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When Bad News is Good News: Information Acquisition in Times of Economic Crisis

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Abstract. A strong argument can be made for the prime importance of information in the context of an economic recession. It is in times of crisis that information on the state of the economy is abundant and citizens have incentives to acquire it in order to sanction incumbents for mismanagement of the economy. Simultaneously, however, economic hardship strains people's cognitive resources and motivations to seek relevant information. Using a novel research design, we assess how the recent economic recession has shaped information acquisition. Our results indicate that while personal economic hardship depresses levels of information, the recession overall boosted considerably the public's knowledge of the state of the economy and, to a lesser degree, of parties' policy positions in elections. For both economic and electoral types of information, economically marginal groups caught up to the economically secure in contexts of economic hardship, thereby reducing information inequalities. We discuss the findings' implications for representative democracy.

Keywords: Electoral information; economic information; gaps in political knowledge; economic crisis; economic voting.

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Few would dispute the need for an informed citizenry in a representative democracy. Study after study demonstrates that representative democracy functions far better when the masses are well informed (e.g., Andersen, Tilley & Heath 2005; Goren, 1997; Hobolt, 2005; Lau & Redlawsk, 2001; Luskin, 2003; Popkin & Dimock 1999). Information of public affairs boosts political participation and tolerance of minorities, and contributes to stronger mass-elite linkages, with positive consequences for political representation and accountability (e.g., Delli Carpini and Keeter, 1996; Gomez & Wilson 2001; Sniderman *et al.*, 1990). From a normative point of view, the relevance of political information is ever more important in the context of an economic recession. After all, it is in times of crisis that citizens ought to monitor public affairs most closely and sanction policymakers, if warranted. This article examines just how informed citizens were of economics and politics during the recent economic recession.

The extant literature offers contradictory hunches on how a plummeting economy may affect citizens' information-seeking behavior. On one hand, scholars argue that socioeconomic resources are crucial to political engagement as they afford citizens both the resources and motivation needed to participate (e.g., Norris 2002; Dalton, Van Sickle & Weldon 2009). Economic duress ought to then stymy the acquisition of new information. On the other hand, economic crises provide a context in which the issues at stake ought to motivate citizens to pay close attention to politicians' decisions and keep abreast of the economic and political situation (Martin 2008; Shen 2009). According to the latter view, worsening economic conditions ought to boost information acquisition. Research on the determinants of political knowledge considers economic duress at the individual level and falls short of analyzing the effects of a macro-level economic crisis on information acquisition (e.g., Fraile 2014; Gordon & Segura 1997; Grönlund & Milner 2006).

To understand how informed citizens are in times of economic upheaval, we first distinguish between economic hardship at the individual level and an economic recession at the macro level, and then consider explicitly their interaction. When economic hardship is experienced personally, it puts a strain on citizens' cognitive resources and motivation to engage in politics (Hassell and Settle 2017; Levine 2015; Marx and Nguyen 2016; Solt 2008), thus likely resulting in lower levels of information. A far-reaching macroeconomic crisis, however, is likely to trigger alarm and generate grievances about poor macroeconomic conditions among the general public, far and beyond those who are directly affected by the crisis (cf. Bahry and Lipsmeyer 2001; Burden & Wichowsky 2012; Pacek, Pop-Eleches & Tucker 2009; Pontiachelli & Voth 2011). Hence, and controlling for between-individual socioeconomic differences, a macroeconomic crisis should, on average, boost levels of information. What is more,

in the context of a widespread economic hardship, poor citizens are more likely to relate their worsening personal economy to the national economy and to place blame on the government's mismanagement of the economy instead of themselves. We argue that, as a result, the economically underprivileged are more motivated to acquire information about public affairs during a recession than in times of economic stability or prosperity.

Second, we distinguish between economic and electoral types of information because the availability and clarity of each type may vary in the context of an economic recession. Information on the state of the economy becomes more abundant during a crisis due to the disproportionate media coverage of negative economic performance (Soroka 2006). In contrast, political parties do not necessarily put forth clearer economic policy proposals during a recession. Recent studies suggest that voters receive more ambiguous policy messages during a recession, as exemplified by the rise of populist parties that intentionally blur their positions on economic policy (Hernández & Kriesi 2015; Rovny 2013) or mainstream parties whose economic policy positions are difficult to pinpoint in the context of austerity (Bremer 2016; English, Grasso, Buraczynska, Karampampas & Temple 2016; Talving 2017). Economic crises, in short, may well boost the public's information levels when it comes to the state of the economy but are less likely to have tangible effects on policy information levels in elections.

Variation in economic conditions resulting from the Great Recession offers fruitful ground for testing these arguments. We tap into multiple sources of cross-sectional survey data and introduce a novel time-series component to help us assess how levels of information have varied as a result of the onset of the recession (Kern, Marien & Hooghe 2015). The findings offer support for distinguishing between personal economic duress and worsening macroeconomic conditions, on one hand, and between economic and electoral information types, on the other. Citizens are indeed less likely to be informed when they personally experience economic hardship. However, we uncover evidence of a process unravelling simultaneously; controlling for differences in individuals' economic situation, citizens on the whole become better informed as macroeconomic conditions *worsen*. And furthermore, in the context of a recession, those citizens who experience personal economic hardship catch up quickly in information levels to the economically secure. While the direct effect of macroeconomic crises on information levels was modest, the recession was remarkably successful in closing the information gaps between those personally affected by the crisis and those who were not. There are important differences between economic and political information, however. While the gains in economic information levels are substantial, gains in electoral information

are modest. The latter type of information is less responsive to changes in macroeconomic conditions, possibly conditioned by how clearly electoral information is articulated by political actors.

We believe that our results qualify a long-standing truism that citizens are unknowledgeable about public affairs and constitute overall good news for the functioning of representative democracy. The extant literature has painted a bleak picture of citizens' motivation to stay informed and has underlined systematic inequalities in information levels among citizens (e.g., Bennett 1989; Healy & Lenz 2014; Hellwig & Marinova 2016; Howe 2006). We contend that even though the public does not stay continuously informed of economics and politics, this is not necessarily bad news for representative democracy. Citizens tune in when it matters (for a related argument, *see* Schudson 1999). In times of economic crisis – that is, when the stakes are high – the public is more likely to keep abreast of public affairs, and the systematic inequalities in information acquisition are likely to dissipate.

Information acquisition during economic downturns

Three arguments may be made for the economy's primary role in understanding information acquisition during an economic crisis (Shen 2009). For one, the economy is essentially a valence issue, such that all citizens support economic prosperity and are alarmed when the economy plummets. Second, economic crises are an important political issue as, by their sheer magnitude, they affect the lives of large segments of society. Finally, poor economic performance usually receives plenty of press and public attention, thus making it also a salient issue (Soroka 2006). These arguments are reinforced during severe and prolonged economic recessions, such as the Great Recession that began in 2008. Here we examine how economic adversity affects citizens' cognitive resources and motivation to acquire information about public affairs.

Consistent with the extant literature on political engagement (Brady, Verba & Schlozman 1995; Dalton et al. 2009; Emmenegger, Marx & Schraff 2017; Rosenstone 1982; Tillman 2008), we expect that the direct personal experience of economic adversity strains cognitive resources to acquire, retain and process information about public affairs, and further suppresses internal political efficacy. Together, the two mechanisms lead to observably lower levels of information. When it comes to cognitive resources, early studies have noted that economic strife focuses people's attention on the most pressing material problems, such as applying for social benefits, borrowing money or moving into cheaper housing; hence less time, energy and attention are available for matters that are unrelated to economic struggles, including public affairs (Jahoda, Lazarsfeld & Zeisel 1972; Rosenstone 1982). More recent research shows that economic hardship and the attendant anxiety diminish cognitive resources to devote to non-

economic concerns (Hassell & Settle 2017; Levine 2015; Marx & Nguyen 2016). When people feel anxious, they are less able to engage in adaptive behaviour patterns (Eysenck, Derakshan, Santos & Calvo 2007), compromising their ability to pay attention to incoming information (Wegbreit, Franconeri & Beeman 2014), retain such information (Eysenck & Calvo 1992) or process it optimally (Leon & Revelle 1985). Anxiety has more generally been associated with impaired decision making (Gino, Wood & Schweitzer 2012; Loewenstein, Weber, Hsee & Welch 2001).

When it comes to the motivation to acquire information, our expectations are consistent with the bulk of the literature showing a negative impact of economic hardship on internal political efficacy, or individuals' perceived capacity to influence politics (e.g., Besley & Coate 1992; Marx & Nguyen 2016; Solt 2008). Economic struggles have been linked to feelings of social stigma, isolation, insecurity and powerlessness, as well as to withdrawal from contact with peers (Fagin & Little 1984; Strandh 2000). Relatedly, feelings of anxiety have been linked to decreased self-confidence (Gino *et al.* 2012), which can also impair individuals' perceived capacity to influence public affairs. In line with this research, we expect economic hardship to depress individuals' perceived capacity to influence politics and, consequently, to lower their motivation to acquire information about public affairs. In short, our expectations are that those who struggle financially have less motivation and less cognitive resources to seek, retain and process information about public affairs. The observable implication of our argument is less knowledge about public affairs among the individuals who struggled economically during the crisis than among those who fared well.

When the economic crisis is contextual rather than experienced directly, we expect that it will contribute to an overall spike in information acquisition, holding constant between-individual economic differences. This is for two related reasons. First, the pervasive nature of economic crises means that many individuals will come into contact with the economy beyond the group of individuals who are directly affected. We know that negative economic performance is disproportionately covered by the mass media (e.g., Goidel & Langley 1995; Harrington 1989; Soroka 2006). Heightened press coverage of the economy makes macroeconomic information readily accessible to the public, also through political discussion and via social media (Eveland 2004). As a result, the abundance of information during an economic recession lowers its cost and facilitates its acquisition. Second, an economic recession is likely to trigger alarm among the public and generate grievances about the management of the economy. Such alarm can motivate citizens to seek further information in order to sanction incumbent governments for mismanagement of the economy (Shen 2009). A number of studies have shown that information seeking tends to

increase with the onset of intense political events that trigger alarm among the general public (Bennett & Paletz 1994; Page & Shapiro 1992; Prior 2002). In line with our expectations, a slew of studies finds that deteriorating macroeconomic conditions – from budget cuts to hikes in national unemployment – motivate citizens to engage in politics (Bahry and Lipsmeyer 2001; Burden & Wichowsky 2012; Pacek, Pop-Eleches & Tucker 2009; Pontiachelli & Voth 2011).

