LIVEWHAT

Living with Hard Times
How Citizens React to Economic Crises and Their Social and Political Consequences

Integrated report on causal relationships between crises and their consequences on citizens

(Deliverable: 5.3)

WP5: Causal effects of crises on citizens' attitudes and behaviours

Work package Leading Institution: UAB

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Introduction

This report describes the major findings for the work package on the causal effects of different dimensions of crises on citizens' attitudes and behaviours. It presents the main results and implications as well as the theoretical underpinning for six lab experiments and seven survey experiments that aim to study the causal mechanisms linking situations of economic crisis and their impact on citizens. The fieldwork took place in Spain and Switzerland from June 2014 to September 2016 combining both convenience and representative samples.

The aim of this work package is to test whether relationships found in other work packages (mainly WP4 based on survey data) between economic conditions and individual political attitudes and behaviours can be considered causal, that is, the extent which differences in citizens' behaviours, attitudes and preferences can be explained by economic conditions, policy changes or other crisis-related events, but not by other unobserved factors.

All experiments deal with situations, perceptions and emotions related to the economic crises and its political context, and how these shapes citizens' political attitudes and behaviours. Lab experiments are able to manipulate individual economic conditions to assess their effects. Survey experiments aim to treat perceptions about contextual economic conditions in order to observe how they affect outcomes of interest. All experiments have been approved by the UAB research ethics committee (CEEAH).

All experiments are built by taking into account the state of art regarding the study of collective action, political participation, political attitudes and political preferences, with a special emphasis on the psychological factors that explain how individuals deal with a situation of economic hardship. They share the common aim of situating previous findings and move forward the knowledge on how and to what extent economic circumstances bear consequence on individuals' political attitudes and behaviours, conditioned by different political circumstances. This has substantive implications for a better understanding of the political effects of the economic crisis and its potential effect on multiple outcomes such as political engagement, political attitudes and policy preferences.

As it is well known, experimental research designs are appropriate strategies to identify causal relations. They have also, however, a number of limitations. First, experimental designs are limited in terms of the degree to which treatments may adequately represent "real life" economic hardship conditions. One cannot inflict economic hardship on experimental subjects beyond a limited point, which is certainly far from what the great recession has meant to many people. At most, you can simulate situations, or make experiences of hardship more salient as part of the experimental treatment. Second, often experiments are not able to alter perceptions regarding the crisis that are well established in experimental subjects (these are called pre-treatment limitations, see Slothus 2015). Third, there is always the concern of the generalizability of the findings: the question of whether positive results would hold for the general population (especially in the case of lab experiments which are usually based on convenience samples of students) or outside the lab or the survey context in which they are generated. Experiments have limited external validity. We have encountered all these usual limitations in the development of this work package, but we

have also been able to identify relevant relationships between economic conditions, perceptions about the crisis and its political context on the one hand, and citizens' attitudes and behaviours on the other.

In the coming lines we present a brief abstract of each of the experiments carried out, the fieldwork details of which can be seen in tables 1 and 2. For the sake of clarity we present the experiments in the same order that we used for Deliverables 5.1 and 5.2.

Lab experiments

The six lab experiments include games, pseudo-games and vignette designs. They deal with behaviour and attitudinal outcomes such as collective action, political participation, populist attitudes and preferences for redistribution. Lab experiments allow for the greatest degree of control over exogenous characteristics and treatment administration. They eliminate the possibility that the effect is produced by factors other than the treatment. They also allow treating individual economic conditions in a way that is sought to be similar to the implications of the economic recession: basically introducing deprivation in the subjects. Their detailed design and protocols are explained in Deliverable 5.1. Four out the six lab experiments have produced positive, statistically significant results, with modest sample sizes. The studies also show treatment integrity and procedural reliability as all the treatments work as planned to a large extent (as verified through manipulation checks).

The fieldwork relied on convenience samples of students recruited ad hoc for this project at UAB and UNIGE and on existing panels of experimental subjects at UPF. Because of the demanding tasks of subject recruitment and the requirements of appropriate experimental settings, five out of the six lab experiments have been conducted in Spain and one in Switzerland (lab6). Multiple sessions were completed during eight months as described in table 1. To enhance external validity, one experiment was replicated in both countries (lab4), and similar theoretical expectations have been tested later in complementary survey experiments for another experiment (lab2).

Lab experiment 1 studies how changes in citizens' perception regarding the fairness of inequalities caused by the economic crisis affect preferences for redistribution. The experimental design is based on an economically incentivised game in which participants choose a preferred tax rate under different circumstances. Participants' initial endowment, the level of inequality among participants, and the source of this inequality are manipulated. Results show a significant impact of fairness consideration on redistribution preferences. Specifically, higher redistribution is preferred when inequality is caused by luck or social background as compared to when it is caused by merit. A sizeable impact of self-interest and a weaker impact of insurance motives are also observed. In both cases, however, these motives moderate but do not supress fairness considerations. Results show no impact of varying levels of inequality on participants' preferences for redistribution.

