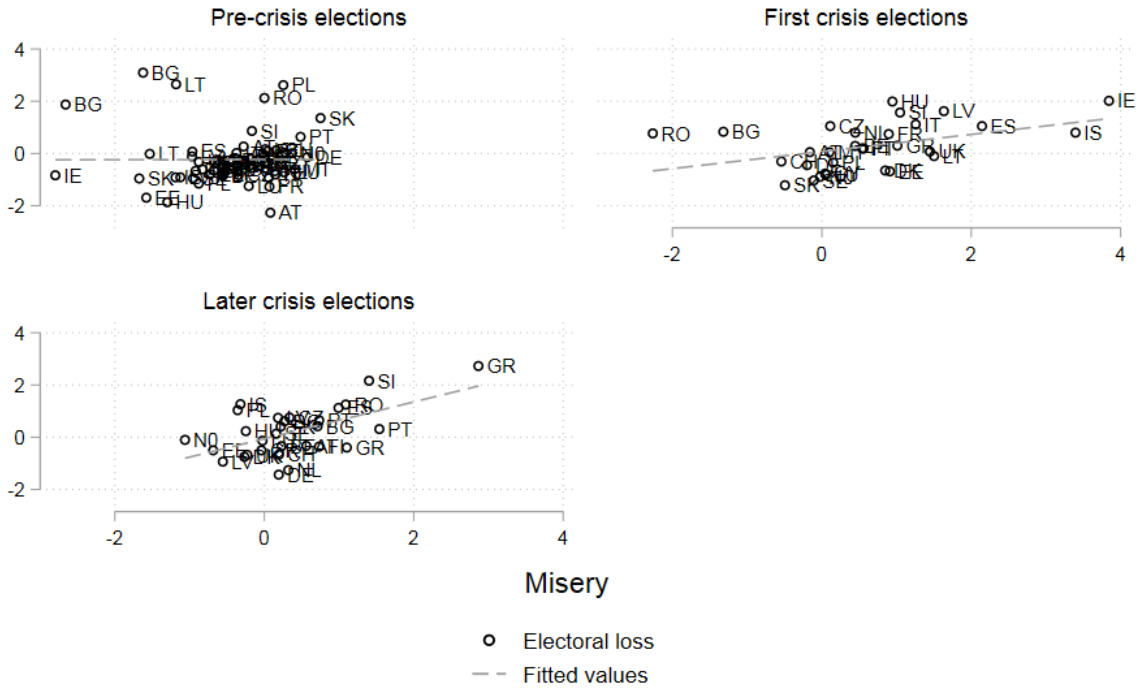


Figure A-3: Scatterplots of protest and misery by election type