The flip side of our argument is that during times of economic stability and prosperity, citizens have fewer opportunities and are less motivated to acquire information about the economy. For one, the state of the economy is less salient in high times because media attention is disproportionately allocated toward negative performance; as a result, information about the economy is less forthcoming. Furthermore, satisfaction with the status quo, as in times of economic prosperity, has been shown to encourage people to rely on decision-making shortcuts rather than invest time and resources in becoming fully informed (Marcus, Neuman & MacKuen 2000). Economic crises thus facilitate the acquisition of economic information by readily supplying information and by providing an impetus for citizens to acquire it.

> *Citizens who endure economic hardship likely display lower levels of knowledge than do citizens who do not personally experience economic hardship* (Hypothesis 1).
>
> *Citizens in contexts of declining macroeconomic conditions likely manifest higher levels of knowledge than do citizens in contexts of economic stability or prosperity* (Hypothesis 2).

While motivation to acquire electoral information may well increase during a recession, familiarity with party platforms also depends on the availability of information about parties (Banducci, Giebler & Kritzinger 2017). On this point, economic and electoral information stand apart. While it has been demonstrated that poor macroeconomic performance makes the headlines, there is little evidence that a plummeting economy triggers policy debate or spurs coverage of parties' proposals to address economic woes. In fact, evidence from electoral competition in the aftermath of the Great Recession suggests just the opposite. Judging by the rise of populist parties of thin economic policy substance across Europe and the parallel demise of traditional mainstream parties during the financial crisis (Hernández & Kriesi 2015), the Great Recession may have contributed to a move away from constructive policy debate in the European democracies hardest hit by the recession. Voters in contexts of worsening economic conditions are exposed to less clear policy information because populist parties tend to blur intentionally their positions on economic policy (Rovny 2013) while mainstream parties implement externally imposed austerity

policies in discord with their electoral programs (English *et al*. 2016; Talving 2017). While citizens in contexts of economic crisis may well have greater incentives to acquire political information, as per Shen (2009), without the ready accessibility of clear policy information, such incentives are less likely to translate into familiarity with party positions. This leads us to expect that if a macroeconomic recession boosts knowledge of electoral alternatives, as per Hypothesis 2, the effect is likely to be modest.

In addition to a direct effect of the economy, both at the individual and contextual levels, we expect a further conditional effect on information inequalities. This is because we expect individuals struck by economic hardship to behave differently in contexts where duress is widespread vis-à-vis contexts of general economic prosperity. The argument is as follows. Individuals who are struggling financially are more likely to relate their worsening personal economy to the national economy in a context of an economic crisis; as a result, we expect that they place blame for their personal economic situation on the government's management of the economy instead of on themselves. As Foster and Matheson (1995: 1168) write, in the context of an economic crisis, "the personal becomes political". This has consequences for individuals' motivation to acquire information. Whereas the economically disadvantaged are generally stigmatized and experience lower political efficacy, we believe that they are likely to experience higher efficacy in the context of widespread economic strife than in context of general economic prosperity. For one, the stigma normally associated with poverty is likely lower when economic hardship is widespread. In this sense, the burden of economic hardship may be easier to sustain. And furthermore, in linking their personal situation to that of the national economy, citizens may perceive a potential solution to their personal economic woes in improvements to the national economy; this can serve as an impetus to acquire information about public affairs. Previous work has shown that anxiety boosts information-seeking behaviors, but only for information that is perceived as useful to solve the problem at hand (Valentino, Banks, Hutchings & Davis 2009). The economic and political context is more likely to be perceived as relevant to personal economic woes when economic hardship is widespread. In turn, when the individual is enduring economic hardship but the national economy is faring well, it is likely more difficult to see a solution for personal economic problems in the economic and the political context. These expectations are consistent with evidence that the concurrence of personal and collective deprivation bolsters political mobilization (Foster & Matheson 1995; Hansford & Gomez 2010; Lim & Sander 2013; Runciman 1966; but cf. Kern *et al.* 2015). The empirical implication of our argument is that worsening economic conditions at the

macro level are likely to ameliorate the expected negative effect of personal economic deprivation on information acquisition.

> *Citizens who endure economic hardship likely display higher levels of knowledge in contexts of declining macroeconomic conditions than in contexts of economic stability or prosperity* (Hypothesis 3).

The expectations outlined above have important implications for the acquisition of information, and relatedly for voting and electoral accountability, during economic downturns. Our first hypothesis suggests that those in underprivileged economic situations are also informationally disadvantaged, with economic adversity serving to reinforce preexisting political inequalities. The implications of our second and third expectations are more optimistic, however. If citizens pay attention to public affairs when, from a normative point of view, it is most critical to do so, otherwise low levels of information need not cause alarm. In fact, economic crises may serve to reduce information inequalities between citizens of differing economic means.

Empirical analyses: Data and method of analysis

To gauge how prone voters are to acquiring economic and electoral information in the context of a recession, we take advantage of cross-national and temporal variation in economic conditions produced by the Great Recession. Our empirical innovation is to introduce a time-series component that helps us assess how levels of information have varied as a result of the onset of the recession (Kern *et al.* 2015). As we are interested in explaining change in information levels as a result of the recession, we introduce a country-level variable that controls for average pre-crisis levels of economic and political information. By including baseline pre-crisis levels of information as a covariate, we complement the multilevel models with the characteristics of a conditional change model (Menard 2007). The approach allows us to estimate the extent to which information levels deviate from the pre-crisis benchmark as a result of the economic recession. The results are conservative because our approach controls indirectly for other country-level variables that might affect information levels and detects only significant deviations from the pre-crisis benchmark.

Our analyses rely on data from the Eurobarometer surveys and from the Comparative Study of Electoral Systems (CSES) for economic and electoral information, respectively. When it comes to economic information, the Eurobarometer is the only survey, to our knowledge, that gauges voters' levels of familiarity with macroeconomic trends. For electoral information, we rely on the CSES as all surveys are fielded at national elections. The election timing of the surveys is important to testing our argument because information on parties' policy positions is most

useful at elections. Although we rely on different sources of data, we keep the analyses as comparable as possible by, for example, including a similar set of control variables and using an identical methodological approach. Direct comparison of the magnitude of coefficients is not possible, but the effects can be interpreted separately and compared in a meaningful way. Indeed, it is not infrequent in the literature to compare different types of knowledge (e.g., Fraile 2017).

Economic information

We rely on cross-sectional time-series survey data from twenty-six European democracies from a series of special Eurobarometer surveys (2007, 2009 and 2015) on national economics and statistics.[1] We take the 2007 survey as a baseline for estimating average country-level economic information before the onset of the recession and model change with respect to that baseline. In doing so we control indirectly for other country-level variables that might affect information levels, such as media system types. Our goal is to test the explanatory power of changing economic conditions over the course of the crisis.

We focus on information about unemployment levels for several reasons. The economic recession in our survey years is best reflected in the macroeconomic data on unemployment. While GDP took a dip in most European countries, in the survey years we have available (2009 and 2015) GDP growth was stable or modestly rising in many of the countries hardest hit by the recession; thus the rate of growth could not accurately capture the economic downturn. Furthermore, levels of unemployment have been most robustly linked to voter preferences, election results and accountability while the effects of economic growth and inflation on elections are less consistent (for a recent review, see Lewis-Beck & Stegmaier 2013). Finally, while the Eurobarometer also gauges respondents' information levels on economic growth and inflation, these questions produced high non-response rates.[2] Respondents were much more likely to answer the question on the levels of unemployment than they were either growth or inflation, suggesting a lower informational threshold. This is consistent with previous literature. While voters are generally uninformed about the state of the macroeconomy (e.g., Caplan 2002 Healy & Lenz 2014;

[1] For a list of countries included, see the Appendix.

[2] In the case of the 2009 EB, 51 percent did not answer the question on economic growth, 46 percent did not answer the question on inflation, and 35 percent did not answer the question on unemployment. In 2015, those numbers were 33 percent, 33 percent and 21 percent, respectively. In 2007, those numbers were 65 percent, 56 percent and 49 percent, respectively. Below we describe several robustness checks related to the large number of missing values.

Hellwig & Marinova 2016), they tend to perceive more accurately changes in unemployment levels (Conover, Feldman & Knight 1986; Di Tella, MacCulloch & Oswald 2001; Paldam & Nannestad 2000).

To gauge information of the national rate of unemployment, responds were asked, "What was the official unemployment rate, the percentage of active people who do not have a job, in [our country] in 2008 [or 2014]? I can tell you that the exact figure is between 0% and 20% [or 30%]."[3] In coding correct responses, we adopt somewhat loose criteria. We use a range of possible correct values rather than exacting a precise figure from respondents.[4] Roughly 30% of respondents provided a correct response across the 2009 and 2015 waves. Among the country-years with highest overall information are Greece-2015 (72%), Slovakia-2015 (61%), Sweden-2015 (48%) and Spain-2015 (44%). On the lower end are Germany-2015 (10%) and Belgium-2009 (9%).

Our main independent variable is change in national unemployment since the beginning of the economic crisis. We do this to assess the consequences of the full crisis episode and not only the consequences of change in unemployment from the previous year. For the 2009 wave, we estimate change in unemployment between 2006 and 2008; for the 2015 wave, we estimate change between 2006 and 2014. Note that both measures are time-lagged to *t-1* in order to strengthen causal inference. As a robustness check, we also model absolute levels of unemployment at *t-1* (see Appendix).

To capture economic hardship at the individual level, we introduce a dummy variable for unemployed.[5] Recent scholarship suggests that being unemployed depresses political interest only in early adulthood; however, unemployment does not affect interest in politics later in life (Emmenegger *et al.* 2016).[6] Hence we test the robustness of our findings to an alternative set of operationalizations of economic hardship at the individual level. The Eurobarometer offers a series of indicators on the ownership of goods; we apply principle-component analysis

[3] In the 2015 wave of the Eurobarometer, several countries surpassed the 20% threshold.

[4] A response is considered correct if unemployment is under 5% and the respondent declares a figure also below 5%; likewise we define the following intervals: 5 to 8%; 8 to 10%; 10 to 15%; 15 to 20%; 20 to 25%; and 25 to 30%. We test the robustness of the results to an alternative set of operationalizations where correct response is anywhere within 2% or within 3% of the correct figure (see Appendix).

[5] We adopt a minimalist approach to operationalizing personal economic hardship in order to keep the analyses of economic and electoral information comparable.

[6] We do not find a statistically significant interaction effect between age and unemployment status.

to estimate individual wealth from these indicators. In addition, the 2009 and 2015 surveys include an indicator of economic hardship based on self-reported frequency with which respondents experienced difficulty paying their bills over the past year.

We control for socioeconomic indicators that have been linked to individual costs and opportunities to acquire information. We include controls for gender, age, education, occupation status and family situation.[7] At the country level, we include a binary indicator for the 2015 wave. Indirectly, we control for country-level differences that contribute to variation in economic information by accounting for baseline information levels prior to the crisis.

