The Financial Drivers of Populism in Europe*

Luigi Guiso† Helios Herrera‡ Massimo Morelli§ Tommaso Sonno¶

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Abstract

The financial crisis has led to economic insecurity among segments of the population that were unaffected by the earlier globalization and immigration shocks. We identify a specific channel through which this in turn fostered populism in Europe. To establish causality, we use a pseudo-panel analysis and instrument the economic insecurity of different cohorts by leveraging a new methodology designed to highlight the variation in sensitivity to financial constraints by occupation. On the supply side, we examine policy positions of old and new parties in order to show that the prevalence populism became much higher immediately following the financial crisis.

Keywords: Populism Demand & Supply; Financial Crisis; Age-Earning Profiles.

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†Einaudi Institute for Economics and Finance, and CEPR

‡Warwick University, and CEPR

§Bocconi University, IGIER, Baffi CAREFIN, and CEPR

¶University of Bologna, and CEP (LSE)

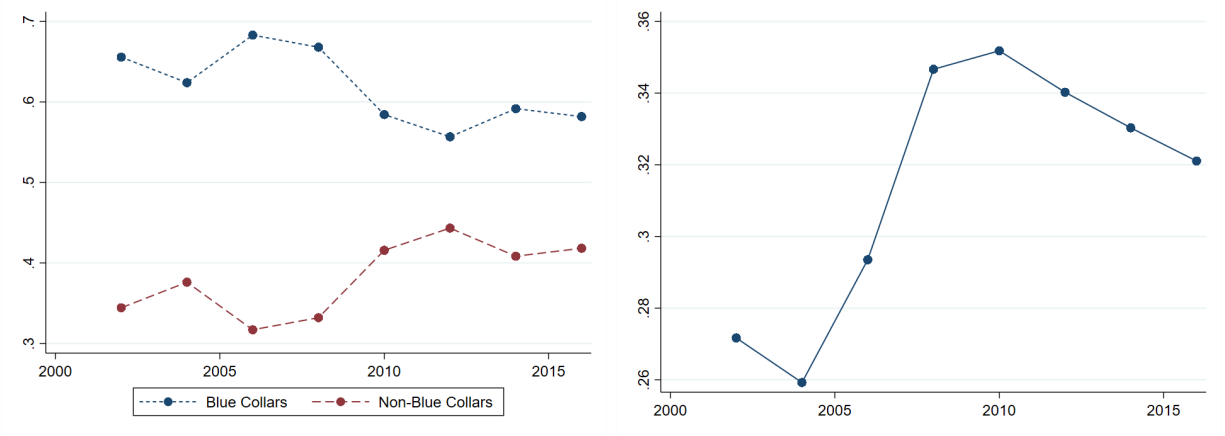
The recent financial crisis and resulting great recession is viewed as a major factor in the spread of populism in Europe during the 21st century. Much of the literature on populism has sought to examine the effect of immigration, globalization and automation on job destruction, primarily among low skilled workers. This is thought to have created voter disillusion in liberal democracies, gradually transforming the demand for policies. In this context, the financial crisis has been treated as yet another factor that enhanced voter appetite for populist policies as a response to economic insecurity. However, this approach has tended to ignore the peculiar effects and consequences of the financial crisis per se on the support for populist parties, particularly among the segments of society most affected by the financial crisis. Indeed, financial crises are fundamentally different processes than globalization, robotization and immigration, which are largely irreversible secular trends. They are, in fact, business cycle events and their effect fades in the medium term. We show that their political consequences are in fact more long-lasting.

The effects of globalization and automation on some segments of society are not uniformly negative: there are of course losers, but undoubtedly there are also winners. Apart from the inequality generated by job destruction and lower wages among workers affected by foreign competition or automation, consumers as a whole have benefited from lower prices of final goods and and firms intermediate inputs. This cannot be said of financial crises. It is difficult to think of a beneficial effect that a recession might have. Thus, most people, across the entire spectrum of the voter population, lose out. Income losses tend to be deep and universal. Hence, the discontent fostered by the resulting economic insecurity tends to be more pervasive and thus more politically relevant.

The first thing to note about the financial crisis is that the economic insecurity following the onset of the crisis in 2008 spread to segments of the population that were less affected by the globalization shock. Figure 1, panel (a) shows the share of blue collar and non-blue collar workers in the top quartile of economic insecurity in each year of our sample. Prior to the financial crisis, when globalization was the main source of economic insecurity, blue

collar workers were those predominantly experiencing a high level of insecurity (66% on average); during the years after 2008 the share of non-blue collar increases substantially (by more than 8 percentage points) compared to the years prior to the financial crisis.

Figure 1: Insecurity among blue collar workers and members of the middle class



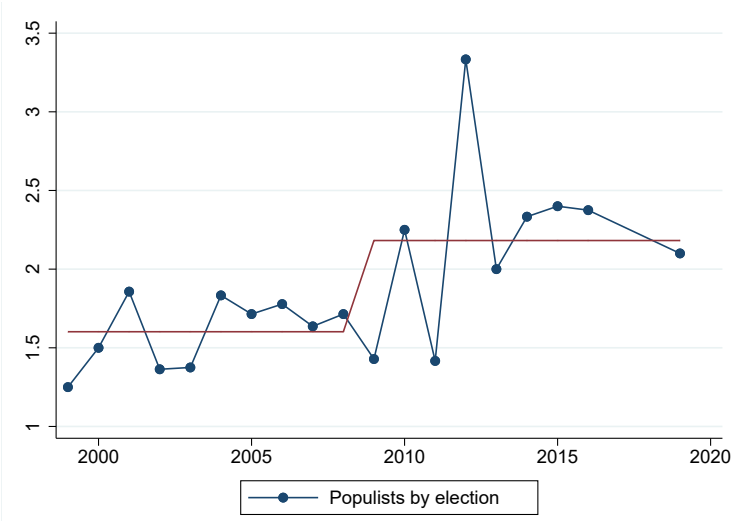
(a) Blue Collar (b) Middle Class

Notes: Panel (a) plots the share of blue collar and non-blue collar workers in the top quartile of economic insecurity during the sample period. Panel (b) shows the share of people in the mid-50% of the distribution of income in each country-wave.

Panel (b) shows that the financial crisis increased economic insecurity also among the middle class, as shown by the average share of people in the mid-50% of the distribution of income in each country-year. Thus the share of middle class voters suffering from serious economic insecurity, i.e. in the top quartile of insecurity, climbs during the years of the great recession. Thus, the financial crisis not only increased insecurity among social strata that were already distressed by globalization and other processes prior to the crisis (typically low skilled workers at the bottom of the income distribution) but it also extended insecurity to segments of the population that had been relatively sheltered from globalization.

The aforementioned phenomenon broadened the pool of disillusioned voters, thus prompting political parties with platforms offering protection for all to enter the political arena. On the supply side, Figure 2 plots the average number of populist parties participating in elections up to 2008 and in subsequent years. It is clear that the great recession marks a watershed in terms of the supply of populist parties competing for voters.

Figure 2: Populist parties



Notes: The graph shows the number of populist parties (in blue) and the average number of populist parties (red line) actively participating in elections.

Up until 2008 an average of 1.7 populist parties took part in an election with no clear trend over time. In the years following 2008, the average number of participating populist parties jumps to 2.4 – a 33% increase compared to the pre-crisis mean – with a spike in the 2012 elections. In sum, the financial crisis appears to mark a structural break in the supply of populist parties.

In advanced Western countries where both firms and households are heavily dependent on financing, a financial collapse can represent an existential threat. Put another way, borrowing provides an important buffer against income shocks in these economies. However, obtaining credit becomes more difficult in a financial crisis, as markets stop working smoothly and financial constraints become tighter. In addition, the accompanying fall in asset pricesreduces the value of precautionary savings, thus limiting people's ability to cope with the economic insecurity.[1] In order to understand the effect this had on voters, we use the European Social Survey (ESS), which is conducted in repeated cross-section waves.

[1]On the contrary, up until the financial crisis, financial markets were intact and credit abundant implying that some of the people hit by the first wave of globalization could use borrowing or their own savings when asset prices were still high. The dramatic spike in the bond spread during the years of the European sovereign debt crisis demonstrates quite clearly how difficult it became for governments to secure funding to run their programs during the financial crisis relative to the globalization years.

The date is used to conduct an instrumented pseudo-panel analysis of the economic and financial drivers of change in political attitudes and voter behavior in Europe during the financial crisis and subsequently.

Our main insight is that economic insecurity triggered by the financial crisis had a causal effect on turnout and on voting choices. Financial shocks specifically hamper the ability to borrow, which particularly affect segments of the middle class characterized by steep age-earnings profiles. This, in turn, significantly expands the pool of voters seeking economic support and who are at the same time losing confidence in the ability of the government to deliver such support. In view of this disappointment in traditional politics, there is likely to be an increase in voter abstention especially among those who had not been seriously affected previously by globalization. Meanwhile, those who were subject to previous crises as well are the most likely to vote for a populist party.

In order to establish a causal link between the financial crisis and economic insecurity, trust in politics and voter abstention, we build a novel instrumental variable that leverages the idea that financial crises are most damaging to individuals who depend more on borrowing to buffer income shocks and thus to manage economic insecurity. Dependence on borrowing is a function of the steepness of an individual's age-earnings profile: people with a steeper profile must rely more on borrowing to smooth consumption, which makes them more vulnerable to financial shocks. The cohorts of respondents to the European Social Survey over time and across countries vary in their distribution by occupation. Furthermore, we find marked differences between occupations in the steepness of the age-earnings profiles. Thus, there will be heterogeneity in the sensitivity to a financial crisis across occupations. Using heterogeneity in the steepness of the age-earnings profiles, we construct a shift-share instrument where the shifter is the aggregate economic shock affecting a country, the share is the weighted average sensitivity/dependence on borrowing by cohort, and the weights are the shares of each occupation within the cohort.

The results show that the instrument has a strong predictive power on both the self-

reported, as well as the wage-based, measures of economic insecurity. In turn, in IV regressions (that also control for cohort fixed effects as well as for country and time fixed effects) shocks to instrumented economic insecurity tend to cause a reduction in voter turnout and to increase populist voting (conditional on turnout). The effects on voter behaviour along all three dimensions are significant in magnitude: an increase of one standard deviation in economic insecurity increases populist voting by 7 percentage points, which is about 94% of the sample mean and it lowers turnout by more than 8 percentage points (about 10% of the sample mean).[2]

The demand analysis described above suggests that the financial crisis may indeed have been the moment of maximum entry and transformation of parties on the supply side, which gave disillusioned voters new hope. To investigate this hypothesis we conduct a novel analysis of the dynamics of the supply of populist parties in Europe. We first examine the manifestos of all European parties, distinguishing between long-lived parties (existing both before and after the financial crisis) from the parties that disappeared or emerged at the time of the crisis. The first order conclusion is that the 2008 financial crisis led to a large discontinuous jump in the number of populist platforms. Thus, as a result of the crisis, old parties left the arena and new populist ones entered. Furthermore, other parties became populist. Moreover, we find that this phenomenon occurred particularly in in countries with a shrinking fiscal space, and especially those on the left of the political spectrum. We interpret this finding to be saying that a shrinking fiscal space has dramatically different effects on left-oriented versus right-oriented parties. It also reduces the feasibility and thus the credibility of protection policies that are focused on the supply of expensive public goods and on redistributive spending. Hence the traditional leftist parties suffered the most in terms of credibility, leading to the exit of traditionally leftist parties, and the entry of new parties such as the Five Star Movement in Italy and Podemos in Spain. The nationalism and identity protection policies championed by right-wing parties did not need

[2]In Appendix E, we also show that it lowered trust in political parties by as much as 35% of the sample mean.

to be altered because they were less dependent on the level of public spending. Thus, nationalist or far-right ideologies do not need to change in a financial and/or fiscal crisis; in contrast, such crises force a shift on the left from (unaffordable) redistributive platforms towards protection rhetoric. This creates an advantage for right leaning parties which are able to advocate the same policies and measures that depend less on public spending.

In order to define a European party as populist in a given year, we rely on the PopuList proposed by Rooduijn et al. (2019), which is available at *www.popu-list.org*. This classification is consistent with both the ideational approach and the political strategic approach to defining populism.[3] Accordingly, the people-vs-elite rhetoric is a straightforward manifestation of populism, which is also the most common measure used in empirical work (Pauwels, 2011; Hawkins and Littvay, 2019; Gennaro et al., 2021; Di Cocco and Monechi, 2021).

There is an immense literature on the economic and cultural causes of populism.[4] For our purposes, we focus on the strands of this literature related to the financial crisis and to the role of the fiscal space. Correlations between a financial crisis and some of the key political variables we use are reported in the literature. Thus, Foster and Frieden (2017) present the correlation between distrust measures and debt using the Eurobarometer survey, Algan et al. (2017) show that in elections after 2008 the regions where unemployment rose and saw the sharpest decline in the trust placed in institutions and traditional politics, while Dustmann et al. (2017) show that in the the aftermath of the crisis, the distrust of European institutions was correlated with the populist vote. Using the age-earnings profiles

[3]The "ideational" approach defines populism as a thin-centered ideology that portrays society as divided into "pure people" and the "corrupt elite", arguing that politics should be the expression of the will of the people. The political-strategic approach considers populism to be a political strategy employed by politicians in the attempt to "win and exercise power" (Mudde, 2004; Weyland, 2001, 2012) while creating unmediated ties between the leader and voters (Weyland, 2017).