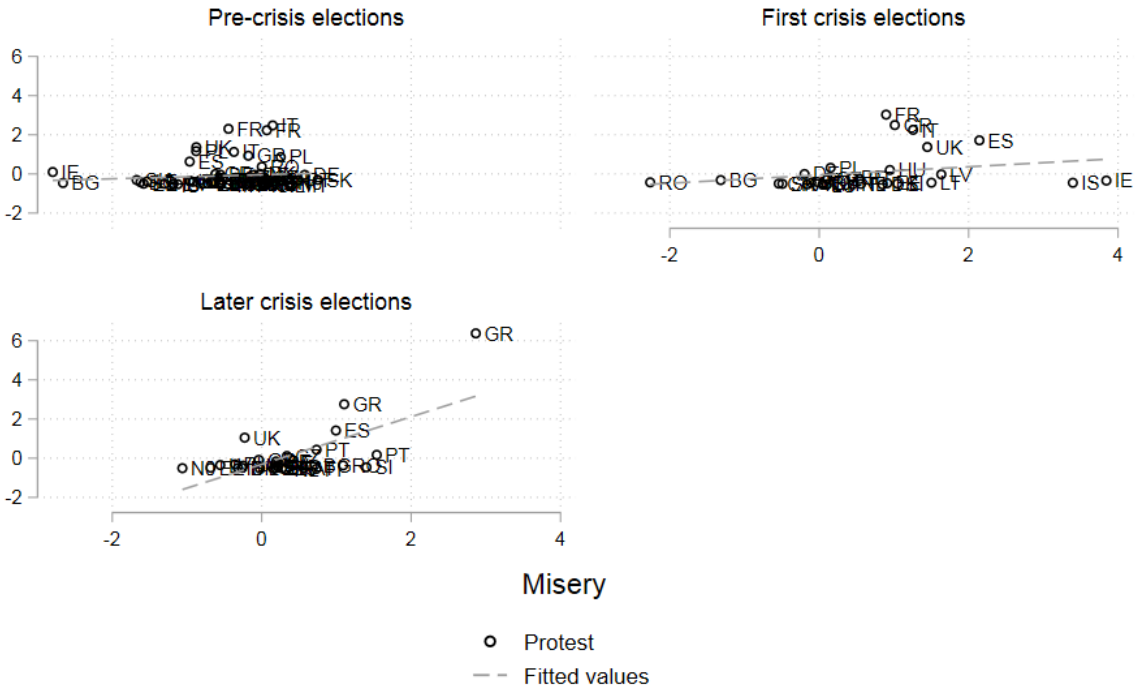
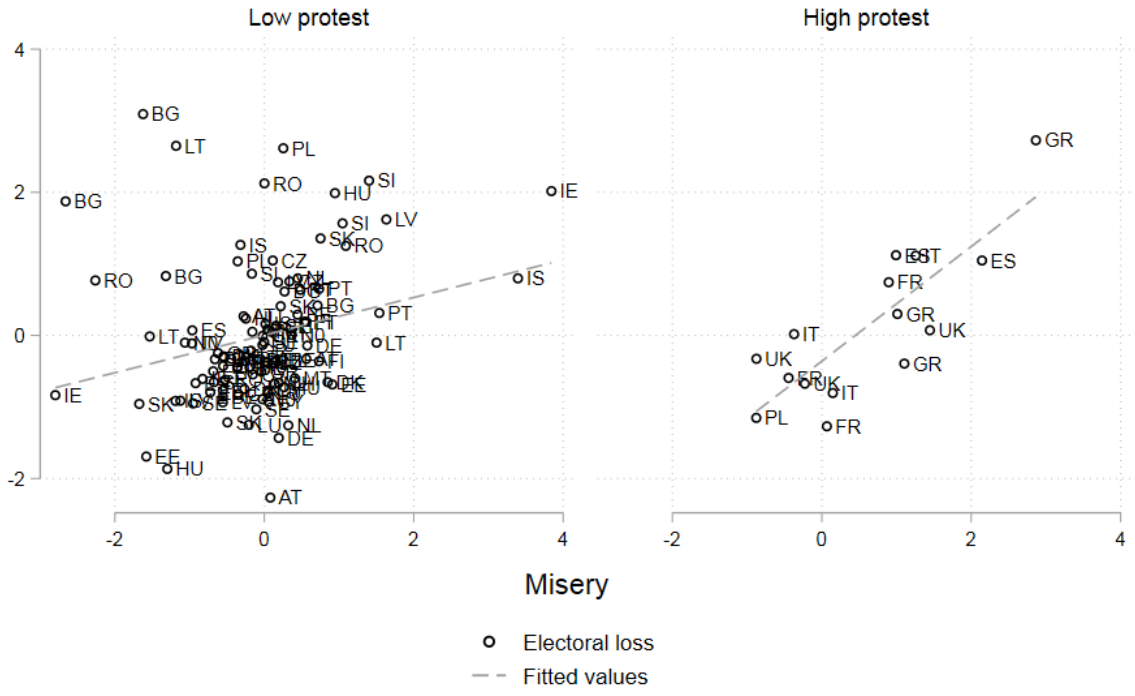