We estimate a series of multilevel mixed-effects logistic regressions. Formally we may express the probability of a correct response as $logit[Pr(Correct_{it} = 1)|X_{ij}\zeta_j] = \beta_0 + \beta_1 \frac{\sum Correct_{ij}}{n_j}_{t-1} + \beta_2 Unemployed_{it} + \beta_3 \Delta Unemployment_{j\,t} + \gamma X_{ij} + \zeta_j$ (1), where $\frac{\sum Correct_{ij}}{n_j}_{t-1}$ is the sum of correct responses divided by the sample size *n* in each country *j* in time period *t-1* (in 2007), $Unemployed_{it}$ indicates whether respondent *i* was unemployed at time *t*, $\Delta Unemployment_{j,t}$ is change in the national rate of unemployment between 2006 and *t-1* in country *j*, X_{ij} is a vector of control variables, γ is a vector of slopes, and ζj constitutes country-specific factors not accounted for by the covariates that may otherwise affect the likelihood of offering a correct response (Rabe-Hesketh & Skrondal 2008; Raudenbush & Bryk 2002). To test Hypothesis 3, we expand on the fixed part of the model with an interaction coefficient between $Unemployed_{it}$ and $\Delta Unemployment_{jt}$, and we allow the slope of $Unemployed_{it}$ to vary across countries. The mixed-effects logistic regressions are fitted via maximum likelihood estimation.

Electoral information

We rely on survey data from twenty-eight elections from seventeen European countries covered after the onset of the Great Recession by the Comparative Study of Electoral Systems (CSES). We select elections for which a pre-crisis election study allowed us to gauge baseline levels of electoral information.[8] We operationalize electoral information as ability to position political parties on the left-right ideological spectrum. Given that the left-right is

[7] Coding information on each variable may be found in the Appendix. In the Appendix we also control for respondents' prior occupation in the case of being unemployed.

[8] For example, we exclude two studies fielded in Greece (2009, 2012) as no study was available prior to the start of the recession in 2008. For a list of election studies, see the Appendix.

dominated by economic issues (Huber & Inglehart 1995; Marks & Steenbergen 1999; Warwick 2002), this operationalization is a good proxy for citizens' familiarity with party platforms on economic policy. We estimate how much each respondent's placement of each party on the scale deviates from political experts' placement of the corresponding party on the same scale and take the mean of the deviations for each respondent.[9] Large values indicate inaccuracy; to ease interpretation, we reverse the scale. Respondents were overall very accurate in placing parties; the mean of information in our sample was 8 out of 10, ranging from 6.9 to 8.5 between countries.

As in the economic information analyses, we test the effect of change in unemployment since the onset of the crisis. To estimate baseline electoral information, we use an election study that was fielded prior to the onset of the recession in each country, as the pre-crisis electoral cycle is the relevant comparison for electoral knowledge. For the countries in our sample, the start of the recession varied between 2007 and 2009; hence, we estimate change in unemployment between 2006 and the year of the corresponding election study. As a robustness check, we also model absolute levels of unemployment in the year prior to the survey as well as change in unemployment between pre-crisis and post-crisis levels of unemployment, both lagged to *t-1* (see Appendix). At the individual level, we operationalize economic hardship with unemployment status and household income quantile.

We control for individual-level differences that have been linked to variation in political information as individual characteristics can lower the costs of acquiring information (Althaus 2003; Berggren 2000; Delli Carpini & Keeter 1996; Fraile 2014; Gordon & Segura 1997; Grönlund & Milner 2006). We control for education, gender, age, occupational status and family situation.[10] The models control indirectly for country-level differences that contribute to variation in political information by accounting for baseline information levels. The results are nonetheless robust to including election-level controls for the effective number of electoral parties, the electoral system, bicameral legislatures and compulsory voting (Berggren 2001; Gordon and Segura 1997; *see* Appendix).

[9] Expert placements of party positions rely on the judgments of the CSES collaborators. The CSES did not provide information on the number of national experts surveyed in each election; this information was available only for some elections (e.g., N=11 in Austria-2013). Expert placements are preferable to average voter placements due to potential endogeneity concerns (e.g., individuals' placements may be affected by the severity of the crisis) as well as errors when voters place small parties (e.g., the UK election in 2015, as detailed in the CSES notes).

[10] We also control for vote for the incumbent (see Appendix).

Finally, as the elections in our sample took place at different points during the crisis, we control for the year of the election with fixed effects.

We estimate a series of multilevel mixed-effects linear regressions using maximum likelihood. The general model may be expressed as $Electoral\ Information_{ijt} = \beta_0 + \beta_1 \frac{\sum Correct_{ij}}{n_j}_{t-1} + \beta_2 Unemployed_{it} + \beta_3 \Delta Unemployment_{jt} + \gamma' X_{ij} + \varepsilon_{ij}$ (2), where Electoral Information$_{ijt}$ is the level of electoral information of individual *i* in election *j* at time *t*, and the remainder of terms is as described in Equation (1). To test Hypothesis 4 for electoral information, we expand the model with an interaction coefficient between $Unemployed_{it}$ and $\Delta Unemployment_{jt}$ and a random slope for $Unemployed_{it}$.

Empirical Results and Robustness Checks

The results offer considerable support for all three expectations. Rising rates of national unemployment since the crisis have contributed to substantial gains in information on macroeconomic trends and to modest gains in information on party positions. Economic hardship at the individual level translates into lower levels of knowledge, without regard to the type of information under study. At the aggregate level, increasing unemployment levels have a *positive* effect on knowledge that is large in magnitude in the case of economic knowledge and more modest in the case of electoral information. With respect to our final hypothesis, those experiencing economic hardship become increasingly informed of downward macroeconomic trends and party positions in contexts of an economic recession. These results are robust to several model specifications described below.

Initial examination of the models in Tables 1 and 2 suggests strong face validity. Demographic predictors of information levels influence information levels in the expected direction, including gender, age, education, occupational status and family situation. Baseline level of information at the country level is a robust and strong predictor of post-crisis information levels (p<0.001), suggesting the validity of our time-series approach. Pre-crisis information levels alone explain 10% and 83% of the between-country variance in economic and electoral information acquisition, respectively.[11] Partitioning the variance of the null models suggests that roughly 15% and

[11] Baseline levels of information account for subsequent levels of electoral information acquisition much better than they do for levels of macroeconomic information. We believe this is due to the relative stability of most parties' policy positions over electoral cycles. In contrast, macroeconomic trends can vary considerably over time.

17% of the total variance in economic and electoral information levels, respectively, can be attributed to between-country differences.[12]

Table 1: Economic information: Correctly identifying the national rate of unemployment

	(1)	(2)
Micro-level predictors		
Female	-0.366***	-0.368***
	0.0257	0.0257
Age	0.032***	0.032***
	0.0049	0.0050
Age (sq.)	-0.0001***	-0.0001***
	0.00001	0.00001
Education (in years)	0.010***	0.010***
	0.0017	0.0017
Occupation status (ref. Working)		
Not in labor force	-0.153***	-0.151***
	0.0383	0.0382
Student	0.126	0.133
	0.0816	0.0816
Unemployed	-0.312***	-0.407***
	0.0504	0.0694
Unemployed *x* ΔUnemployment		0.024*
		0.0101
Household type (ref. Single, no children)		
Single with children	-0.029	-0.027
	0.0605	0.0605
Partner, no children	0.135***	0.134***
	0.0333	0.0333
Partner, with children	0.052	0.052
	0.0358	0.0358
Macro-level predictors		
Baseline information, 2007	2.107*	2.154*
	0.8645	0.8384
ΔUnemployment since 2007	0.162***	0.159***
	0.0064	0.0065
2015 wave	-0.363***	-0.362***
	0.0361	0.0361
Constant	-2.929***	-2.933***
	0.3087	0.3027
Variance components		
Intercept	0.418	0.423
Unemployed		0.004
Covariance		-0.041
N	36,989	36,989

[12] Baseline models suggested a number of potential outliers at the country level; our results are robust to the exclusion of these cases from the models (see Appendix).

Note: The table presents estimates from mixed-effects logistic regression based on 56 country-years from 28 countries. Model 1 includes a random slope. Model 2 includes a random slope and a random intercept for unemployed; the variance-covariance structure of the random effects is unstructured. Coefficient estimates and standard errors are reported. $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Table 2. Electoral information: Positioning parties' on the left-right

	(1)	(2)
Micro-level predictors		
Female	-0.055***	-0.055***
	0.0092	0.0092
Age	0.003	0.003
	0.0017	0.0017
Age squared	-0.0001	-0.0001
	0.0000	0.0000
University degree	0.236***	0.235***
	0.0130	0.0130
Occupation status (ref. Working full-time)		
Not in labor force	-0.083***	-0.084***
	0.0137	0.0137
Student	0.600***	0.602***
	0.0825	0.0825
Works part time	-0.031	-0.032
	0.0177	0.0177
Unemployed	-0.116***	-0.114***
	0.0201	0.0211
Unemployed *x* ΔUnemployment		0.008
		0.0057
Household type (ref. Single, no children)		
Single with children	0.009	0.009
	0.0378	0.0378
Partner, no children	0.025	0.024
	0.0134	0.0133
Partner, with children	0.041**	0.041**
	0.0153	0.0153
Macro-level predictors		
Baseline information levels	0.933***	0.905***
	0.1549	0.1496
Δ Unemployment since 2006	0.012***	0.011***
	0.0030	0.0031
Constant	0.498	0.732
	1.2837	1.2397
Fixed effects election year	Yes	Yes
Variance components		
Intercept	0.046	0.047
Residual	0.703	0.703
Unemployed		0.001
Covariance		-0.006
N	35,295	35,295

Note: Estimates are based on 28 election studies from 17 European countries. The table presents estimates from mixed-effects linear regression with fixed effects for election year (estimates not shown). Model 1 includes a random slope. Model 2 includes a random slope and a random intercept for unemployed; the variance-covariance

structure of the random effects is unstructured. Coefficient estimates and standard errors are reported. $^{\dagger}p < 0.1$, $^{*}p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$

Beginning with micro-level effects, unemployed individuals are on average 4% less likely to be correct on the rate of unemployment than are those in the labor force when the unemployment rate is stable ($p<0.001$; see Table 1, Model 1). Similarly, the results on electoral information show that the experience of economic hardship as expressed by being unemployed, translates into an error of 0.1 points in placing each party on the left-right scale ($p<0.001$; Table 2, Model 1). Though modest, the negative effect of being unemployed on knowledge is roughly half that of education. These effects are consistent with previous literature and offer support for Hypothesis 1.