[4]For a review of the literature on the demand for populism, see for example Gidron and Bonikowski (2013) and Mudde and Kaltwasser (2017). The most recent survey in economics is Guriev and Papaioannou (2021). Norris and Inglehart (2019) highlight the relevance of cultural backlashes, which clearly occur simultaneously with an increase in economic insecurity. However, the competition between economic and cultural drivers of populism is of less interest in our context. Note also the methodological caveats against trying to distinguish between them Margalit (2019).

typical of different occupations, we are able to directly identify the channel through which the specific features of the financial crisis (primarily the inability to borrow) impacted each cohort of citizens in Europe. We are therefore able to provide evidence of causal effects, by differentiating such effects across cohorts with different occupational distributions.

There is an interesting literature on financial crises as determinants of extremism (see, for example, Funke et al. (2016), and Galofré-Vilà et al. (2021)).[5] Our analysis of the 2008 financial crisis emphasizes their impact on the political orientation and feasibility of policy platforms on either side of the political spectrum, rather than focusing on extremism specifically.[6] Voth et al. (2020) were the first to present causal evidence that a financial crisis can fan extreme right populism, based on variation in failing banks in Germany prior to the 1932 elections. In contrast to their findings, we show that the financial crisis in 2008 shifted politics in the direction of populism in a broader scale, rather than only on the right. Indeed, the transformation after 2008 occurred primarily on the left.[7] Furthermore, our method of identification makes it possible to zoom in on the heterogeneous impact of the financial crisis by occupation and to identify the mechanism that creates economic insecurity, regardless of pre-existing anti-Semitism or some similar types of ideology.

On the relevance of the fiscal space, Arias and Stasavage (2019) and Fetzer (2019) look at the political costs of austerity politics, although they ignore the dynamic transformation we focus on. Indeed, we find that it is precisely in the countries with the smallest fiscal space that the financial crisis had a greater impact on politics (and especially on the left).

Rodrik (2018) traces the increase in populism to the globalization shock. While this may be true when considered in isolation and for specific events,[8] Guiso et al. (2019) show

[5]For a related literature on the effects of financial hardship on political participation, see Schaub (2021) and references therein.

[6]A well-known signaling theory that links populism to extremism can be found in Acemoglu et al. (2013).

[7]Gyongyosi and Verner (forthcoming) emphasize the effectiveness of debt relief policies to attract populist voters towards far-right parties in the case of Hungary, while we show that for Europe as a whole the political transformation caused by the financial crisis occurred mostly on the left.

[8]Autor et al. (2020); Colantone and Stanig (2018b,a); Jensen and Bang (2017) are clear examples of well-identified effects of the China shock on specific manifestations like Brexit.

that globalization shocks alone cannot account for the cross-country pattern of populism in Europe. They show that the interaction of globalization with an euro-dummy accounts for the large majority of the explanatory power, and, in the presence of such an interaction variable, globalization shocks alone have little effect. In section 5 we show that whereas the supply of populism displays a discontinuous jump in 2008, there was no similar increase in 2004, the year of the globalization shock due to the expansion of the EU. Moreover, while globalization primarily reduced trust in free markets, the conjunction of the financial crisis and shrinking fiscal space reduces trust in all other institutions as well. It is the collapse of confidence in representative democracy that increases the demand and supply of simple protection commitment policies like walls, protectionism, and Brexit (see Morelli et al. (2021) for a commitment theory of populism that can deliver such a prediction).

1 Data

The individual data is primarily drawn from the European Social Survey (ESS), which systematically tracks socioeconomic status, opinions, and attitudes. It is carried out in all European countries as repeated cross-sections, though not every country participates in every wave. To study the dynamics of populist party support, we use all eight waves up to 2016. We extract from them a synthetic panel after grouping people into 14 5-year birth cohorts of men and women in each country, as in Deaton (1985). These waves cover the full cycle preceding and following the financial crisis. By 2016, almost all European countries had recovered to the levels of income prevailing in 2006 and, as we will show, by 2016 individual economic insecurity was back down to pre-crisis values. Table 1 presents the descriptive statistics.[9]

Voter choice and turnout. The ESS asks respondents whether they voted in the last parliamentary election in their country and which party they voted for. This provides us with an indicator of turnout and an indicator of voting for a populist party. The method

[9] A more detailed description of the data used can be found in Appendix A.

Table 1: Descriptive statistics

	Obs.	Mean	St. Dev	Median
ESS Dataset				
Economic Insecurity (PC)	2,310	0.22	0.09	0.22
Instrument	2,310	2.48	0.60	2.59
Turnout	2,310	0.80	0.12	0.83
Populist Vote	2,310	0.08	0.11	0.03
Trust Parties	1,981	3.41	1.10	3.32
Trust Politician	2,310	3.46	1.06	3.39
Trust Parliament	2,310	4.30	1.15	4.28
Trust (PC)	1,981	0.34	0.11	0.34
Importance Adventure	2,310	4.13	0.54	4.12
Population Region (thousands)	2,310	2262	2295	1223
TV Total	2,310	4.41	0.76	4.39
TV Politics	2,310	2.19	0.57	2.12
Left-Right Orientation	2,310	5.16	0.61	5.15
Age	2,310	54.66	16.25	54.60
Education	2,310	11.93	2.37	12.44
EU-SILC Dataset				
Age	3,097,970	48.49	18.56	48.00
Income	1,053,770	12734	14583	9376
Marital status	3,079,617	0.56	0.50	1.00
Education	3,004,680	2.85	1.30	3.00

Notes: Authors' computations based on from the European Social Survey (ESS) data, and the European Union Statistics on Income and Living Conditions (EU-SILC) data.

for identifying these parties is described in detail below.[10]

Age earnings profiles. As discussed in Section 4, constructing the instrument for economic insecurity requires individual panel data with well-measured labor income for each European country in the sample. This is obtained from the European Union Statistics on Income and Living Conditions (EU-SILC), which covers the period from 2003 to 2012. The main purpose of the EU-SILC is to collect information over time on labor market experiences and outcomes for a representative panel of individuals in each European country. In particular, it collects annual data on employment spells and labor earnings, apart from a wealth of demographic characteristics. Since we know the year of birth, gender and country of the respondents, we can use EU-SILC to retrieve several variables for our synthetic panel, particularly β_k, the steepness of the age-earnings profiles for each occupation k, and

[10]Responses to the ESS do not necessarily correspond to the respondents' actual choices. The correlation between turnout in the ESS and actual turnout is however quite high at 78%. The correlation between ESS votes for populist parties conditional on participation and the actual voting choice is even higher at 80%.

s_{jkc}, the occupation weights for each cohort and country prior to the 2008 financial crisis.

Controls. Two proxies for voters' ability to understand the pitfalls of the populist platforms are used as controls: education and a measure of attention devoted to politics (details in Appendix A). Voting for an anti-establishment party may entail some risk and therefore may appeal more to risk-loving voters. Similarly, sensitivity to policies that offer short term protection at the expense of long term benefits likely depends on individuals' subjective discounting. Four age dummies for cohort age quartile are used as a proxy for subjective discounting, on the assumption that older people are less likely to bear the future cost of current policies. The ESS indicator of whether people consider it important to avoid taking risks is used as a proxy for risk tollerance. In all the regressions, we control for political orientation, as measured on a scale from 0 (far left) to 10 (far right).

Economic insecurity. We use three indicators from the ESS data to construct the economic insecurity variable: 1) whether the voter has been unemployed at some time in the past five years, thus forcing him to search for a new job; 2) a measure of financial distress, based on whether the respondent finds it hard to live on her current income;[11] and 3) an indicator of exposure to the business cycle, based on type of employment, industry and skill level, such that low-skilled workers in manufacturing are most exposed. The indicator takes a value of 1 if the individual is a blue-collar worker in manufacturing and 0 otherwise. We will find it useful to combine these three objective measures of financial and economic distress into a single composite index of economic insecurity. This will be done by taking the first principal component and rescaling it to vary between 0 (least insecure) and 1 (most insecure). By using this measure, we are agnostic about the specific factor causing economic insecurity. The index is on the rise in the early 2000s, presumably as a consequence of the globalization shock but notably, it jumps significantly with the onset of the financial crisis. Indeed, in 2010 and 2012 it is 20% higher that it was in the first wave

[11] Answers range from 1 (*"Living comfortably on present income"*) to 4 (*"Finding it very difficult on present income"*).

of the ESS in 2002. Economic insecurity reverts back to the level prevailing in 2002 after the 2014 wave, by which time most countries had recovered from the great recession.

Parties. To identify populist parties in Europe, we rely on the PopuList which was proposed by Rooduijn et al. (2019) and is available at *www.popu-list.org*. The PopuList is a list of populist European parties that obtained at least 2% of the votes in at least one national parliamentary election since 1998. Peer-reviewed by more than 30 academics, the list is kept up to date with changes in the classification of individual parties over time. Thus, it is a reliable source of information and well-suited to our needs. Rooduijn et al. (2019) base their classification of populist parties on criteria derived from the classic definition provided by Mudde (2004).[12] We were able to identify 121 populist parties in the sample of 30 countries examined. The full list of parties can be found in Appendix C.

Manifestos. The parties' policy positions were obtained from the Manifesto Project, which provides a content analysis of parties' electoral manifestos in electoral years. The data covers over a thousand political parties starting from 1945. It relies on textual analysis to identify a party's position on a large number of issues grouped into seven domains. The process yields a total of 56 variables. In order to examine the change in the parties' positions, we selected one manifesto prior to 2008 and one subsequent to 2008. More specifically, we choose the manifesto closest to 2006, but (strictly) before 2008, and the one closest to 2013, but (strictly) after 2008.

2 Voter Turnout/Abstention

Heterogeneity in voters' reaction to the crisis suggests that voter disappointment and abstention from voting played a crucial role in the surge of populism. In this section, we take an in-depth look at voter turnout, which has largely been neglected in the literature,

[12]Mudde (2004) defines a party as populist if (a) it endorses idea that society is ultimately separated into two homogeneous and antagonistic groups: "the poor" and "the corrupt elite," and (b) it argues that politics should be an expression of the general will of the people.

and how it interacts with economic insecurity and populist voting. The analysis here tends to be more descriptive, a stronger identification analysis is presented in the subsequent sections.

The pseudo-panel consists of 840 age/country/year-of-birth/gender groups/cohorts. Cohorts are relatively large, with an average of 358 observations and therefore measurement error in the cohort is likely to be negligible. Dropping cohorts with fewer than 50 observations (4.8% of the total) does not alter the results.

In Table 2, we split cohorts between left- and right-oriented individuals and compute average turnout in elections taking place before and after the financial crisis, and the consequent rise in economic insecurity. The table suggests that the drop in turnout took place entirely on the left. Thus, although voter turnout is on average higher among left-oriented voters, the crisis reduced their participation rate by 1.56 percent. In contrast, turnout among right-oriented voters hardly changed (and if anything increased slightly). This suggests that left-leaning voters suffered greater disappointment with traditional political parties, which was not tempered by the appearance of left-oriented populist parties.

Table 2: Decrease in voter turnout

	Left	Right
Pre	0.834	0.744
Post	0.821	0.746
% change	*-1.56%*	*0.27%*

Notes: The table shows the pre- and post-crisis average level of turnout among left- and right-oriented individuals, together with their relevant percentage change.

To better understand this phenomenon, we first compute the cohort-specific growth rate in abstention in the vicinity of the crisis by comparing the first election after the financial crisis with the last one before it, which is denoted as *abstention growth*$_{jct}$. We then create a country dummy that takes a value of 1 if in that period there is an increase in the number of populist parties available to voters, and denote it as *new populist party*$_{ct}$. With those variables in hand we estimate the following specification, and present the results in column

1 of Table 3:

$$abstention\ growth_{jct} = \delta_1 x_{jct} + \delta_2\ new\ populist\ party_{ct} + f_t + u_{jct} \quad (1)$$

where j is the cohort, c is the country, and t is time. The variable $\mathbf{x}_{jct}$ is a vector of time-varying voter controls (described in section 1), while f_t are wave fixed effects. In column 2 we replace *new populist party*$_{ct}$ with a somewhat different dummy, which takes a value of 1 when the number of leftists (rightist) populist parties available to left-leaning (right-leaning) voters increases in that period. Column 2 shows that this magnifies the effect on turnout. Apparently, the drop in turnout following the financial crisis shock is smaller in presence of a populist party on the same side of the political spectrum as the voter.