Lab experiment 2 assesses the impact of the risk of losing income on support for redistribution. It uses an economically incentivised game in which participants receive an initial endowment and

are told that one third of them will lose it. They are then offered the possibility to compensate the losers by establishing a tax on the keepers. They are randomly assigned to one of two groups by varying the source of income (luck, social background, effort and greed) and the degree to which they are affected and level of information, with three different conditions (self-interest, self-insurance and fairness considerations). Evidence shows that fairness considerations matter for supporting redistribution. In contexts where specific segments of the population suffer an income shock, different levels of redistribution depend on the causes of income loss. Specifically, support for redistribution is weaker when the income loss is caused by lack of effort than when it is caused by other factors such as luck, social background or greed. Furthermore, self-interest is also shown to matter as knowledge on potential loss leads to higher support for redistribution. This means that under risk conditions, when participants are affected by their decisions but do not know whether they are among the losers or keepers, they tend to have insurance motives, thus those expecting to be keepers tend to choose lower tax rates than those expecting to loose.

Lab experiment 3 explores the effects of economic deprivation on political participation in order to explain the net effect of an economic crisis which has seriously affected the resources of thousands of people who struggle to survive with dignity and has also generated situations of relative deprivation on account of the impact of austerity policy on income and social security expectations. It uses a simulated game experiment that induces three forms of deprivation in order to test the extent to which a loss of resources disincentivises political participation or, on the contrary, generates perceptions of injustice and emotional reactions that encourage participation in protest. It finds that deprivation is related to higher levels of protest only when it is collective, but reduces collective action when it is personal. It also finds that moral outrage is a key mediating factor to understand the behaviour of individuals who are collectively deprived. These effects seem to be independent of the cost of joining the protest.

Lab experiment 4 explores the consequences of emotional reactions which are typically elicited by an economic crisis (anger, anxiety, and sadness) on a variety of political attitudes (political trust and anti-political feelings, interpretations of the crisis, intention to participate in contentious politics, and opinions about economic inequality and redistribution). The study took place both in Spain and Switzerland where incidental emotions were induced in participants. Results were largely inconclusive, if not entirely null. Despite the fact that the analysis of the manipulation checks suggests that our treatments managed to elicit – at least retrospectively – the intended emotions, discrete emotions have been proved to be irrelevant for attitudes toward inequality and political participation. In contrast, we found partial evidence in support for the hypothesis that, in line with the appraisal tendency framework, distinct emotional reactions would promote different perceptions of the economic crisis. Specifically, the experiment reveals at least marginally significant differences between individuals exposed to the anxiety and the anger treatments in their ability to attribute blame for the crisis and their perception of the predictability of the situation, if not in the sense of internal efficacy. Anger, as compared to anxiety, would increase individuals' willingness to punish politicians by enacting measures to further control their activity and restrict their privileges.

Lab experiment 5 leverages a legislative reform that hardened the conditions for contentious action that took place in Spain on July 2015 as the government's response to anti-austerity protest. It thus manipulates public reactions by priming cost and threat issues, as well as the

legitimacy of the reform considering its potentially negative impact on freedom of expression and assembly rights. The study provides evidence that perceived illegitimacy of state repression influences the willingness to demonstrate and attitudes towards repertoires of protest. It also shows that emotional reactions to the threat of repression, such as fear and anger, affect contentious action, both in terms of intentional behaviour and in actual involvement in petitioning and signalling discontent through the support of social media campaigns.

Lab experiment 6 tests the effect of feelings and sources of deprivation on preferences for redistribution. The experimental design manipulates three sources of deprivation (based on luck, merit, or family background) and distinguishes between in-group and out-group deprivation. The evidence shows that higher levels of injustice and group efficacy are reported by deprived subjects. However, these feelings do not transform into political attitudes, even though they are powerful predictors of political behaviour in general terms. The participants know that the deprivation is large, unfair and that they could change the game if they act collectively, but they do not support more redistribution. This result may be explained by the fact that respondents do not relate the particular deprivation of their in-group to the global welfare system.

TABLE 1. Laboratory experiments

Experiment	**# of participants**	**Dates**	**# of sessions**	**Main findings**
Experiment 1. Inequality, fairness and preferences for redistribution Game experiment	Spain 212	17/06/2015 to 19/06/2015	10	There is no impact of varying level of inequality on preferences for redistribution. Higher redistribution is preferred when inequality is caused by luck or social background as compared to when it is caused by merit. There is a sizeable impact of self-interest and a smaller impact of insurance motives.
Experiment 2. Risk of income loss, fairness perceptions and support for redistribution Game experiment	Spain 243	15/02/2016 to 05/03/2016	11	Support for redistribution is weaker when the income loss is caused by lack of effort than when it is caused by other factors such as luck, social background or greed. Self-interest also matters.
Experiment 3. Deprivation and collective action Simulated game experiment	Spain 301	18/02/2016 to 27/04/2016	5	While personal deprivation reduces collective action, group deprivation increases collective action, mediated by moral outrage. The effect is independent from the cost of collective action.
Experiment 4. Emotion elicitation and political attitudes	Spain 295	23/09/2015 to 30/11/2015	8	Distinct emotional reactions promote different perceptions about the economic crisis but overall no effects on political attitudes.