Simultaneously, rising levels of unemployment at the national level exert a strong positive effect on economic information ($p<0.001$) and a modest positive effect on electoral information ($p<0.05$). As unemployment rises over the course of the crisis, individuals become more likely to gauge correctly the national rate of unemployment (Fig. 1). In countries where unemployment remained stable, the predicted probability of knowing this rate is under 0.15. As the unemployment rate climbs up, respondents are increasingly more likely to offer a correct response. Where unemployment had increased by 5%, 10% or 20% since the onset of the crisis, the respective probabilities of identifying the rate correctly were .25, .40 and .80. When it comes to economic information, the mobilization effect at the contextual level is significantly more powerful than the withdrawal effect at the individual level.

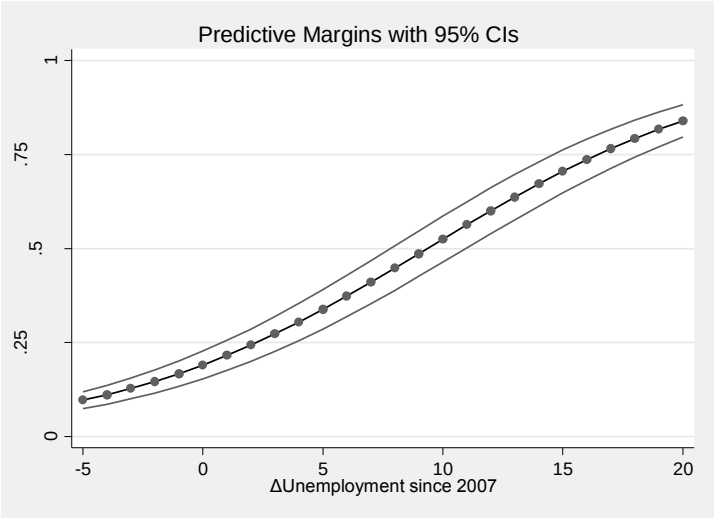
When it comes to electoral information, the positive effect at the macro level is considerably weaker than the negative effect at the individual level. The effect of rising national unemployment exerts a positive, but weak, effect on political knowledge ($p<0.05$, Model 2 in Table 2). An increase in unemployment of 10% in magnitude is predicted to improve the correct positioning of parties by only a fraction of a point on the 11-point scale. Hence, the first two hypotheses receive support when it comes to electoral information, but the effect of the macroeconomy is modest.

Furthermore, the models detect a statistically significant interaction between macro and micro-level unemployment that lends support to Hypothesis 3 (Models 2 in Tables 1 and 2). In both analyses, we use the full-time employed as a basis of comparison. In the case of economic information, the difference in information levels between the working and the unemployed persist when the rate of unemployment declines, remains stable or increases by as much as 10% since the onset of the Great Recession. Where unemployment has climbed by more

than 10%, we no longer detect statistically significant differences in levels of economic knowledge between the unemployed and the working (Fig. 2). When it comes to electoral information, we observe a trend in the same direction that is stronger in magnitude. Namely, differences in information levels between the unemployed and working disappear when the national unemployment rate since the recession is upward of 7% (Fig. 3). In contexts of sharp increases in national unemployment, we no longer observe a negative effect of personal economic hardship on either type of information levels.

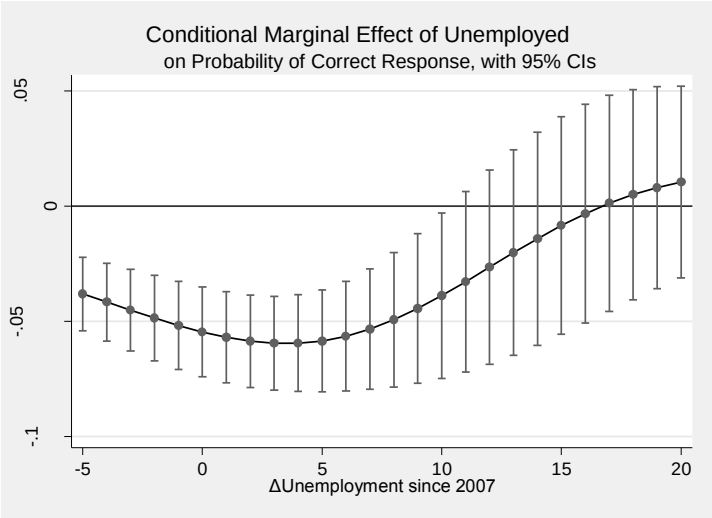
Analyses with each of the alternative indicators of economic hardship at the individual level offer strong support for the results presented here (*see* full results in the Appendix). In the case of economic knowledge, both wealth and the experience of economic difficulties contribute to a withdrawal effect ($p<0.001$), but with only a two to three percent increase in the rate of unemployment since the recession, the less financially privileged become just as likely to state correctly the rate of unemployment as are those more economically secure ($p<0.001$). In the CSES data, we are able to operationalize economic hardship at the individual level as household income quantile, and we observe a statistically significant negative effect ($p<0.001$), such that voters in the lowest quantile were on average half a point less accurate in placing each party than were those in the highest quantile. Similarly to the results reported in Table 2, we observe a statistically significant interaction between economic hardship at the micro and macro levels. Regardless of how personal economic hardship is operationalized—as unemployment status, ownership of goods, self-reported difficulty in paying bills or income quantile—the economic recession equalized information levels about the state of the economy and party positions between those who experienced economic hardship and those who did not.

Fig. 1. Predicted Probability of Economic Information by ΔUnemployment since the Onset of the Crisis



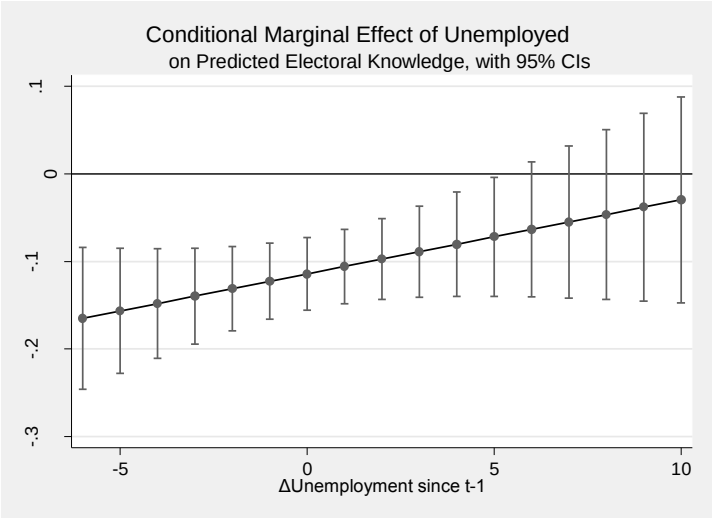
Note: Predicted probabilities based on Table 1, Model 1. The graph displays cluster-specific predicted probabilities for the fixed part of the model. The probability reflects the average respondent in our sample in a country of average pre-crisis levels of information (roughly 30%).

Fig. 2. Conditional Marginal Effect of Unemployed on Economic Information



Note: Predicted probabilities based on Table 1, Model 2. The graph displays cluster-specific predicted probabilities for the fixed part of the model. The probability reflects the average respondent in the sample in a country of average pre-crisis levels of information (roughly 30%).

Fig. 3. Conditional Marginal Effect of Unemployed on Electoral Information



Note: Predictions based on Table 2, Model 2. The predictions reflect the average respondent in the sample in a country of average pre-crisis levels of electoral information (roughly 8 on a 0-10 scale).

The results are robust to a series of additional specifications. First, we probe if our findings on economic knowledge are driven by systematic over-reporting of unemployment; if individuals tend to over-report levels of unemployment, then those in contexts of higher unemployment would get it right more often. On average, unemployment was over-reported by 4%, with a range of under-reporting by 2.7% in Spain-2015 to over-reporting by 10,6% in Hungary-2015, suggesting meaningful variation in unemployment estimates rather than systematic over-reporting.[13] In the data, we observe a very strong correlation between levels of unemployment and the average estimate of unemployment per country (ρ=0.81), suggesting that estimates of unemployment generally track actual unemployment levels.

Second, given the high number or missing values on economic knowledge (*see* fn. 4), we conduct two sets of ancillary analyses to test the robustness of the results to missing values. We explicitly model the mechanism of missingness. The results indicate that non-response is more likely when individuals experience unemployment (p<0.001) and are embedded in contexts of declining unemployment (p<0.05), but the effect of being unemployed is attenuated as unemployment increases (p<0.1). This results thus suggest that the mechanisms driving lack of knowledge also drive non-response. And further, we impute missing values for the dependent variable and re-run the

[13] As a norm, we do not observe over-reporting in cases of high unemployment. In the ten cases with *highest* level of unemployment in the dataset, only three registered over-reporting above average. Compare this to the ten cases with *lowest* unemployment in the sample, where five registered over-reporting above average.

analyses.[14] The results from the models with imputed values replicate the results presented in Table 1 and lend further support to the hypotheses.

We carry out a number of robustness checks for the models on electoral information (*see* Appendix). The models presented in Table 2 are robust to controls for ENEP, electoral system and bicameralism (Fraile 2014). We test the results to two alternative operationalizations of unemployment: change since the baseline CSES wave and absolute level of unemployment at *t-1*. The results confirm the direct positive effect of unemployment on electoral knowledge as well as the conditional effect through individual unemployment status. Finally, we check how electoral knowledge varies between pre-existing parties and new party formations. While baseline levels of information predict only familiarity with pre-existing parties, the gist of the effects of national unemployment and unemployment status are as reported in Table 2.

Discussion and Conclusion

During good economic times a rational citizenry may well delegate policymaking and spare the time and effort necessary to acquire information. From a normative point of view, however, when the economy plummets, citizens have good reason to monitor public affairs closely and to invest resources in acquiring information. The goal of this article was to examine empirically the extent to which citizens kept abreast of macroeconomic trends and electoral proposals during the Great Recession.

Our findings offer a nuanced understanding of information acquisition during economic downturns by identifying a set of parallel processes unfolding at the individual and contextual levels of analysis and for different types of information. First, our results help make sense of the conflicting findings in the literature on political engagement by documenting a set of opposing effects of economic conditions and underlining the importance of studying their separate effects at the micro and macro levels of analysis. Depending on whether it is personally experienced, or a contextual feature, economic hardship has different effects over economic and electoral knowledge. Economic hardship at the micro level contributes to a decline in information acquisition while the crisis experienced at the macro level increases the acquisition of information. Hence our results are consistent with the bulk of the

[14] We impute missing values based on individuals' perceptions of economic performance (both unemployment and general economic situation), trust in official statistics, demographic variables and fixed effects for country and survey year. To avoid endogeneity, we did not include any of the main explanatory variables as predictors. N=48,595. See Appendix for full results.

literature that, based on the role of socioeconomic resources, argues that economic hardship reduces political engagement, but this effect holds only at the individual level of analysis. At the same time, our results are in line with work based on aggregate data that links hard economic conditions to higher levels of political engagement (e.g., Pontichelli & Voth 2011; Lim & Sander 2013; Hansford & Gomez 2010). Together, these results suggest that the distinction between levels of observation is critical to theories of information-seeking behavior and political engagement more broadly.