Table 3: Increase in voter abstention

	(1)	(2)
Dependent variable	Abstentionism growth rate	
Estimation	OLS	
New populist party	-0.561**	
	(0.271)	
New populist party same orientation		-0.784***
		(0.225)
Obs	659	659
Wave FE	Yes	Yes
Controls	Yes	Yes

Notes: OLS estimation. Dependent variable: Abstentionism growth rate (comparing the first election after the financial crisis with the last one before it). *New populist party* is a dummy equal to 1 if there is an increase in the number of populist parties for that country-year. *New populist party same orientation* is a dummy equal to 1 if there is an increase in the number of populist parties of the same orientation as the cohort for that country-year. In all regressions, we control for wave fixed effects, together with cohort-level time-varying controls described in section 1. Table A10 in Appendix H presents the control variables' coefficients. Errors are clustered at the cohort level.

This evidence reveals suggestive correlations that are consistent with the idea that the presence of populist parties mitigated the disappointment of voters on the left and the right, and reduced abstention but only if those populist parties had the same ideological orientation as the voter.

Table 4 enriches the evidence on the dynamics of voter turnout and choice by splitting the cohorts into two groups: high abstainers, denoted by *HA*, which are the cohorts in

each country with the highest abstention rate in the last election before the crisis[13] and the complement set of cohorts, denoted by O. We calculate the change in abstentionism for each of the two groups between the election and the election after it. Panel (a) shows that abstentionism increases by 9% in the O group relative to the pre-crisis level; in contrast, it falls by a remarkable 29% in the *HA group*. Panel (b) shows the mean vote shares received by populist parties in elections before and after the crisis for each group. Populist vote share increases by 32% in the O group, but increases by twice as much (65%) in the HA group, suggesting that populist platforms were particularly appealing to disappointed voters. In panel (c) and (d) we split the HA group into two, according to level of economic insecurity (EI).[14] Panel (c) indicates that the drop in abstentionism in the group HA is similar in both subgroups at about 30%. On the other hand, there is a huge difference between the two subgroups in terms of vote choice: voting for populist parties increases by more than 100% among voters with high EI, compared to only 20% among those with *low EI*. These data anecdotally suggest that when a populist alternative was available, disappointment translated into a remarkable increase in support for populist parties among the most insecure cohorts. This also motivated them to vote, thus driving abstentionism down. Put differently, the emergence of populist parties mitigated the drop in turnout due to disappointment with traditional parties. Furthermore, these additional votes tended to go to populist parties.

3 Empirical Framework and Identification Strategy

To complement the descriptive analysis above, we now test more rigorously whether increased economic insecurity during the great recession in Europe affected voter preference

[13] These individuals - who were already high abstainers even before the financial crisis - are likely to be those who had been particularly affected by previous economic shocks.

[14] *High-EI* cohorts are those above the median of economic insecurity, and *low-EI* cohorts constitute the complementary set.

Table 4: Abstentionism and economic insecurity

Panel (a): Abstentionism

	High Abstainers	Other
Pre	0.373	0.172
Post	0.263	0.188
	-29%	9%

Panel (b): Populist Vote

	High Abstainers	Other
Pre	0.054	0.072
Post	0.089	0.095
	65%	32%

Panel (c): Abstentionism

	High Abstainers - high EI	High Abstainers - low EI
Pre	0.450	0.290
Post	0.320	0.202
	-29%	-30%

Panel (d): Populist Vote

	High Abstainers - high EI	High Abstainers - low EI
Pre	0.057	0.050
Post	0.116	0.060
	104%	20%

Notes: In Panel (a) we compare the pre- and post-crisis average levels of abstentionism among *High Abstainers* (which contains for each country the cohorts with the highest abstention rate in the last election before the crisis) and *Other* (the complement set of cohorts). In Panel (b) we make the same comparison in terms of Populist Vote. In the last two panels we replicate the analyses on Abstentionism, Panel (c), and Populist Vote, Panel (d) but focusing on *High Abstainers* only, splitting them among *High Abstainers - high EI* (who are above the median of economic insecurity within the *High Abstainers* group) and *High Abstainers - low EI* (the complement set).

for populist parties and voter turnout. We estimate the following panel-data model:

$$v_{jct} = \gamma_1 x_{jct} + \gamma_2 EI_{jct} + f_j + f_c + f_t + u_{jct} \tag{2}$$

where v_{jct} is a generic outcome variable (voting for a populist party, turnout, or trust in the political system) for cohort j in country c in year t, $\mathbf{x}_{jct}$ is a vector of time-varying voter controls, EI_{jct} is the index of economic insecurity, and u_{jct} is an error term that varies across cohorts, countries and time. Unobserved heterogeneity is controlled for by the

cohort-specific fixed effects f_j. We also include country fixed effects (f_c) and wave fixed effects (f_t) in order to capture common trends in the outcome variables and in economic insecurity and systematic differences in both across countries.[15]

Any effect of economic insecurity on the outcome variable stems from the correlation between changes over time in the economic insecurity of the various cohorts and the corresponding change in the outcome variable. OLS estimation would produce a consistent estimate of the parameter γ_2, which captures the causal effect of economic insecurity on the outcome variable, only if, conditional on the controls and fixed effects, economic insecurity is uncorrelated with the error term. There are two reasons why this may fail: first, despite the presence of cohort-level time-varying controls, the control function may not capture all relevant variables that affect the change in the outcome and therefore some may end up in the error term and may be correlated with economic insecurity (known as omitted variable bias). The second realistic possibility is measurement error in economic insecurity. As we will discuss in the next section, we use various proxies to gauge individual economic insecurity, yet precisely because they are proxies they are likely to imperfectly capture the true state of an individual economic insecurity.

In order to address the above problems, and in order to focus on the financial sources of economic insecurity, we propose a new instrument. This involves exploiting the heterogeneity across members of the different cohorts in terms of exposure to the financial crisis, in order to generate the instrument and obtain exogenous variation in each cohort's economic insecurity. Specifically, we rely on the idea that individuals who are more dependent on external financing tend to be hit harder by the tighter restraints on borrowing during a financial crisis. To obtain a measure of dependence on external finance we leverage on the idea that individuals that face steeper age earning profiles need to borrow more intensively in order to smooth lifetime consumption. Accordingly, they suffer more when a financial

[15]Notice that we cannot control for time-country fixed effects. This is because the synthetic panel is constructed by averaging individual level variables by cohort-country-wave. Hence, the cohort fixed effects and the country-wave fixed effects will absorb all the variability in the data.

shock hits the economy compared to individuals with less steep income profiles. We exploit variation in the steepness of the income profile across types of occupations; e.g. originating by differences across occupations in education requirement, or on the job accumulation of human capital in the tradition of Becker (1962), and Mincer (1975).

3.1 Building the instrument

Let β_k denote the steepness parameter of the age-earnings profile of workers in occupation k and let s_{jkc} denote the share of workers that belong to cohort j in country c who are employed in occupation k, relative to all workers in the cohort at the beginning of our sample. Our instrument is then:

$$z_{jct} = y_{ct} \left(\sum_{k=1}^{K} \beta_k s_{jkc} \right) \tag{3}$$

where y_{ct} is country c's GDP in year t, which is set to 1 in 2008. Hence it captures the dynamics of GDP in a country relative to 2008 and differences across countries in terms of the crisis' impact on the country's economy. The instrument allocates the shock to a country's GDP among the various cohorts according to the relative importance of the various occupations in each cohort and the exposure of each occupation to financial shocks. Hence, when a country's GDP falls following the onset of a financial crisis, cohorts that have a higher incidence of occupations with greater dependence on external financing should experience a larger increase in economic insecurity. In other words, the instrument z_{jct} should correlate negatively with cohort economic insecurity EI_{jct}. In Section 4, we discuss in detail how the measures of β_k were obtained and how we constructed the instrument.

To build the instrument, we first use the EU-SILC panel data for the period 2003-2012 and estimate for each of the two-digit ISCO occupation codes (comprising 26 occupations)

the following model of labor income:

$$y_{ict}^{k} = \alpha_0^k + \alpha_1^k Z_{ict} + \beta^k log(age)_{ict} + f_i + f_t + \varepsilon_{ict}^k \tag{4}$$

where k is occupation, i is the individual, c is the country, and t is time. The variable y_{ict} is logged labor income, age_{ict} is the individual's age, and ε_{ict} is the residual shock to labor income. The model also includes an individual fixed effect f_i which captures relevant time-invariant individual characteristics, a vector Z_{ict} of controls which include time-varying individual demographics (marital status and education, which vary over time for some members of the sample), and year fixed effects (f_t) reflecting business cycle and aggregate productivity dynamics.

From this estimation, we retrieve the slope of the profile $\hat{\beta}^k$. The estimated values of β^k range from 1.99 to 4.37, with a mean of 3.18 and a standard deviation of 0.53, suggesting that there is a remarkable degree of heterogeneity in ISCO occupation age-earnings profiles. At age 40, an extra year on the job is associated with an increase in labor income that ranges from 5% in the occupation with the flattest profile to 11% in the occupation with the steepest. Table A4 in Online Appendix D lists the occupations and their relative $\hat{\beta}^k$.

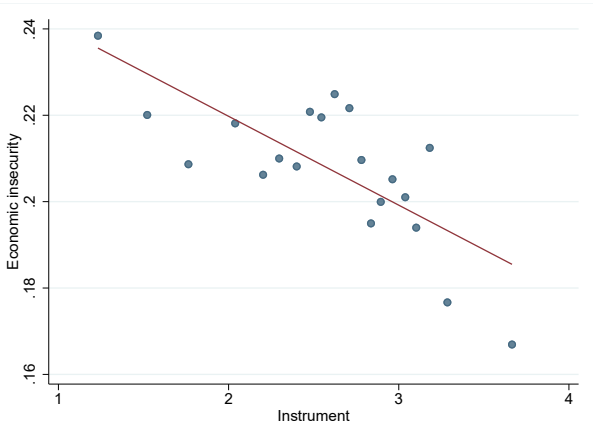
We next, use the EU-SILC 2003, 2004 and 2005 waves, for each cohort j and country c, to compute the weights $\hat{s}_{jkc}$, i.e. the share of workers in occupation k belonging to cohort j in country c, prior to the financial crisis shock. We then compute the instrument:

$$\hat{z}_{jct} = y_{ct} \left(\sum_{k=1}^{K} \hat{\beta}^k \hat{s}_{jkc} \right). \tag{5}$$

Figure 3 presents a bin scatter plot of the instrument plotted against the index of economic insecurity across the cohorts in our sample, highlighting a clear negative correlation between the instrument and economic insecurity. Thus, cohorts with a higher than average share of individuals in occupations characterized by steep age-earnings profiles experienced a greater increase in economic insecurity when the financial crisis reduced a country's GDP,

that is, when y_{ct} dropped below 1 in the years following the financial crisis.

Figure 3: The instrument and economic insecurity



Notes: The figure shows the bin scatter plot of the instrument (equation 5) against the index of economic insecurity across the cohorts in our sample.

Table 5 presents the results of regressing the instrument against economic insecurity, where the first column controls for cohort, country, and wave fixed effects, and the second adds the cohort-level time-varying controls described in Section 1, thus reproducing the first stage of our IV estimation. The instrument has the expected sign and is highly statistically significant, suggesting that we are likely to have enough power to use this instrument in regressions estimating the effect of economic insecurity on voting and the other outcome variables.

Table 5: Economic insecurity and populist vote - First stage

	(1)	(2)
Dep. Variable	Economic Insecurity	
Estimation:	OLS	
Instrument	-0.0380***	-0.0368***
	(0.00876)	(0.00865)
Obs	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes
Controls	No	Yes

Notes: OLS estimation. Dependent variable: Economic insecurity. *Instrument* is the variable computed as in equation 5. In both regressions we control for cohort, country, and wave fixed effects. In column 2, we add the cohort-level time-varying controls described in section 1. Table A11 in Appendix H includes the control variables' coefficients. Errors are clustered at the cohort level.

4 The Financial crisis and voter reaction

Voting populist. Table 6 presents the estimation results for model (2) where the outcome variable is the share of votes going to populist parties. The first two columns present the OLS estimates, where the first column controls for cohort, wave, and country fixed effects while the second adds the time-varying cohort controls described in Section 1. In both cases, a cohort's support for populist parties correlates positively with the variation over time in the level of economic insecurity experienced by the cohort in a particular country. The effect is highly statistically significant and of similar magnitude in both specifications. The other two columns show the 2SLS estimation results for the corresponding specification. The effect of economic insecurity on the populist vote is strongly positive and significant. The IV estimates show a larger effect than the OLS estimates, which is consistent with the idea that the index of economic insecurity imperfectly captures economic distress, thus resulting in attenuation bias in the OLS estimates. Based on the estimates in the last column, an increase of one standard deviation in economic insecurity leads to an increase in the populist vote of 7 percentage points, which is about 94% of the sample mean. The Kleibergen-Paap Wald F statistic reported at the bottom of the table indicates that the estimates do not suffer from a weak instrument problem.

Table 6: Economic insecurity and the populist vote

	(1)	(2)	(3)	(4)
Dep. Variable	Populist vote			
Estimation	OLS		2SLS	
Economic insecurity	0.0956***	0.128***	0.790***	0.850***
	(0.0301)	(0.0234)	(0.149)	(0.193)
Obs	2,310	2,310	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes
KP F			18.80	18.10

Notes: OLS estimation in columns 1 and 2, 2SLS estimation in columns 3 and 4. Dependent variable: Populist vote. *Economic insecurity* is the survey-based measure of economic insecurity. In all regressions we control for cohort, country, and wave fixed effects. In columns 2 and 4 we add also cohort-level time-varying controls described in section 1. Table A12 in Appendix H includes control variables' coefficients. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported for columns 3 and 4.