Vignette experiment	Switzerland 183	2/10/2015 to 18/12/2015	19	
Experiment 5. Repression and participation Vignette experiment	Spain 289	28/09/2015 to 17/02/2016	7	Perceived illegitimacy of State repression influences the willingness to demonstrate and attitudes towards repertoires of protest. Emotional reactions to the threat of repression such as fear and anger affect contentious action both in terms of intentional behaviour and in actual involvement in petitioning and signalling discontent through the support of social media campaigns.
Experiment 6. Deprivation and preferences for redistribution Vignette experiment	Switzerland 221	11/04/2015 to 19/05/2015	15	Higher levels of injustice and group efficacy are reported by deprived subjects. However, these feelings do not affect attitudes towards redistribution.

Survey experiments

Survey experiments allow for larger, more representative sample sizes, and hence allow for larger external validity. In this case the treatments refer to primes regarding the country's economic situation, often with some additional political treatments. We do that for two reasons. One is that, unlike lab experiments, in survey experiments it is difficult to treat individual economic circumstances. The second is that according to some findings of WP4 the main of the recession that conditions political attitudes are perceptions regarding the state of the economy (Rico and Anduiza 2016)

The seven survey experiments were embedded in three different online surveys. Four vignette experiments and three conjoint designs were combined in different subsamples in order to maximise respondent attention and prevent question-order effects while keeping the number of respondents as high as possible. Samples were drawn from panels provided by Qualtrics in Spain (with two rounds) and Switzerland. A snowball sample based on online social networks in Spain was also used for one of the experiments (for survey4). Detailed question wording for each experiment can be consulted in Deliverable 5.2.

Results have confirmed some consequences of primes of the economic crisis on nationalism and support for the EU, but have not shown conclusive effects on populist attitudes. Surveys have also allowed testing the extent to which protest event characteristics affect the likelihood of taking part in them and the way economic performance affects corruption voting.

TABLE 2. Survey experiments

Experiment	**# of participants**	**Dates**	**Main findings**
Experiment 1. Economic crisis and national identification. Vignette experiment	Spain 763	1/06/2016 to 7/06/2016	Lower social class respondents identify more strongly with Spain and become more nationalist when they perceive a loss of economic status of the country. Arguments pointing to the EU as responsible for the situation. Higher status individuals respond in the opposite way.
Experiment 2. Inequalities in Europe and attitudes towards the EU Vignette experiment	Spain, first round Qualtrics sample 783 Spain, second round Qualtrics sample 865	1/06/2016 to 7/06/2016 14/06/2014 to 18/06/2014	Unequal and equal distributions of poverty treatments had similar effects when compared to the control group, suggesting that what matters is not the level of inequality but poverty.
Experiment 3. Perceptions of economic hardship and populism Vignette experiment	Spain, first round Qualtrics sample 795	1/06/2016 to 7/06/2016	Primes of the negative economic situation and the loss of sovereignty does not affect populist attitudes.
Experiment 4. Framing of crisis consequences and support for redistribution Vignette experiment	Spain, snowball 2328 Spain, second round Qualtrics sample 883 Switzerland, Qualtrics sample 1040	04/03/2016 to 09/03/2016 14/06/2014 to 17/06/2014 24/08/2016 to 21/09/2016	Preferences for redistribution are higher when those affected by the crisis (and likely to benefit from redistribution) are so for reasons beyond their own control (family background, luck). Support for redistribution decreases when those affected by the crisis are so because of lack of effort, or greed.
Experiment 5. Economic performance and corruption voting. Conjoint experiment	Spain, first round Qualtrics sample 2274 Spain, second round Qualtrics sample 858	1/06/2016 to 7/06/2016 14/06/2014 to 17/06/2014	Good economic outputs partially explain the lack of electoral punishment of corrupt politicians. However, in spite of previous evidence, we fail to confirm that the economic crisis implies a harsher electoral judgement on corruption.

Experiment 6. Event characteristics and protest Conjoint experiment	Spain, first round Qualtrics sample 2275	1/06/2016 to 7/06/2016	Protest event characteristics such as cost, party endorsement, issue importance, expected efficacy and expected turnout have important, independent and additive effects on protest participation, homogeneous across individuals.
Experiment 7. Political opportunity and protest Conjoint experiment	Switzerland, Qualtrics sample 1163	24/08/2016 to 21/09/2016	Expected police repression and issue importance have independent and additive effects on protest participation.

Survey experiment 1 seeks to assess the impact that the loss of economic status of the nation, and the "blaming the EU" strategy has on three attitudes: nationalism, national identification and national pride. The experimental design primes both the loss of economic status of the nation and the attribution of responsibilities to a third party (the EU) regarding this loss of economic status experienced in Spain. The evidence indicates that lower social class respondents identify more strongly with Spain and that they become more nationalist and more proud to be Spanish when both treatments are present. The effect is the opposite among high-income people and people who belong to the upper or upper-middle class, and there is no direct or indirect impact of blame attribution on nationalist attitudes for the unemployed.

