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Unfulfilled aspirations: the link between living standards and anti-establishment politics after financial crises

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INDICE

Resumen- Abstract

1. INTRODUCTION

2. LIVING STANDARDS AND ANTI-ESTABLISHMENT POLITICS IN DEBTOR COUNTRIES: THREE CROSS-SECTIONAL PUZZLES

3. TRUST, INSTITUTIONAL DETERIORATION AND LIVING STANDARDS OVER THE CREDIT CYCLE

3.1. Theory

3.2. Empirical strategy

3.2.1. Identification

3.2.2. Pseudo-panel estimation

3.2.3. Unfulfilled aspirations and consumption spending

3.3. Data and measurement

3.3.1. Description of the data

3.3.2. Semi-parametric estimation of cohort moments

3.3.3. A dynamic factor model of trust items

3.4. Results

3.4.1. Measurement of trust

3.4.2. Measurement of unfulfilled aspirations

3.4.3. Second stage: estimates of (β, π, ϕ)

3.4.3.1. Effect of unfulfilled aspirations on trust

3.4.3.2. Electoral discontent and the effect of unfulfilled aspirations and trust: vote share of mainstream and new parties

3.4.3.3. Electoral discontent and the effect of unfulfilled aspirations and trust: change in turnout

4. POLITICAL IDENTITIES AND CREDIT CONTRACTIONS

4.1. Theory: the complement-substitute link between trust and left-right cleavages

4.2. Empirical strategy

4.3. Results

4.3.1. Political identity and the effect of unfulfilled aspirations and trust

4.3.2. Heterogeneous effects by political identity

4.3.3. Demand and supply of new parties

5. POLITICAL AND ECONOMIC CONFLICT OVER THE CREDIT CYCLE

REFERENCES

APPENDIX: DESCRIPTION OF TRUST ITEMS

Resumen

Este artículo explora el vínculo entre las reacciones anti-sistema y la renta tras las crisis financieras. Ambos están conectados por la frustración de las aspiraciones: las expansiones financieras generan aspiraciones de gasto cada vez mayores, y las crisis las frustran generando desconfianza hacia el sistema político. Esta relación explica por qué los votantes de partidos anti-sistema no se diferencian de los demás por su nivel de renta, sino por sus identidades y su confianza en las instituciones. Esta hipótesis se testa para el caso de España tras la crisis de 2008 combinando datos de consumo y de opinión pública estimando la respuesta de la confianza, las identidades y el voto a la desviación de los planes de consumo anteriores a la crisis. Se encuentra una elasticidad de 0,9 del voto de los dos grandes partidos respecto al gasto que se acentúa según las identidades de los votantes.

Abstract

I explore the link between anti-establishment politics and living standards after financial crises. I argue that both are connected by *unfulfilled aspirations*. Financial booms feed aspirations of rising living standards, and the inability of elites to protect them during crises explains why citizens are not divided by their income, but by their distrust of institutions and pre-crisis political identities. I focus on Spain and combine opinion and spending surveys to estimate the response of institutional trust, identities, and electoral support to the deviation from pre-crisis spending plans. I find an elasticity of 0.9 of mainstream parties' vote share with respect to spending, which is reinforced by voters' political identity.

1. INTRODUCTION

Financial crises have implications for both living standards and politics. The Great Recession was followed by a wave of anti-establishment politics, and the literature¹ has shown that financial contractions have historically caused distrust, support for anti-establishment parties, and polarization.² However, in many of these cases, citizens were not divided by their incomes, but by their *trust* in elites, or by conflicts rooted in *identities* that preceded the crisis. What, then, motivated discontents? Were they moved by their living standards, or by unresolved long-term political conflicts related to identities and institutions?

This paper re-examines the link between living standards and anti-establishment politics. It argues that *economic aspirations* are essential to understand how economic insecurity affects the relationship between citizens and elites. Financial booms feed aspirations of rising living standards and make the trust in politicians contingent on their record protecting them. The adjustment to a financially depressed environment frustrates aspirations, and thus undermines trust. If citizens distrust elites, they may interpret moderate positions as failures of representation. They may refuse compromises, and support extremist parties who can credibly commit to stand for their identity.

This explanation is tested in the context of the crisis that hit the European periphery after 2008. I focus on two expressions of anti-establishment politics: *institutional distrust*, (i.e., the perception that institutions and parties can not be trusted), and *electoral discontent* (i.e., decline in turnout and the sharp shifts of support from mainstream to new parties). I look at Spain, the largest of the economies that were bailed out. I combine 250 opinion surveys, with 12 waves of household spending surveys to track the response of expressions to the deviation from pre-crisis spending plans. I find that two-thirds of the trust distribution can be explained by unfulfilled spending plans, and an elasticity of 0.9 of the vote share of mainstream parties to the change in spending.

Section 2 motivates the Spanish puzzle in the context of the literature on anti-establishment politics. The collapse of a housing bubble hit low-skilled workers disproportionately more (Bonhomme and Hospido 2017). However, while mainstream parties lost a large share of the vote, these losses were concentrated among the upper-middle class and educated workers. The main predictors of the vote were *institutional distrust* and voters' political *identity*. Why were voters divided by their *trust* in elites, or by conflicts that preceded the crisis? And why was distrust more prevalent among the relatively better-off? The answer is divided in two parts.

Section 3 examines why a financial crisis could result in distrust and why it may be more intense among the upper-middle class. It considers two channels. Through the *General distrust channel*, voters may be concerned about the country in general and -irrespective of their personal economic situation- differ in their predisposition to blame the corruption of elites and institutions for it. In

¹ See Funke, Schularick, and Trebesch (2016); Mian, Sufi, and Trebbi (2014), and Margalit (2019b) for a review

² In this paper, I label as “anti-establishment” those parties that question central features of the institutional statu quo, and gather their electoral support among those who regard parties and institutions as unable to represent the people. This includes parties often referred as “populist”, but also other challengers that follow the same strategy of opposing the establishment to the people. I avoid the term populist since it is often considered to be normatively loaded referring to parties with illiberal ideologies, a theme that I do not treat explicitly.

contrast, through the *Unfulfilled aspirations channel*, voters' distrust would be triggered by the failure of institutions politicians to protect their living standards. But not because these are objectively low, but because they deviate from the spending plans fed under the credit expansion. To disentangle these mechanisms, I model how voters form beliefs about parties and institutions over the credit cycle. The model represents credit cycles as having effects both on institutional deterioration (e.g. corruption, or elite competence; (Fernández-Villaverde, Garicano, and Santos 2013)), and on living standards. Voters infer the *type* of politicians and institutions, but differ in their interpretation in two dimensions: their "*trust priors*" (how sensitive are voters' beliefs to institutional deterioration) and their "*economic aspirations*" (i.e. planned spending). The model shows that both mechanisms can rationalize the puzzle, but have different empirical implications- which will inform the identification design.

The identification assumptions are derived from the model: I show that *unfulfilled aspirations* can be regarded as exogenous to *trust priors* if the former are measured by changes in life-cycle adjusted spending. Identification requires, however, observing individuals both before and after the financial crisis. The rarity of longitudinal data is a key obstacle to the study of the link political attitudes and economic insecurity (Margalit 2019b). I overcome it constructing a pseudo-panel that combines 250 opinion surveys and 12 waves of household spending surveys. This allows to follow cohorts over the credit cycle, and to combine household spending with public opinion data. The robustness of this strategy is contrasted³ with closest analogs available in post-electoral surveys.

The findings of section 3 confirm, that economic aspirations are critical to understand the link between living standards and anti-establishment politics. In cross-sectional data, the trust cleavage seems to be the main driver of the electoral losses of mainstream parties, while having low income or being unemployed has a *positive* effect on their support. However, once aspirations are considered, living standards emerge as the major factor behind this cleavage: unfulfilled aspirations explain two-thirds of the distrust in institutions. Moreover, the losses of mainstream parties react with an elasticity of 0.9 to the deviation from pre-crisis spending plans. This channel explains 40% of the variance, and the inclusion of trust only adds 10% of explanatory power.

The role of pre-existing political identities is considered in section 4. I refer by *political identities* to traits that structure voters' political preferences and perceptions⁴ which in most West European countries are organized around the left-right cleavage (Häusermann and Kriesi 2015). Political identities play a central role in representation⁵ ensuring the *linkage* (Kitschelt 2000) between citizens and institutions through the intermediation of parties. Since financial crises undermine the trust linking voters to institutions and mainstream parties, we would like to understand (a) whether

³ See additional material.

⁴ These include both "ideology" (interests, values, and preferences over issues (Feldman 2013) , and "group identities" (Achen and Bartels 2017)

⁵ The role of ideology and identities linking voters to parties has extensively been studied in political economy (Aldrich and others 1995; Achen and Bartels 2017). The stability of most voting models requires preferences to be representable on a reduced number of dimensions (McKelvey 1979; Iversen and Goplerud 2018) such as the left-right axis. Then they can be aggregated through political competition. Similarly, ideology is known to play an informational role, allowing to process information about politics.

General distrust and *Unfulfilled aspirations* channels also shift voter's identities in response to the crisis and (b) whether these identities reinforced or weakened the effect of these channels on electoral outcomes.

The results of section 4 underline the importance of pre-crisis political cleavages to understand the link between living standards and politics. Neither *General distrust* nor *Unfulfilled aspirations* substitute or substantially shift the cleavage between the left and the right. However, the effect of unfulfilled aspirations on vote transfers between left parties is twice as large among left voters, and its intensity among center-right and radical-left voters can explain why anti-establishment parties emerged on those locations.

These findings address a key debate in political economy: what is the origin of anti-establishment politics? The literature is divided between those who see it as a consequence of economic insecurity (e.g., Guiso et al. 2020; Algan et al. 2017; Rodrik 2018; Mudde and Kaltwasser 2017), and those who emphasize identities (Mudde and Kaltwasser 2017; Norris and Inglehart 2019). While previous evidence on the effect of economic insecurity is abundant,⁶ it is also ambiguous about the nature of this link. Economic insecurity refers to a variety of situations -from employment status to subjective economic anxiety- and the literature is ambivalent about whether these situations translate into anti-establishment politics because they affect policy preferences (e.g., demand for redistribution, protectionism, immigration policy), or through a different mechanism (Margalit 2019a).

In this debate, this paper emphasizes the role of *aspirations* linking economic insecurity and anti-establishment politics. Aspirations are spending plans, linked to social status, for which elites and institutions are expected to provide insurance. Unfulfilled aspirations are a form of economic insecurity. They make citizens feel betrayed, and push them to look for alternatives that will represent their interests and identities. In contrast to other explanations, this channel is agnostic about the link between economic insecurity, economic self-interest and policy preferences. Preferences could remain defined by income levels or identities. This explanation complements previous research integrating the key elements of this debate: living standards, identities, and anti-systemic attitudes. This allows to clarify the link between anti-establishment attitudes, and the closely related topic of "polarization" along pre-crisis cleavages (Funke, Schularick, and Trebesch 2016; Boxell, Gentzkow, and Shapiro 2020).

Therefore, this paper connects anti-establishment politics with the literature that has shown the importance of aspirations for economic decisions (La Ferrara 2019; Genicot and Ray 2020, 2017) or preferences for redistribution (Rueda and Stegmueller 2019). It connects them to the role *relative deprivation* in political mobilization (Binzel and Carvalho 2017; Gurr 1970; Davies 1974). Finally, it suggests that spending data can be used to identify plans or aspirations which are, by definition, unobservable.

Finally, this paper also underlines the importance of country-specific factors. Its main insight is that the link between living standards and anti-establishment politics depends on the pre-crisis relationship between voters and elites. What voters expect from elites depends on their prior trust,

⁶ See (Margalit 2019b).

economic aspirations and their political identities. While unfulfilled aspirations fuel distrust, identities shape voters demands in response to distrust. These two factors are likely to vary across countries, and their interaction could explain why economic shocks of the same magnitude cause different types of reaction.

2. LIVING STANDARDS AND ANTI-ESTABLISHMENT POLITICS IN DEBTOR COUNTRIES: THREE CROSS-SECTIONAL PUZZLES

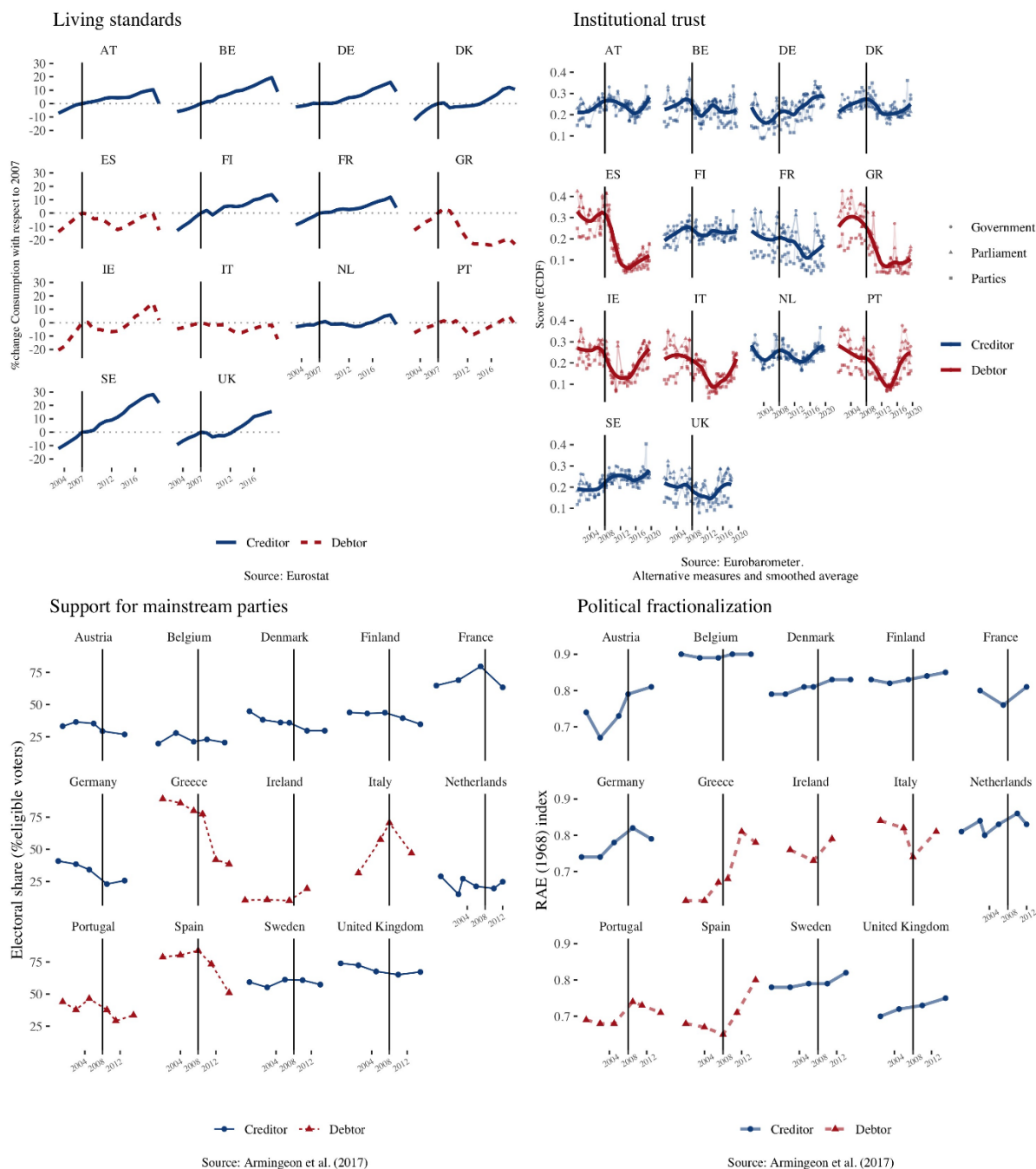
The literature that documents the causal link between living standards and anti-establishment politics is extensive⁷, and this link that is known to be particularly strong after financial crises (Funke, Schularick, and Trebesch 2016; Mian, Sufi, and Trebbi 2014). Its strength is illustrated by the asymmetric trajectories followed by creditor and debtor countries after the Euro-crisis. However, at the cross-sectional level, the link between living standards and political discontent is much less clear.