Voter Turnout. Table 7 shows the estimation results for voter turnout, based on OLS (column 1) and 2SLS (columns 2-4) estimates, including in all cases all the controls (cohort, wave, and country fixed effects and time-varying cohort controls). The results indicate that an increase in economic insecurity discourages people from voting. This is true for both the OLS estimates and the 2SLS estimates. As in the case of voting populist, the IV estimate of the effect of economic insecurity is much stronger than the OLS estimate, which is consistent with the presence of measurement error in the index of economic insecurity. From an economic perspective, the estimates in the second column imply that an increase of one standard deviation in economic insecurity reduces turnout by more than 8 percentage points, or about 10% of the sample mean.

The evidence is consistent with the idea that the economic insecurity resulting from the crisis led to disappointment with traditional political parties and as a result voters either became more receptive to populist anti-elite, and protectionist rhetoric and more likely to vote populist parties, or they became more inclined to abstain.

We next investigate whether the appearance of a populist party constitutes a valid alternative for disappointed voters, thus mitigating their tendency not to vote. In column 3, we add an indicator for whether a new populist party with the same orientations as the voters in the cohort exists in that country, as well as its interaction with the economic insecurity variable.[16] The results show that neither of the two variables is statistically significant. In column 4, we replace the indicator for a new populist party with one indicating whether or not a populist party appears *just after* the onset of the financial crisis. This is based on evidence, albeit weak, that the presence of a populist party of the same orientation pat the onset of the crisis reduces the tendency to abstain from voting. This suggests that political orientation matters and that a populist party can more easily attract the disappointed voters who share its ideology. Among such voters, the effect of economic insecurity on turnout

[16]A cohort is defined to be right-oriented if the average orientation of the cohort is above the median orientation in the country wave, and vice versa for left-orientation. This is then compared to the orientation of the populist party.

is 1/3 smaller (in absolute value) than among voters who do not share the orientation of the populist party (-0.976 as compared to -0.622, which is the difference between -0.976 and 0.354).

Table 7: Economic Insecurity and Voter Turnout

Dep. Variable	(1)	(2)	(3)	(4)
	Turnout			
Estimation	OLS	2SLS	2SLS	2SLS
Economic insecurity	-0.383***	-0.972***	-0.962***	-0.976***
	(0.0514)	(0.306)	(0.306)	(0.313)
Economic insecurity × New populist of same orientation			0.203	
			(0.188)	
Economic insecurity × New populist of same orientation post-crisis				0.354*
				(0.179)
New populist of same orientation			-0.0426	
			(0.0486)	
New populist of same orientation post-crisis				-0.0788*
				(0.0438)
Obs	2,310	2,310	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
KP F		18.10	8.97	8.94

Notes: OLS estimation in column 1, 2SLS estimation in columns 2-4. Dependent variable: Populist vote. *Economic insecurity* is the survey-based measure of economic insecurity. *New populist same orientation* is a dummy equal one if a new populist party exists in the country and whether it is of the same orientation as that of the voters in the cohort. *New populist same orientation post crisis* is a dummy assuming value one when the new populist appears just after the burst of the financial crisis. In all regressions we control for cohort, country, and wave fixed effects, together with cohort-level time-varying controls described in section 1. Table A13 in Appendix H includes control variables' coefficients. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported for columns 2-4.

Trust and Sensitivity Analysis. In Appendix E, we show how economic insecurity also triggered substantial distrust in politicians and political parties. Importantly, all these result survives several robustness checks (Appendix F), which include using alternative (data-driven and not self-reported) measures of economic insecurity (following Guvenen et al., 2014), potential non-random exposure to the shocks (Borusyak and Hull, 2020), and different clustering of the standard errors and/or different fixed effects schemes.

The results, taken together, lend support to our thesis that deterioration in individual economic security leads to a loss of confidence in political parties, which may in turn lead to disappointment and voters' abstention.

5 Supply side: the financial crisis and party dynamics

In this section, we present evidence that the political supply of populist parties was substantially altered by the financial crisis. As noted above, voters' reactions to changes the increased economic insecurity were modified by the appearance of new populist parties. In this section, we provide a detailed account of the change by examining the platforms of all the political parties that existed during that period. For each party (and each country) we examine the last platform adopted before 2008 and the first adopted after 2008. Before doing so, however, it is worth presenting some summary statistics i order to get an initial impression of the political transformation that occurred following the onset of the crisis: the number of *long lived* parties, i.e. they existed before and after the 2008 crisis, is 173; the number of *dead* parties, i.e. they existed only prior to 2008, is 92; the number of *newborn* parties, i.e. they appeared after 2008, is 152, of which 30 were populists, and the turnover ratio, i.e. the sum of *newborn* and *dead* parties divided by the pre-crisis total number of parties, in 2008 is 58%, which is notably higher than prior to the crisis. Indeed, it is 38% higher than in 2004, another watershed in which the EU was expanded.

To quantify the changes in the political platforms, we use lasso regressions and isolate the top six policy items that tend to be most associated with populist positions (whether before or after the financial crisis, or both), namely: anti-EU, protectionism, anti-internationalism, anti-multiculturalism, protection of national way of life, anti-corruption (see Appendix G for a full explanation of the methodology). Among those, anti-multiculturalism and protection of national way of life appear to be particularly relevant for populists on the right (herein "right policies"), whereas the other four are characteristic of all populist parties, although two in particular, namely anti-EU and protectionism, and more characteristic of left-oriented populists (herein "left policies"). Anti-corruption and anti-internationalism characterize both left and right, therefore we do not include them in the comparative analysis of the two orientations.

The common characteristic of all six policies is that they tend to stress protection

against some type of threat (immigrants/foreigners) or shock (economic, cultural, etc.). As argued by Guiso et al. (2017), this is indeed a distinctive feature of populist parties, the other being anti-elite rhetoric, as captured by the anti-corruption position.

We now take the positions of all *long lived* parties on these six issues before and after the crisis and construct a *delta policy* variable for the change in their positions. To identify possible drivers of change in a party's position on these issues we run the following regression model:

$$\delta_{ipc} = \sigma_1 y_{ipc}^{pre} + \sigma_2 pop_{pc} + \sigma_3 left_{pc} + \sigma_4 left_{pc} \times ds_c + f_i + f_c + u_{ipc} \tag{6}$$

where $i \in \{1, ..., 6\}$ is the index of the issue, p is the party, and c is the country; δ_{ipc} is the delta policy variable described above; y_{ipc}^{pre} is the party's pre-crisis position on issue i; pop_{pc} is a dummy for whether party p is populist and $left_{pc}$ is a dummy for whether party p left-oriented, and ds_c measures the difference between the average country-level 5-year sovereign CDS spread during 2009-2012 and the average country-level 5-year sovereign CDS spread during 2005-2007. This captures the deterioration in a country's access to the bond market and thus the ability to finance fiscal policy. In other words, it is a proxy for the change in the fiscal space following the financial crisis. Finally, f_i is a policy fixed effect and and f_c is a country fixed effect. The OLS estimates of equation (6) are presented in Table 8. Column 1 pools the six policies together. The pre-crisis platform is relevant to explain the change in the party's platform: the higher the initial score for its policy - that is, the more protection-oriented it was prior to the crisis - the less "room for manoeuvrer" it has with the onset of the crisis. Populist parties, on average, appear to have changed their platform the most, with right-oriented parties moving toward greater protection and left-oriented parties moving toward less protection. However, the effect of orientation on a party's platform depends on the available fiscal space. In the case of a shrinking fiscal space, left-oriented parties tend to move their platform towards increased protection. Nonetheless, the regression reported in Column 1 makes no distinction between the nature of the parties' platforms. In columns 2 and 3 we estimate the same model but separately for "right policies" and

"left policies" respectively. Interestingly, in the case of "right policies", left-oriented parties are less prone to advocate more protection in response to a crisis even when the fiscal space has tightened, as can be seen by the fact that the interaction between the left party variable and the fiscal space proxy is no longer significant. In the case of "left-policies", left-oriented parties advocate greater protection, which is supported by left-oriented voters when the fiscal space is shrinking, whee the magnitude of the interaction term being more than 4-fold prior to that estimated in column 1.[17] Prior to the financial crisis and even more so prior to the acceleration of globalization, the platforms of left-oriented parties often involved spending as a way to address individuals' economics insecurity and their demand for greater protection. Thus, a shrinking fiscal space that occurs simultaneously with a financial crisis requires a much larger re-adjustment with respect to the right, whose identity-protection policies require no spending.

Table 8: Protection dynamics

Dep. Variable	(1)	(2) Delta Policy	(3)
Policies analised	All policies	Right policies	Left policies
Policy pre-period	-0.719***	-0.743***	-0.617***
	(0.110)	(0.125)	(0.0912)
Populist	0.794**	0.861	0.901*
	(0.314)	(0.747)	(0.442)
Left	-0.299**	-0.778**	-0.0261
	(0.135)	(0.338)	(0.149)
Percentage change spread × Left	0.000482***	-0.000349	0.00228***
	(0.000163)	(0.000445)	(0.000179)
Obs.	720	240	240
R2	0.410	0.513	0.318
Policy FE, Country FE	Yes	Yes	Yes

Notes: OLS estimation. Dependent variable: *Delta policy*, defined as the difference between the policy in the (closest) manifestos in 2013 and 2006; in column (1) all policies are included; in column (2) only left policies are included; in column (3) only right policies are included. ***,**,* = indicate significance at the 1, 5, and 10% level, respectively. *Policy pre-period* is the policy in the (closest) manifesto in 2006. *Populist* is a dummy = 1 when the party is populist. *Left* is a dummy = 1 when the party is left-oriented. *Percentage change spread* is the country-level spread (5-year sovereign CDS spread) percentage change between pre-crisis (average 2005-2007) and post-crisis (average 2009-2012) periods. All specifications include policy FE and country FE. Standard errors are clustered at the country level.

In Table 9 we compare the average scores of the platforms of *dead parties* (534 in total) to those of *newborn* parties (882 in total). The former are obviously measured prior to

[17] All the results are robust to including the interaction between the percentage delta in GDP (measured consistently using the percentage spread delta) and the variable $left_{pc}$ as an additional control.

the crisis and the latter after it. A comparison between the two offers some insight into how the financial crisis influenced the platforms of new parties. Taking all the platforms together, we find a significant difference between the *dead* parties and the *newborn* ones. Compared to *dead* parties, *newborn* parties offer policies that are even more protection-oriented, particularly in the case of parties in high-spread countries (above the median) where fiscal space is more constrained. Focusing separately on right and left policies, we find that the right policies of *newborn* parties are no different (in level and statistically) from those of *dead* parties. Meanwhile, the left policies of *newborn* parties are much more tilted towards protection than those of dead parties, particularly in countries with limited fiscal space (i.e. high spread countries).

Table 9: Platform comparison

Policies	Countries	Observations		Mean policies		Absolute
		Dead parties	New born parties	Dead parties	New born parties	diff means
All policies	All	534	882	0.96	1.29	0.32*
	High spread	252	410	0.47	1.09	0.62***
Right policies	All	178	294	1.89	1.76	0.13
	High spread	84	138	0.75	1.11	0.35
Left policies	All	178	294	0.36	0.75	0.39**
	High spread	14784	138	0.33	0.82	0.49**

Notes: The table reports the difference in (mean) policies and its significance among parties who did not survived the 2008 crisis (*Dead parties*) and parties who were born after the 2008 crisis (*New born parties*). The policies analysed are either *All policies* (anti-EU, protectionism, anti-internationalism, anti-multiculturalism, national way of life, anti-political corruption), *Right policies* (anti-multiculturalism, national way of live), or *Left policies* (anti-EU, protectionism). The comparison is performed among *All* countries and *High spread* (above the median) countries.

The results in Tables 8 and 9 are consistent with the idea that the 2008 crisis indeed led to a major shift in the supply of political parties in Europe toward populism. To test whether this is unique to the crisis we run a placebo test using the 2004 enlargement of the EU. As Guiso et al. (2016) argue, this event constitutes one of the three critical junctures in the European construction process.[18] They show that it was a source of tension based on individuals' sentiments towards the EU, but that it did *not* have the same effect in the political arena. Specifically, re-estimating the same model as in equation (6), with the boundary as 2004 rather than 2008, leaves policy positions unchanged along the six

[18]The other two are the signing of the Maastricht treaty and the Great Recession.

dimensions of populism mentioned above.[19] Similarly, in comparing *newborn* and *dead* parties, the replacement of 2008 with 2004 does not lead to any significant change in populist platforms (even in the case of high-spread countries).