Survey experiment 2 studies how citizens' perceptions of inequality between member states of the EU shape attitudes toward European institutions and the process of European integration. The economic crisis has led to diverging economic paths among member states and this can be seen in their levels of poverty. The design exposes individuals randomly to two groups of graph bars picturing the poverty rates across EU countries. In the inequality treatment differences in poverty rates in the EU are large whereas in the equality treatment differences are insignificant. The results show that perceptions of inequality weaken favourable opinions of the EU. However, differences between perceptions of inequality between member states are mostly unable to explain detachment from the EU, except for trust in the EU and in the European Central Bank.

Survey experiment 3 examines the extent to which perceptions of economic crisis or political crisis affects individuals' adoption of populist attitudes. Sovereignty and economic implications of the crisis were primed using opinion questions on the measures required by the EU to reduce public spending and on major economic problems in Spain. The evidence shows that neither the economic situation nor the loss of sovereignty seem to have any impact on the level of populist attitudes. They also show that there is no relation between economic or sovereignty perceptions and feelings of anger.

Survey experiment 4 questions whether the framing of the crisis as affecting different social groups leads to different levels of support for redistribution. The experimental design exposes individuals randomly to one of four arguments on who was most affected by the crisis (luck, social background, effort, greed). The evidence confirms that support for redistribution varies depending on the framing of the crisis exposure. Participants who believe that crisis-related losses are mostly associated with greedy or risky behaviour related with real estate investments,

are consistently less willing to accept a tax raise to compensate for the income-loss of those most hit by the crisis. All other framings of the crisis losses fail to produce a significant change in respondents' willingness to redistribute.

Survey experiment 5 focuses on economic considerations and their potential effect on the scarce electoral punishment of corrupt candidates. It examines whether voters only care about corruption in harsh times and forgive corrupt candidates when the economy is doing well. A conjoint experiment is used in order to determine the relative effect of each potential explanation of non-punishment, to assess how they interact with each other and their potential interaction with economic considerations. The study finds that good economic outcomes explain part of the support for corrupt candidates as the vote probability of malfeasant candidates increases 5 per cent when candidates have good outcomes. However, the study does not find a preference for the corrupt candidate with good economic outcomes over the honest candidate with bad economic outcomes. Partisanship seems to be a better explanatory factor for the support of corrupt candidates as respondents do trade-off integrity for party preference and this trade-off is stronger when information about corruption comes from a source with low credibility than from a source with high credibility.

Survey experiment 6 tests under what conditions people are more likely to choose different forms of political action. It explores attitudes towards protest by studying five attributes of protest actions: participation mode, issue importance (including economic issues), efficacy, turnout and the endorsement of parties. A conjoint design is used to test individual preferences for event attributes, trade-offs in response to combinations of attributes and heterogeneous effects. The results suggest that party cues, issue importance, and efficacy are key drivers of participation and that the effect of these characteristics seems to be independent of each other and also independent of individual traits. However, egotropic issue importance (the extent to which the action is related to an issue the respondent personally cares for) is particularly important for engaging in social media campaigns as compared to demonstrating or signing a petition.

Survey experiment 7 studies the effect of perceptions of political opportunities on protest behaviour. As the economic crisis has changed government responses to contentious politics, this study builds on a conjoint design to test the extent to which motivational derivatives of the political opportunity structure have an effect on individuals' intentions to demonstrate. The experiment presents all possible combinations of four factors that define the opportunity structure: facilitation, repression, external responses to movement goals without any action by the movement and success chances; along with event attributes such as the issue and the expected turnout. The evidence indicates that individuals are quite sensible to police repression and, to a lesser extent, they also consider the issues that they care about the most in their decision to demonstrate. It is also shows that these effects are not homogeneous between respondents but that they vary according to previous involvement in protest, high associational involvement and risk taking attitudes.

In short, the experimental studies in this work package not only study causal relationships between crises and their consequences on citizens, but also move forward the research in multiple fields by providing sophisticated analytical models. This approach is promising to advance theories in the fields of political psychology and political behaviour with a contextualised

understanding that accounts for the complex interplay between emotions and decisions under particular circumstances.

Highlights and main findings

The expected effects presented and discussed for each experiment have been confirmed in some occasions, but not in others. In most cases, within the same experiment some hypotheses were confirmed while others were not. Often the effects are also heterogeneous across individuals. All in all, the number of specific findings of this work package is extremely large, and hence readers are referred to the specific experiments and their results described below. Here we present a summary of what we consider the main substantive findings of this work package.

The political and economic consequences of the crisis have been structured in three different categories that constitute the outcomes of interest in this work package: behaviour, attitudes, and preferences.

Behaviours

The main outcome of interest has been collective action. Collective action or more generally political participation in its different modes has been found to be significantly affected by the economic crisis in different directions (see Giugni and Grasso 2016). Most of the existing evidence in the literature is based on observational data, with some limitations to establishing the causal nature of effects.

Our first purpose was then to assess the consequences of illegitimate economic deprivation on the likelihood that individuals would join efforts to protest against this situation. The results of a lab experiment (lab3) show that **deprivation enhances participation in collective action only when it is group-based, but reduces it when it is strictly personal.** This effect of collective deprivation is channelled through moral outrage, and it is independent from the cost of collective action.