Second, we find that citizens do not possess high levels of information all the time, but that information levels depend on the economic context. In time of economic stability and prosperity, voters have low levels of information. However, as the economy plummets, the public tends to acquire information about the state of the economy and, to a lesser degree, party positions. At least in times of a recession of the magnitude of the Great Recession that began in 2008, lack of objective information on the state of the economy should not prevent effective economic voting. In this way our results carry further implications for understanding the weak and inconsistent effects that the state of the economy exerts on the vote (Anderson 2007; Kayser 2014). While a number of previous studies have placed emphasis on voters' skewed perceptions of the state of the economy (e.g., Healy & Lenz 2014; Hellwig & Marinova 2016), our results show that voters are better informed when the stakes are higher.

Third, our results show that the positive effects of a recession are quite substantive for economic information, but relatively modest for electoral information. When a hard recession hits, individuals' economic information acquisition escalates while familiarity with party platforms at elections increases modestly. Although the relationship between economic hardship and the two types of knowledge is estimated using different data sources, the substantive interpretation of the results shows a clear difference. At least two factors may help explain the weaker effect of contextual economic hardship on electoral knowledge. As we argue above, one factor has to do with the availability of information. While information about the state of the economy is readily accessible and highly salient particularly in times of economic upheaval, extant literature suggests that information about policy alternatives may not be available at the same rate. Hence the lack of forthcoming policy information may weaken the otherwise positive effect of citizens' heightened motivation to become informed during an economic crisis. Second, the weak positive effect may also be due to the relative stability of party positions over electoral cycles and hence the limited predictive power of changes in macroeconomic conditions. This explanation is corroborated by the high predictive power of pre-crisis electoral information levels. To disentangle these alternative explanations, future

research should ideally measures electoral knowledge with respect to policy areas where parties have changed their positions.

Finally, and probably most importantly, our results show that contextual economic hardship has an important effect on closing knowledge gaps. The unemployed, the poor and those expressing financial difficulty are less likely to be informed about public affairs. When a hard recession hits, however, these individuals' information acquisition escalates, and disadvantaged groups catch up in information levels to their more economically secure counterparts. With about seven to ten percentage points rise in unemployment over the course of the crisis, we can no longer observe statistically significant differences in electoral and economic information levels, respectively, between the economically secure and insecure. Hence, the Great Recession had a palpable balancing effect on inequalities in knowledge for both types of knowledge.

Our research has broader implications for voter decision-making and for the workings of representative democracy. The extant literature has generally been pessimistic about citizens' levels of political awareness, stressing further that already scant levels of knowledge are experiencing a decline over time (e.g. Bennett 1989; Healy & Lenz 2014; Hellwig & Marinova 2016; Howe 2006; Delli Carpini & Keeter 1996). Things look even bleaker when we consider that knowledge is strongly conditioned by individual cognitive and economic resources, and that personal economic hardship depresses knowledge further. However, low information levels may be a sign of voter rationality. Our results show that citizens react to an economic recession by increasing their overall levels of knowledge and that the economically disadvantaged react in a stronger way that closes the knowledge gaps due to economic differences. Heightened and more equal political awareness in times of crises – that is, when it really matters – could make up for otherwise low information levels.

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Appendix for "Information Seeking in Times of Economic Crisis"

Contents

Tables

Table 1. List of variables: Eurobarometer

Variable name	Coding
Information of unemployment	1-correct when both unemployment and the R's guestimate were in one of the following ranges: 0-5%, 5-8%, 8-10%, 10-15%, 15-20%, 20-25%, 25-30%; coded 0 otherwise.
Baseline information levels of unemployment, 2007	Average levels of information of unemployment by country. Computed from Eurobarometer 67.2 fielded in 2007.
Change in the national rate of unemployment, 2007 – *t-1*	Change in unemployment between 2007 and 2008 (for 2009 wave) and between 2007 and 2014 (for 2015 wave)
National rate of unemployment, *t-1*	Absolute level of unemployment in 2008 (for 2009 wave) and in 2014 (for 2015 wave)
Age	Continuous
Age squared	Age squared
Female	1-female; 0-male
Education	Education in years
Occupation	Working (reference category); unemployed; not in labor force (retired, domestic worker); student.
Household type	Living alone (reference category); single with children; living with partner, no children; living with partner and children.
Wealth	Estimated by principle-component factor analysis based on a series of dummy variables indicating goods ownership (television, DVD player, music CD player, desk computer, laptop, tablet, smartphone, internet connection, car, apartment/house paid)
Difficulty paying bills last year	1-Almost never/Never, 2-From time to time; 3-Most of the time
2015 wave	Dummy for 2015 wave

Note: Data from Eurobarometer 83.3 (May 2015) and Eurobarometer 72.1 (August-September, 2009). In addition, Eurobarometer 67.2 (April-May, 2007) was used to estimate Baseline information levels of unemployment by country. Countries included are Austria (AT); Belgium (BE); Bulgaria (BG); Cyprus (CY); Czech Republic (CZ); Germany (DE); Denmark (DK); Estonia (EE); Spain (ES); Finland (FI); France (FR); Great Britain (GB); Greece (GR); Hungary (HU); Ireland (IE); Italy (IT); Lithuania (LT); Luxembourg (LU); Latvia (LV); Malta (MT); Netherlands (NL); Poland (PL); Portugal (PT); Romania (RO); Sweden (SE); Slovenia (SI); Slovakia (SK).

Table 2. List of variables: CSES

Variable name	Coding
Information of party positions	We estimate how much each respondent's placement of each party on a 0 to 10 left-right ideological scale deviates from political experts' placement of the corresponding party on the same scale and take the mean of the deviations for each respondent. We reverse the scale such that larger values indicate higher accuracy.
Age	Continuous
Age squared	Age squared
Female	Binary variable where 1-female.
University degree	Binary variable where 1-holds university degree.
Unemployed	Binary variable where 1-unemployed.
Works part time	Binary variable where 1-works part time (32 hours or less per week).
Student	Binary variable where 1-student, in school, in vocational training.
Not in labor force	Binary variable where 1-not in labor force (retired, housewife, disabled, others).
Baseline political information	Average levels of political information by country. Computed from an election study fielded before the onset of the recession. Year varies by country; see note below.
Household type	Living alone (reference category); single with children; living with partner or other adult, no children; living with partner or other adult and children.
Household income	Household income quantile.
Voted for PM's party	Binary variable where 1-voted for PM's party.
Voted for Government incumbent party	Binary variable where 1-voted for a party that is in government
Change in the national rate of unemployment, 2006 – *t-1*	Change in unemployment between 2006 and the year of the election. Source: Eurostat and the World Bank.
Unemployment, *t-1*	National unemployment rate in the year prior to the election. Source: CSES, Eurostat or the World Bank.
ENEP	Effective number of electoral parties (Laakso and Taagepera 1979)
District magnitude	Number of representatives elected from a given district to the same legislative body
PR	Binary variable where 1-proportional representational system
Majoritarian	Binary variable where 1-majoritarian representational system
Bicameral legislature	Binary variable where 1-bicameral legislature
Compulsory voting	Binary variable where 1 indicates the presence of compulsory voting.

Note: The source for all variables is the CSES unless otherwise noted.

Note: To select the survey year used to compute baseline electoral information, we took account of the onset of the recession in each country and selected the most recent election study available prior to that year. The start of the recession varied between 2007 and 2009. One country in our sample did not experience a recession: Poland.

Note: List of election studies included (in parentheses, election used to estimate pre-crisis baseline for electoral information): Austria-2013 (2008); Czech Republic-2010, 2013 (2006); Finland-2011, 2015 (2007); France-2012 (2007); Germany-2009, 2013 (2005); Iceland-2007, 2009, 2013 (2003); Ireland-2007, 2011 (2002); Netherlands-2010 (2006); Norway-2009, 2013 (2005); Poland-2007, 2011 (2005); Portugal-2009, 2015 (2005); Romania-2009, 2012 (2004); Slovenia-2008, 2011 (2004); Spain-2008 (2004); Sweden-2014 (2006); Switzerland-2011 (2007); United Kingdom-2015 (2005).

Table 3. Economic information: Baseline models

	(1)	(2)	(3)
Baseline information levels, 2007		1.786	1.872*
		0.9395	0.9357
2015 wave			0.322***
			0.0246
Constant	-1.108***	-1.633***	-1.848***
	0.1422	0.3073	0.3065
Variance components			
Constant	-0.561	-0.500	-0.492
	0.1519	0.1346	0.1335
N_i / N_j	39,187 / 28	39,187 / 28	39,187 / 28

Note: Baseline models are used to estimate proportion of the variance at the country level and the variance explained by Baseline information levels at that level. See Fig. 1 for a plot of the country-level residuals. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4. Economic information: Models in main text, excluding outliers (Slovenia and Poland; see Figure 1)

	(1)	(2)
Baseline information levels, 2007	2.064**	2.075***
	0.6588	0.6014
ΔUnemployment since 2007	0.161***	0.158***
	0.0064	0.0065
Female	-0.369***	-0.371***
	0.0260	0.0260
Age	0.032***	0.032***
	0.0050	0.0050
Age (sq.)	-0.0001***	-0.0001***
	0.00001	0.00001
Education (in years)	0.010***	0.010***
	0.0017	0.0017
Occupation status (ref. Working)		
Not in labor force	-0.155***	-0.153***
	0.0387	0.0387
Student	0.119	0.128
	0.0827	0.0826
Unemployed	-0.300***	-0.375***
	0.0508	0.0706
Unemployed *x* ΔUnemployment		0.017‡
		0.0105
Household type (ref. Single, no children)		
Single with children	-0.037	-0.035
	0.0614	0.0614
Partner, no children	0.147***	0.146***
	0.0337	0.0337
Partner, with children	0.065	0.064
	0.0362	0.0362
2015 wave	-0.360***	-0.359***
	0.0361	0.0361
Constant	-2.801***	-2.799***
	0.2505	0.2379
Variance components		
Intercept	0.240	0.247
	0.0686	0.0701
Unemployed		0.013
		0.0133
Covariance		-0.056
		0.0325
N_i / N_j	34,219 / 26	34,219 / 26

Note: The table presents estimates from mixed-effects logistic regressions. ‡ p < 0.01, * p < 0.05, ** p < 0.01, *** p < 0.001