The economic collapse of the European periphery was unprecedented. Between 2008 and 2013, living standards measured by consumption spending declined by 12% in Spain and up to 20% for Greece (Figure 1). The shock put was the end of a decade of unprecedented prosperity that followed the creation of the single currency. In the case of Spain, however, growth rested on a housing bubble fed by external imbalance. The sudden stop of financial inflows burst the bubble and caused the most severe recession in decades. Successive governments had to implement fiscal cuts in 2010 and 2011 that explicitly contradicted their electoral promises, accentuated after the bail-out in 2012. During this period, several *signs of institutional deterioration* were revealed (García-Santana *et al.* 2020; Fernández-Villaverde, Garicano, and Santos 2013) like the collapse of quasi-public financial institutions and multiple corruption cases (Sanz, Solé Ollé, and Sorribas 2020; Solé Ollé and Sorribas-Navarro 2018).

Political discontent in debtor countries parallels the economic downturn (Algan *et al.* 2017; Guiso *et al.* 2020). The impact of the crisis undermined the link between citizens and elites. Distrust against parties and institutions rose (Figure 1, top-left panel). Over successive elections, “Mainstream” (conservative and socialdemocratic) parties suffered large losses (bottom-left panel) while the entry of new parties with a strong anti-establishment tone (Hutter, Kriesi, and Vidal 2018) resulted in more fractionalized electoral landscape (bottom-right). This dynamic was specific to debtor countries and, in the case of Spain, two expressions of the anti-establishment backlash were particularly intense. *Institutional distrust* (Figure 1) was evidenced by waves of street protests in 2011, who blamed the corruption of the two-party system, and demanded direct democracy (Vidal 2018). *Electoral discontent* (the shift from mainstream to new parties) translated into a historical change in the party system. For decades the two mainstream parties (social-democrats from PSOE, and conservatives from PP) were supported by 75% of the total eligible voters, but after the 2015 election, they only accounted for 50%. Two new parties emerged on the center right (“Ciudadanos”), and on the far left (“Podemos”), which got 13,93% and 20,66% of the vote respectively.

⁷ The literature has shown the empirical link between economic insecurity and Brexit (Fetzer 2019); the rise of radical right in Hungary (Gyongyosi and Verner 2018), and Sweden (Dal Bó *et al.* 2020), as well Europe-wide (Algan *et al.* 2017), and (Guiso *et al.* 2020). See (Margalit 2019a) for a review.

Figure 1
Parallel economic and political trends



Note: Debtor countries are defined as those which experienced a large correction of their external balance (Portugal, Italy, Ireland, Greece, Spain) after 2008. The change in living standards (NW picture) is the change in household spending with respect to the 2007 level. Institutional trust (NE) depicts the answer to three items included in the Eurobarometer survey, where respondents are asked to evaluate their trust in the government, in the parliament, and in political parties. For each item, the average response is computed substituting each ordinal item by its score in the empirical cumulative substitution of the whole sample. The thick line depicts the (loess) smoothed average of the 3 items. The two bottom plots depict the change in the composition of the party system, where fractionalization is measured by the RAE (1968) concentration index, and the support for mainstream parties is the vote share of conservative and social-democratic parties, with respect to the total number of eligible voters.

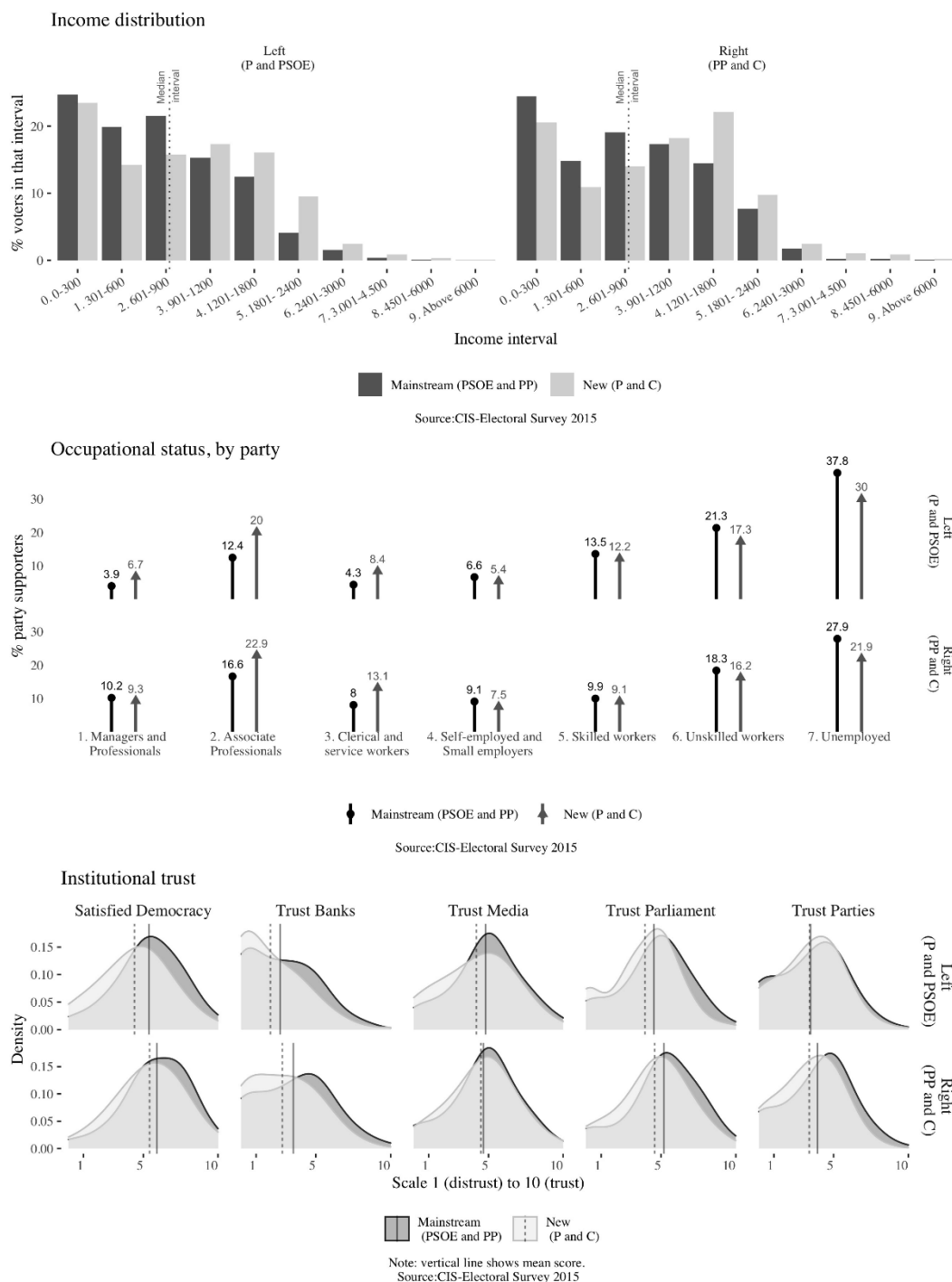
In spite of the parallel economic and political trends, three features of the Spanish case illustrate the puzzle investigated in this paper. Firstly, the average voter of new parties was not the prototypical loser of the housing bubble. The Spanish unemployment rate attained 23% by 2013 and made earnings inequality explode (Bonhomme and Hospido 2017), and low skilled construction workers were the main casualties of the housing bubble.⁸ Paradoxically, however, Figure 2 shows that low income, low-skilled and unemployed workers remained loyal to mainstream parties.⁹ Secondly, economic issues seemed to play a modest role in the strategy of new parties. Instead, their critiques focused on the core features of the Spanish institutional system and on institutional deterioration, denouncing elite corruption and broken electoral promises.¹⁰ Figure 2 shows that voters of the two new parties had in common their distrust against traditional parties and institutions.

⁸ (Bonhomme and Hospido 2017) show that the change in unemployment was the core driver of inequality before and after the recession. Similarly, (Campos and Reggio 2015) show that the risk of unemployment had a substantial effect on consumption, as household refrained.

⁹ The additional material of this paper provides a detailed analysis of vote transfers at the individual level that make this point rigorously.

¹⁰ Both parties emphasized the importance of trust issues- corruption, representation, elite competence. In the case of Podemos (especially its early incarnation), the classification as a “left populist” party, similar to France Insoumise or Syriza, is commonly accepted (see Rooduijn *et al.* 2019). It denounced the two mainstream parties as part of the “caste” (an amalgam of economic and political elites), and proposed an overwhelming reform of the constitution and the institutional system as a whole. Ciudadanos is commonly seen as belonging to liberal right family, but it denounced the corruption of the parties, and the lifestyle of politicians, as well as a piece key to Spanish politics: the backdoor deals with peripheral nationalist parties, which were denounced as deviations from the general will.

Figure 2
The composition of mainstream and new parties



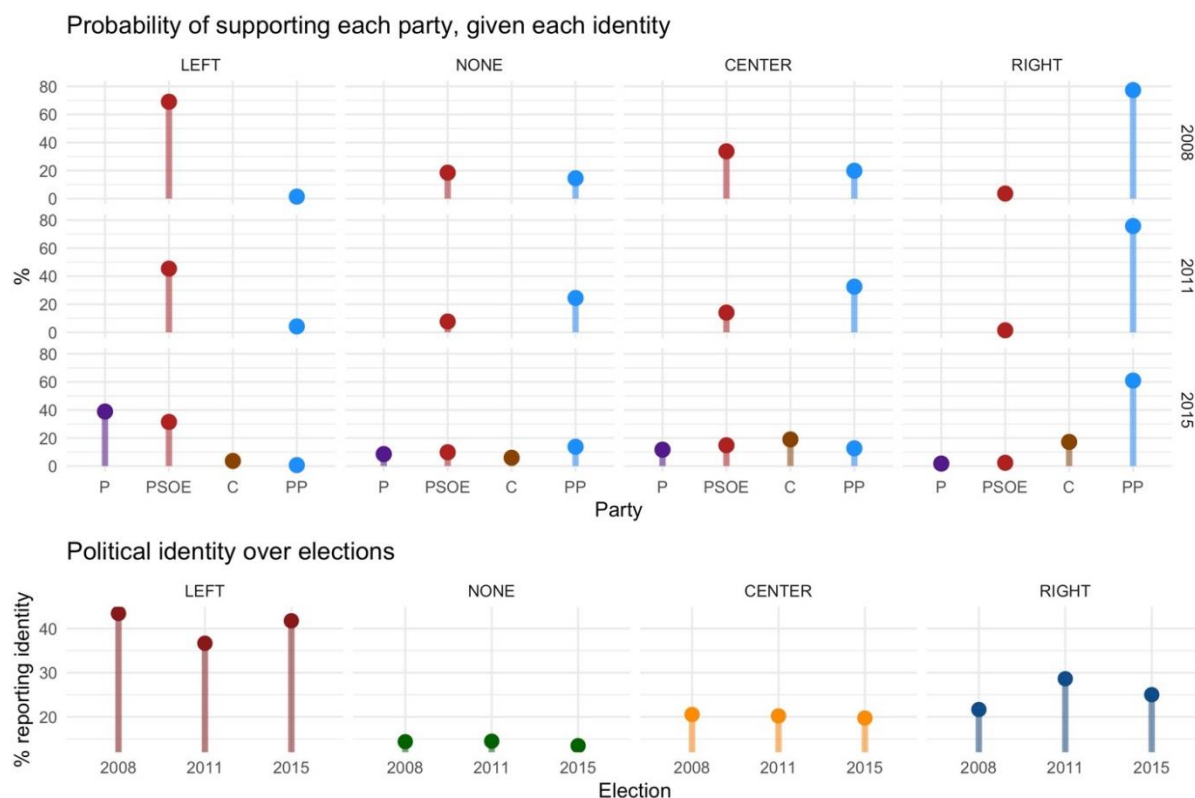
Note: The figures illustrate the composition of mainstream and new parties, based on electoral survey of 2015 of the Spanish Center of Sociological research (CIS). The bottom plot illustrates the institutional trust, by party, measured by five items on a 1-10 scale. The first and second plots show the percentage of voters located in each of the income intervals, and by occupation.

Thirdly, pre-crisis political identities remained central for Spanish politics. This was surprising, given the vast change in the electoral landscape. Key pre-crisis identities were defined along the left-right dimension (Sánchez-Cuenca and Dinas 2016), and based on how they identify¹¹. Three facts illustrated in Figure 3 show its centrality. Firstly, the top panel shows that the size of these groups in the total population is remarkably stable over time, in spite of change in electoral patterns. Moreover, the stability of these groups was closely connected to that of party shares. As illustrated in the bottom panel, in 2008 and 2011, the “left” and the “right” groups were the cores of the socialdemocrat (PSOE) and conservative (PP) electorate, while the “center” and “none” categories pivoted toward one or the other. Finally, with the 2015 election, the left-right axis strongly conditioned the support for old and new parties. The change was highly uneven across the left-right spectrum: “*Podemos*” became the preferred party among the left, but failed to attract many voters from the right; in contrast “*Ciudadanos*” gathered most of its support from the center-right.