Economic conditions are located in a political context that cannot be ignored. We have hence designed additional experiments that take these contextual features into account. From a general perspective we have designed two conjoint experiments that assess the consequences of protest event characteristics (survey6) and political opportunity structures (survey7) in which the economic situation must be contextualised. From a more specific perspective we have taken a closer look at the consequences of rights deployment and repression (lab5) and corruption (survey5), both fairly specific of the Spanish context.

Our results coming from these conjoint experiments (survey6 and survey7) provide evidence supporting the idea that **event characteristics such as cost of the action, party endorsement, issue importance (including economic issues), expected efficacy, expected police repression and expected turnout have important, independent and additive effects on intention to protest, mostly homogeneous across individuals**. While individual characteristics affect the probability to participate in ways anticipated by the literature, they do not affect the choice of

modes or the relative importance of event characteristics. The preferences for modes and the effect of event characteristics are similar regardless of individuals' previous participation experiences, degree of risk aversion, or ideology. We do not find evidence of individuals with different profiles giving more importance to specific event characteristics, or preferring some modes over others. Overall, these results suggest that participation in different protest modes responds to the same stimuli and can be understood with the same explanatory factors.

More specifically, we have also tried to identify the potential consequences of protest repression policies that have taken place in Spain. In this case we have found (lab5) small effects pointing to the fact that **frames of the illegitimacy of state repression decrease the willingness to demonstrate and weakens support for repertoires of protest**. Our results also show that primes of cost and fear resulting from potential repression affect contentious action. While the **cost of repression diminishes intentional behaviour and actual involvement in petitioning and signalling**, **threat augments them**. However, **both cost and threat lead to stronger support for demonstrators and contentious repertoires**.

Finally we have also addressed the question of how the economy may condition the relationship between corruption and vote choice (survey5). Good economic outputs partially explain the lack of electoral punishment of corrupt politicians. However, in spite of previous evidence, we **fail to find evidence that the economic crisis implies a harsher electoral judgement on corruption**.

Attitudes

Political attitudes are a second fundamental outcome of interest in this research project. Here we have chosen to identify two attitudes of special interest when thinking about the consequences of the economic crisis: nationalism and populism.

We have found (survey1) that **the crisis affects national identity and nationalism in different ways for high status and low status individuals**. Those belonging to the lower classes become more nationalistic when exposed to information about their country losing economic status; conversely, individuals belonging to middle upper classes become less so. This helps to understand the micro-mechanisms behind the idea that ethno-nationalist responses to the economic crisis spread around at these times, especially among those who are more seriously hit by the economic crises. Our results confirm expectations from group conflict theory regarding how nationalism should increase during these economic times, particularly among those most vulnerable. Economic crises depreciate the appeal of the nation because of the loss of international and internal prestige. People belonging to a high-income group or to the upper social class should become less attached to the nation because of the nation's losing status and because they become more distant from the typical member of the nation. However, people belonging to low-income groups or to the lower social class should become more attached to the nation because they turn closer to the mean citizen, an individual who has lost economic status due to the economic crisis. These effects are accentuated when the EU is seen as responsible for this situation.

We expected to find similar effects for primes of economic hardship and other political variables related to the crisis on populist attitudes (survey3). However, **we have been unable to find significant effects of primes of the economic crisis on populism**. In addition, **primes on the loss of sovereignty seem to have no consequences on populist attitudes.** The first of these findings seems to disconfirm previous evidence obtained from WP4 (Rico and Anduiza 2016). Our explanation for this lack of confirmation of our expectations has to do mainly with pre-treatment issues: as much as we try to prime the perception of a bad economic situation in the treatment condition, those that are in the control group also share these perceptions. Hence we do not consider this experimental evidence enough to reject the observational evidence that negative perceptions of the national economy facilitate the rise of populist attitudes and further research in other cases less affected by pre-treatment issues (i.e., by the crisis) is required.

Also contrary to our expectations we **fail to see any consequences of emotional states on populist attitudes and other political attitudes** (lab4). Distinct emotional reactions promote different perceptions of the economic crisis, but overall no effects are found on political attitudes. In this case further analysis is also necessary, but one possible interpretation of this null finding is that emotional elicitation that is based on personal private circumstances (and not on the perception of the context) may have limited effect on political attitudes.

Finally, we have also explored the consequences of the crisis for support for the EU (survey3). In this case we find different results depending on the indicator that we use, but the overall results point to a limited effect of the level of inequality vs. on support for the EU. What matters is the **priming effect of talking about poverty, which depresses some of the indicators of support for the EU and trust in its institutions**.

Structure of the report

Since the design details have been presented in previous deliverables, in this report we focus on the main findings of each of the 6 lab experiments and 7 survey experiments.

The report is structured in thirteen detailed description, one for each experiment, following the same order as used for Deliverables 5.1 (laboratory experiments) and 5.2 (survey experiments). For each experiment we follow a similar structure. First, a brief introduction presents the research question and the relevance of each study. This is followed by a second part with a short discussion on the theoretical background on the academic literature from which expectations and hypotheses derive. A third part describes the experimental design and the fourth one introduces the experimental results and main findings. A final part presents a short discussion and conclusions for each study. The reader must bear in mind that the results presented here are still very preliminary and the research team is currently still working on the analyses.