In sum, the difference-in-difference results presented in this section suggest that the globalization shock was not sufficient to change the platforms of *long-lived* parties significantly nor to create new parties at a faster rate. It would appear that the globalization shock affected economic insecurity only on the "market side", leaving room for political competition on state provision of welfare protection. This is consistent with the increasing number of countries who violated the Maastricht limit on government debt following the entry of China into the WTO and prior to the start of the Great Recession.[20] On the other hand, the financial crisis, which was combined with (or contributed to) a shrinking fiscal space, led to much grater disillusionment also on the "state side". Thus, the distrust in markets, as well as in state institutions that were already facing constraints, encouraged political competition which led to more radical platforms.

6 Concluding remarks

We have shown that the financial crisis was a catalyst in the rise of populism in Europe. On the demand side, we have documented this with a novel methodology, while on the supply side a standard difference-in-differences methodology has revealed a consistent pattern of policy change both among long-lived parties and in the comparison between dead and newborn parties. The fact that in 2014, well after the crisis, populism continued to persist in Europe suggests that the financial crisis led to a structural break or tipping point that

[19]To perform this exercise, we designated the election closest to 2002 but (strictly) before 2004 as the pre-election, and the election closest to 2006 but (strictly) before 2008 and after 2004 as the post-election. The change in spread is measured as the difference between the average country-level 5-year sovereign CDS spread during 2005-2009 and the average country-level 5-year sovereign CDS spread during 2002-2003.

[20]The number of countries violating the Maastricht threshold already jumped from 6 to 10 after the globalization shock and before the financial crisis, suggesting that the globalization shock contributed to shrinking the fiscal space available when the financial crisis arrived. The number of threshold violators jumped to 15 during the crisis, both because GDP per capita shrank and because countries accumulated debt in order to recapitalize banks during the crisis.

is difficult to reverse and which changed the views of voters and the rhetoric of political parties. It remains to be seen whether this populist wave will endure or whether the failure of populist policies to gain significant ground will lead to a resurgence of the traditional parties.

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Online Appendix

A Additional data information

In this section, we provide additional details about the data used in the analysis.

ESS data. Data has been collected by means of face-to-face interviews biannually since September 2002, where a random sample of individuals is surveyed each time. Sample size varies by country, ranging from 1,000 for smaller countries to 3,000 for larger ones. Hence, the ESS is a sequence of cross-sections, one for each participating country. The ESS questionnaire consists of a core module, which is fixed from round to round, and smaller-scale rotating modules on selected topics that are repeated at intervals. We focus on the core module, which covers a wide range of social, economic, political, psychological and demographic variables.

Voter choice and turnout. An important characteristic of the ESS repeated cross-section data is that each individual is asked which party (s)he voted for in the *last* parliamentary election, as well as her/his *current* level of economic insecurity. Since ESS interviews are performed every two years, some adjustments are needed. In particular, two problems might arise: (i) cases in which multiple waves are associated with the same election, and (ii) cases in which the election happened too far in advance of the survey. For these reasons, we attach to each election in each country only one wave of interviews, with a maximum lag of 2 years between the wave and the election. See Appendix B for details and examples of this problem in the data. In the same appendix, we test the robustness of our analysis to modifications of this correction method.

Trust in traditional politics and institutions. The ESS provides several proxies for confidence in institutions, governments, and political parties, all scaled to between 0 (no trust) and 10 (full trust). These indicators tend to be closely correlated and thus hard to distinguish. In order to capture the response to economic insecurity we use the proxy for trust in political parties, which speaks directly to our narrative. The results remain

unchanged when using the alternatives, namely trust in parliament, trust in politicians, or a principal component of the three.

Controls. Two proxies for voters' ability to understand the pitfalls of the populist platforms are used as controls: education and a measure of attention devoted to politics. The first is education, as measured by four dummies indicating quartiles of the education distribution. The second is a measure of attention devoted to politics, as captured by two variables: hours per week devoted to watching TV in general, and the portion of those hours spent watching news or programs about politics and current affairs.[21] Watching TV in general is taken as a proxy for low interest in politics, and thus being poorly informed about political platforms. The portion of hours spent watching the news and programs about politics, is used to proxy information level.

Manifesto. The seven domains are: External Relations; Freedom and Democracy; Political System; Economy; Welfare and Quality of Life; Fabric of Society; Social Groups. Each variable is assigned a score that increases with the party's support of that issue. There are sometimes separate scores measured for positive and negative mentions in the parties' manifestos.[22]

[21]For the eighth wave of the ESS, we use the variables "internet use time" and "time spent watching/listening to/reading the news", as the questions on media use have been slightly changed in this wave.

[22]For example, the variable "Traditional Morality: Positive" measures a party's "Favourable mentions of traditional and/or religious moral values" in its manifesto while "Traditional Morality: Negative" measures "Opposition to traditional and/or religious moral values".

B ESS waves selection

In this Appendix, we first explain in details the selection of ESS waves in order to avoid problematic inconsistencies between the years of the interviews and political election years. Then, we show that our results are completely robust if we consider different strategies, or even if we ignore this selection using a different dependent variable.

In the ESS data, each individual is asked who she/he voted for in the *last* parliamentary election, on top of her/his *current* economic insecurity. ESS interviews are performed on a two years basis, therefore, we need to ensure that we avoid: (i) cases in which multiple waves are associated with the same election, and (ii) cases in which the election happened too far in advance with respect to the survey. These two cases are, for example, are present in Belgium, where we had elections in 1999, 2003, and 2007. Without adjustments, (i) both waves 2 (2004) and 3 (2006) would refer to the same election in 2007, and (ii) wave 1 (2002) would refer to an election which took place 4 years before. For these reasons, we associate to each election in each country only one wave of interviews, with a maximum lag of 2 years between the wave and the election. In Figure A1 we show the ESS waves considered for each country (yellow) and those we exclude for the above mentioned reasons (yellow-red).

One could argue that the second condition above (a maximum lag of 2 years between the wave and the election) could be somehow arbitrary. In Table A1 we first test the sensitivity of our result with respect to this condition, and then we relax this correction using a different dependent variable. In column 1, we restrict the selection of ESS interviews to those where the election happened with max 1 year lag with respect to the survey. In columns 2 and 3 we change this condition with a 3 years lag and 4 years lag maximum, respectively. As we can see, our results are always positive and well identified. In column 4 we use a different dependent variable, which allows us to avoid the selection of ESS waves. The respondents are asked two questions, specifically *"Is there a particular political party you fell closer to than all other other parties?"* and, if they respond yes, "*Which one?*".

With these questions we can identify whether the party towards which the respondent feels closer to is populist or not (using the same definition as in the rest of the paper). As we can see from column 4 of Table A1, also this specification confirms our main result.

Figure A1: ESS waves and elections

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT				E				E		E					E			
BE	E				E				E			E				E		
BG			E				E				E				E	E		
CY			E					E					E					E
CZ				E				E				E			E			
DE				E			E				E				E			
DK			E				E		E				E				E	
EE	E				E				E				E				E	
ES		E				E				E			E				E	E
FI	E				E				E				E				E	
FR				E					E					E				
GB			E				E					E					E	
GR		E				E			E		E			E			E	
HR					E				E				E				E	E
HU				E				E				E				E		
IE				E					E				E					E
IL	E							E			E				E		E	
IS	E				E				E		E				E			E
IT			E					E		E					E			
LT		E				E				E				E				E
LU	E					E					E				E			
LV				E				E				E				E		
NL				E	E			E				E		E				
NO			E				E				E				E			
PL			E				E		E				E				E	
PT	E			E			E				E		E				E	
RO		E				E				E				E				E
SE				E				E				E				E		
SI		E				E				E			E			E		
SK				E				E				E		E				E

E	National election
	ESS wave
	Repeated ESS data

Notes: The table presents for each country and year the ESS waves available (yellow), the years with an election (E), and the ESS waves we exclude from our analysis (yellow-red).

Table A1: ESS waves and elections - Robustness

Dep. Variable	(1)	(2) Populist vote	(3)	(4) Populist closer party
Estimation		2SLS		2SLS
Economic Insecurity	0.796**	0.837***	0.554***	0.839***
	(0.319)	(0.158)	(0.0928)	(0.228)
Importance Adventure	-0.0135	-0.0345***	-0.0296***	-0.0518***
	(0.00870)	(0.00743)	(0.00570)	(0.00843)
Second Quartile Education	0.0283***	0.0102*	0.00454	0.00435
	(0.0100)	(0.00554)	(0.00429)	(0.00574)
Third Quartile Education	0.0400**	0.0138*	0.00537	0.0140*
	(0.0151)	(0.00768)	(0.00647)	(0.00798)
Fourth Quartile Education	0.0479**	0.0179*	0.00656	0.0104
	(0.0209)	(0.00973)	(0.00764)	(0.00927)
Fourth Quartile Age	-0.0123	-0.0118	-0.0135	-0.0205
	(0.0196)	(0.0135)	(0.0103)	(0.0167)
Second Quartile Age	-0.00209	0.00129	-0.00182	0.0101
	(0.00866)	(0.00501)	(0.00348)	(0.00801)
Third Quartile Age	-0.000101	-0.00750	-0.00867	-0.00396
	(0.0136)	(0.00864)	(0.00678)	(0.0117)
Regional Population	-3.29e-08***	1.68e-09	1.17e-09	-4.17e-09**
	(3.97e-09)	(1.64e-09)	(1.49e-09)	(1.92e-09)
Hours Watching TV	-0.00446	0.00812***	0.00808***	0.00899*
	(0.00422)	(0.00231)	(0.00209)	(0.00472)
Hours Watching Politics	-0.00151	-0.000205	0.000148	0.00445
	(0.00859)	(0.00649)	(0.00533)	(0.00892)
Placement on left right scale	0.0367***	0.0340***	0.0310***	0.0538***
	(0.00665)	(0.00231)	(0.00245)	(0.00454)
Obs	1,224	3,028	3,852	3,688
Wave, Country, Cohort FE FE	YES	YES	YES	YES
Years of Lag	1	3	4	0
KP F	8.836	18.33	24.16	23.13

Notes: 2SLS estimations. Dependent variable: *Populist vote* in columns 1 to 3, *Populist closer party* in column 4, which is a dummy indicating whether the party the respondent feels closer to is a populist party. *Economic insecurity* is the survey-based measure of economic insecurity. In column 1 we include a maximum lag of 1 year between the wave and the election, in column 2 the maximum lag is of 3 years, in column 3 of 4 years. Note that in column 4 the maximum lag between the wave and the election is 0 year because the question on which party the respondent feels closer to is available for each wave. In all regressions we control for cohort, country, wave fixed effects, and cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported at the bottom of the table.

C Populist parties

Table A2: Populist parties - 1/2

Country	Party name
Austria	Alliance for the Future of Austria
	Freedom Party of Austria
	Hans-Peter Martin's List
	Team Stronach
Belgium	National Front
	Libertarian, Direct, Democratic
	People's Party
	Flemish Interest
Bulgaria	Attack
	Reload Bulgaria / Bulgaria Without Censorship
	Bulgarian Business Bloc
	Citizens for European Development of Bulgaria
	National Front for the Salvation of Bulgaria
	National Movement Simeon II
	Order, Law and Justice
	IMRO - National Bulgarian Movement
	Will
Croatia	Croatian Civic Party
	Croatian Democratic Alliance of Slavonia and Baranja
	Croatian Labourists - Labour Party
	Bridge of Independent Lists
	Human Shield
Cyprus	Citizens' Alliance
Czech Republic	Action of Dissatisfied Citizens
	Coalition for Republic - Republican Party of Czechoslovakia
	Sovereignty – Jana Bobosikova Bloc
	Freedom and Direct Democracy Tomio Okamura
	Dawn-National Coalition
	Public Affairs
Denmark	Danish People's Party
	Progress Party
	The New Right
Estonia	Estonian Citizens
	Estonian Conservative People's Party
	Independent Royalists
Finland	Blue Reform
	Finns Party
France	Republic Arise | France Arise
	National Front / Rally
	France Unbowed
Germany	Alternative for Germany
	The Left (Germany)
Greece	Independent Greeks
	Democratic Social Movement
	Greek Solution
	European Realistic Disobedience Front [MeRa25]
	Popular Orthodox Rally
	Political Spring
	Syriza - The Coalition of the Radical Left
	Synaspismos - The Coalition of the Left
Hungary	Fidesz - Hungarian Civic Alliance
	Fidesz – Hungarian Civic Party / Christian Democratic People's Party
	Jobbik, the Movement for a Better Hungary
	Hungarian Justice and Life Party
	Our Homeland Movement
Iceland	Civic Movement – The Movement
	People's Party
	Centre Party

Notes: The table presents the list of populist parties from PopuList.