Table 5: Economic information with absolute levels of unemployment at *t-1*

	Model 1	Model 2
Baseline information levels, 2007	2.325**	2.304***
	0.7383	0.6787
Unemployment rate, t-1	0.143***	0.141***
	0.0059	0.0060‡
Unemployment x Unemployed		0.011
		0.0100
Female	-0.369***	-0.371***
	0.0259	0.0260
Age	0.032***	0.032***
	0.0050	0.0050
Age^2	-0.0001***	-0.000***
	0.00001	0.0000
Education (years)	0.010***	0.010***
	0.0017	0.0017
Occupation status (ref. Working)		
Not in labor force	-0.151***	-0.149***
	0.0387	0.0387
Student	0.120	0.127
	0.0826	0.0826
Unemployed	-0.291***	-0.428***
	0.0508	0.1226
Household type (ref. Single)		
Single with children	-0.037	-0.035
	0.0613	0.0614
Partner, no children	0.147***	0.146***
	0.0336	0.0336
Partner, with children	0.068	0.068
	0.0362	0.0362
2015 wave	-0.291***	-0.290***
	0.0351	0.0351
Constant	-3.801***	-3.780***
	0.2773	0.2637
Variance components		
Constant	0.302	0.309
	0.0863	0.0882
Slope unemployed		0.015
		0.0243
Covariance		-0.063
		0.0395
N	34,219	34, 219

Note: The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6. Economic information: Correct response operationalized as within 2% or within 3% of the national unemployment rate

	Within 2%		*Within 3%*	
	(1)	(2)	(3)	(4)
Baseline information levels, 2007	3.039***	3.084***	2.000**	2.019**
	0.8289	0.8232	0.7221	0.7288
Δ Unemployment since 2007	0.096***	0.095***	0.082***	0.081***
	0.0061	0.0062	0.0054	0.0055
Female	-0.452***	-0.452***	-0.438***	-0.439***
	0.0246	0.0246	0.0228	0.0228
Age	0.031***	0.031***	0.027***	0.027***
	0.0047	0.0047	0.0043	0.0043
Age^2	-0.000***	-0.000***	-0.000**	-0.000**
	0.0000	0.0000	0.0000	0.0000
Education	0.014***	0.014***	0.016***	0.016***
	0.0017	0.0017	0.0017	0.0017
Occupation status (ref. Working)				
Not in labor force	-0.184***	-0.184***	-0.200***	-0.199***
	0.0367	0.0367	0.0340	0.0340
Student	0.058	0.059	0.074	0.077
	0.0789	0.0789	0.0717	0.0718
Unemployed	-0.339***	-0.391***	-0.339***	-0.385***
	0.0488	0.0643	0.0438	0.0611
Unemployment x Unemployed		0.013		0.013
		0.0104		0.0106
Household type (ref. Single)				
Single with children	-0.030	-0.029	-0.038	-0.038
	0.0574	0.0575	0.0523	0.0523
Partner, no children	0.126***	0.126***	0.125***	0.124***
	0.0318	0.0318	0.0296	0.0297
Partner, with children	0.029	0.029	0.060	0.060
	0.0343	0.0343	0.0316	0.0316
2015 wave	-0.219***	-0.218***	-0.393***	-0.392***
	0.0334	0.0334	0.0309	0.0310
Constant	-2.992***	-2.997***	-1.976***	-1.977***
	0.2958	0.2941	0.2596	0.2610
Variance components				
Constant	0.384	0.381	0.291	0.290
	0.1046	0.1040	0.0793	0.0792
Slope unemployed		0.001		0.014
		0.0040		0.0164
Covariance		0.022		-0.003
		0.0348		0.0294
N	36,989	36,989	36,989	36,989

Note: The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 7. Economic information: Economic hardship operationalized as wealth or as difficulty paying bills

	(1)	(2)	(3)	(4)
Baseline information levels, 2007	1.921*	1.988*	1.758*	1.793*
	0.8392	0.8587	0.8421	0.7435
ΔUnemployment since 2007	0.162***	0.167***	0.161***	0.127***
	0.0064	0.0065	0.0065	0.0087
Female	-0.351***	-0.362***	-0.350***	-0.364***
	0.0258	0.0258	0.0258	0.0259
Age	0.029***	0.033***	0.029***	0.032***
	0.0050	0.0050	0.0050	0.0050
Age (sq.)	-0.000**	-0.000***	-0.000**	-0.000***
	0.0000	0.0000	0.0001	0.0000
Education (in years)	0.008***	0.009***	0.008***	0.010***
	0.0018	0.0017	0.0018	0.0018
Household type (ref. Single)				
Single with children	-0.088	0.010	-0.085	0.018
	0.0608	0.0609	0.0610	0.0611
Partner, no children	0.075*	0.118***	0.079*	0.118***
	0.0339	0.0336	0.0342	0.0337
Partner, with children	-0.051	0.045	-0.046	0.042
	0.0372	0.0360	0.0373	0.0361
Occupation status (ref. Working)				
Not in labor force	-0.109**	-0.141***	-0.106**	-0.134***
	0.0386	0.0385	0.0386	0.0387
Student	0.092	0.097	0.111	0.106
	0.0818	0.0831	0.0819	0.0830
Unemployed	-0.246***	-0.227***	-0.246***	-0.231***
	0.0508	0.0518	0.0509	0.0522
Wealth	0.189***		0.238***	
	0.0180		0.0301	
Wealth x ΔUnemployment			-0.017***	
			0.0049	
Difficulty paying bills (ref. Almost Never/Never)				
Sometimes		-0.229***		-0.325***
		0.0319		0.0574
Frequently		-0.333***		-0.614***
		0.0500		0.1098
Sometimes x ΔUnemployment				0.044***
				0.0086
Frequently x ΔUnemployment				0.067***
				0.0129
2015 wave	-0.379***	-0.381***	-0.370***	-0.320***
	0.0361	0.0363	0.0364	0.0374
Constant	-2.842***	-2.773***	-2.820***	-2.678***
	0.3012	0.3077	0.3027	0.2838
Variance components				
Constant	0.628	0.413	0.633	0.703
	0.0859	0.1129	0.0870	0.2034
Slope			0.100	0.046
			0.0254	0.0171
Covariance			-0.252	-0.140
			0.2734	0.0534
N	36,989	36,652	36,989	36,652

Note: The table presents estimates from mixed-effects logistic regressions. ‡ p < 0.01, * p < 0.05, ** p < 0.01, *** p < 0.001

Table 8. Economic information: Models of missing values (1=Non-response; 0=Response)

	(1)	(2)
Baseline information levels, 2007	-1.037	-0.982
	0.8489	0.8477
ΔUnemployment since 2007	-0.014*	-0.016**
	0.0056	0.0058
Female	0.518***	0.518***
	0.0230	0.0230
Age	-0.053***	-0.053***
	0.0039	0.0039
Age (sq.)	0.001***	0.001***
	0.0000	0.0000
Education (in years)	-0.012***	-0.012***
	0.0015	0.0015
Household type (ref. Single)		
Single with children	-0.008	-0.007
	0.0461	0.0461
With partner, no children	-0.188***	-0.188***
	0.0289	0.0289
With partner and children	-0.151***	-0.150***
	0.0309	0.0309
Occupation status (ref. Working)		
Not in labor force	0.248***	0.249***
	0.0319	0.0319
Student	-0.071	-0.066
	0.0757	0.0758
Unemployed	0.279***	0.241***
	0.0402	0.0576
Unemployed # ΔUnemployment		0.017‡
		0.0103
Trust official statistics	-0.052*	-0.052*
	0.0222	0.0222
EB=2015	-0.787***	-0.785***
	0.0313	0.0314
Constant	0.613*	0.604*
	0.2944	0.2945
Variance components		
Constant	0.403	0.409
	0.109	0.111
Slope		0.025
		0.019
Covariance		-0.026
		0.036
N	49,449 / 28	49,449 / 28

Note: The table presents estimates from mixed-effects logistic regressions. ‡ p < 0.01, * p < 0.05, ** p < 0.01, *** p < 0.001

Table 9. Economic information: Models with imputed values of the dependent variable

	(1)	(2)
Baseline information levels, 2007	2.054	2.052
	0.8365	0.8365
ΔUnemployment since 2007	0.117***	0.114***
	0.0061	0.0062
Female	-0.361***	-0.363***
	0.0263	0.0264
Age	0.033***	0.032***
	0.0051	0.0051
Age (sq.)	-0.0002***	-0.0002***
	0.00005	0.00005
Education (in years)	0.010***	0.010***
	0.0017	0.0017
Household type (ref. Single)		
Single with children	-0.022	-0.021
	0.0595	0.0595
With partner, no children	0.135***	0.134***
	0.0338	0.0338
With partner and children	0.047	0.047
	0.0368	0.0368
Occupation status (ref. Working)		
Not in labor force	-0.113**	-0.112**
	0.0368	0.0368
Student	0.107	0.114
	0.0808	0.0807
Unemployed	-0.242***	-0.316***
	0.0488	0.0633
Unemployed # ΔUnemployment		0.019*
		0.0091
EB=2015	-0.179***	-0.178***
	0.0359	0.0359
Constant	-2.905***	-2.895***
	0.3016	0.3016
Variance components		
Constant	0.626	0.626
	0.0859	0.0859
Slope		
Covariance		
N	48,595 / 28	48,595 / 28

Note: The table presents estimates from mixed-effects logistic regressions. ‡ p < 0.01, * p < 0.05, ** p < 0.01, *** p < 0.001

Note: Values of the dependent variable were imputed based on the following covariates: evaluation of the economic situation in respondent's country, evaluation of the unemployment situation in respondent's country, trust in official statistics, gender, age, square of age, education in year, household type, and fixed effects for country and survey year.