Figure A-4: Scatterplots of electoral loss and misery by intensity of protest



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

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

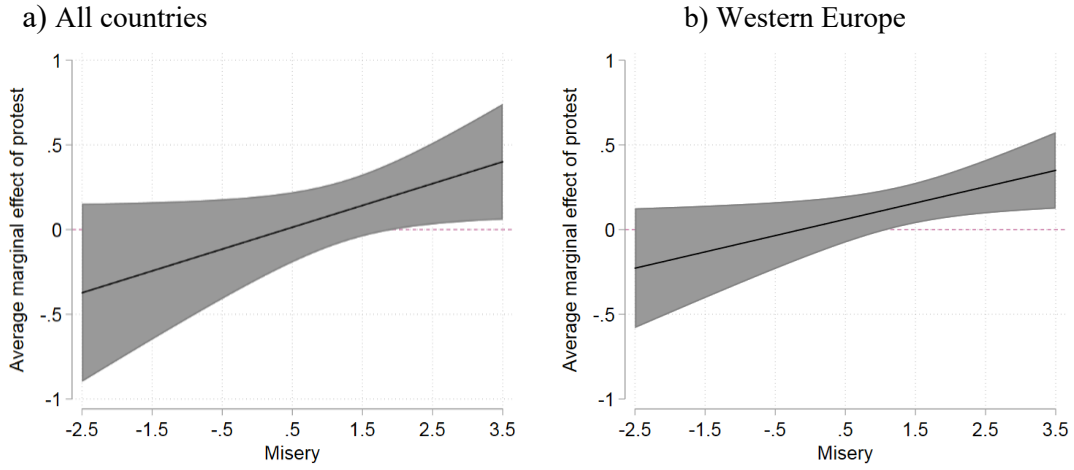
	All countries (n=30)			Western Europe (n=20)		
	(1) Protest	(2) Protest	(3) Protest	(4) Protest	(5) Protest	(6) Protest
Misery	0.13	0.15	0.20	0.14	0.21	0.22
	(1.21)	(1.36)	(1.59)	(0.84)	(0.98)	(1.00)
Electoral loss		-0.08	-0.10		-0.15	-0.06
		(-0.75)	(-0.93)		(-0.52)	(-0.18)
Misery # Electoral loss	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

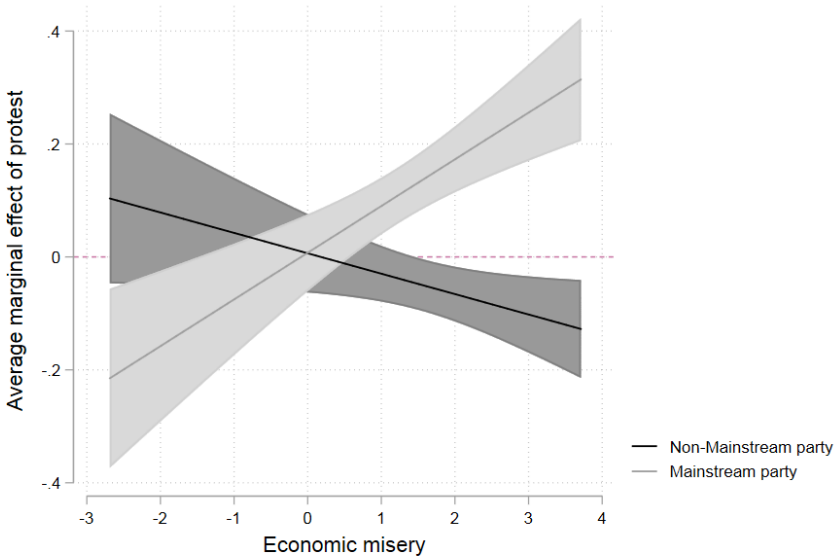
Following the recommendations of Berry et al. (2015), below we present a second set of marginal effect plots. They show the marginal effect of protest across the range of economic misery in order to account for the inherent symmetry of interactions.