Table A3: Populist parties - 2/2

Country	Party name
Ireland	Sinn Fein
Italy	The People of Freedom / Forza Italia (FI)
	Brothers of Italy
	The People of Freedom / Forza Italia (FI)
	(Northern) League
	Southern Action League
	Venetian League
	Five Star Movement
Latvia	Who owns the state?
	Reform Party
Lithuania	Labour Party
	The Way of Courage
	Young Lithuania
	Lithuanian Centre Party
	Lithuanian Liberty Union
	National Resurrection Party
	Order and Justice
Luxembourg	Alternative Democratic Reform Party
Netherlands	Centre Democrats
	Forum for Democracy
	Livable Netherlands
	Fortuyn List
	Party for Freedom
	Socialist Party (Netherlands)
Norway	Progress Party (Norway)
	Coastal Party
Poland	Kukiz '15
	League of Polish Families
	Party X
	Law and Justice
	Self-Defense of the Republic Poland
Portugal	Enough!
Romania	People's Party Dan Diaconescu
	Greater Romania Party
	United Romania Party
	Romanian National Unity Party
Slovakia	Alliance of the New Citizen
	Ordinary People
	Real Slovak National Party
	Slovak National Party
	We are family
	Direction - Social Democracy
	Party of Civic Understanding
	Association of Workers of Slovakia
Slovenia	The Left
	List of Marjan Sarec
	Slovenian Democratic Party
	Slovenian National Party
	United Left / The Left
Spain	In Common We Can
	In Tide
	Podemos
	Voice
Sweden	New Democracy
	Sweden Democrats
Switzerland	Automobile Party | Freedom Party of Switzerland
	Federal Democratic Union of Switzerland
	Ticino League
	Geneva Citizens' Movement
	Swiss People's Party
United Kingdom	Respect – The Unity Coalition
	Sinn Fein
	United Kingdom Independence Party

Notes: The table presents the list of populist parties from PopuList.

D Age earning profile

Table A4 presents the estimated values of β^k. These are obtained from equation (3), as explained in details in section 3.1.

Table A4: Income elasticity w.r.t. age

β_k	ISCO88 occupation
1.987	Skilled agricultural and fishery workers
2.234	Managers of small enterprises
2.613	Corporate managers
2.886	Office clerks
2.886	Life science and health associate professionals
2.896	Precision, handicraft, craft printing and related trades workers
2.922	Teaching associate professionals
2.937	Extraction and building trades workers
2.964	Other associate professionals
3.016	Physical, mathematical and engineering science professionals
3.054	Other professionals
3.059	Physical and engineering science associate professionals
3.059	Drivers and mobile plant operators
3.065	Machine operators and assemblers
3.065	Sales and services elementary occupations
3.093	Personal and protective services workers
3.315	Teaching professionals
3.339	Customer services clerks
3.345	Metal, machinery and related trades workers
3.424	Agricultural, fishery and related labourers
3.462	Stationary plant and related operators
3.477	Labourers in mining, construction, manufacturing and transport
3.651	Other craft and related trades workers
3.871	Models, salespersons and demonstrators
4.346	Life science and health professionals
4.374	Legislators and senior officials

Notes: The table presents the estimated values of β^k, from equation (3). Details are explained in section 3.1.

E Trust in political parties

Columns 1 and 2 of Table A5 show the effect of economic insecurity on trust in political parties. The OLS estimation results show that trust in political parties dropped more in cohorts that were experiencing greater economic uncertainty, after controlling for cohort fixed effects as well as country and time effects common to all cohorts and time-varying characteristics of the cohort. The results of 2SLS estimation indicate that as in the case of voter choice and voter turnout, the IV estimate of the effect of economic insecurity on trust – apart from being more precisely estimated – is much larger than the OLS estimate (-13.8 as compared to -2.8), lending support to the idea that OLS estimates are biased downwards due to measurement error in economic insecurity. From an economic perspective, an increase of one standard deviation in economic insecurity lowers trust in political parties by as much as 35% of the sample mean, clearly a non-negligible effect. Columns 3-6 show that the effect of economic insecurity is strong also on other trust variables, namely trust in politicians and trust in the legislature.

Table A5: Economic Insecurity and Trust

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. Variable	Trust on Parties		Trust on Politicians		Trust on Parliament	
Estimation	OLS	2SLS	OLS	2SLS	OLS	2SLS
Economic insecurity	-2.795***	-13.77***	-2.967***	-11.80***	-3.367***	-15.31***
	(0.255)	(3.037)	(0.219)	(2.278)	(0.317)	(2.584)
Obs	1,981	1,981	2,310	2,310	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
KP F		14.37		18.10		18.10

Notes: OLS estimation in columns 1, 3, and 5, 2SLS estimation in columns 2, 4, and 6. Dependent variable: Trust in political parties in columns 1 and 2, Trust in politicians in columns 3 and 4, and Trust in Parliament in columns 5 and 6. *Economic insecurity* is the survey-based measure of economic insecurity. In all regressions we control for cohort, country, and wave fixed effects, together with cohort-level time-varying controls described in section 1. Table A14 in Appendix H includes control variables' coefficients. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported for columns 2, 4, and 6.

F Robustness

The measure of economic insecurity we have used so far has the important advantage of being drawn from the same sample as the outcome political variables. One potential limitation is that it is self-reported, rather than being based on observed data. To check whether this is a problem, we follow Guvenen et al. (2014, pp. 621-660) in comparing it to a data-driven measure of economic insecurity obtained from the EU-SILC panel. In section F.1, we replicate the IV estimation for the three outcomes (voting populist, voter turnout, and trust in political parties) using this non-self-reported, alternative measure, in order to validate our results. In the same appendix we test the robustness of our results when using an alternative estimation method (Tobit).

As pointed out by Borusyak and Hull (2020), a problem encountered when using the shift-share identification strategy is that the exogeneity of the shares may fail to hold even when they are measured prior to the relevant experiment (the financial crisis shock in our case). To assess the robustness of our results to the exogeneity issue, we perform a falsification analysis in Appendix F.2 (in the spirit of a placebo test). Another concern is potential non-random exposure to the shocks, which could give rise to omitted variable bias. To alleviate this concern, we show that the 2SLS results are robust when using the re-centering methodology proposed by Borusyak and Hull (2020).

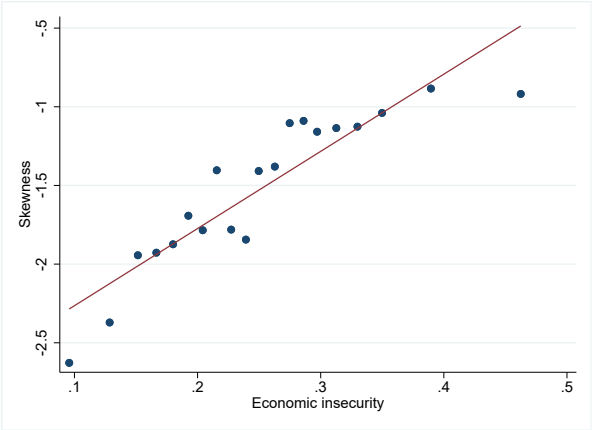
Finally, we test the robustness of the results to different clusterings of the standard errors and/or different fixed effect schemes. Specifically, the results remain unchanged if: (i) we cluster standard errors at the country-cohort level, instead of cohort level; (ii) we replace country and cohort fixed effects with country$\times$cohort fixed effects; or (iii) we carry out both (i) and (ii) simultaneously. Notice that the specification we used in the estimations minimizes the Kleibergen-Paap Wald F statistic, which is the most demanding test in terms of the instrument's power.

F.1 Alternative Measures of Economic Insecurity

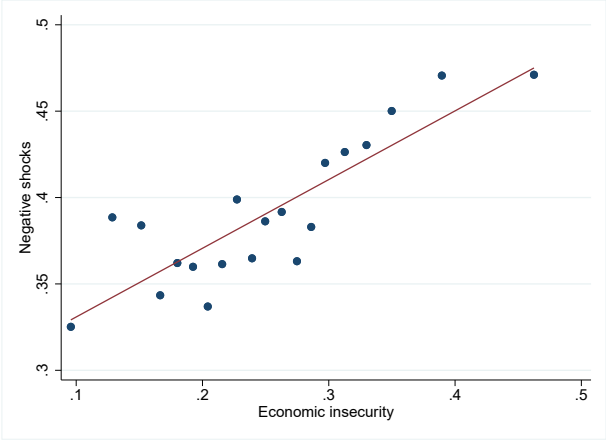
The measure of economic insecurity we introduced has the great advantage that it is obtained from the same sample that we use to obtain our outcome political variables and we use it as our reference measure. One potential limitation is that it is self reported, rather than being based on hard, observed data. To check whether this is an issue we validate our reference measure comparing it with a data-driven measure of economic insecurity obtained from the EU-SILC panel. Following Guvenen et al. (2014), we use the EU-SILC panel data to estimate a process for log-labor income, from which we retrieve the estimated residual and compute measures of its variance and skewness for each cohort and wave in our ESS sample. As discussed by Guvenen et al. (2014), more than the variance of labor income shocks it is the skewness of the left tail that best characterizes income risk and moves counter cyclically. In recessions, the distribution of shocks to labor income gains mass on the left tail when large drops in earnings become more likely. Besides a measure of skewness we also compute the fraction of cohort members that in each wave/year experience negative shocks to their labor income and the fraction with a large negative shock (below the 25th percentile). These measures, even more than the skewness, can capture the spirit of Guvenen et al. (2014) measure of uncertainty. Figure A2 shows plots of the skewness of the residuals, panel (a), the fraction of cohort members with negative shocks, panel (b), and the fraction with large negative shocks to labor income, panel (c), against the average value of our survey-based measure of economic insecurity. Interestingly, the Guvenen et al. (2014) measures all correlate positively and strongly with our measure of economic insecurity based on self reported data. This suggests that: (i) what people report very likely reflects their actual experiences; and (ii) that drops in income is what really shakes people economic insecurity.[23]

[23]Consistent with Guvenen et al. (2014), the correlation between the variance of the residuals and the survey measure of economic insecurity is positive but not as strong as that between the share of cohort members that suffer a drop in income and our measure of economic insecurity. Further, while skewness and the share suffering negative (and strongly negative) income shocks is strongly countercyclical, the variance shows less action over the cycle.

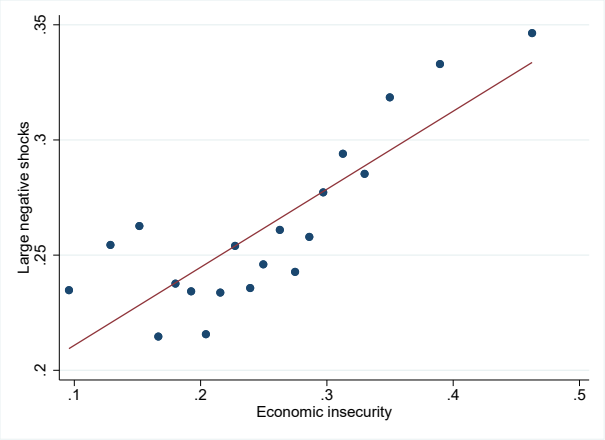
Figure A2: Labour income shocks and economic insecurity



(a) Skewness



(b) Negative shocks



(c) Large negative shocks

Notes: This figure compares data-driven measures of economic insecurity with our survey-based measure of economic insecurity. For the former, we follow the spirit of Guvenen et al. (2014), estimating the skewness of labour income shocks. In all figures, on the horizontal axis we have our survey-based measure of economic insecurity. On the vertical axis we have: in Panel (a), the skewness of the residuals of the labour income shock estimation (details in Section 3.1, equation 4); in Panel (b) the fraction of cohort members with negative shocks to labor income; in Panel (c) the fraction with large negative shocks (lower than the 25%) to labor income.

Table A6 re-runs our IV estimates for our three outcome measures (voting populist, turnout, and trust in political parties) using this time the Guvenen et al. (2014) measure of economic insecurity, captured either by the fraction of cohort members experiencing a drop in income or the fraction of cohort members experiencing a large drop (in the top quartile of drops for the whole sample in the country-year) in labor income.[24]

Even using these non-self reported, alternative measures, an increase in economic insecurity causes an increase in the share of votes to populist parties, a decrease in turnout and in trust in political parties, confirming the results obtained with our reference measure. This reassures us that what we are capturing is truly the effect on people political decisions and beliefs caused by economic uncertainty. In the last two columns of Table A6 we test the robustness of our result on populist vote to the fact that our classification of populist parties only applies to parties that gain at least one seat in parliament. Hence, in some countries populist votes may be zero even if one or more such parties are present but none gains a seat. To account for this possibility we use a Tobit estimator. We obtain very similar results: the simple Tobit regression shows a positive and significant effect of economic insecurity; the IV Tobit estimate is much larger, consistent with the difference between the OLS and IV estimates in the other tables.

F.2 Falsification analysis and Omitted Variable Bias

In this Appendix, we perform two tests to check the robustness of our identification strategy. First, as pointed out by Borusyak and Hull (2020), one issue with the shift-share identification strategy is that the exogeneity of the shares may fail to hold even when shares are measured before the relevant experiment (the financial crisis shock in our case). To assess the robustness of our results to this issue, we perform a falsification analysis. First, we replace the shift component in the shift-share instrument (that is the actual changes in

[24]To be more precise, the first percentage is the percentage of the cohort members who have a negative residual when comparing their labor income with the one predicted by her characteristics up to that moment; the second percentage is the percentage of the cohort members with a residual in the worst quartile of residuals in such a regression, for all the data in the country and year.