Table 10

	(1) unempl_correct_cat	(2) unempl_correct_cat
Baseline information levels, 2007	2.182*	2.205**
	0.8681	0.8390
Female	-0.367***	-0.368***
	0.0317	0.0318
Age	0.028***	0.028***
	0.0058	0.0059
Age (sq.)	-0.000***	-0.000***
	0.0001	0.0001
Education (in years)	0.005*	0.005*
	0.0019	0.0019
Household type (ref. living alone)		
Single with children	0.006	0.011
	0.0719	0.0720
With partner, no children	0.110**	0.111**
	0.0390	0.0391
With partner and children	0.056	0.058
	0.0446	0.0447
Occupation status (ref. Working)		
Not in labor force	-0.258*	-0.238*
	0.1179	0.1188
Student	-0.010	0.021
	0.1429	0.1440
Unemployed	-0.451***	
	0.1239	
ΔUnemployment since 2007	0.166***	0.162***
	0.0076	0.0080
Prior occupation (ref. Self-employed)		
Managers	-0.137**	-0.136**
	0.0525	0.0525
Other white collars	-0.276***	-0.276**
	0.0501	0.0502
Manual workers	-0.437***	-0.434***
	0.0578	0.0579
House persons	-0.407**	-0.413***
	0.1240	0.1244
Unemployed	-0.213	-0.134

	0.1341	0.1473
Retired	-0.172	-0.190
	0.1154	0.1163
Students	0.080	0.088
	0.6415	0.6424
EB=2015	-0.325**	-0.324**
	0.1158	0.1161
Working		0.000
		.
Unemployed		-0.513***
		0.1524
Unemployed # une_chng_crisis		0.013
		0.0160
Constant	-2.398***	-2.423***
	0.3256	0.3198
N	25725	25725

Table 10. Electoral information: Baseline models

	(1)	(2)	(3)
Baseline information levels		1.011***	0.978***
		0.1114	0.1368
Constant	8.249***	-0.146	0.240
	0.0967	0.9258	1.1326
FE for election year	No	No	Yes
Variance components			
Constant	0.159	0.0268	0.041
Residuals	0.742	0.742	0.752
N	40,769	40,769	40,769

Note: Baseline models are used to estimate proportion of the variance at the country level and the variance explained by Baseline information levels at that level. See Fig. 4 for a plot of the country-level residuals. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 11. Electoral information with absolute levels of unemployment at *t-1*

	(1)	(2)
Baseline information levels	0.960***	0.961***
	0.1507	0.1328
Unemployment rate, t-1	0.014***	0.013***
	0.0032	0.0033
Female	-0.055***	-0.055***
	0.0092	0.0092
Age	0.003	0.003
	0.0017	0.0017
Age (sq.)	-0.000	-0.000
	0.0000	0.0000
University degree	0.236***	0.235***
	0.0130	0.0130
Occupation status (ref. Working full-time)		
Not in labor force	-0.083***	-0.083***
	0.0137	0.0137
Student	0.600***	0.600***
	0.0825	0.0825
Works part time	-0.031	-0.032
	0.0177	0.0177
Unemployed	-0.116***	-0.210***
	0.0201	0.0505
Unemployment rate, t-1 x Unemployed		0.012*
		0.0057
Household type (ref. Single, no children)		
Single with children	0.010	0.009
	0.0378	0.0378
Partner, no children	0.025	0.024
	0.0133	0.0133
Partner, with children	0.041**	0.040**
	0.0153	0.0153
Constant	0.185	0.181
	1.2495	1.1015
Fixed effects election year	Yes	Yes
Variance components		
Intercept	0.044	0.045
Residual	0.703	0.703
Unemployed		0.003
Covariance		-0.011
N	35,295	35,295

Note: The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 12. Electoral information: Placement of pre-existing parties (Models 1 and 2) and new parties and party coalitions (Models 3 and 4)

	(1)	(2)	(3)	(4)
Baseline information levels	0.943***	0.913***	-0.010	-0.006
	0.1488	0.1437	0.0372	0.0354
ΔUnemployment rate since 2006	0.006*	0.005	0.006***	0.006***
	0.0031	0.0031	0.0006	0.0006
Female	-0.061***	-0.061***	0.006**	0.006**
	0.0093	0.0093	0.0019	0.0019
Age	0.003	0.003	0.000	0.000
	0.0017	0.0017	0.0003	0.0003
Age (sq.)	-0.000	-0.000	0.000	0.000
	0.0000	0.0000	0.0000	0.0000
University degree	0.240***	0.240***	-0.004	-0.004
	0.0132	0.0132	0.0026	0.0026
Occupation status (ref. Working full-time)				
Not in labor force	-0.084***	-0.085***	0.001	0.001
	0.0139	0.0139	0.0028	0.0028
Student	0.606***	0.608***	-0.005	-0.005
	0.0838	0.0838	0.0167	0.0167
Works part time	-0.025	-0.025	-0.007	-0.007
	0.0180	0.0180	0.0036	0.0036
Unemployed	-0.117***	-0.114***	0.002	0.001
	0.0205	0.0214	0.0041	0.0043
ΔUnemployment x Unemployed		0.006		0.002
		0.0058		0.0012
Household type (ref. Single, no children)				
Single with children	0.010	0.010	-0.000	-0.001
	0.0384	0.0384	0.0076	0.0076
Partner, no children	0.023	0.023	0.002	0.002
	0.0136	0.0136	0.0027	0.0027
Partner, with children	0.037*	0.037*	0.004	0.004
	0.0155	0.0155	0.0031	0.0031
Constant	0.427	0.680	0.073	0.043
	1.2332	1.1907	0.3080	0.2933
Fixed effects election year				
Variance components				
Intercept	0.042	0.043	0.003	0.003
Residual	0.725	0.725	0.029	0.029
Unemployed		0.001		0.00001
Covariance		-0.005		-0.003
N	35285	35285	35285	35285

Note: The dependent variable is estimated based only on parties that competed in the previous electoral cycle. The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 13. Electoral information: ΔUnemployment from baseline wave

	(1)	(2)
Baseline information levels	0.929***	0.899***
	0.1598	0.1530
ΔUnemployment rate since baseline wave	0.011***	0.011***
	0.0030	0.0030
Female	-0.055***	-0.055***
	0.0092	0.0092
Age	0.003	0.003
	0.0017	0.0017
Age (sq.)	-0.000	-0.000
	0.0000	0.0000
University degree	0.236***	0.235***
	0.0130	0.0130
Occupation status (ref. Working full-time)		
Not in labor force	-0.083***	-0.084***
	0.0137	0.0137
Student	0.600***	0.602***
	0.0825	0.0825
Works part time	-0.031	-0.032
	0.0177	0.0177
Unemployed	-0.116***	-0.110***
	0.0201	0.0214
ΔUnemployment x Unemployed		0.003
		0.0043
Household type (ref. Single, no children)		
Single with children	0.010	0.010
	0.0378	0.0378
Partner, no children	0.025	0.024
	0.0134	0.0133
Partner with children	0.041**	0.041**
	0.0153	0.0153
Constant	0.537	0.783
	1.3238	1.2679
Fixed effects for year	Yes	Yes
Variance components		
Intercept	0.049	0.050
Residual	0.703	0.703
Unemployed		0.001
Covariance		-0.006
N	35,295	35,295

Note: Change in unemployment is estimated with respect to the year of the CSES wave used as pre-crisis baseline of information levels and lagged to *t-1*. The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 14. Electoral information: Country-level controls for electoral system

	(1)	(2)
Baseline information levels	1.646**	1.540**
	0.5062	0.4686
ΔUnemployment rate since 2006	0.017***	0.016***
	0.0032	0.0032
Female	-0.055***	-0.055***
	0.0092	0.0092
Age	0.003	0.003
	0.0017	0.0017
Age (sq.)	-0.000	-0.000
	0.0000	0.0000
University degree	0.232***	0.231***
	0.0130	0.0130
Occupation status (ref. Working full-time)		
Not in labor force	-0.083***	-0.084***
	0.0137	0.0137
Student	0.601***	0.602***
	0.0825	0.0825
Works part time	-0.032	-0.032
	0.0177	0.0177
Unemployed	-0.117***	-0.112***
	0.0201	0.0214
ΔUnemployment x Unemployed		0.003
		0.0043
Household type (ref. Single, no children)		
Single with children	0.010	0.010
	0.0378	0.0378
Partner, no children	0.025	0.025
	0.0133	0.0133
Partner with children	0.041**	0.041**
	0.0153	0.0153
ENEP, log	-0.489***	-0.469***
	0.0935	0.0909
PR system	0.104	0.225
	0.4326	0.3930
Majoritarian system	1.460*	1.637**
	0.6419	0.6015
Bicameral legislature	-0.029	-0.083
	0.3349	0.3077
Compulsory voting	.	.
Constant	-4.771	-4.004
	4.2353	3.9224
Fixed effects for year	Yes	Yes
Variance components		
Intercept	0.307	0.295
Residual	0.702	0.702
Unemployed		0.001
Covariance		-0.015
N	35,295	35,295

Note: The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 15. Electoral information: Personal economic hardship operationalized as income quantile

	(1)	(2)
Baseline information levels	0.937***	0.903***
	0.1474	0.1417
ΔUnemployment rate since 2006	0.017***	0.022***
	0.0032	0.0064
Female	-0.064***	-0.063***
	0.0100	0.0100
Age	-0.001	-0.001
	0.0018	0.0018
Age (sq.)	0.000	0.000
	0.0000	0.0000
University degree	0.194***	0.193***
	0.0141	0.0141
Occupation status (ref. Working full-time)		
Not in labor force	-0.039*	-0.039*
	0.0153	0.0153
Student	0.367***	0.365***
	0.0922	0.0923
Works part time	0.018	0.019
	0.0189	0.0189
Unemployed	-0.031	-0.037
	0.0225	0.0226
Income quantile	0.060***	0.065***
	0.0042	0.0097
ΔUnemployment x Income		-0.002
		0.0018
Household type (ref. Single, no children)		
Single with children	-0.033	-0.023
	0.0398	0.0398
Partner, no children	-0.048**	-0.032*
	0.0152	0.0157
Partner with children	-0.038*	-0.019
	0.0174	0.0178
Constant	0.448	0.693
	1.2219	1.1750
Fixed effects for year	Yes	Yes
Variance components		
Intercept	0.041	0.068
Residual	0.662	0.661
Income quantile		0.001
Covariance		-0.006
N	28,475	28,475

Note: The table presents estimates from mixed-effects logistic regressions. ‡ $p < 0.01$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 16. Electoral information: Control for Voted for PM's party or governing incumbent party