The impact of the financial crisis in Spain illustrates our insufficient understanding of the micro-foundations of anti-establishment politics -a point made by (Margalit 2019a) and (Rooduijn 2018). One would expect that, if voters turn their backs on the system in response to the crisis, they would do it in the name of economic insecurity and pursuing their economic interests. In the case of Spain, at least three puzzles remain to be explained: (1) Why did voters react to an economic crisis with distrust against political institutions? (2) Why was discontent more prevalent among the upper half of the income distribution than among the poor and the unemployed? (3) How did these forces interact with pre-existing political identities, and why did pre-existing cleavage remain in place in spite of the electoral change? I address the first two questions in section 3, and the third one in 4.

¹¹ This measure of identity results from an item where respondents are asked to report their identity on a 1-10 left to right scale, recoded this item in four categories: “Left” (below 5), “Center” (exactly 5), “right” (above 5) and “none” (if the respondent refuses to identify with any). This item correlates strongly both with policy preference on most issues in the Spanish case (see Sánchez-Cuenca and Dinas 2016), as well as with economic perceptions (Guirola 2020), voters can be classified as: “Left”, “None”, “Center”, “Right”.

Figure 3
Political identity over elections



Source: Post-electoral survey of 2008, 2011 and 2015. Groups are formed based on respondents answer to an item where they were asked to report where they stood on 1-10 scale on the left- right spectrum: Left (below 5), center (5), right (above 5) or none.

3. TRUST, INSTITUTIONAL DETERIORATION AND LIVING STANDARDS OVER THE CREDIT CYCLE

3.1. Theory

I start addressing the first two puzzles: how can a financial crisis generate a political cleavage along trust (rather than economic) lines? And why is distrust more intense among upper-middle income voters, than among those who are objectively worse off? I argue that these puzzles can be rationalized in two fashions. Voters could be concerned about their country in general, irrespective their individual situation (the “General distrust channel”), or about the frustration of their economic aspirations (“Unfulfilled aspirations channel”).

In the “*General distrust channel*”, citizens differ in their discontent because during a financial crises signals of institutional deterioration become visible, but citizens have different priors about what those signals mean. (Fernández-Villaverde, Garicano, and Santos 2013) suggest that credit expansions can generate corruption and poor management, but these remain hidden by the climate of affluence. The credit contraction exposes institutional deterioration in the form of failed investments, unexpected budget cuts, corruption scandals, or simply the inability of governments to

handle the crisis. Voters' predisposition to react to these signals might be heterogeneous,¹² and I capture this predisposition under the umbrella of "trust priors".

In the "*Unfulfilled aspirations channel*", the key signal is how the credit cycle affects voters' (pre-crisis) spending plans, and not institutional deterioration. Parties and institutions play a game with voters, in which they exchange political support for insurance of voters' spending plans ("*economic aspirations*"). A credit expansion feeds aspirations of upward mobility (which may translate into financial commitments) and, while it lasts, rising living standards reinforce the trust of voters in parties and institutions. A sudden credit contraction, however, frustrates previous spending plans, and since the government's capacity to provide insurance (either through macroeconomic policy or transfers) is limited by credit constraints, the trust of voters is undermined. Therefore, the heterogeneity in distrust results from *unfulfilled aspirations*, a form of *relative deprivation*¹³ defined by the gap of outcomes relative to aspirations.

These two channels capture the main families of explanations in the debate on anti-establishment politics. The *General distrust channel* assumes that voters care about politics and institutions intrinsically, and represents, through the concept of "trust priors", most explanations which emphasize non-economic factors. In contrast, in the *Unfulfilled aspirations channel* voters only care about institutional deterioration due to its economic externalities (Fernández-Vázquez, Barberá, and Rivero 2016; Sanz, Solé Ollé, and Sorribas 2020), and thus represents theories that link anti-establishment tendencies to economic interests (Guiso *et al.* 2020). Implicitly, it therefore expresses a form of distributive conflict, in which they react to protect their entitlement from adjustment (Mian, Sufi, and Trebbi 2014).¹⁴

To formalize how these channels can make sense of the two puzzles, I propose a simple model. The support for parties and trust in institutions is represented by $E_i[\Lambda|\Omega_{it}]$: given her information set Ω_{it} , individual i has beliefs about all the variables that determine the trustworthiness of parties and institutions Λ (their "type"). Voters do not observe the type Λ directly. At each point in time, the information set Ω_{it} is given by a history of utilities $u(c_{it})$ associated with individual living standards c_{it} , and of public signals of political and institutional performance θ_t : $\Omega_{it} \equiv \{c_{i\tau}, \theta_\tau\}_{\tau \in (1, \dots, t)}$. Voters update their beliefs at each point in time based on new realizations of (θ_t, c_{it}) . On the one hand, they observe public signs of institutional deterioration θ_t -e.g. unfulfilled electoral promises, corruption scandals, etc- which are noisily connected to Λ ,

$$\theta_t = \Lambda + \epsilon_{\theta,t} \quad (1)$$

¹² Reasons for this may be the existence of local legacies of corruption (Sanz, Solé Ollé, and Sorribas 2020; Solé-Ollé and Sorribas-Navarro 2018), different values (Torcal 2014), or political preferences (Anduiza, Gallego, and Muñoz 2013).

¹³ The concept relative deprivation has a long tradition in political economy as the key link between economic and political phenomena (Binzel and Carvalho 2017, Burgoon 2018, Gurr 1970, Davies 1974). It can capture most forms of economic insecurity (Ambrosio *et al.* 2007), since, by measuring economic deprivation with respect to a reference point it generalizes absolute deprivation (which implicitly assumes that all references points are identical).

¹⁴ The relative deprivation channel extends the insight of (Mian, Sufi, and Trebbi 2014), for whom the central political game after financial crises is how to share the burden of adjustment, and different groups react exerting pressure on politicians to protect the value of their entitlements.

where $\epsilon_{\theta,t}$ is a serially uncorrelated distortion (i.e. white noise). On the other hand, from voters' point of view, one of the functions of politicians is to insure them against the uncertainties of their life-cycle. Voters perceive that their realized living standards $u(c_{it})$ should match their economic aspirations $u(\tilde{c}_{it})$. Aspirations $u(\tilde{c}_{it})$ are a benchmark of what voters can legitimately expect at each stage of their life-cycle, given certain characteristics (e.g. gender, education). Voters regard the function of institutions and politicians to against deviations from this benchmark, and therefore deviation are informative about their type, Λ :

$$u(c_{it}) = u(\tilde{c}_{it}) + \psi_u \Lambda + \epsilon_{u,it} \quad (2)$$

Moreover, the vector of distortions $(\epsilon_{u,it}, \epsilon_{\theta,t})$ is assumed iid, and serially uncorrelated, and therefore:

$$E[(\epsilon_{u,it}, \epsilon_{\theta,t}) | \Omega_{it-1}] = 0; \quad E[(\epsilon_{u,it}, \epsilon_{\theta,t})(\epsilon_{u,it}, \epsilon_{\theta,t})^T | \Omega_{it-1}] = \text{diag}(\sigma_u, \sigma_\theta) \quad (3)$$

Equation 2 and 3 will be key to our identification strategy. They imply that voters understand that their aspirations might not only be frustrated due to institutions' performance (Λ). *Transitory* (i.e. serially uncorrelated) "bad luck" shocks $\epsilon_{u,it}$ are exogenous to the control of the government. In contrast, more *persistent* (non-transitory) deviations from \tilde{c}_{it} are seen as violations of the duty of elites and institutions to provide insurance -and thus informative about their type Λ . Moreover, assumption 3 implies that, conditional on all prior knowledge about Λ , deviations from economic aspirations are uncorrelated with the prior history.

The extraction of signals about Λ can be represented as a as process of bayesian learning, in which priors are updated proportionally to the likelihood:

$$E_i[\Lambda | \Omega_{it}] = \underbrace{E_i[\Lambda | \Omega_{it-1}]}_{\text{Priors}} + \underbrace{\frac{\alpha_\theta [\theta_t - E_i[\theta_t | \Omega_{it-1}]]}{\alpha_u [u(c_{it}) - E_i[u(c_{it}) | \Omega_{it-1}]]}}_{\text{Institutional deterioration update}} + \underbrace{\alpha_u [u(c_{it}) - E_i[u(c_{it}) | \Omega_{it-1}]]}_{\text{Living standards update}} \quad (4)$$

where $(\alpha_u, \alpha_\theta)$ are the weights given to each signal. Equation 4 expresses that the beliefs of individual i at time t , $E_i[\Lambda | \Omega_{it}]$ are the result of updating its prior value in response to unexpected unfulfilled aspirations, and institutional deterioration. In the case in which (θ_t, c_{it}) behave in line with expectations, the prior Λ would be confirmed, and no update would take place. However, when (θ_t, c_{it}) deviate substantially from expectations, the beliefs about Λ would be updated. The weight given to these signals $(\alpha_u, \alpha_\theta)$ will depend on their precision $((\alpha_u, \alpha_\theta))$ relative to that of the prior. Using property 3, and replacing equations, 1 and 2, in equation 4:

$$E_i[\Lambda | \Omega_{it}] = E_i[\Lambda | \Omega_{it-1}] + \alpha_\theta [\theta_t - E_i[\theta_t | \Omega_{it-1}]] + \alpha_u [u(c_{it}) - u(\tilde{c}_{it}) - \psi_u E_i[\Lambda | \Omega_{it-1}]]$$

and letting $\alpha_\Lambda \equiv (1 - \alpha_u \psi_u - \alpha_\theta)$:

$$E_i[\Lambda | \Omega_{it}] - \alpha_\Lambda E_i[\Lambda | \Omega_{it-1}] = \alpha_\theta \theta_t + \alpha_u [u(c_{it}) - u(\tilde{c}_{it})] \quad (5)$$

Equations 5 and 4 show how the two mechanisms rationalize the two puzzles observed in the data. Firstly, equation 5 shows why the reaction to a financial collapse could be more intense among the relatively better-off. On the one hand, affluent voters may judge signs of institutional deterioration

more severely, if they have different priors ($E_i[\Lambda|\Omega_{it-1}]$) (the general discontent channel). But on the other hand, they are used to higher living standards (\tilde{c}_{it}), and may experience more intense frustration ($u(c_{it}) - u(\tilde{c}_{it})$), even in the presence of higher income (the unfulfilled aspirations channel).

Secondly, in both mechanisms a “trust” cleavage emerges as the outcome of a credit cycle. A credit expansion fuels a history of living standards growing above economic aspirations ($u(c_{it}) > u(\tilde{c}_{it})$). This history will inflate positive beliefs about the parties and institutions types ($E_i[\Lambda|\Omega_{it}]$), and lead to ignore signs of institutional deterioration (θ_t). In contrast, during the credit contraction, unfulfilled aspirations ($u(c_{it}) < u(\tilde{c}_{it})$) will combine with signs of institutional deterioration (θ_t) to undermine the trust in parties and institutions. Therefore, both mechanisms imply that a shift in the support for mainstream parties and in institutional trust will be correlated, since they respond to common causes.

Both channels can rationalize the puzzles but, as equation 5 shows, they have different empirical implications. The *Unfulfilled aspirations channel* implies that, conditional on their prior values, both electoral discontent and institutional trust should be explained with the gap between economic aspirations and outcomes. In contrast, the *General distrust channel* implies that the deviation from economic aspirations should add no information with respect to priors and, as a corollary, the correlation between the change in trust and electoral discontent should not diminish when unfulfilled aspirations is taken into account. This difference will inform our empirical strategy.

3.2. Empirical strategy

3.2.1. Identification

Each causal channel is identified testing the link between unfulfilled aspirations, and institutional trust and party support (equation 5). Identification is granted by property 3 and the assumption of bayesian updating of trust priors (eq. 4). Together, they imply an exclusion restriction: given prior beliefs about the types of parties and institutions’ ($E_i[\Lambda|\Omega_{it}]$), deviations of living standards from economic aspirations are unexpected (i.e. uncorrelated with trust priors $E_i[\Lambda|\Omega_{it-1}]$, and thus with all prior history). In the *General distrust channel* all the heterogeneity in response to common signs of institutional deterioration is due to differences in trust priors; therefore all the variance explained by unfulfilled aspirations can be attributed to the *Unfulfilled aspirations channel*. The identification strategy depends therefore on measuring unfulfilled aspirations in a manner consistent with property 3, and I argue below that this is the case for changes in life-cycle adjusted consumption.

To operationalize how the effect of the two mechanisms implied by equation 5 can be pinned down from observed trust and electoral discontent, consider the following system:

$$\Delta Trust_{ct} = \lambda_t + \beta[u(c_{ct}) - u(\tilde{c}_{ct})] + v_{ct} \quad (6)$$

$$\Delta Vote_{ctj} = \mu_{tj} + \pi_j[u(c_{ct}) - u(\tilde{c}_{ct})] + \phi_j \Delta Trust_{ct} + e_{ctj} \quad (7)$$

The system is analog to equation 5, but for each observation c it specifies the link between trust level ($Trust_{ct}$) and its probability of voting for option j , ($Vote_{ctj}$) as components $E_i[\Delta|\Omega_{it}]$. In equations 6 and 7, Δ operator represents the change with respect to the pre-crisis environment, which allows to control for the effect of priors (about parties and institutions), and other sources of unobserved heterogeneity. Parameters (β, π, ϕ) in 6 therefore allow to distinguish between the *General distrust* and the *Unfulfilled aspirations* channels:

- The effect of unfulfilled aspirations on trust is pinned down by β . A positive value of β would support *Unfulfilled aspirations channel*- that institutional trust is endogenous to life-cycle frustration.
- The total effect of unfulfilled aspirations on electoral outcomes is given by π_j , constraining $\phi_j = 0$. This is because in equation 7 unfulfilled aspirations affects $Vote_{ctj}$ both directly, and through its effect on trust- including trust in the specifications would induce post-treatment bias.
- The effect of *Unfulfilled aspirations channel* on electoral outcomes can be approximated comparing the value of ϕ_j when constraining $\pi_j = 0$, to the unconstrained case. A large difference between the two would suggest that the effect of trust on electoral outcomes is driven by their common exposure to unfulfilled aspirations (β).

I consider three electoral outcomes $\Delta Vote_{ctj}$: the vote share of new parties (Podemos and Ciudadanos), the change in the share for mainstream parties, and in vote turnout. Unfulfilled aspirations and lower trust should move voters away from mainstream parties. In the 2015 and 2016 elections, discontents would move to new parties, and in 2011 voters would mainly move away from the ballot (lower turnout)- as a result, we would expect that in 2011, the effect of frustration on turnout would be stronger than in 2015 and 2016.