Table A6: Robustness

Dep. ariable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Populist vote		Turnout		Trust on parties		Populist vote	
Estimator	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS	Tobit	IV Tobit
Share Income Drop	0.218***		-0.357***		-5.055***			
	(0.0620)		(0.0958)		(0.746)			
Share Large Income Drop		0.209***		-0.344***		-4.863***		
		(0.0598)		(0.0931)		(0.801)		
Economic Insecurity							0.198***	1.769***
							(0.0392)	(0.325)
Importance Adventure	-0.00303	-0.00259	-0.00409	-0.00482	-0.156	-0.166*	-0.0310***	-0.0372***
	(0.00905)	(0.00902)	(0.0182)	(0.0169)	(0.106)	(0.0889)	(0.0111)	(0.0115)
Second Quartile Education	-0.0130	-0.00884	0.0111	0.00428	-0.0308	-0.128	0.0150	0.0293**
	(0.00923)	(0.00863)	(0.0115)	(0.0106)	(0.139)	(0.115)	(0.0104)	(0.0125)
Third Quartile Education	-0.0237***	-0.0179**	0.0283**	0.0187	0.0715	-0.0641	0.00822	0.0355**
	(0.00847)	(0.00757)	(0.0137)	(0.0123)	(0.174)	(0.131)	(0.0153)	(0.0171)
Fourth Quartile Education	-0.0262**	-0.0205*	0.0569***	0.0476***	0.169	0.0365	0.0188	0.0530**
	(0.0119)	(0.0109)	(0.0186)	(0.0169)	(0.212)	(0.156)	(0.0184)	(0.0215)
Fourth Quartile Age	-0.0215	-0.0262	0.0468	0.0546	-0.0366	0.0741	0.0174	-0.00827
	(0.0240)	(0.0231)	(0.0415)	(0.0409)	(0.495)	(0.485)	(0.0192)	(0.0273)
Second Quartile Age	-0.00888	-0.0109	-0.0308*	-0.0276*	-0.264	-0.218	0.0123	0.00256
	(0.0124)	(0.0111)	(0.0176)	(0.0159)	(0.176)	(0.149)	(0.00911)	(0.0123)
Third Quartile Age	-0.0116	-0.0138	-0.0309	-0.0273	-0.461*	-0.410**	0.0126	-0.00247
	(0.0150)	(0.0134)	(0.0269)	(0.0251)	(0.228)	(0.196)	(0.0123)	(0.0176)
Regional Population	1.36e-08***	1.27e-08***	-1.32e-08**	-1.18e-08**	-3.08e-07***	-2.87e-07***	8.44e-09***	5.91e-09**
	(4.52e-09)	(4.02e-09)	(5.55e-09)	(5.32e-09)	(6.10e-08)	(5.52e-08)	(1.73e-09)	(2.87e-09)
Hours Watching TV	0.00652	0.00852	-0.000307	-0.00359	0.0650	0.0186	0.00455	-0.000748
	(0.00891)	(0.00872)	(0.0100)	(0.00926)	(0.105)	(0.0961)	(0.00317)	(0.00497)
Hours Watching Politics	0.0210*	0.0158	0.00588	0.0143	0.102	0.222*	-0.00899	0.000736
	(0.0121)	(0.0121)	(0.0158)	(0.0149)	(0.117)	(0.115)	(0.00949)	(0.0112)
Placement on left right scale	0.0120**	0.0124**	0.0182***	0.0176**	0.0113	0.00289	0.0344***	0.0435***
	(0.00503)	(0.00496)	(0.00587)	(0.00663)	(0.0676)	(0.0592)	(0.00434)	(0.00448)
Obs	724	724	724	724	724	724	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KP F	98.21	82.45	98.21	82.45	98.21	82.45		

Notes: 2SLS estimation in columns 1-6, Tobit in column 7 and IV Tobit in column 8. Dependent variable: Populist vote in columns 1, 2, 7, and 8, Turnout in columns 3 and 4, Trust in political parties in columns 5 and 6. *Share Income Drop* is the fraction of cohort members experiencing a drop in income. *Share Large Income Drop* is the fraction of cohort members experiencing a large drop (in the top quartile of drops for the whole sample in the country-year) in labor income. *Economic insecurity* is the survey-based measure of economic insecurity. In all regressions we control for cohort, country, and wave fixed effects, together with cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported for columns 1-6.

GDP at the country level - y_{ct} in equation 3) with randomly generated instruments. We generate these counterfactual GDP shocks from a distribution with mean and standard deviation equal to the corresponding moments of the historical GDP distribution. We then show that the counterfactual shift share instruments (we create 1,000 of them) have no predictive power when used in the voting, participation, and trust regressions. Second, one may be concerned about non-random exposure to the shocks, which could give rise to an omitted variable bias. To deal with this concern, we show that the 2SLS results are robust when applying the re-centering methodology proposed by Borusyak and Hull (2020).[25] Details of these two exercises are presented below.

First, to check the validity of the presented instrumental strategy, we construct counterfactual shocks by randomly choosing country-level measures of GDP. More specifically, starting from the distribution of the actual shifter (y_{ct}) at the country level, we conduct 1,000 independent random draws assigning a random value for the shock to each country. We then obtain 1,000 placebo instruments z^P_{jct} and estimate the baseline regression on them. Among our 1,000 randomizations, the number of significant coefficients is well below 5% thus confirming that substituting the real instrument with this "simulated instrument" provides no significant effects.[26]

Second, we address omitted variable concerns. Even if the shares capturing heterogeneous exposure to the shocks are constructed using data from the first years available, namely 2003-2005, one may be still concerned about non-random exposure to the shocks, which could give rise to an omitted variable bias (OVB) in the IV estimates. In a recent work, (Borusyak and Hull 2020) explain how to effectively purge OVB from non-random exposure to the shocks, without having to impose further assumptions, such as parallel trends. Their methodology, called "recentering", proposes to control for the simulated in-

[25]"Re-centering" consists in subtracting the mean of the counterfactual instruments from the IV, or adding it as a control variable. Borusyak and Hull (2020) show that recentering effectively removes the bias from non-random shock exposure, without having to impose further assumptions (like parallel trends). All our results are robust when we apply the recentering methodology.

[26]Considering the large number of results, these results are available upon request.

strument described above (or subtracting it from the IV) in order to remove the bias from non-random shock exposure.

We apply the recentering methodology by averaging across the 1,000 randomizations described above, therefore obtaining an average simulated instrument $\bar{z}^{P}_{jct}$. In Table A7, we include the simulated instruments constructed based on the randomization in our main specifications (Table 6, column 4; Table 7, column 2; Table A5, column 2). The coefficient of *Economic insecurity* is always positive and significant, and very similar in magnitude to the corresponding estimates in our main specifications, therefore confirming that our results on the impact of economic insecurity on populist vote, turnout, and trust are robust to addressing OVB concerns.

Table A7: Omitted Variable Bias

Dep. Variable	(1) Populist vote	(2) Turnout	(3) Trust on parties
Estimation	2SLS	2SLS	2SLS
Economic Insecurity	0.889***	-0.820***	-13.37***
	(0.110)	(0.219)	(1.801)
Avarage Simulated Instrument	0.00374	0.0146	0.0331
	(0.0147)	(0.0117)	(0.155)
Importance Adventure	-0.0218***	0.0198	-0.0714
	(0.00644)	(0.0154)	(0.103)
Second Quartile Education	0.0156**	0.0166**	-0.154***
	(0.00705)	(0.00729)	(0.0498)
Third Quartile Education	0.0182*	0.0137	-0.230***
	(0.0100)	(0.00924)	(0.0741)
Fourth Quartile Education	0.0252*	0.0223*	-0.138
	(0.0132)	(0.0115)	(0.111)
Fourth Quartile Age	-0.00336	0.0211	0.0445
	(0.0161)	(0.0294)	(0.154)
Second Quartile Age	0.00305	0.0146	-0.0177
	(0.00680)	(0.00993)	(0.0422)
Third Quartile Age	-0.00110	0.0245	-0.101
	(0.0104)	(0.0209)	(0.104)
Regional Population	9.73e-10	7.58e-09**	8.43e-09
	(1.93e-09)	(3.30e-09)	(2.00e-08)
Hours Watching TV	0.00131	0.00791*	0.0641*
	(0.00308)	(0.00388)	(0.0349)
Hours Watching Politics	-0.00224	-0.00578	-0.00431
	(0.00720)	(0.00810)	(0.0400)
Placement on left right scale	0.0350***	0.00874**	-0.00266
	(0.00330)	(0.00390)	(0.0323)
Obs	2,310	2,310	1,981
Wave, Country, Cohort FE	Yes	Yes	Yes
KP F	56.32	56.32	60.18

Notes: 2SLS estimations. Dependent variable: Populist vote in column 1, Turnout in column 2, Trust in parties in column 3. *Economic insecurity* is the survey-based measure of economic insecurity. *Average simulated instrument* is the average of the 1,000 placebo instruments ($\tilde{z}^P_{jct}$). In all regressions we control for cohort, country, and wave fixed effects. In columns 2 and 4 we add also cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported at the bottom of the table.

G Lasso analysis

In this section we first show that populist parties are not only far-right parties and, therefore, focusing only on them would bias the analysis. Then, we use lasso regressions to identify the most relevant policies for populist parties.

Table A8 below summarizes the distribution of Populist v. Nationalist and Socialist or other left parties. The classification "Nationalist" /"Socialist or other left parties"/"Other" is taken directly from variable "party family" in the Manifesto dataset.

As we can see from the Table, 54% of populist parties in our dataset are neither nationalist nor socialist/left. Also, we can see that 30 out of 45 nationalist parties are also populist whereas only 7 out of 57 socialist/left parties are also populist.

Table A8: Parties' families

	Populist		
	0	1	Total
Party Family (Manifesto)			
0 (Other)	324	43	367
	83%	54%	78%
1 (Nationalist)	15	30	45
	4%	38%	10%
2 (Socialist or other left party)	50	7	57
	13%	9%	12%
Total	389	80	469
	100%	100%	100%

Notes: Authors' computation from the Manifesto Project dataset.

Subsequently, we used a Lasso regression to identify which variables are the most likely to predict populist party (according to PopuList definition) for both Manifesto. We focus on the Manifesto data because, being available for each year, it allows to study the changes before/after the crisis.

In table A9, we study for each variable its relevance before (column 1) and after (column 2) the crisis for all populist parties. Then, we replicate this exercise for the 4 sub-groups populist far-right nationalist (FR NA), populist far-right not nationalist (FR noNA), populist not far-right nationalist (noFR NA), and populist not far-right and not nationalist (noFR noNA). A variable which is relevant before and after the crisis for all populist parties

and also for all sub-groups, will appear 10 times in these lassos. We order these variables according to their frequency, and we keep those appearing at least in 8 out of the 10 lassos. When a policy appears two times in the lasso (one positive and one negative), we choose only one of them. This process selects six variables: anti-multiculturalism, national way of live, anti-EU, protectionism, anti-political corruption, anti-internationalism.

Table A9: Lasso analysis

Variable	P		P FR NA		P FR noNA		P noFR NA		P noFR noNA		Relevance
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
EU (-)	0.243	0.271	0.111	0.145	0.197	0.233	0.266	0.260	0.401	0.388	10
Protectionism (+)	0.182	0.168	0.165	-0.030	0.220	0.156	0.198	0.175	0.221	0.220	10
Internationalism (-)	0.160	0.264	0.091	0.149	0.070	0.188	0.146	0.277	0.427	0.352	10
Multiculturalism (+)	-0.097	-0.389		-0.056	-0.040	-0.172	-0.069	-0.279	-0.086	-0.765	9
National way of live (+)	0.108	0.324		0.174	0.076	0.242	0.098	0.188	0.184	0.559	9
Multiculturalism (-)	0.126	0.271			0.154	0.288	0.128	0.295	0.279	0.292	8
Political Corruption (-)	0.013	0.170		0.109	0.045	0.148	0.014	0.196		0.110	8
EU (+)	-0.259	-0.106	-0.055		-0.349	-0.042	-0.208	-0.081	-0.141		8
Law and Order (+)	0.187	0.056	0.021		0.196		0.158	0.098	0.239		7
Environment (+)	-0.065	-0.215			-0.217	-0.141	-0.009	-0.102		-0.379	7
Labour Groups (+)	-0.335		-0.287	-0.004	-0.350		-0.361		-0.141	-0.011	7
Corporatism/Mixed Economy (+)	-0.119	-0.077			-0.283	-0.017	-0.056	-0.073	-0.010		7
Democracy (+)	-0.096	-0.029	-0.067		-0.075		-0.046	-0.020			6
Governmental and Administrative Efficiency (+)		0.290		0.206		0.141		0.304	0.188	0.220	6
Costitutionalism (-)		0.107				0.089		0.123	0.154	0.021	5
Imperialism (-)		0.065		0.059		0.026		0.011	-0.114		5
Agriculture and Farmers (+)		0.219		0.083		0.169		0.178		0.227	5
Equality (+)		-0.132		-0.016		-0.066		-0.181		-0.315	5
Peace (+)	-0.093				-0.007		-0.076		-0.656	-0.102	5
Traditional Morality (-)		-0.106			0.021			-0.082	0.180	-0.382	5
Military power and expenses (+)	0.018				0.037		0.023		0.270		4
Economic Growth (+)		-0.069				-0.013		-0.046		-0.297	4
Controlled Economy (+)	0.079				0.059		0.087		0.301		4
Free Market Economy (+)	0.049				0.083		0.028		0.104		4
Economic Planning (+)		-0.068						-0.102	0.001		3
Internationalism (-)		0.081		0.109		0.071		0.018			3
Non-economic Demographic Groups (+)	-0.077						-0.030		-0.183		3
Labour Groups (-)	0.015				0.040				0.063		3
Economic Orthodoxy (+)		-0.108			-0.054			-0.223			3
Market Regulation (+)		0.146						0.173	-0.096		3
Culture (+)		0.088						0.105		0.018	3
Civic Mindness (+)	0.001									0.063	2
Anti-Growth Economy (+)		-0.008						-0.009		-0.045	2
Welfare State Expansion (+)		-0.047		-0.003							2
Economic Goals (+)	-0.005									-0.062	2
Decentralization (+)					-0.203					-0.114	2
National way of live (-)		0.075						0.053			2
Nationalisation (+)		-0.015								-0.106	2
Military power and expenses (-)									-0.078		1
Political Authority (+)									0.053		1
Traditional Morality (+)			0.052						0.133		1
Keynesian Demand Management (+)									-0.013		1
Underpriviledged Minority Groups (+)					0.023						1
Centralisation (+)									-0.042		1
Military (-)										-0.207	1
Constitutionalism (+)					0.021						1
Marxist Analysis		-0.012									1
Foreign Special Relationship (-)										-0.037	1