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

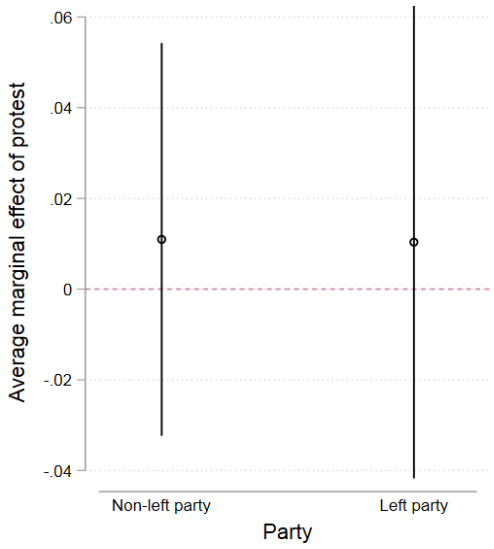


Note: Marginal effects are calculated based on model 2 in Table 5 (from the main analysis).

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

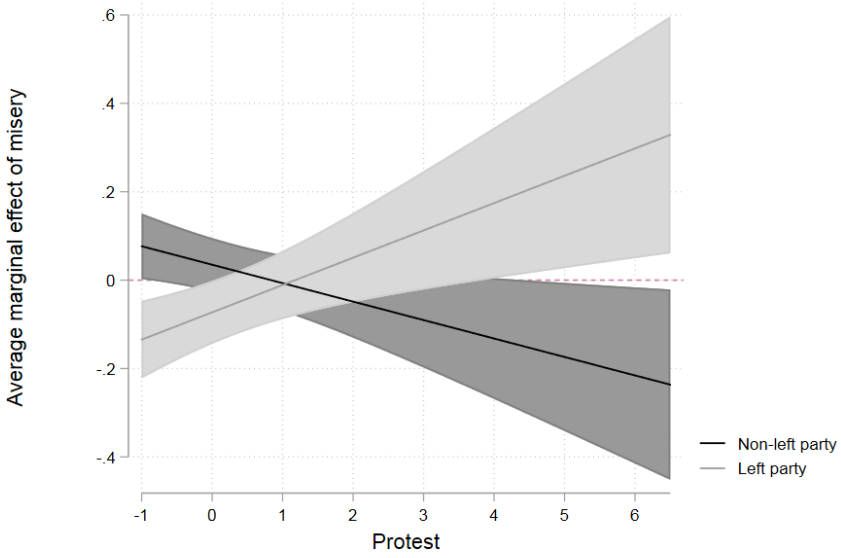
The plots below show the interaction effect between party type and protest as well as party type, protest, and misery based on model 3 and 4 from table 3 in the main analysis. They show the effect that protest, in interaction with misery, has on the performance of left vs. non-left parties.

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



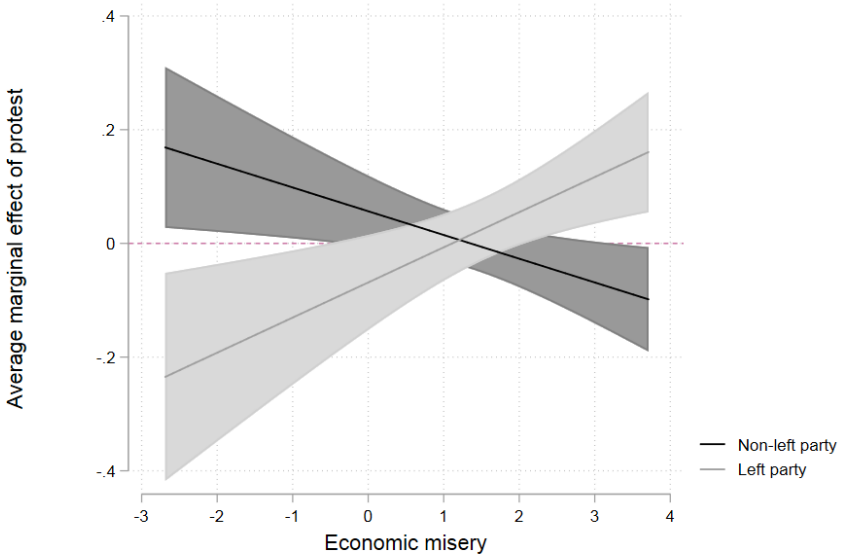
Note: Average marginal effects are calculated based on model 3 in Table 5 (from the main analysis).

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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