3.2.2. Pseudo-panel estimation

The core obstacle to estimate the system of equations 6 and 7 is that neither pre-crisis values $Trust_{ct}$, nor economic aspirations $u(\tilde{c}_{it})$ can be directly observed in cross-sectional data, and no longitudinal data exists at the individual level. I overcome this problem combining public opinion and consumer spending surveys into a pseudo-panel (Deaton 1985). Repeated cross-sectional observations are grouped in *cohorts*, and the change in their moments is compared longitudinally. Each cohort is defined by time invariant covariates, such that the change in their conditional distribution tracks the same sub-population over samples. I define cohorts based on education, gender and year of birth.¹⁵ These criteria track the key determinants asymmetric impact of the crisis (Anghel et al. 2018), both within (driven by education and gender) and especially across generations (by year of birth). I assessed the validity of this approach comparing results to those obtained using a more conventional design with post-electoral surveys data on vote transfers.¹⁶

¹⁵ I select those individuals who were 24 or above before onset of the crisis in 2008, for whom education is likely to be unchanged.

¹⁶ See additional material.

3.2.3. Unfulfilled aspirations and consumption spending

The identification strategy rests upon a measure of unfulfilled aspirations $[u(c_{ct}) - u(\tilde{c}_{ct})]$ that (i) validly reflects expectations about permanent (non-transitory) income (eq. 2), and (ii) complies with exclusion restriction (property 3) of being orthogonal to trust priors $E_c[\Lambda|\Omega_{it-1}]$ (i.e. unexpected). Both properties are fulfilled by the variation in the log of consumption, adjusted by the life-cycle: $\log c_{ct} - \log \tilde{c}_{ct}$ ¹⁷: the *permanent income hypothesis* (Attanasio and Weber 2010) implies that, conditional on the life-cycle, changes in spending reflect credit constraints (for which government is expected to provide insurance), or unexpected (i.e. uncorrelated with Ω_{it-1}) permanent changes in future income. Intuitively, if pre-crisis spending reflects expectations of future income (in virtue of eq.2), it should already incorporate prior information about the trustworthiness of parties and institutions; therefore, its change, does not.

3.3. Data and measurement

3.3.1. Description of the data

Our pseudo-panel design, allows to combine multiple surveys, with data on trust, consumption, and vote, into a longitudinal cohort panel.

To measure *consumption* I rely on the Spanish HBS (Household Budget Survey -*Encuesta de presupuestos familiares*). The HBS is a large household survey (about 24,000 households per year), containing annual data between 2006 and 2016 on household expenditure in each of the years. Households are asked to report their spending on different items, and the total is computed in a household file. Individual files are also available, containing information about the characteristics of household members- such as education, age, and gender. I impute to each member the average consumption of the household, using the equivalence scale of the Spanish statistical agency.

Data about *voting* behavior is extracted from a total 200 cross-sectional surveys. The Spanish center of sociological studies (CIS) performs a surveys on a variety of topics at a monthly level, and asks in most of them about who the person voted in the previous election. From each survey, I recovered their reported vote, their demographics, and their identification on the left-right scale (which will be used later). The sample size is of 169,214 observations for the 2008 election; 259,701 for 2011; 69,260 for 2015, and of 80,546 for 2016.

The measurement of *institutional trust* is the most challenging part. Trust is not directly observable, and no item is repeated frequently enough to allow a precise estimate for the four periods (before 2008, 2008-2011, 2012-2015, 2015-2016). However, in 50 surveys by the Spanish center of sociological studies (CIS), there were up to 16 different items that were asked at least once before and after 2008 which were candidates to measure trust in institutions. These items ask

¹⁷ For cohort c (defined by gender, year of birth and education) of age_{ct} , the change in consumption is measured with respect to the cohort of that age in the pre-crisis period (provided cohort effects are neglectable, which is plausible if cohorts as adjacent).

respondents to report, on an ordinal scale, how much they trust different institutions- e.g. their trust in the government, parties, or the crown, or democracy. The ordinal scale of each item is converted into the (0,1) interval using the empirical cumulative distribution of the item in the period 2004-2008 as a reference.¹⁸ These items are combined into a dynamic factor model of trust (see below).

Measuring cohort moments from the above sources poses two problems. Firstly, a well known cost of pseudo panels is their inefficiency: with small sample sizes, many cohorts are likely to contain a small number of observations, and their measurement contaminated by large measurement error. Secondly, for the case of institutional trust, the problem of small sample size is compounded by the challenge of *aggregating* multiple items, observed with *mixed frequencies*, into a single measure. I overcome these problems smoothing cohort moments semiparametrically and combining trust items in a dynamic factor model.

3.3.2. Semi-parametric estimation of cohort moments

I overcome the problem of small sample size estimating cohort means through local polynomial regression (see Fan and Gijbels 1996). Cohorts are defined by their age, gender, and three levels of education (primary, secondary, and tertiary). The intersection of these three criteria gives a grid of 396 cohorts, which are used to track the distribution. For each age, a local weighted regression is computed with the an intercept and education, gender, and the interaction of gender and education as covariates. For cohort c , the mean of the observation y_{ci} is a function $g()$ of the polynomial:

$$y_c = E[y_{ci}|age_c, gender_c, edu_c] = g(\alpha^{age_c} + \rho^{age_c} edu_{ci} + \gamma^{age_c} gender_{ci} + \phi^{age_c} gender_{ci} \times edu_{ci}) \quad (8)$$

where $gender_{ci}, edu_{ci}$ are education and gender dummies. The vector of parameters governing the cohort mean $\Xi^{age_c} \equiv (\alpha^{age_c}, \gamma^{age_c}, \phi^{age_c})$ are age specific, and are estimated at each age point, maximizing the local weighted likelihood $L()$

$$\Xi^{age_c} \in \operatorname{argmax} \sum_i \frac{K_h(age_c, age_{ci}) L(y_{ci} | gender_{ci}, edu_{ci}, age_{ci}, \Xi^{age_c})}{\sum_i K_h(age_c, age_{ci})}$$

and where the weights are given by a gaussian kernel $K_h(age_c, age_{ci}) = \frac{1}{\sqrt{2\pi}} \exp(-\frac{age_c - age_{ci}}{2h})$, and h is a bandwidth parameter.¹⁹ The likelihood $L()$ and the function $g()$ used are a Gaussian-linear for continuous variables (consumption and trust items), and logistic regression for binary variables (vote shares).

¹⁸ Therefore, a score $y_{ijq} = 0.5$ should be interpreted as individual i being in the middle of the distribution defined for the 2004-2008 period.

¹⁹ The bandwidth chosen for most estimates was 4 for all estimates. I privileged using the same bandwidth in the three samples, in order to ensure comparability. I performed substantial sensitivity analysis in the neighborhood of 2, not finding any substantial difference.

The local polynomial regression in 8 allows to estimate cohort specific moments at each age point. All cohort defining dummies (education, age, and gender) are interacted, minimizing the parametric assumptions and maximizing the heterogeneity between cohorts. On the other hand, the locally smoothed estimates of eq. 9 solves the problem of small or empty cells. It partially pools the information from adjacent cohorts. Finally, the smoothing over the age distribution has the added benefit of ensuring that the identification is not contaminated by cohort-specific effects (since these are dissolved for contiguous similar cohort of the same age).

3.3.3. A dynamic factor model of trust items

The measurement of trust faces two obstacles: the *aggregation* of the multiple items into a single measure, and the *mixed frequency* nature of the data. The semi-parametric estimates deliver cohort means y_{cjq} for the $j \in \{1, \dots, 16\}$ items, in each quarter q . However, there are up to 16 candidate items (the *aggregation* problem), and these are observed at irregular intervals (certain items appear in certain surveys but not in others), and never all simultaneously (*mixed frequency*). These two obstacles are overcome through a dynamic factor model estimated with a Kalman filter. These allow to update information provided by new items, extracting factors at each point in time whenever a new item is observed.

Let $Trust_{cq}$ be a common dynamic factor, whose dynamics incorporate all the information available at a point in time. Its dynamics are governed by the transition equation:

$$Trust_{cq} = Trust_{cq-1} + \xi_{cq} \quad (10)$$

While $Trust_{cq}$ is not directly observable, it is linked to the observed item score y_{cjq} by a measurement equation:

$$y_{cjq} = a_{cj} + b_j Trust_{cq} + e_{cjq} \quad (11)$$

in which the observed score y_{cjq} of the item j is the sum of an item specific constant (a_{cj}), and the contemporary value of the dynamic factor $Trust_{cq}$ scaled by a factor loading b_j .

The vector of errors e_{cjq} and the innovation are distributed as

$$\begin{pmatrix} e_{cjq} \\ \eta_{cq} \end{pmatrix} \sim N \left[\begin{pmatrix} 0 \\ 0 \end{pmatrix}, \begin{pmatrix} diag(\sigma_j) & 0 \\ 0 & \sigma_\eta \end{pmatrix} \right]$$

where σ_1 is normalized to 1. Therefore, σ_η controls the degree of smoothing (the average informativeness of the signals), and $(\sigma_j)_{\{j>1\}}$ accounts for the *relative* informativeness of the items. Conditional on the parameters $((b_j), \sigma_\eta, diag(\sigma_j))$ the Kalman filter smoothing algorithm (Harvey 1983) extracts the value of the factor $Trust_{cq}$ for each period, even if not all items j are observed every quarter j , the common factor $Trust_{cq}$.²⁰

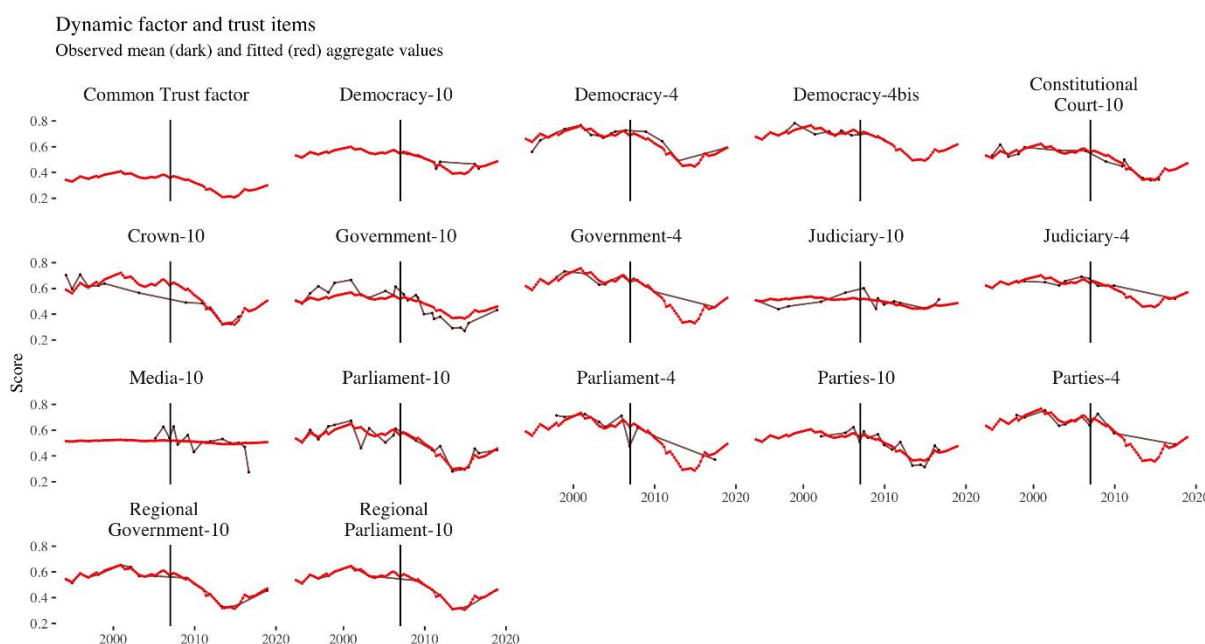
²⁰ The calibration of the filter was done by estimating the parameters measuring the cross-sectional link between the items $((b_j), diag(\sigma_j))$ through MLE for the aggregate trend. In turn, these parameters were used to extract values at the cohort level.

3.4. Results

3.4.1. Measurement of trust

Figure 4 shows the aggregate evolution across surveys for each of the 17 items (in bold), and the predicted value from the common trust factor (red). The model solves the problem of *aggregation* of trust items. The comparison of fitted to observed values indicates that the trust in *all* the institutions follows a common trend. Although the items refer to a broad span of institutions (such as parties, courts, or the crown), their dynamics are parallel. Similarly, the estimates suggest that trust in those institutions more directly connected to political elites follow more closely the common factor (e.g. government and parliament vs the media), confirming that the common factor is a measure of trust towards *political* institutions. The parallel evolution of trust evolves across institutions confirms the validity of the specification capturing institutional trust along one dimension only.

Figure 4
Dynamic factor and trust items



Note: The black line shows the mean scores observed at each point in time for each of the 17 trust items observed over 50 different surveys. The red line shows the common dynamic factor resulting from the Kalman smoothing algorithm.

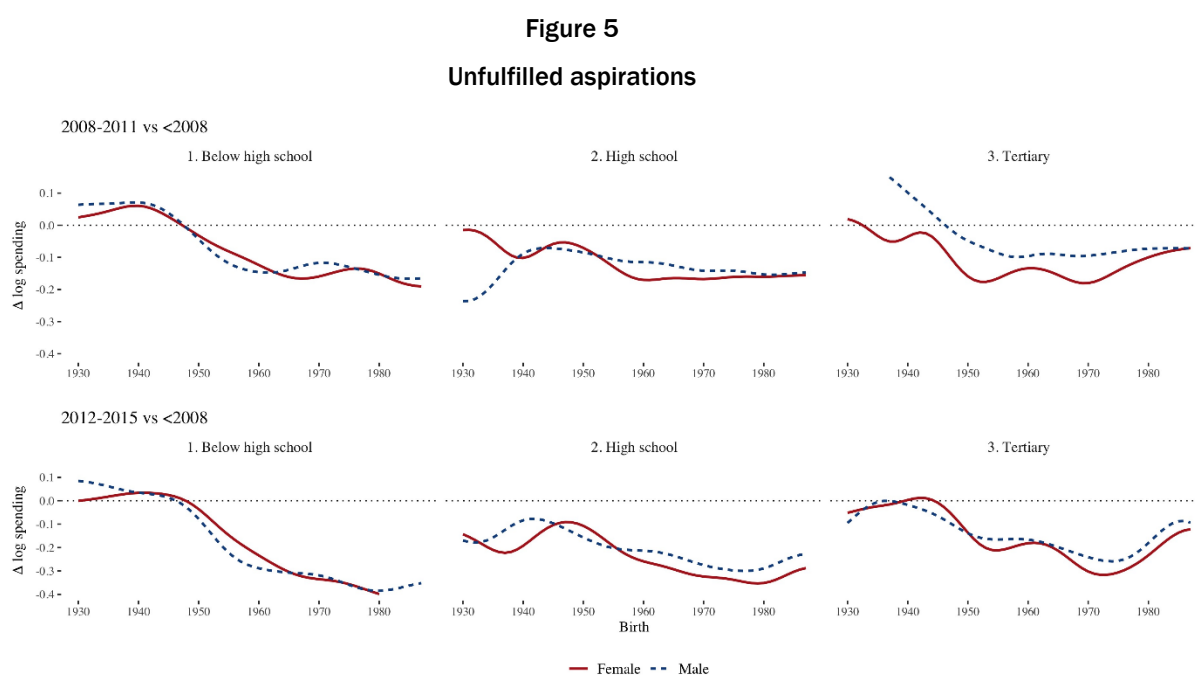
The model also overcomes the *mixed frequency* problem of trust items. This is apparent comparing two versions of the same item. Consider trust in parliament-10 and parliament-4, which only differ in the formulation of the question and the number of items proposed. Comparing the predicted trajectory of parliament-4 when it is not observed, it can be seen that it closely maps the observed trajectory of parliament-10. The estimated parameters of the filter can therefore be considered to be valid at filtering the underlying common factor of the 16 series time series.