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Lab experiment 1. Income inequality, fairness considerations and citizens' preferences for redistribution

Introduction

The economic crisis has increased income inequality. This increase may lead to changes in citizens' perception of the fairness of this inequality. Can these changes generate a change in people's preferences for redistribution?

One of the main consequences of the crisis that started in 2008 has been a significant increase in income inequality. A recent OCDE report (OCDE, 2015) shows that during the crisis, income inequality has increased, even if following a long-term trend. From 2008 the average income has dropped in all income deciles. However, those at the bottom 10% of the income structure have fared worse than the median earners and much worse than the top earners.

This increase in inequality[1] levels is linked to the source of one's income. On the aggregate, the increase in inequality has been mainly fuelled by a reduction of income from labour, which has been much more steeper than the reduction of returns of capital. Labour income reduction has been mainly due to the increase in unemployment rates.

This has led to a significant increase in the pre-tax-and-benefits inequality, as the number of people receiving benefits has increased and the number of people working has decreased. Taxes and benefits moderated the rise in inequality especially during the first years of the crisis and before the consolidation programmes. Additionally, they modified the composition of the lower income deciles. For instance, while poverty levels among the elderly diminished, they increased for all other ages, and more significantly among young people. The reason is that, generally, older people receive their income from pension systems and therefore they have not been directly affected by increased unemployment rates. The crisis, thus, increased the levels of inequality. Additionally, depending on the source of one's income different people have seen their relative position changed.

Under these circumstances, it is relevant to survey the potential consequences of these changes on citizens' demands for redistribution. The level of inequality has been considered as one of the main factors determining citizens' demand for redistribution. According to the standard rational choice theorists, an increase in inequality levels would tend to generate higher demand for redistribution among the poor and those below the median. Other authors argue that support for redistribution can also arise in other social sectors, as people have some pro-social motivation and other preferences regarding this topic. If people care about inequality levels, their support for redistribution will increase if inequality does. Furthermore, some theories argue that depending on whether people regard their own and others' situation in the inequality structure as his or their responsibility, or as a consequence of circumstances outside one's control, different fairness considerations can be triggered. These fairness considerations may lead to higher or lower support for redistribution. As the crisis has caused a significant change in economic circumstances, it might have led to different evaluations of citizens' control over their economic circumstances. Thus, it might have caused changes in citizens' demand for redistribution.

[1] In this paper we analyse income inequality. Thus, whenever the term inequality is used, it refers to income inequality.

We aim to show how inequality levels and the source of inequality affect citizens' preferences for redistribution. We isolate the impact of these two factors. We use a laboratory experiment in which participants receive different initial allocations based on three different factors: luck, merit, and social circumstances. Participants are offered the chance to choose a flat tax rate that would be used to redistribute the total collected among all participants, thus reducing initial inequality. Participants choose the tax under different circumstances. Firstly, as an unaffected participant, not affected by the tax they choose. Secondly, they choose as an affected participant under risk – that is, without knowing which their position in the income inequality structure is. Finally, they choose as a fully informed affected participant, after being informed of which was their actual position in the income inequality structure. Thus we can analyse the interaction between fairness considerations and self-interest and insurance motives. There are two different inequality structures. Half of the participants are exposed to a high inequality structure, while the other half are exposed to a low inequality structure.

Results show a significant impact of fairness consideration on redistribution preferences. Specifically, they show higher redistribution when inequality is caused by luck or social background rather than when it is caused by merit. Similarly, they show a sizeable impact of self-interest and a lower impact of insurance motives. In both cases, though, these motives moderate but do not supress fairness considerations. Finally, the results show no impact of the varying level of inequality in participants' preferences for redistribution.

Theory

The literature on preferences for redistribution has focussed on two main explanatory factors: self-interest and others-regarding considerations. The former has often been claimed as the only factor determining those preferences. However, in the last decades, an increasing amount of literature has surveyed the role of other-regarding preferences. The authors of the latter approach do not deny the role of self-interest. They argue that both motives interact. In this section we will briefly depict the main contributions of both schools of thought and we introduce new ideas to contribute to the understanding of preferences for redistribution.

Self-interest based explanations

The dominant explanations of attitudes towards redistribution in contemporary social science literature have been based on self-interest. They assume a) the capacity of individuals to recognise their best self-interest based on material grounds and b) that individuals act according to this self-interest regardless of non-material interests, other-regarding preferences and other moral reasons. According to these analyses, those at the bottom of the wealth distribution are expected to support redistribution from the top down, as it will increase their income. On the other hand, the wealthy are supposed to oppose redistribution to avoid losing income. Finally, those in the middle will vary their attitudes depending on the pre-distribution, supporting those redistributive measures that maximise their absolute or relative wealth after redistribution.

The paradigmatic example of these theories is the Meltzer and Richard's median voter model. It assumes that citizens calculate whether they will benefit or be penalised from government redistribution. Exclusively on these grounds, they decide whether they support or they oppose

redistribution. The median voter is the key to knowing whether there will be majority support for redistribution or not. If her income is lower than the mean, she will support redistribution. If her income is higher, she will oppose it (Meltzer & Richard, 1981).