	(1)	(2)	(3)	(4)
Voted PM's party	0.032**	0.032**		
	0.0123	0.0123		
Voted for incumbent party			0.070***	0.070***
			0.0105	0.0105
Baseline information levels	0.970***	0.961***	0.980***	0.987***
	0.1843	0.1841	0.1954	0.1952
ΔUnemployment rate since 2006	0.012***	0.011***	0.014***	0.013***
	0.0030	0.0030	0.0030	0.0030
Female	-0.039***	-0.039***	-0.050***	-0.050***
	0.0098	0.0098	0.0095	0.0095
Age	0.002	0.003	0.003	0.003
	0.0018	0.0018	0.0017	0.0017
Age (sq.)	-0.000	-0.000	-0.000	-0.000
	0.0000	0.0000	0.0000	0.0000
University degree	0.226***	0.225***	0.237***	0.236***
	0.0139	0.0139	0.0132	0.0132
Occupation status (ref. Working full-time)				
Not in labor force	-0.072***	-0.073***	-0.074***	-0.074***
	0.0149	0.0149	0.0144	0.0144
Student	0.522***	0.524***	0.549***	0.552***
	0.0902	0.0902	0.0870	0.0870
Works part time	-0.041*	-0.040*	-0.028	-0.028
	0.0199	0.0199	0.0181	0.0181
Unemployed	-0.118***	-0.121***	-0.118***	-0.118***
	0.0206	0.0207	0.0204	0.0205
ΔUnemployment x Unemployed		0.012*		0.011
		0.0056		0.0056
Household type (ref. Single, no children)				
Partner, no children	-0.018	-0.018	-0.016	-0.016
	0.0394	0.0394	0.0385	0.0385
Partner with children	0.020	0.020	0.016	0.015
	0.0137	0.0137	0.0137	0.0137
Partner with children	0.035*	0.034*	0.032*	0.031*
	0.0159	0.0159	0.0156	0.0156
Constant	0.178	0.251	0.097	0.037
	1.5340	1.5327	1.6269	1.6249
Variance components				
Intercept	0.0573	0.0573	0.0648	0.0652
Residual	0.6510	0.6509	0.6520	0.6519
Unemployed		0.00003		0.0001
Covariance		0.0014		-0.0018
N	28,750	28,750	30,914	30,914

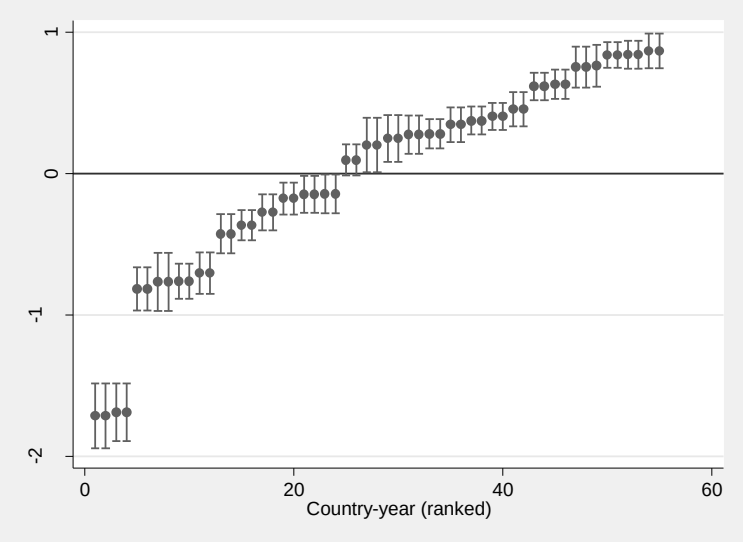
Table 17. Economic information: Controls for prior occupation

	(1)	(2)
Baseline information levels	2.100*	2.108*
	0.8643	0.8366
Female	-0.366***	-0.367***
	0.0258	0.0258
Age	0.032***	0.032***
	0.0050	0.0050
Age (sq.)	-0.000***	-0.000***
	0.0000	0.0000
University degree	0.010***	0.010***
	0.0017	0.0017
Household type (ref. Single, no children)		
Partner, no children	-0.030	-0.028
	0.0607	0.0608
Partner with children	0.136***	0.135***
	0.0335	0.0335
Partner with children	0.049	0.049
	0.0360	0.0360
Occupation status (ref. Working)		
Not in labor force	-0.153***	-0.152***
	0.0384	0.0384
Student	0.093	0.097
	0.0829	0.0828
Unemployed	-0.395***	-0.387***
	0.0817	0.0844
Unemployed *x* ΔUnemployment		0.028*
		0.0125
ΔUnemployment since 2007	0.159***	0.157***
	0.0065	0.0066
Prior occupation (ref. working)		
Self-employed	0.399**	0.234
	0.1489	0.1642
Managers	0.133	-0.055
	0.1541	0.1739
Other white collar	0.076	-0.111
	0.1199	0.1421
Manual workers	-0.011	-0.217
	0.2336	0.2490
Other: House, Retired, Student	-0.220	-0.538
	0.3411	0.3712
Wave 2015	-0.355***	-0.343***
	0.0371	0.0374
Constant	-2.911***	-2.912***
	0.3093	0.3029
Variance components		
Intercept	0.4181	0.4228
	0.1143	.1156
Unemployed		0.0042
		0.0085

Covariance		-0.0422
		0.0440
N	36348	36348

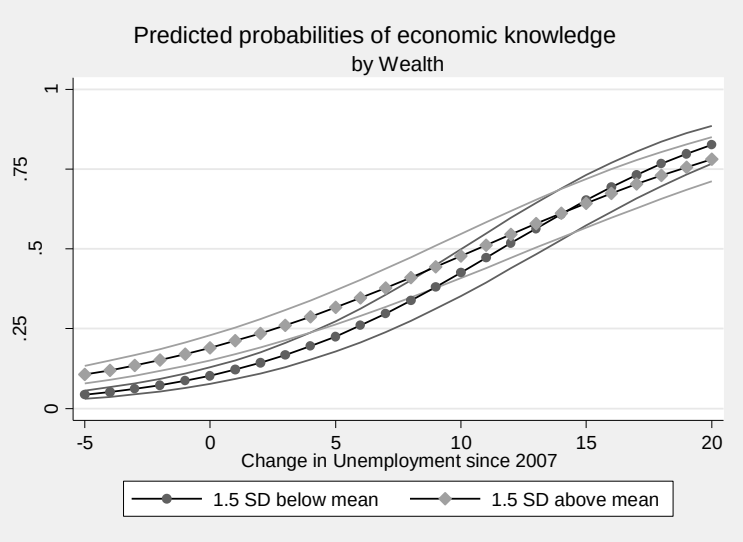
Figures

Figure 1 . Economic information: Caterpillar plot of country-level residuals with 95% confidence intervals



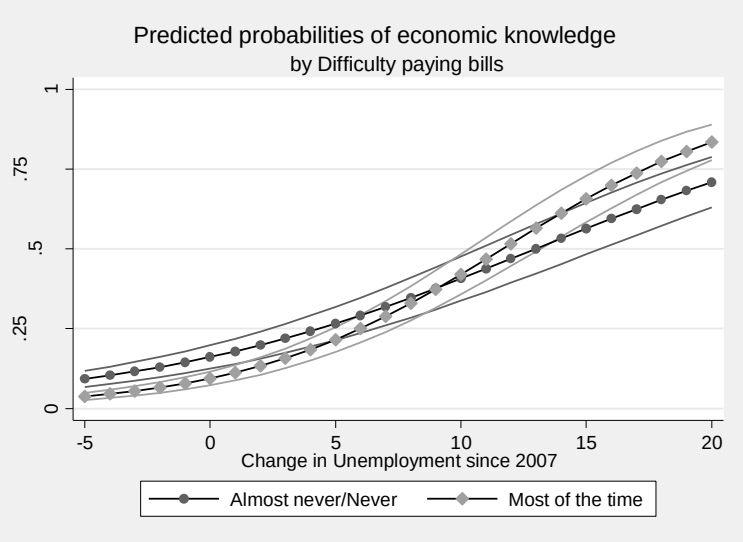
Note: The caterpillar plot shows country-level residuals from Model 3 in Table 3 for each country-year. These residuals represent departures from the overall mean (horizontal line at 0). Four country-years stand out as outliers: Slovenia-2009, Slovenia-2015, Poland-2009 and Poland-2015 (bottom left).

Figure 2. Predicted probability of economic information by wealth



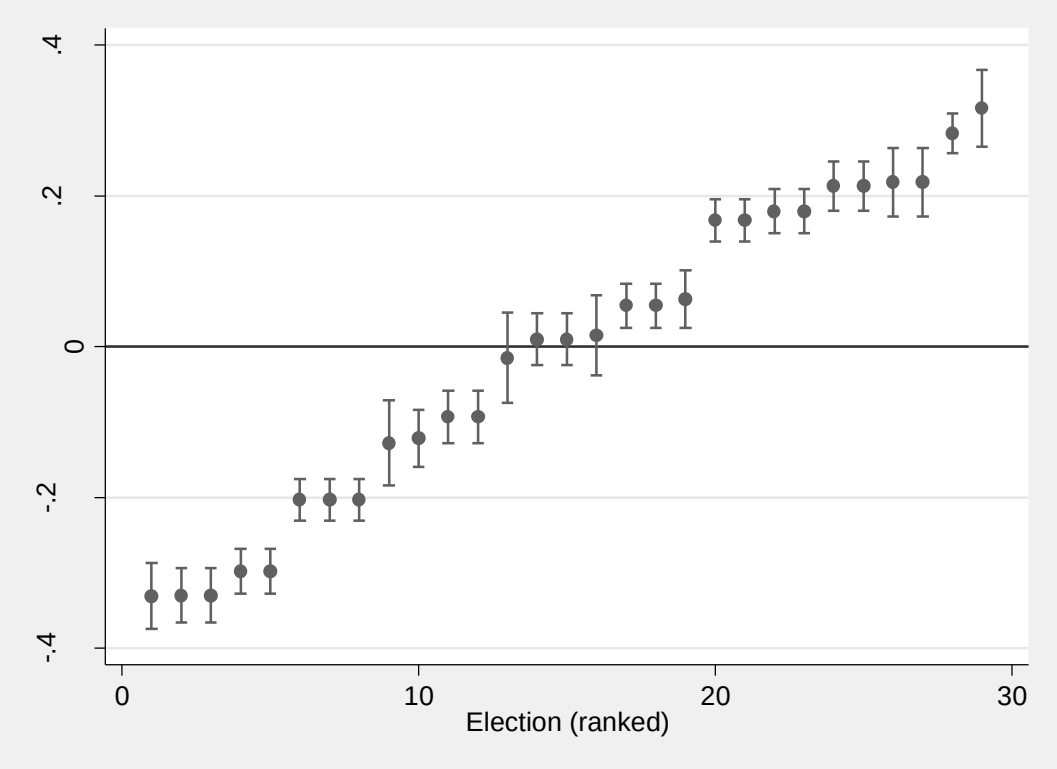
Note: Predicted probabilities of economic information by change in unemployment and wealth (1.5 standard deviations below and above the mean). When unemployment increases by more than 3%, there predicted probabilities for the two groups are not statistically different. Estimations are based on Model 3 in Table 7.

Figure 3. Predicted probability of economic information by difficulty paying bills



Note: Predicted probabilities of economic information by difficulty paying bills (Almost never and Most of the time). When unemployment increases by more than 2%, there predicted probabilities for the two groups are not statistically different. Estimations are based on Model 4 in Table 7.

Figure 4. Electoral information: Caterpillar plot of country-level residuals with 95% confidence intervals



Note: The caterpillar plot shows country-level residuals from Model 3 in Table 8 for each election. These residuals represent departures from the overall mean (horizontal line at 0). No country-years stand out as outliers.