Two patterns observed in Figure 4 support our explanatory framework. Firstly, Figure 4 illustrates the political credit cycle documented in the literature (Funke, Schularick, and Trebesch 2016;

Fernández-Villaverde, Garicano, and Santos 2013): institutional trust evolves over the credit cycle. The evolution of all trust items, are parallel to that of credit cycle that starts in the late nineties (with membership to the single currency), and peaks around 2008. Secondly, both hypotheses explaining the puzzle were based on the assumption that citizens perceive that institutional deterioration (θ_t) and economic outcomes (c_{it}) are the product of the joint action of *all* institutions globally, captured by latent “institutional trust”. The observed coevolution of *all* trust items suggests the trust in all institutions is indeed closely linked. This contradicts those explanations based on specific events such as unpopular budget cuts of a particular government, or the corruption scandals specific to a party. These undoubtedly affect the trust in governments or parties, but it is hard to see why the trust in the constitutional court or the judiciary would move in parallel.

3.4.2. Measurement of unfulfilled aspirations

Figure 5 describes the estimate of unfulfilled aspirations for the 2009-2011 and 2012-2015 electoral cycles. It shows the difference in the semi-parametric estimate of consumption adjusted by age, gender and education with respect to the 2006-2008 pre-crisis period. Using the weight of each cell from the pre-recession groups, the average change in 2011 is of -0.056 (-5.6%), and of -0.108 (-10.8%) in the 2015. These estimates correspond, roughly, to the aggregate change for this period as shown in national accounts, suggesting that they are of the right order of magnitude.



Note: For each cohort, unfulfilled aspirations is measured by the gap between observed consumption in the 2008-2011 and 2012-2015 period, with respect to the consumption of a cohort of the same age-gender-education. Consumption is estimated with local polynomial regression.

The relevance of life-cycle specific aspirations to understand the distributive incidence of the crisis is apparent. Figure 5 shows that the highly asymmetric impact of the macroeconomic shock across generations. The shape of the effect presumably reflects the interaction between life-cycle specific risks, and common macroeconomic conditions (e.g. whether the source of income depends on the

labor market or pension expenditure). In contrast, unfulfilled aspirations has a much weaker link with *levels* of living standards. Frustration is, for instance, particularly intense among the young and educated, who have relatively higher income levels. Therefore, while certain segments of population may not look particularly deprived in absolute terms, the gap with their economic aspirations is comparably stronger.

3.4.3. Second stage: estimates of (β, π, ϕ)

I now turn to describe the results of estimating the parameters (β, π, ϕ) of equation 6, governing the link between trust, unfulfilled aspirations, and electoral discontent. Estimates were performed through OLS, weighted by the size of each cohort, and standard errors were obtained through 200 bootstrap replications of the surveys used in the first stage estimation.

3.4.3.1. Effect of unfulfilled aspirations on trust

Firstly, we examine whether institutional distrust is exogenous, or instead caused by unfulfilled aspirations. Table 1 shows the impact of unfulfilled aspirations on the level of trust $Trust_{ct}$ and on its change (parameter β in equation 6). The *level* of institutional trust ($Trust_{ct}$) is closely correlated with unfulfilled aspirations $[\log c_{ct} - \log \tilde{c}_{ct}]$.

Table 1
Effect of Life cycle frustration on institutional trust

| | Dependent variable: | | | | | |
|-------------------------------------|---------------------|--------------------|---------------------|--------------------|--------------------|--------------------|
| | $\Delta Trust_{ct}$ | | | $Trust_{ct}$ | | |
| | (2011) | (2015) | (2016) | (2011) | (2015) | (2016) |
| $\log c_{ct} - \log \tilde{c}_{ct}$ | 1.01*** (0.33) | 0.73*** (0.17) | 0.71*** (0.16) | 0.192*** (0.01) | 0.16*** (0.01) | 0.16*** (0.03) |
| $year_{2011}$ | -0.89*** (0.04) | | | 0.31*** (0.001) | | |
| $year_{2015}$ | | -0.87*** (0.04) | | | 0.28*** (0.003) | |
| $year_{2016}$ | | | -0.88*** (0.038) | | | 0.27*** (0.003) |
| Adjusted R ² | 0.191 | 0.34 | 0.35 | 0.56 | 0.70 | 0.70 |

Note: OLS estimate from 338 year-of-birth-education-gender cells of the distribution of each variable. $\Delta Trust_{ct}$ is calculated as the difference in the level of trust between the pre-crisis period, and the date of the quarter in which the election took place. Unfulfilled aspirations $[\log c_{ct} - \log \tilde{c}_{ct}]$ is the estimate of the change in spending for person with identical (gender, education, age) characteristics of the pre-crisis period. Standard errors were calculated as the standard deviation of the coefficients resulting from 200 resampling of each of the original surveys.

The distribution of the latter explains between 50% (in 2011) and 70% (2015) of the variance in the level of trust $Trust_{ct}$. This result illustrates one of the central motivations of this paper: analyses based on cross-sectional distributions of institutional trust cannot be interpreted as independent of economic insecurity, since it incorporates most of the information of unfulfilled aspirations. The *change* in trust ($\Delta Trust_{ct}$) also seems to map closely institutional trust almost one to one—although the variance explained does not go beyond 30%. Given that the trust factor was calibrated upon the pre-crisis empirical cumulative distribution, the estimate indicates that a 10% drop in living standards results in dropping one decile in the pre-recession trust distribution in the 2011 election, and 7% in 2016 and 2015.

3.4.3.2. Electoral discontent and the effect of unfulfilled aspirations and trust: vote share of mainstream and new parties

The total effect of unfulfilled aspirations on electoral outcomes is large. Column (1) in Figure 6 shows that a decline in spending of 10 % with respect to the level expected in the pre-crisis period generates a drop in support for mainstream parties of 3 to 3.4%. This magnitude is equivalent to an elasticity between 0.9 and 1 of mainstream party support to living standards. Similarly, a 10% drop would predict between 4%. and 4.8% vote for new parties. Unfulfilled aspirations alone explain between 34% and 48% of the variance in electoral patterns.

Figure 6

Results: Mainstream and new parties

| Vote for mainstream parties (PP+PSOE) | | | | | | | | | | | | | | | |
|---|---------------------|------------------|---------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|-------------------|
| Increase in the share (%) with respect to the 2008 election | | | | | | | | | | | | | | | |
| | Election 2011 | | | | | Election 2015 | | | | | Election 2016 | | | | |
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| $\log c_{ct} - \log \tilde{c}_{ct}$ | 0.3*** (0.034) | 0.3*** (0.06) | | | 0.22*** (0.04) | 0.36*** (0.023) | 0.3*** (0.07) | | | 0.21*** (0.045) | 0.34*** (0.022) | 0.26*** (0.062) | | | 0.22*** (0.04) |
| Trust | | 0.03 (0.218) | 0.92*** (0.115) | | | | 0.39 (0.399) | 1.55*** (0.188) | | | | 0.49 (0.34) | 1.48*** (0.167) | | |
| Δ Trust | | | | 0.13*** (0.018) | 0.08*** (0.019) | | | | 0.28*** (0.036) | 0.2*** (0.044) | | | | 0.26*** (0.034) | 0.17*** (0.04) |
| Year: 2016 | | | | | | | | | | | -0.14*** (0.005) | 0.27*** (0.094) | 0.56*** (0.04) | 0.06* (0.035) | 0.01 (0.035) |
| Year: 2015 | | | | | | -0.14*** (0.006) | -0.25** (0.112) | -0.6*** (0.046) | 0.07* (0.036) | 0.04 (0.039) | | | | | |
| Year: 2011 | -0.06*** (0.004) | -0.07 (0.068) | -0.36*** (0.034) | 0.03* (0.018) | 0.01 (0.017) | | | | | | | | | | |
| Adj.R2 | 0.38 | 0.38 | 0.22 | 0.34 | 0.5 | 0.39 | 0.39 | 0.28 | 0.41 | 0.52 | 0.47 | 0.48 | 0.35 | 0.43 | 0.57 |

| Vote for new parties (Podemos+Ciudadanos) Share (%) of potential voters | | | | | | | | | | |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Election 2015 | | | | | Election 2016 | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| $\log c_{ct} - \log \tilde{c}_{ct}$ | -0.48*** (0.025) | -0.38*** (0.105) | | | -0.25*** (0.064) | -0.41*** (0.025) | -0.44*** (0.104) | | | -0.21*** (0.065) |
| Trust | | -0.61 (0.592) | -2.16*** (0.249) | | | | 0.19 (0.587) | -1.56*** (0.238) | | |
| Δ Trust | | | | -0.42*** (0.051) | -0.32*** (0.065) | | | | -0.36*** (0.055) | -0.28*** (0.073) |
| Year: 2016 | | | | | | 0.17*** (0.006) | 0.11 (0.162) | 0.63*** (0.057) | -0.12** (0.056) | -0.08 (0.063) |
| Year: 2015 | 0.16*** (0.006) | 0.33** (0.167) | 0.79*** (0.061) | -0.17*** (0.052) | -0.12** (0.057) | | | | | |
| Adj.R2 | 0.34 | 0.34 | 0.26 | 0.44 | 0.49 | 0.26 | 0.26 | 0.15 | 0.33 | 0.37 |

Note: OLS estimate from 338 year-of-birth-education-gender cells of the distribution of each variable. $\Delta Trust_{ct}$ trust is calculated as the difference in the level of trust between the pre-crisis period, and the date of the quarter in which the election took place. Unfulfilled aspirations [$\log c_{ct} - \log \tilde{c}_{ct}$] is the estimate of the change in spending for person with identical (gender, education, age) characteristics of the pre-crisis period. Standard errors were calculated as the standard deviation of the coefficients resulting from 200 resampling of each of the original surveys.

The anti-establishment nature of the electoral change is confirmed by columns 3 and 4 in Figure 6. Both the electoral losses of mainstream parties and the vote for new parties are closely associated to the level of trust ($Trust_{ct}$), and its change ($\Delta Trust_{ct}$): those who left mainstream parties for new parties were also those who lost their faith in political institutions.

However, the effect of institutional trust is shown to be at least partially endogenous to unfulfilled aspirations, consistent with results of Table 1. This is apparent comparing columns 3 and 4 to 2 and 5. Once unfulfilled aspirations [$\log c_{ct} - \log \tilde{c}_{ct}$] is taken into account, the effect of ($Trust_{ct}$) is reduced to less than one third of its original effect, and in the case of vote for new parties, is not significantly different from zero. The impact of the update of trust ($\Delta Trust_{ct}$) is also downgraded, but is still substantial in size: a drop (exogenous to unfulfilled aspirations) in the pre-recession distribution of trust is associated with an increase in the probability of voting for a new party 2.8% (2016) to 3% (2015), and in a 0.8% (2011), and a 2.2% (2015) or 1.7% decline in the share of mainstream parties.

3.4.3.3. Electoral discontent and the effect of unfulfilled aspirations and trust: change in turnout

The effect of discontent on turnout is more complex. Interestingly, unfulfilled aspirations (column (1) in Figure 7) had the effect of *increasing* turnout. The effect is small in 2011 and relatively large in the 2015 and 2016 elections (consistent with an elasticity of turnout to living standards between 0.5 and 0.7). The same pattern is exhibited for institutional trust (columns 2 to 5 in Figure 7): larger distrust in institutions (both in levels and differences) is associated with an *increase* in the probability of voting, which becomes larger and statistically significant for the 2015 and 2016 elections. Just as in the previous analysis, the impact of trust is shown to be partly endogenous to unfulfilled aspirations.

The initial effect of the anti-establishment reaction was (in 2011), therefore to remove discontent voters from the ballot, along with non-discontents who were driven by other motivations. However, in the 2015 and 2016 elections, once new political options became available for anti-establishment voters, these were mobilized back into the ballot. This pattern is consistent with the one found by Guiso *et al.* (2020), who find that economic insecurity has initially the effect of decreasing turnout, and then citizens are mobilized by populist parties.

Figure 7
Results: Turnout

| Turnout | | | | | | | | | | | | | | | |
|---|--------------------|-------------------|-------------------|-------------------|--------------------|--------------------|------------------|---------------------|--------------------|--------------------|--------------------|-------------------|---------------------|-------------------|--------------------|
| Increase in the share (%) of non-voters with respect to the 2008 election | | | | | | | | | | | | | | | |
| Election 2011 | | | | | Election 2015 | | | | | Election 2016 | | | | | |
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) |
| $\log c_{ct} - \log \tilde{c}_{ct}$ | 0.06*** (0.019) | 0.08** (0.032) | | | 0.02 (0.024) | 0.16*** (0.017) | 0.1** (0.041) | | | 0.08*** (0.027) | 0.14*** (0.016) | 0.09** (0.041) | | | 0.06** (0.027) |
| Trust | | -0.1 (0.139) | 0.12 (0.081) | | | | 0.34 (0.229) | 0.81*** (0.111) | | | | 0.28 (0.228) | 0.73*** (0.109) | | |
| Δ Trust | | | | 0.04*** (0.01) | 0.04*** (0.012) | | | | 0.14*** (0.019) | 0.1*** (0.025) | | | | 0.14*** (0.02) | 0.11*** (0.026) |
| Year: 2016 | | | | | | | | | | | 0.02*** (0.004) | -0.06 (0.063) | -0.19*** (0.026) | 0.13*** (0.02) | 0.11*** (0.023) |
| Year: 2015 | | | | | | -0.01** (0.004) | -0.1 (0.064) | -0.24*** (0.027) | 0.1*** (0.019) | 0.08*** (0.021) | | | | | |
| Year: 2011 | -0.01** (0.002) | 0.03 (0.043) | -0.05* (0.024) | 0.03*** (0.01) | 0.03*** (0.01) | | | | | | | | | | |
| Adj.R2 | 0.06 | 0.06 | 0.02 | 0.19 | 0.19 | 0.28 | 0.29 | 0.29 | 0.39 | 0.41 | 0.23 | 0.24 | 0.24 | 0.37 | 0.35 |

Note: OLS estimate from 338 year-of-birth-education-gender cells of the distribution of each variable. ΔTrust_{ct} trust is calculated as the difference in the level of trust between the pre-crisis period, and the date of the quarter in which the election took place. Unfulfilled aspirations [$\log c_{ct} - \log \tilde{c}_{ct}$] is the estimate of the change in spending for person with identical (gender, education, age) characteristics of the pre-crisis period. Standard errors were calculated as the standard deviation of the coefficients resulting from 200 resampling of each of the original surveys.