Many other theories from a variety of disciplines and traditions have assumed this direct link between objective self-interest and citizens' attitudes and behaviours. However, significant research demonstrates that citizens' motivations are different and that the model does not hold. One of the soundest examples of the questioning of the homo economicus hypothesis are the Fehr and Schmidt (1999) experiments, in which citizens, in order to reduce inequality, behave in such ways that they do not maximise their income. They repeated a variety of economically incentivised experiments in many different cultural contexts. Income was consistently proven to be a poor predictor of attitudes towards redistribution. Additionally, observational data shows significant levels of support for redistribution among those with income over the mean, and relevant levels of opposition among those below it (Alesina & Angeletos, 2003; Fong, 2001, Bartels, 2008). Some authors have improved the prediction capacity by including a variety of factors in the definition of self-interest. For instance, Benabou and Ok (1998) introduce the role of expected mobility, which can explain to some extent why some people below the mean might support redistribution and why some above it might support redistributive measures based on their or their children's expected future position on the income scale. Other authors have surveyed the role of misinformation on citizens' attitudes, showing how in some cases, people did not know their relative position and thus failed to connect their self-interest to the evaluation of the redistribution policies (Slemrod, 2006; Bartels, 2008, Kuziemko et al. 2013). However, significant empirical research shows that often one's position in the income distribution, even in these enriched models, is not a good predictor of citizens' attitudes towards redistribution (Sears et al., 1980; Bartels, 2008; Fong et al., 2006).

Considerations based on social concerns

A broad body of literature shows that attitudes towards redistribution are, at least partially, caused by considerations other than self-interest. These theories mainly focus on two aspects: other-regarding preferences and fairness considerations (Fehr & Smith, 2003).

Some theorists have explored the role of other-regarding preferences. They claim that people's preferences include some level of altruism. Therefore, people include others' income in their own utility function. The Fehr and Schmidt (1999) inequity aversion model is a clear example. It claims that when people judge inequality, they take into account their own position and the position of others. When they experience advantageous inequality, they feel altruism towards those below a benchmark and support redistribution to the bottom. When they experience disadvantageous inequality they feel envy and support redistribution from the top down. The model shows that people can voluntarily contribute to public goods instead of free riding and that people can hand out costly punishments to free riders even if they will not get any future gain out of it. Further experimental research such as that of Tyran and Sausgruber (2006) is based on this model and confirms that introducing realistic heterogeneous levels of non-egoistic preferences can lead to better predictions of support for redistribution.

However, the support for redistribution to others is not unconditional. Other theories have focussed on fairness considerations which take in to account the worthiness of the potential

recipient of the redistribution. According to these theories, people tend to be more redistributive when they consider that the potential recipients have been victims of bad luck or unfair circumstances. On the other hand, when they consider that potential recipients are in a bad situation due to their own lack of effort or to their free riding attitude, people reduce their support for redistribution. Experimental evidence based on ultimatum, dictator games and public goods games shows that the driving motive of this higher support for redistribution is often neither based on self-interest nor on unconditional altruism (Fong et al., 2006; Krawczyk, 2013; Fong & Luttmer, 2011). Observational data can also support these claims. For instance, Alesina and Angeletos (2003), Fong, Bowles and Gintis (2006) and Benabou and Tirole (2006) show how the perception of responsibility of the poor for their situation correlates with support for redistribution.

The aforementioned literature highlights the role of perceptions of the worthiness of the recipient. However, potential recipients' worthiness is not the only fairness-related consideration when analysing this initial inequality. For instance, do all circumstances outside one's responsibility trigger the same level of support of redistribution? Whether the mechanism leading to the initial inequality is regarded as fair, unfair or neutral can have a significant role in the evaluation of the situation. Alesina and Angeletos (2003) and most of the fairness considerations literature differentiate solely between fair circumstances (effort or merit related) and unfair circumstances (not related to merit or effort). Differentiating between different unearned income sources might also lead to variation in the levels of support for redistribution. Distinguishing between luck and unfair social circumstances as the cause of pre-tax income inequality can also trigger different fairness considerations. A recent experimental study (Durante et al., 2014) analysed the issue but found no conclusive evidence. More evidence is needed to isolate the role played by different perceptions of the fairness of initial inequality regarding support for redistribution. This research aims to contribute to the understanding of the impact of the source of the initial inequality on citizens' preferences for redistribution.

Based on the existing literature, we hypothesise that:

H1: Higher levels of inequality lead to higher aggregate support for redistribution.

H2a: Support for redistribution varies depending on the source of the inequality.

H2b: Support for redistribution via taxes is higher with an income structure determined by family background than with an income structure determined by luck or merit.

H2c: Support for redistribution via taxes is higher with an income structure determined by luck or family background than with income structures determined by merit.

H3a: In full-information conditions, support for redistribution decreases with one's relative position in the initial income structure.

H3b: In risk conditions, support for redistribution increases with one's expected relative position in the initial income structure.

Design

In this research we seek to isolate the impact of a) the level of inequality and b) the source of inequality on support for redistribution, while controlling for fairness considerations and self-interest motives. We especially aim to differentiate between fairness considerations linked to three different sources of initial inequality: merit, luck and unfair social circumstances - in this case measured as family background. To do so, we rely on experimental methods. Using experimental methods facilitates isolating the causal factors that the researcher is interested in. Thus, while in observational analysis it is certainly complicated to control for all the possible confounding effects, the experimental method ensures that the only variation between different circumstances are the treatments that the experimenter manipulates.