Notes: The table presents the results from 10 different lasso regressions. Each column represents one regression. The first two columns show the coefficients each item in the Manifesto Project database scores in a regression where the dependent variable is a dummy = 1 if the party is a populist party (P), respectively pre- and post-crisis. For example, from column 1 we can see that negative mentions of the EU has a coefficient of 0.243 in the lasso explaining populist parties (P) before the crisis. *P FR NA* is = 1 when the party is a populist far-right nationalist. *P FR noNA* is = 1 when the party is a populist far-right non-nationalist. *P noFR NA* is = 1 when the party is a populist non-far-right nationalist. *P noFR noNA* is = 1 when the party is a populist non-far-right not-nationalist. *Relevance* is an index measuring for how many columns the items are significant for each Manifesto Project item.

H Full Tables

In this section we include all the Tables where we use control variables, including the coefficients of the latter.

Table A10: Abstention growth - Full

	(1)	(2)
Dependent variable	Abstentionism growth rate	
Estimation	OLS	
New populist party	-0.561**	
	(0.271)	
New populist party same orientation		-0.784***
		(0.225)
Importance Adventure	0.278	0.183
	(0.233)	(0.233)
Second Quartile Education	0.0194	0.00696
	(0.319)	(0.317)
Third Quartile Education	-0.650*	-0.693*
	(0.350)	(0.367)
Fourth Quartile Education	-1.099***	-1.090***
	(0.340)	(0.350)
Fourth Quartile Age	-1.297**	-1.271**
	(0.558)	(0.555)
Second Quartile Age	-0.216	-0.185
	(0.329)	(0.331)
Third Quartile Age	-0.757	-0.732
	(0.503)	(0.514)
Regional Population	-1.92e-08	-3.16e-09
	(3.66e-08)	(2.71e-08)
Hours Watching TV	-0.209	-0.180
	(0.126)	(0.124)
Hours Watching Politics	0.724***	0.649***
	(0.245)	(0.229)
Placement on left right scale	-0.178	-0.0339
	(0.203)	(0.179)
Obs	659	659
Wave FE	Yes	Yes

Notes: OLS estimation. Dependent variable: Abstentionism growth rate (comparing the first election after the financial crisis with the last before). *New populist party* is a dummy equal one if the country-year there is an increase in the number of populist parties. *New populist party same orientation* is a dummy equal one if the country-year there is an increase in the number of populist parties of the same orientation of the cohort. In all regressions we control for wave fixed effects, together with cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level.

Table A11: Economic insecurity and populist vote - First stage - Full

	(1)	(2)
Dep. Variable	Economic Insecurity	
Estimation:	OLS	
Instrument	-0.0380***	-0.0368***
	(0.00876)	(0.00865)
Importance Adventure		0.00429
		(0.00421)
Second Quartile Education		-0.00529*
		(0.00274)
Third Quartile Education		-0.0125***
		(0.00366)
Fourth Quartile Education		-0.0159**
		(0.00587)
Second Quartile Age		0.00596
		(0.00402)
Third Quartile Age		0.00926
		(0.00685)
Fourth Quartile Age		0.0159*
		(0.00911)
Regional Population		5.21e-10
		(1.05e-09)
Hours Watching TV		0.00383*
		(0.00197)
Hours Watching Politics		-0.00552*
		(0.00276)
Placement on left right scale		-0.00609**
		(0.00234)
Obs	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes

Notes: OLS estimation. Dependent variable: Economic insecurity. *Instrument* is the variable computed as in equation 5. In both regressions we control for cohort, country, and wave fixed effects. In column 2 we add also cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level.

Table A12: Economic insecurity and populist vote - Full

Dep. Variable	(1)	(2)	(3)	(4)
	Populist vote			
Estimation	OLS		2SLS	
Economic Insecurity	0.0956***	0.128***	0.790***	0.850***
	(0.0301)	(0.0234)	(0.149)	(0.193)
Importance Adventure		-0.0185***		-0.0216***
		(0.00603)		(0.00671)
Second Quartile Education		0.00992		0.0155**
		(0.00600)		(0.00698)
Third Quartile Education		0.00696		0.0177*
		(0.00917)		(0.00995)
Fourth Quartile Education		0.0106		0.0245*
		(0.0113)		(0.0131)
Second Quartile Age		0.00729		0.00326
		(0.00556)		(0.00692)
Third Quartile Age		0.00585		-0.000754
		(0.00817)		(0.0107)
Fourth Quartile Age		0.00898		-0.00269
		(0.0126)		(0.0163)
Regional Population		2.50e-09		1.05e-09
		(1.52e-09)		(1.92e-09)
Hours Watching TV		0.00406*		0.00148
		(0.00224)		(0.00314)
Hours Watching Politics		-0.00728		-0.00252
		(0.00607)		(0.00741)
Placement on left right scale		0.0303***		0.0347***
		(0.00313)		(0.00309)
Obs	2,310	2,310	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes
KP F			18.80	18.10

Notes: OLS estimation in columns 1 and 2, 2SLS estimation in columns 3 and 4. Dependent variable: Populist vote. *Economic insecurity* is the survey-based measure of economic insecurity. In all regressions we control for cohort, country, and wave fixed effects. In columns 2 and 4 we add also cohort-level time-varying controls described in section 1. Kleibergen-Paap F-statistic are reported for columns 3 and 4.

Table A13: Economic Insecurity and Turnout - Full

Dep. Variable	(1)	(2)	(3)	(4)
	Turnout			
Estimation	OLS	2SLS	2SLS	2SLS
Economic Insecurity	-0.383***	-0.972***	-0.962***	-0.976***
	(0.0514)	(0.306)	(0.306)	(0.313)
Economic insecurity × New populist same orientation			0.203	0.354*
			(0.188)	
Economic insecurity × New populist same orientation post crisis				0.354*
				(0.179)
New Populist same orientation			-0.0426	
			(0.0486)	
New Populist same orientation post crisis				-0.0788*
				(0.0438)
Importance Adventure	0.0181	0.0206	0.0205	0.0205
	(0.0144)	(0.0160)	(0.0159)	(0.0160)
Second Quartile Education	0.0208***	0.0162**	0.0162**	0.0166**
	(0.00691)	(0.00727)	(0.00729)	(0.00749)
Third Quartile Education	0.0207***	0.0119	0.0119	0.0123
	(0.00735)	(0.00947)	(0.00950)	(0.00968)
Fourth Quartile Education	0.0312***	0.0198	0.0200	0.0201
	(0.00922)	(0.0121)	(0.0119)	(0.0122)
Fourth Quartile Age	0.0142	0.0238	0.0241	0.0238
	(0.0278)	(0.0313)	(0.0310)	(0.0308)
Second Quartile Age	0.0122	0.0155	0.0157	0.0152
	(0.00942)	(0.0105)	(0.0105)	(0.0104)
Third Quartile Age	0.0205	0.0259	0.0259	0.0252
	(0.0197)	(0.0220)	(0.0219)	(0.0216)
Regional Population	6.69e-09**	7.88e-09**	7.37e-09**	7.66e-09**
	(3.12e-09)	(3.48e-09)	(3.56e-09)	(3.50e-09)
Hours Watching TV	0.00649*	0.00860**	0.00791*	0.00799*
	(0.00369)	(0.00405)	(0.00422)	(0.00399)
Hours Watching Politics	-0.00301	-0.00689	-0.00622	-0.00574
	(0.00819)	(0.00836)	(0.00814)	(0.00830)
Placement on left right scale	0.0111**	0.00749*	0.00628	0.00625
	(0.00429)	(0.00429)	(0.00429)	(0.00441)
Obs	2,310	2,310	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes
KP F		18.10	8.969	8.936

Notes: OLS estimation in column 1, 2SLS estimation in columns 2-4. Dependent variable: Populist vote. *Economic insecurity* is the survey-based measure of economic insecurity. *New populist same orientation* is a dummy equal one if a new populist party exists in the country and whether it is of the same orientation as that of the voters in the cohort. *New populist same orientation post crisis* is a dummy assuming value one when the new populist appears just after the burst of the financial crisis. In all regressions we control for cohort, country, and wave fixed effects, together with cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported for columns 2-4.

Table A14: Economic Insecurity and Trust - Full

Dep. Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Trust on Parties		Trust on Politicians		Trust on Parliament	
Estimation	OLS	2SLS	OLS	2SLS	OLS	2SLS
Economic Insecurity	-2.795***	-13.77***	-2.967***	-11.80***	-3.367***	-15.31***
	(0.255)	(3.037)	(0.219)	(2.278)	(0.317)	(2.584)
Importance Adventure	-0.103	-0.0699	0.0328	0.0709	-0.0128	0.0388
	(0.0610)	(0.108)	(0.0395)	(0.0481)	(0.0617)	(0.0966)
Second Quartile Education	-0.0283	-0.157***	-0.00448	-0.0732*	0.0228	-0.0701
	(0.0364)	(0.0548)	(0.0347)	(0.0423)	(0.0440)	(0.0478)
Third Quartile Education	-0.0226	-0.236***	-0.0117	-0.144**	0.0682	-0.110
	(0.0531)	(0.0834)	(0.0397)	(0.0536)	(0.0405)	(0.0651)
Fourth Quartile Education	0.108*	-0.147	0.102**	-0.0689	0.240***	0.00968
	(0.0631)	(0.121)	(0.0495)	(0.0764)	(0.0585)	(0.106)
Fourth Quartile Age	-0.0553	0.0492	-0.102	0.0406	-0.0835	0.109
	(0.0874)	(0.158)	(0.0846)	(0.123)	(0.114)	(0.156)
Second Quartile Age	-0.0423	-0.0166	-0.0497	-0.000404	-0.0591	0.00755
	(0.0401)	(0.0436)	(0.0380)	(0.0369)	(0.0445)	(0.0463)
Third Quartile Age	-0.126*	-0.0993	-0.130**	-0.0493	-0.161*	-0.0513
	(0.0667)	(0.106)	(0.0615)	(0.0806)	(0.0840)	(0.106)
Regional Population	-3.78e-08**	1.02e-08	8.96e-09	2.67e-08	-8.30e-09	1.57e-08
	(1.77e-08)	(1.87e-08)	(1.42e-08)	(1.79e-08)	(1.48e-08)	(1.94e-08)
Hours Watching TV	0.0214	0.0660*	0.0243	0.0559**	-0.00826	0.0344
	(0.0250)	(0.0379)	(0.0188)	(0.0256)	(0.0251)	(0.0231)
Hours Watching Politics	0.0434	-0.00629	-0.0391	-0.0973	0.0359	-0.0428
	(0.0444)	(0.0399)	(0.0587)	(0.0578)	(0.0388)	(0.0589)
Placement on left right scale	0.0648***	-0.00608	0.0666***	0.0124	0.0736***	0.000434
	(0.0222)	(0.0341)	(0.0207)	(0.0309)	(0.0217)	(0.0390)
Observations	1,981	1,981	2,310	2,310	2,310	2,310
Wave, Country, Cohort FE	Yes	Yes	Yes	Yes	Yes	Yes
KP F		14.37		18.10		18.10

Notes: OLS estimation in columns 1, 3, and 5, 2SLS estimation in columns 2, 4, and 6. Dependent variable: Trust in political parties in columns 1 and 2, Trust in politicians in columns 3 and 4, and Trust in Parliament in columns 5 and 6. *Economic insecurity* is the survey-based measure of economic insecurity. In all regressions we control for cohort, country, and wave fixed effects, together with cohort-level time-varying controls described in section 1. Errors are clustered at the cohort level. Kleibergen-Paap F-statistic are reported for columns 2, 4, and 6.