4. POLITICAL IDENTITIES AND CREDIT CONTRACTIONS

4.1. Theory: the complement-substitute link between trust and left-right cleavages

I now turn to analyze the role of political identity shaping the response to the crisis. I define *political identities* as clusters of traits which structure voters' political preferences and perceptions. While the exact nature of this link is debated, political identity can be regarded as closely linked to these determinants of political conflict. The evidence presented in section 2 showed that, in spite of the drastic change in the electoral landscape, there was no major shift in the distribution of pre-crisis political identities at the aggregate level. Moreover, they remained strongly associated with electoral support, and coexisted with the trust cleavage.

The coexistence of the “trust” and “left-right” cleavages poses the question of how their interaction shapes the response to financial crises. Did voters shift their political identities (i.e. their political preferences and perceptions) in response to the two “General distrust” and “Unfulfilled aspirations” channels identified? And, if not, does the resilience of a pre-crisis identities imply that these

dominate over preferences connected to the incidence of the crisis? In other words, should we regard the effect of the “General distrust” and “Unfulfilled aspirations” channels either as weakening, or exacerbating the significance of the left-right cleavage?. The answers are connected to a distinction key in the research on anti-establishment trends, namely, whether the trust and left-right dimensions of voters’ preferences are *substitutes* or *complements*.²¹

- The trust and left-right dimensions would be *substitutes*, if voters’ value left-right issues (redistribution, social values) and trust issues (e.g. good governance, democratic representation, corruption, accountability, checks and balances) *intrinsically*. Their vote would reflect a *tradeoff* between how close they feel to different parties on these two dimensions. The effect of the crisis would be to push them towards new parties by increasing the salience of trust, and weaken that of the left-right dimension.²²
- Alternatively, trust could be a *complement* of left-right dimension if voters care about trust issues *instrumentally*-i.e., only because they affect their representation on the left-right dimension. If preferences are primarily defined by voters’ left (right) identity, their distrust towards their former left (right) party would not push them to support a party located on the other side of the political spectrum-no matter how trustworthy. They would instead look for one that is more credibly anchored on the left (right).

Clarifying whether the trust and left-right dimensions are complements is central to understand the conflict generated by financial crises. If the crisis-induced distrust and left-right preferences were complements, the conflict would critically depend on *where* those exposed to *General distrust* and *Unfulfilled aspirations* are concentrated in the left-right axis. Firstly, the location of the left-right axis of new “anti-establishment” parties -and the policies they introduce in the agenda- would depend on existence of a demand for representation (Guiso et al. 2020) in that particular niche. Secondly, as argued, a key puzzle is why polarization after financial crisis often takes place on issues not connected to the crisis. However, if preferences remain defined on the left-right axis, crisis-induced distrust in the ability of elites to represent them will affect both economic and non-economic issues. Old and new parties would compete to regain the trust of voters *within* their niche, emphasizing their preferences, and low trust and more intense competition would prevent parties from compromising (for example, on middle of the road policy strategies out of the crisis), intensifying polarization *between* blocks.²³

²¹ Mudde (2010) documents this debate for the context of radical right parties. anti-establishment movements do not only blame mainstream elites for their failure to represent the people, but they also try to introduce their own agenda around new topics -e.g. immigration, european integration, trade, or corruption- at the expense of issues that were specific to the left-right cleavage -e.g. taxation, inequality. A central disagreement in this literature is whether their success is due to positive “*support*” (for their specific set of issues and agenda), or to negative “*protest*” (against mainstream parties).

²² Algan et al. (2019) suggest that this was the case in France. The left-right cleavage was replaced by the trust cleavage after the 2016 election. Centrist president Emmanuel Macron was supported by coalition whose members differed on left-right issues, but who had in common their agreement on trust issues and cosmopolitan values. Similarly, these were the issues that opposed them more strongly to the main radical right challenger, Marine Le Pen.

²³ (Acemoglu, Egorov, and Sonin 2013) formally show that, when political elites lack credibility, voters can opt for more extreme options, for whom deviation is more costly.

4.2. Empirical strategy

Whether trust and left-right cleavages are substitutes or complements has different empirical implications. I explore them in three steps.

1. Firstly, I test whether political identity shifts in response to the same forces that shift electoral support. If the trust and left-right cleavage were substitutes, one would expect that the emergence of the trust cleavage would weaken the significance of the “left” and “right” categories. Voters would shift from “left” and “right” towards the more neutral “center”, and especially “none” categories. In contrast, if they were complements, identities would remain mostly invariant.
2. Secondly, I examine how political identity conditions the shift from old to new parties. If the trust cleavage was a substitute of the left-right, the effect of unfulfilled aspirations and institutional distrust should be relatively similar over the ideological spectrum. However, if they were complements, left-right identity would modulate their effect. As they lose their trust in mainstream parties, voters with different identities may demand different solutions (embodied by different parties). Similarly, voters would be more likely to shift if a new party that fits their identity is available (Podemos on the left, and Ciudadanos on the center) to mobilize them.
3. Thirdly, as a corollary, new parties would succeed placing themselves in segments of the left-right axis where the effect of unfulfilled aspirations was more prevalent (i.e. in the Spanish case, discontent should be more prevalent among the center and the left).

4.3. Results

4.3.1. Political identity and the effect of unfulfilled aspirations and trust

To examine the effect of trust and unfulfilled aspirations on political identity, I replicate the analysis conducted for electoral discontent, but substituting vote shares by the shares for each of the political identity as a dependent variable.

The results shown in Figure 8 suggest that while identities shifted, this effect was minimal and pre-crisis cleavages remained in place for the most part. During the last socialist term (2008-2012), each 1 % deviation from expected living standards shifted individuals away from the “left” identity by 0.13% (column 1), mirrored by the effect on “none”. This effect, however, disappears after 2012, as the conservative government gains office and seems to activate the “left” identity. In contrast, the right block suffers a larger, and more enduring effect of unfulfilled aspirations, which pushes voters to the “center” and “none” category, opening the ground to the centrist “Ciudadanos” party. Similarly, the effect of trust variables seem to go in the same direction.

The small size of the changes seems to confirm that the four identities are overall stable, as suggested by Figure 3, supporting the *complement* hypothesis for most voters. To the extent to which they change, they are more consistent with the *substitute* hypothesis. The same forces that drove

discontent with mainstream parties and institutions seem to push individuals to reject identities associated with these parties (left and right) and adopt more neutral “center” and “none” category. After new parties entered the arena (in 2015 and 2016 elections), discontents tended to identify with the labels associated with these parties (center and left).

Figure 8

Results: Political identity

Impact on political identity

Increase in the share (%) identifying with each group, compared to the 2004–2008 period

| Period 2008–2012 | | | | | | Period 2012–2016 | | | | | | Period 2015–2018 | | | | | | |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|--|---------------------|---------------------|---------------------|--------------------|---------------------|---------------------|--------|
| (1) | (2) | (3) | (4) | (5) | | (1) | (2) | (3) | (4) | (5) | | (1) | (2) | (3) | (4) | (5) | | |
| log _{cat} –log _{cat} | –0.13*** (0.027) | –0.05 (0.058) | | | 0.09** (0.038) | 0.01 (0.014) | –0.06** (0.028) | | | 0 (0.019) | | –0.04*** (0.015) | –0.07*** (0.027) | | | –0.05*** (0.019) | | LEFT |
| Trust | | 0.7*** (0.189) | 0.75*** (0.12) | | | | 0.43*** (0.142) | 0.15** (0.071) | | | | | 0.19 (0.136) | –0.16** (0.075) | | | | |
| D Trust | | | | 0.06** (0.022) | 0.04 (0.025) | | | | 0.02 (0.011) | 0.02 (0.015) | | | | | | –0.02 (0.012) | 0.02 (0.015) | |
| Year: 2016 | | | | | | | | | | | | –0.01*** (0.004) | –0.04 (0.038) | 0.06*** (0.018) | 0 (0.012) | 0.03** (0.013) | | |
| Year: 2015 | | | | | | 0 (0.003) | –0.12*** (0.04) | –0.04** (0.018) | 0.01 (0.011) | 0.02 (0.013) | | | | | | | | |
| Year: 2011 | –0.03*** (0.003) | –0.16*** (0.052) | –0.2*** (0.035) | 0.08*** (0.021) | 0.07*** (0.022) | | | | | | | | | | | | | |
| Adj.R2 | 0.09 | 0.21 | 0.19 | 0.08 | 0.11 | –0.01 | 0.17 | 0.07 | 0.03 | 0.04 | | 0.1 | 0.13 | 0.06 | 0.03 | 0.12 | | |
| log _{cat} –log _{cat} | –0.13*** (0.03) | –0.02 (0.065) | | | –0.09** (0.04) | –0.1*** (0.013) | –0.04* (0.022) | | | –0.08*** (0.015) | | –0.06*** (0.014) | –0.04* (0.02) | | | –0.05*** (0.016) | | NONE |
| Trust | | –0.45** (0.207) | –0.63*** (0.127) | | | | –0.34*** (0.109) | –0.46*** (0.065) | | | | | –0.12 (0.102) | –0.22*** (0.068) | | | | |
| D Trust | | | | –0.06*** (0.023) | –0.05* (0.026) | | | | –0.05*** (0.01) | –0.02 (0.012) | | | | | | –0.03*** (0.01) | –0.01 (0.011) | |
| Year: 2016 | | | | | | | | | | | | –0.07*** (0.003) | –0.03 (0.028) | 0 (0.017) | –0.08*** (0.01) | –0.08*** (0.011) | | |
| Year: 2015 | | | | | | –0.04*** (0.003) | 0.06* (0.031) | 0.09*** (0.016) | –0.07*** (0.01) | –0.05*** (0.01) | | | | | | | | |
| Year: 2011 | –0.07*** (0.003) | 0.06 (0.057) | 0.13*** (0.037) | –0.12*** (0.023) | –0.11*** (0.023) | | | | | | | | | | | | | |
| Adj.R2 | 0.08 | 0.12 | 0.11 | 0.09 | 0.11 | 0.54 | 0.61 | 0.54 | 0.25 | 0.55 | | 0.34 | 0.36 | 0.19 | 0.11 | 0.35 | | |
| log _{cat} –log _{cat} | –0.11*** (0.02) | –0.03 (0.026) | | | –0.09*** (0.022) | –0.11*** (0.012) | –0.04** (0.019) | | | –0.08*** (0.014) | | –0.12*** (0.014) | –0.07*** (0.022) | | | –0.1*** (0.016) | | CENTER |
| Trust | | –0.33*** (0.083) | –0.51*** (0.085) | | | | –0.4*** (0.101) | –0.58*** (0.068) | | | | | –0.32*** (0.104) | –0.61*** (0.074) | | | | |
| D Trust | | | | –0.04*** (0.009) | –0.02** (0.009) | | | | –0.07*** (0.01) | –0.03*** (0.01) | | | | | | –0.08*** (0.012) | –0.04*** (0.012) | |
| Year: 2016 | | | | | | | | | | | | –0.04*** (0.003) | 0.05 (0.029) | 0.13*** (0.018) | –0.1*** (0.012) | –0.08*** (0.011) | | |
| Year: 2015 | | | | | | –0.03*** (0.003) | 0.08*** (0.028) | 0.13*** (0.017) | –0.08*** (0.01) | –0.06*** (0.009) | | | | | | | | |
| Year: 2011 | –0.02*** (0.002) | 0.07*** (0.022) | 0.14*** (0.025) | –0.05*** (0.009) | –0.04*** (0.008) | | | | | | | | | | | | | |
| Adj.R2 | 0.43 | 0.61 | 0.58 | 0.25 | 0.48 | 0.7 | 0.8 | 0.78 | 0.5 | 0.76 | | 0.72 | 0.78 | 0.69 | 0.48 | 0.78 | | |
| log _{cat} –log _{cat} | –0.12*** (0.022) | 0.09*** (0.032) | | | 0.09*** (0.024) | –0.19*** (0.012) | 0.14*** (0.019) | | | 0.17*** (0.014) | | –0.22*** (0.016) | 0.18*** (0.023) | | | 0.2*** (0.017) | | RIGHT |
| Trust | | 0.08 (0.096) | 0.38*** (0.086) | | | | 0.3*** (0.098) | 0.89*** (0.075) | | | | | 0.26** (0.111) | 0.99*** (0.083) | | | | |
| D Trust | | | | 0.05*** (0.01) | 0.03*** (0.01) | | | | 0.1*** (0.013) | 0.03*** (0.01) | | | | | | 0.13*** (0.016) | 0.03*** (0.012) | |
| Year: 2016 | | | | | | | | | | | | 0.1*** (0.004) | 0.02 (0.03) | –0.19*** (0.02) | 0.18*** (0.016) | 0.13*** (0.011) | | |
| Year: 2015 | | | | | | 0.07*** (0.003) | –0.01 (0.028) | –0.19*** (0.018) | 0.13*** (0.013) | 0.1*** (0.009) | | | | | | | | |
| Year: 2011 | –0.05*** (0.003) | 0.03 (0.026) | –0.07*** (0.025) | 0.09*** (0.009) | 0.08*** (0.009) | | | | | | | | | | | | | |
| Adj.R2 | 0.33 | 0.34 | 0.24 | 0.27 | 0.42 | 0.85 | 0.87 | 0.73 | 0.43 | 0.87 | | 0.83 | 0.84 | 0.67 | 0.43 | 0.85 | | |

Groups are formed based on respondents answer to an item where they were asked to report where they stood on 1-10 scale on the left-right spectrum: Left (below 5), center (5), right (above 5) or none.

4.3.2. *Heterogeneous effects by political identity*

In a second step, I test whether the effect of priors and unfulfilled aspirations pushes voters towards different parties, depending on their political identities. For each trust and vote survey, I split the sample based on respondent identity, and repeat the analysis to explore the vote for individual parties. I examine whether the elasticity is to institutional trust and unfulfilled aspirations varies across the ideological spectrum.²⁴

The identification of heterogeneous effects based on political identity over repeated surveys requires two additional assumptions. Firstly, we need to assume that the change in life-cycle adjusted consumption is not correlated with political identity, conditional on the other cohort variables (gender, year of birth and education). This assumption is necessary to link consumption surveys with vote and trust polls, since identity is only available in the latter.

Secondly, left-right identity should not change endogenously in response to the treatment variables over repeated cross-sections; otherwise, it could not be a valid cohort criterion. Both assumptions are unlikely to hold fully and should be kept in mind interpreting results.²⁵

Results show that the effect is strongly modulated by identity. Figure 9 describes the effect of trust and unfulfilled aspirations for each of the two new parties (*Podemos* and *Ciudadanos*). The top panel shows the average effect across all identities. However, when examining left and right separately, the effect of both trust and unfulfilled aspirations is almost null for *Podemos* (*Ciudadanos*) among the right (left) and larger for *Podemos* (*Ciudadanos*) on the left (right). The same pattern is visible looking at Figures 10 and 11. In the 2011 election, unfulfilled aspirations among the left-wing voters pushed them away from the socialdemocrats (positive sign in column (1) Figure 10), partially towards the conservatives (negative sign column (1) in Figure 11, presumably as an anti-incumbent effect). In contrast, for centrist voters, for whom unfulfilled aspirations and distrust have the effect of pushing voters away from *both* mainstream parties over the three elections.

²⁴ To facilitate the comparison across groups, I estimate the elasticity (i.e. the percent change) of the changes in vote shares and trust levels, setting magnitudes as log-differences.

²⁵ Nonetheless, the second assumption can be justified, since the previous analysis showed that although significant, the change on the left-right axis in response to trust and unfulfilled aspirations is very small.

Figure 9

Results: Political identity and vote for new parties

| Vote for new left party (Podemos) Share (%) of potential voters | | | | | | | | | | | New center-right party (Ciudadanos) Share (%) of potential voters | | | | | | | | | | |
|--|-------|-------|------|-------|---------------|-------|-----|-------|-------|--------|--|-------|------|-------|-------|---------------|-------|------|-------|-------|--------|
| Election 2015 | | | | | Election 2016 | | | | | | Election 2015 | | | | | Election 2016 | | | | | |
| (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | |
| log _{ct} -log _{ct} | -0.29 | -0.14 | | -0.12 | -0.23 | -0.23 | | -0.13 | | ALL | -0.19 | -0.24 | | -0.14 | | -0.18 | -0.21 | | -0.13 | | ALL |
| Trust | -0.91 | -1.51 | | | -0.04 | -0.95 | | | | | 0.3 | -0.66 | | | | 0.23 | -0.61 | | | | |
| D log Trust | | | | -0.62 | -0.47 | | | -0.41 | -0.26 | | | | | -0.29 | -0.13 | | | | -0.25 | -0.11 | |
| Year: 2016 | | | | | | | | | | | | | | | | 0.05 | -0.01 | 0.24 | 0.01 | 0.03 | |
| Year: 2015 | 0.1 | 0.35 | 0.53 | -0.03 | -0.01 | | | | | | -0.06 | -0.02 | 0.26 | 0.01 | 0.03 | | | | | | |
| log _{ct} -log _{ct} | -0.48 | -0.28 | | -0.43 | -0.43 | -0.33 | | -0.4 | | LEFT | -0.06 | -0.07 | | -0.06 | | -0.05 | -0.06 | | -0.05 | | LEFT |
| Trust | -1.94 | -3.32 | | | -0.96 | -2.53 | | | | | 0.09 | -0.21 | | | | 0.13 | -0.16 | | | | |
| D log Trust | | | | -0.78 | -0.42 | | | -0.56 | -0.21 | | | | | -0.03 | 0.01 | | | | -0.02 | 0.03 | |
| Year: 2016 | | | | | | | | | | | | | | | | 0.02 | -0.01 | 0.06 | 0.02 | 0.03 | |
| Year: 2015 | 0.19 | 0.67 | 1.05 | -0.02 | 0.03 | | | | | | 0.02 | 0 | 0.08 | 0.02 | 0.03 | | | | | | |
| log _{ct} -log _{ct} | -0.14 | -0.11 | | -0.13 | -0.05 | -0.02 | | -0.03 | | NONE | -0.12 | -0.09 | | -0.09 | | -0.1 | -0.04 | | -0.04 | | NONE |
| Trust | -0.15 | -0.42 | | | -0.14 | -0.17 | | | | | -0.13 | -0.29 | | | | -0.34 | -0.37 | | | | |
| D log Trust | | | | -0.08 | -0.02 | | | -0.04 | -0.03 | | | | | -0.08 | -0.06 | | | | -0.11 | -0.11 | |
| Year: 2016 | | | | | | | | | | | | | | | | 0.05 | 0.13 | 0.15 | 0.03 | 0.02 | |
| Year: 2015 | 0.04 | 0.08 | 0.16 | 0.04 | 0.04 | | | | | | 0.05 | 0.09 | 0.14 | 0.05 | 0.04 | | | | | | |
| log _{ct} -log _{ct} | -0.15 | -0.12 | | -0.15 | -0.08 | -0.06 | | -0.07 | | CENTER | -0.32 | -0.52 | | -0.38 | | -0.28 | -0.46 | | -0.36 | | CENTER |
| Trust | -0.22 | -0.67 | | | -0.09 | -0.31 | | | | | 1.39 | -0.34 | | | | 1.24 | -0.21 | | | | |
| D log Trust | | | | -0.15 | -0.03 | | | -0.07 | -0.02 | | | | | -0.09 | 0.18 | | | | -0.04 | 0.2 | |
| Year: 2016 | | | | | | | | | | | | | | | | 0.11 | -0.23 | 0.22 | 0.16 | 0.16 | |
| Year: 2015 | 0.05 | 0.12 | 0.26 | 0.04 | 0.05 | | | | | | 0.13 | -0.26 | 0.28 | 0.17 | 0.17 | | | | | | |
| log _{ct} -log _{ct} | -0.05 | -0.05 | | -0.05 | -0.03 | -0.03 | | -0.02 | | RIGHT | -0.39 | -0.42 | | -0.31 | | -0.33 | -0.4 | | -0.29 | | RIGHT |
| Trust | -0.01 | -0.14 | | | -0.03 | -0.1 | | | | | 0.15 | -0.91 | | | | 0.4 | -0.62 | | | | |
| D log Trust | | | | -0.04 | -0.01 | | | -0.04 | -0.02 | | | | | -0.39 | -0.2 | | | | -0.28 | -0.1 | |
| Year: 2016 | | | | | | | | | | | | | | | | 0.07 | -0.06 | 0.33 | 0.09 | 0.06 | |
| Year: 2015 | 0.01 | 0.01 | 0.06 | 0.01 | 0.01 | | | | | | 0.08 | 0.03 | 0.44 | 0.11 | 0.07 | | | | | | |

Note: Only second stage (rather than bootstrapped first stage) standard errors are presented.

Note: Only second stage (rather than bootstrapped first stage) standard errors are presented.

Note: Groups are formed based on respondents answer to an item where they were asked to report where they stood on 1-10 scale on the left-right spectrum: Left (below 5), center (5), right (above 5) or none.

Figure 10

Results: Political identity and vote for socialdemocrats

Vote socialdemocratic party (PSOE)

Elasticity of the share (%) of potential voters with respect to the 2008 election

| | Election 2011 | | | | | Election 2015 | | | | | Election 2016 | | | | | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.53 0.08 | 0.49 0.12 | | | 0.13 0.09 | 0.51 0.11 | 0.15 0.2 | | | -0.15 0.14 | 0.61 0.09 | 0.25 0.16 | | | 0.05 0.12 | ALL |
| Trust | | 0.24 0.48 | 1.68 0.32 | | | | 2.19 1.01 | 2.92 0.53 | | | | 2.19 0.83 | 3.29 0.44 | | | |
| $\Delta \log \text{Trust}$ | | | | 2.23 0.21 | 2.02 0.26 | | | | 1.64 0.18 | 1.82 0.28 | | | | 1.54 0.14 | 1.47 0.22 | |
| Year: 2016 | | | | | | | | | | | -0.51 0.02 | -1.11 0.23 | -1.43 0.1 | -0.13 0.05 | -0.14 0.06 | |
| Year: 2015 | | | | | | -0.57 0.03 | -1.18 0.28 | -1.4 0.13 | -0.17 0.06 | -0.14 0.07 | | | | | | |
| Year: 2011 | -0.36 0.01 | -0.43 0.15 | -0.9 0.09 | -0.12 0.03 | -0.13 0.03 | | | | | | | | | | | LEFT |
| $\log c_{it} - \log \tilde{c}_{it}$ | 1.05 0.09 | 0.66 0.13 | | | 0.94 0.09 | 0.83 0.12 | 0.28 0.16 | | | 0.67 0.12 | 1.02 0.1 | 0.6 0.14 | | | 0.91 0.11 | |
| Trust | | 2.27 0.56 | 4.35 0.38 | | | | 5.27 1.11 | 7.12 0.76 | | | | 4.02 0.95 | 7.21 0.67 | | | |
| $\Delta \log \text{Trust}$ | | | | 1.81 0.26 | 1.16 0.24 | | | | 2 0.26 | 1.18 0.29 | | | | 1.66 0.23 | 0.72 0.24 | |
| Year: 2016 | | | | | | | | | | | -0.38 0.03 | -1.35 0.23 | -2.2 0.15 | 0.12 0.1 | -0.08 0.1 | |
| Year: 2015 | | | | | | -0.49 0.03 | -1.8 0.28 | -2.29 0.17 | 0.14 0.11 | -0.04 0.11 | | | | | | NONE |
| Year: 2011 | -0.2 0.01 | -0.9 0.17 | -1.57 0.11 | 0 0.04 | -0.02 0.04 | | | | | | | | | | | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.35 0.11 | -0.42 0.15 | | | 0.17 0.12 | 0.28 0.19 | -0.92 0.24 | | | -0.36 0.2 | 0.55 0.13 | -0.21 0.16 | | | 0.13 0.14 | |
| Trust | | 2.83 0.41 | 1.99 0.28 | | | | 6.15 0.83 | 3.79 0.59 | | | | 3.86 0.55 | 3.46 0.43 | | | |
| $\Delta \log \text{Trust}$ | | | | 0.57 0.13 | 0.47 0.15 | | | | 1.05 0.16 | 1.35 0.19 | | | | 0.88 0.11 | 0.82 0.13 | |
| Year: 2016 | | | | | | | | | | | -0.7 0.03 | -1.67 0.14 | -1.55 0.09 | -0.5 0.05 | -0.49 0.04 | CENTER |
| Year: 2015 | | | | | | -0.7 0.05 | -2.27 0.22 | -1.57 0.13 | -0.39 0.06 | -0.37 0.06 | | | | | | |
| Year: 2011 | -0.54 0.01 | -1.34 0.12 | -1.08 0.07 | -0.48 0.02 | -0.48 0.02 | | | | | | | | | | | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.91 0.1 | 0.89 0.14 | | | 0.93 0.11 | 0.76 0.11 | 1.09 0.16 | | | 0.94 0.13 | 0.9 0.09 | 1.02 0.13 | | | 0.98 0.11 | |
| Trust | | 0.19 0.63 | 2.86 0.51 | | | | -2.25 0.77 | 1.45 0.58 | | | | -0.86 0.59 | 2.37 0.45 | | | |
| $\Delta \log \text{Trust}$ | | | | 0.47 0.23 | -0.12 0.22 | | | | 0.24 0.16 | -0.48 0.18 | | | | 0.47 0.13 | -0.21 0.14 | RIGHT |
| Year: 2016 | | | | | | | | | | | -0.44 0.02 | -0.2 0.17 | -1.21 0.11 | -0.48 0.05 | -0.49 0.04 | |
| Year: 2015 | | | | | | -0.52 0.03 | 0.11 0.22 | -1.05 0.14 | -0.62 0.05 | -0.63 0.05 | | | | | | |
| Year: 2011 | -0.45 0.01 | -0.51 0.2 | -1.39 0.15 | -0.47 0.03 | -0.46 0.03 | | | | | | | | | | | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.18 0.16 | 0.29 0.18 | | | -0.22 0.17 | 0.31 0.14 | 0.25 0.19 | | | 0.1 0.17 | 0.34 0.2 | 0.69 0.28 | | | 0.29 0.25 | |
| Trust | | -0.76 0.7 | -0.21 0.61 | | | | 0.37 0.82 | 0.84 0.64 | | | | -2.1 1.19 | 0.12 0.79 | | | |
| $\Delta \log \text{Trust}$ | | | | 1.58 0.26 | 1.73 0.28 | | | | 0.56 0.2 | 0.48 0.23 | | | | 0.45 0.24 | 0.12 0.34 | |
| Year: 2016 | | | | | | | | | | | -0.5 0.05 | 0.18 0.39 | -0.63 0.23 | -0.51 0.05 | -0.49 0.06 | |
| Year: 2015 | | | | | | -0.71 0.03 | -0.84 0.27 | -1.04 0.19 | -0.71 0.04 | -0.68 0.04 | | | | | | |
| Year: 2011 | -0.44 0.02 | -0.19 0.24 | -0.39 0.2 | -0.34 0.02 | -0.35 0.02 | | | | | | | | | | | |

Note: Only second stage (rather than bootstrapped first stage) standard errors are presented.

Note: Groups are formed based on respondents answer to an item where they were asked to report where they stood on 1-10 scale on the left-right spectrum: Left (below 5), center (5), right (above 5) or none.

Figure 11

Results: Political identity and vote for conservative party

Vote conservative party (PP)

Elasticity of the share (%) of potential voters with respect to the 2008 election

| | Election 2011 | | | | | Election 2015 | | | | | Election 2016 | | | | | |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|
| | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | (1) | (2) | (3) | (4) | (5) | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.51 0.03 | 0.51 0.05 | | | 0.43 0.04 | 1.34 0.06 | 0.87 0.11 | | | 0.87 0.08 | 1.19 0.04 | 0.69 0.08 | | | 0.79 0.06 | ALL |
| Trust | | 0.02 0.2 | 1.52 0.14 | | | | 2.88 0.55 | 6.48 0.33 | | | | 3.03 0.38 | 5.83 0.23 | | | |
| $\Delta \log \text{Trust}$ | | | | 1.11 0.11 | 0.41 0.11 | | | | 2.36 0.12 | 1.31 0.15 | | | | 1.97 0.09 | 1.04 0.1 | |
| Year: 2016 | | | | | | | | | | | 0.06 0.01 | -0.77 0.11 | -1.6 0.06 | 0.46 0.03 | 0.32 0.03 | |
| Year: 2015 | | | | | | 0.06 0.01 | -0.74 0.16 | -1.82 0.08 | 0.51 0.04 | 0.37 0.04 | | | | | | |
| Year: 2011 | -0.17 0 | 0.16 0.06 | -0.33 0.04 | 0.27 0.01 | 0.21 0.01 | | | | | | | | | | | LEFT |
| $\log c_{it} - \log \tilde{c}_{it}$ | -1.67 0.12 | -0.74 0.17 | | | -1.53 0.12 | 1.63 0.1 | 1.46 0.13 | | | 1.57 0.1 | 0.24 0.2 | 0.1 0.28 | | | 0.2 0.21 | |
| Trust | | -5.35 0.72 | -7.69 0.49 | | | | 1.61 0.9 | 9.4 0.72 | | | | 1.39 1.9 | 3.15 1.4 | | | |
| $\Delta \log \text{Trust}$ | | | | -2.54 0.38 | -1.48 0.33 | | | | 1.92 0.27 | 0.39 0.24 | | | | 1.11 0.45 | 0.28 0.48 | |
| Year: 2016 | | | | | | | | | | | -0.87 0.05 | -1.21 0.47 | -1.62 0.31 | -0.44 0.2 | -0.76 0.2 | |
| Year: 2015 | | | | | | 0.22 0.02 | -0.18 0.23 | -2.27 0.16 | 0.65 0.11 | 0.37 0.09 | | | | | | NONE |
| Year: 2011 | -0.05 0.01 | 1.7 0.22 | 2.45 0.14 | -0.22 0.06 | -0.18 0.05 | | | | | | | | | | | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.07 0.06 | -0.09 0.1 | | | -0.08 0.07 | 1.75 0.12 | 1.55 0.16 | | | 1.53 0.13 | 1.47 0.1 | 1.08 0.13 | | | 1.15 0.11 | |
| Trust | | 0.58 0.26 | 0.4 0.17 | | | | 1.03 0.53 | 4.45 0.45 | | | | 1.99 0.46 | 4.35 0.38 | | | |
| $\Delta \log \text{Trust}$ | | | | 0.34 0.08 | 0.39 0.09 | | | | 1.03 0.12 | 0.47 0.12 | | | | 1.06 0.1 | 0.62 0.1 | |
| Year: 2016 | | | | | | | | | | | 0.14 0.03 | -0.36 0.12 | -1.1 0.08 | 0.2 0.04 | 0.3 0.04 | CENTER |
| Year: 2015 | | | | | | 0.2 0.03 | -0.06 0.14 | -1.13 0.1 | 0.17 0.05 | 0.32 0.04 | | | | | | |
| Year: 2011 | 0.36 0.01 | 0.2 0.07 | 0.25 0.05 | 0.41 0.01 | 0.41 0.01 | | | | | | | | | | | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.34 0.05 | 0.49 0.07 | | | 0.29 0.05 | 1.23 0.08 | 1.13 0.12 | | | 1.1 0.09 | 1.21 0.06 | 1.2 0.09 | | | 1.21 0.07 | |
| Trust | | -1.09 0.31 | 0.4 0.25 | | | | 0.7 0.56 | 4.7 0.47 | | | | 0.09 0.41 | 4.05 0.35 | | | RIGHT |
| $\Delta \log \text{Trust}$ | | | | 0.51 0.11 | 0.33 0.11 | | | | 1.23 0.14 | 0.36 0.13 | | | | 0.89 0.1 | 0.01 0.1 | |
| Year: 2016 | | | | | | | | | | | 0.01 0.02 | -0.02 0.12 | -1.24 0.09 | 0.04 0.04 | 0.01 0.03 | |
| Year: 2015 | | | | | | -0.12 0.02 | -0.32 0.16 | -1.57 0.12 | -0.01 0.04 | -0.04 0.04 | | | | | | |
| Year: 2011 | 0.35 0.01 | 0.69 0.1 | 0.2 0.08 | 0.39 0.01 | 0.39 0.01 | | | | | | | | | | | |
| $\log c_{it} - \log \tilde{c}_{it}$ | 0.05 0.02 | 0.12 0.02 | | | 0.07 0.02 | 0.64 0.05 | 0.62 0.07 | | | 0.46 0.06 | 0.59 0.04 | 0.45 0.06 | | | 0.36 0.05 | |
| Trust | | -0.49 0.08 | -0.26 0.07 | | | | 0.13 0.31 | 1.64 0.24 | | | | 0.83 0.24 | 1.99 0.18 | | | |
| $\Delta \log \text{Trust}$ | | | | -0.02 0.03 | -0.07 0.03 | | | | 0.7 0.07 | 0.42 0.09 | | | | 0.75 0.05 | 0.51 0.06 | |
| Year: 2016 | | | | | | | | | | | -0.06 0.01 | -0.33 0.08 | -0.77 0.05 | -0.06 0.01 | -0.02 0.01 | |
| Year: 2015 | | | | | | -0.07 0.01 | -0.11 0.1 | -0.69 0.07 | -0.1 0.01 | -0.04 0.01 | | | | | | |
| Year: 2011 | -0.02 0 | 0.19 0.03 | 0.1 0.02 | 0.01 0 | 0.02 0 | | | | | | | | | | | |

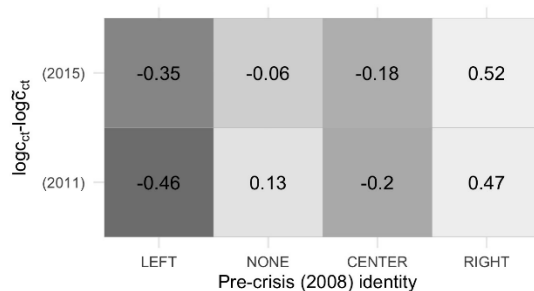
Note: Only second stage (rather than bootstrapped first stage) standard errors are presented.

Note: Groups are formed based on respondents answer to an item where they were asked to report where they stood on 1-10 scale on the left-right spectrum: Left (below 5), center (5), right (above 5) or none.

4.3.3. Demand and supply of new parties

The success of the two new parties among the center and the left poses the question of why these parties chose to challenge that particular niche. The analysis suggests that the demand for parties on the center (*Ciudadanos*) and the left (*Podemos*) pulled their supply, rather than their supply pushing voters to those locations. Figures 10 and 11 show that the electoral losses of both parties were to a large extent concentrated among the center and left groups, even before the emergence of new parties. This interpretation is comforted by Figure 12, which shows the cohort-level correlation between the change in living standards (unfulfilled aspirations) and, pre-crisis political identities. It indicates that unfulfilled aspirations were more intense among those cohorts that in the 2004-2008 identified as center or left.

Figure 12
Correlation between unfulfilled aspirations and pre-crisis identity



Note: Cohort level correlation between pre-crisis (2008) share of each identity, and unfulfilled aspirations in 2011 and 2015. Cohort estimates are based on local polynomial regression estimates for each gender, education, year of birth cell. The correlation is computed without taking into account the size of cohorts.

The findings of this section support the hypothesis that the trust cleavage opened by the crisis did not weaken the left-right cleavage. Voters do not change significantly their location in the left-right spectrum; instead, their left-right identity seems to act a benchmark of what they expect from parties. When they lose their trust in parties and institutions to fulfill these expectations, they shift their support towards others who can credibly fulfill them. Figure 10 and 11 also sheds light on why the two new parties emerged on the left and the center-right, for these are the segments of the electorate where unfulfilled aspirations had eroded more the support for mainstream parties.

5. POLITICAL AND ECONOMIC CONFLICT OVER THE CREDIT CYCLE

The starting point of this paper was a puzzle. The collapse of the Spanish housing bubble caused historically high levels of inequality and unemployment. However, the anti-establishment backlash that followed did not seem to oppose voters on the basis of living standards. The new cleavage opposed voters on the basis of trust; new parties distinguished themselves for questioning the political -rather than the economic- statu quo; they gathered their support from the upper-middle classes; and their support was clearly anchored by their pre-crisis political identities. The puzzle raises several question about the political economy of financial crises: why didn't new parties coordinate unemployed workers to shift the economic policy? Should one conclude that how the burden

of adjustment is distributed is irrelevant, and that the anti-establishment backlash was driven by non-economic factors, like identities and exogenous changes in trust?

I started arguing that the above facts are a puzzle partly because we lack a theoretical account of the link between trust and living standards. Firstly, I argued that the trust of affluent voters is partly driven by their different trust priors, but also by whether elites and institutions succeed in ensuring the fulfillment of their aspirations. This paper contributes therefore by considering the trust in parties and institutions as the result of updating priors in response to institutional deterioration, and to unfulfilled aspirations. Empirically, this theoretical framework allowed to rationalize this puzzle. Its findings are summarized by five pieces of evidence.

- Firstly, conventional economic cleavages (based on the level of income or employment status) do not capture who are the economic losers of the financial shock. Instead, relatively affluent young cohorts were found to lose disproportionately more than comparatively poorer (but older) ones. The key economic cleavage emerging during the financial crisis was along generational lines. The first contribution of this paper is therefore to uncover *unfulfilled aspirations* as the central variable distinguishing losers of the financial crisis.
- Secondly, unfulfilled aspirations are a major force behind the vote for new parties. Between one third and one half in the change in vote for mainstream parties is due to unfulfilled aspirations, implying, an elasticity of the vote share to living standards between 0.9 and 1.
- Thirdly, institutional trust is endogenous, and to a large extent, driven by unfulfilled aspirations. The latter explains two thirds of the cross-sectional distribution of institutional trust, and about one third of its change. This and the precedent point are another critical contribution of this paper: the trust of voters in parties and institutions depends upon their capacity to insure them against the hazards of their life-cycle. Therefore, unfulfilled aspirations are the most relevant economic variable linking voters to parties and institutions during financial crises.
- Fourthly, institutional trust is the common trait of those voters who left old parties for new parties. However, since institutional distrust is endogenous to unfulfilled aspirations, its effect on electoral outcomes partially reflects economic insecurity. Therefore, this paper stressing that economic insecurity can not be concluded to be irrelevant with respect to institutional distrust.
- Finally, unfulfilled aspirations explain only part of the change in institutional trust. Trust priors seem to play a role. New parties draw their support not only from the losers of the financial crisis, but also from those who had different priors and were more sensitive to signs of institutional deterioration.

I then turned to address the role of identities shaping post-crisis conflict. I argued that voters could value trust issues (such as corruption or elite selection) either intrinsically -and thus as a substitute for the left-right dimension- or instrumentally -complementing left-right cleavages. Empirically, I found support for the substitute hypothesis: political identities were not affected by the *General*

discontent and *Unfulfilled aspirations* channels, and they were a strong determinant of vote transfers. This explains why the crisis polarized parties around cleavages that preceded it, and why new parties succeeded on the center and left niches where most discontents were concentrated.

These pieces of evidence support a novel account of the nature of the political conflict that emerges over the credit cycle. Over a credit expansion, the climate of affluence pushes voters to aspire to ever more optimistic spending plans, while they turn a blind eye on bad institutions and politicians (Herrera, Ordonez, and Trebesch 2020; Fernández-Villaverde, Garicano, and Santos 2013). The credit contraction imposes unexpected constraints on households and the state. These constraints have two effects: they unveil the deterioration of elites and institutions, and they prevent households from achieving their overoptimistic economic aspirations. Both undermine the linkage of voters to parties and institutions, but voters will react asymmetrically. Firstly, voters have different *trust priors*, which accentuate their sensitivity to institutional deterioration (irrespective of its economic effect). Secondly, voters differ in their economic aspirations, and it is their frustration what undermines their trust in the ability of parties and institutions. Finally, the cleavage created by the forces of *General distrust* and *Unfulfilled aspirations* will not substitute pre-existing cleavages, and thus voters will be sorted into different parties

The political challenge of a credit contraction implies splitting the burden of adjustment and finding a remedy for institutional deterioration. However, voters' heterogeneity explains why the conflict does not oppose voters of new parties to those of the old based on economic interests, and why new parties do not advocate radical departures from the economic statu quo. Firstly, the coalition of new parties is drawn from a mixture of economic and political discontents. Secondly, even economic discontents do not necessarily have common economic interests, or even share a common left-right identity: voters affected by unfulfilled aspirations have different income levels and have large stakes in the economic statu quo. Therefore, the strategy of new parties is to deemphasize the role of traditional left-right cleavages and distributive conflict, and instead emphasize valence issues.

The complexity of this last point speaks to the external validity of the analysis of the Spanish case. I argued that *who* bears the burden of adjustment is doubly important in shaping country-specific outcomes: not only are discontents mobilized by the size of the gap between economic aspirations and outcomes, but it will interact with their identity, and trust priors to shape which new parties will succeed, and whose preferences they will advocate. The pre-crisis distribution of *identities*, *aspirations* and *priors* is likely to vary across countries, explaining why financial contraction of similar magnitudes may result in asymmetric responses.

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APPENDIX: DESCRIPTION OF TRUST ITEMS

Table 2
Trust items in detail

| Item short name | Complete question | Response options |
|-------------------------|--|---|
| Democracy-4 | <i>How satisfied are you with the functioning of democracy</i> | Very satisfied/pretty satisfied/not very satisfied/not satisfied at all |
| Democracy-4bis | <i>How satisfied are you with the functioning of democracy</i> | Very satisfied/pretty satisfied/slightly dissatisfied/very dissatisfied |
| Parliament-4 | <i>Among the following institutions, how much do you trust [the parliament]?</i> | 1. Not trust at all-4. fully trust |
| Government-4 | <i>Among the following institutions, how much do you trust [the government]?</i> | 1. Not trust at all-4. fully trust |
| Parties-4 | <i>Among the following institutions, how much do you trust [political parties]?</i> | 1. Not trust at all-4. fully trust |
| Judiciary-4 | <i>be better or worse compared to the present year?</i> | 1. Not trust at all-4. fully trust |
| Parties-10 | <i>Do you think the situation to find a job in Spain is now better or worse than six months ago?</i> | 0-10 |
| Government-10 | <i>On a 0 to 10 scale, how much do you trust... [the government]</i> | 0-10 |
| Parliament-10 | <i>On a 0 to 10 scale, how much do you trust... [the parliament]</i> | 0-10 |
| Democracy-10 | <i>On a 0 to 10 scale, how satisfied are you with the functioning of democracy</i> | 0-10 |
| Regional Parliament-10 | <i>On a 0 to 10 scale, how much do you trust... [the regional parliament]</i> | 0-10 |
| Regional government-10 | <i>On a 0 to 10 scale, how much do you trust... [the regional government]?</i> | 0-10 |
| Judiciary-10 | <i>On a 0 to 10 scale, how much do you trust... [the the court system]</i> | 0-10 |
| Constitutional court-10 | <i>On a 0 to 10 scale, how much do you trust... [the constitutional court]?</i> | 0-10 |
| Crown-10 | <i>On a 0 to 10 scale, how much do you trust... [the crown]?</i> | 0-10 |
| Media-10 | <i>On a 0 to 10 scale, how much do you trust... [the media]?</i> | 0-10 |