The research is based on an economically incentivised laboratory experiment in which participants were asked to choose a preferred tax rate under different circumstances. Participants' initial wealth, the level of inequality among participants, and the source of this inequality were all manipulated. There were two groups. Both groups received the same amount of money, but it was initially distributed differently. One group had a high level of inequality, which reproduced the 2012 Spanish income inequality structure. In this structure, the participant who received the highest initial payment received an income 150 times higher than the participant receiving the lowest initial payment. This difference reproduces the gap between the income received by those at the higher end of the poorest 1% and those at the bottom of the richest 1% in Spain. The other group had much lower inequality, reproducing a linear 6:1 inequality structure. Each session contained just one group, with high or low inequality.

In each session, the source of the inequality was manipulated. There were three sources of inequality: luck (a lottery), skill (using a logical reasoning test), and social circumstances (family background, measured through parents' jobs and education levels)[2].

Participants were asked to choose a tax rate for each source. They were informed that one of the choices would be randomly selected and applied to all participants, determining their final pay. The choices were made after being informed of the level of inequality, having been shown few examples of the redistributive impact of different tax rates (0%, 25%, 50%, 75%, 100%), and having been informed of the three different sources of inequality. The choices of the three tax rates, one for each income source, were made on the same screen. Thus, it was clear to participants that there were three income sources and that they had to choose a tax rate for each one. They were informed that they could choose the same or different tax rates for each case.

Participants made these choices three times under different conditions (unaffected, under risk and with full information). Participants were informed that they would be asked to choose a tax rate three times. However, they were not told in advance under which conditions they would make these choices. Firstly they chose as an agent unaffected by the situation. They were informed that the rest of participants would receive an initial sum of wealth depending on a lottery, on their

[2] The family background was measured using participants' parents' occupations and levels of education. The information was obtained at the beginning of the experiment as part of a basic questionnaire. Participants did not know that it would be used to rank them in the experiment. Skill was calculated based on a logical reasoning test. After responding the demographic questionnaire, participants were asked to do a logical reasoning test. They were informed that their final payoff could be based on their performance in the test.

performance on the quiz, and on their family background. They had to decide a tax rate for each condition. Their payment would not depend on their choice, but the rest of participants' payments would. In this choice, self-interest did not play any role in the decision. Only fairness considerations mattered.

Secondly, they were asked to make the choices again, but this time knowing that they themselves would be affected by their own decision. They were not informed of their position in the income structure in the different conditions. Therefore, they made the choices under risk, as they did not know their position. After having made the choice, they were asked which position they thought they occupied in each condition. Thus, the interaction between fairness considerations and self-interested insurance motives could be measured.

Thirdly, participants were asked to make the choice after being informed of which position they had in each condition. Thus, they made their choice with full information regarding which was their initial wealth and their relative position on the income scale. In this choice, the interaction between self-interest with full information and fairness considerations could be measured. Table 1 shows the experiment design.

TABLE 1: Experiment treatments structure

		Luck	**Merit**	**Social**
Low inequality group	Unaffected			
	Risk			
	Full information			
High inequality group	Unaffected			
	Risk			
	Full information			

Once all the tax choices were made, participants were asked to respond a questionnaire. Questions were introduced regarding the participants' social background, ideology (including left-right self-positioning, egalitarian values and perceptions of the role of the state), personal economic circumstances and perception of the severity of the crises. The questionnaire also included a risk aversion test, in which participants had the chance to earn money. Finally, after being informed of their payoff, participants were asked some open-ended questions as control checks[3] and they were offered the possibility to leave a comment for the researchers.

The experiment was run at the end of June 2015 at the Behavioural and Experimental Sciences Laboratory (BES Lab) at Pompeu Fabra University in Barcelona. Participants were recruited through the BES Lab experimental subjects' pool. Participants registered for one of the several time slots offered. Each time slot corresponded to a group receiving one or the another level of inequality treatment. The treatment was assigned to each group randomly, ensuring that the same number of groups received each treatment. Among the 212 participants, 110 participated in sessions with the low inequality treatment and 102 in sessions with high inequality. Participants

[3] Questions included whether they understood the sources of the different income, whether they had chosen different tax rates depending on the income source or on the different information and degree of being affected and why, and whether there was anything that they found upsetting or unfair.

in both treatments had no significant differences. Table 2 shows that both groups were balanced for gender and ideology, measured as left-right self-placement.

TABLE 2. Randomization test

Treatment	Female	Ideology	Interest in politics
Low inequality	57.27	3,26	1.16
High inequality	59.8	3,26	1.09
Total	58,9	3,26	1.13
Test	Chi2(1) = 0,40	t = - 0.011	1.68
p-value	0,709	0.99	0.09

The sample was student-based. 96% of participants were students. Therefore the experiment did not use a representative sample of the population. However, this is not a threat to our findings. In this experiment we are mainly concerned about the internal validity, which is the capacity to infer that the change in the measured outcomes can be caused only by the treatment. The key goal is to find evidence that people change their support for redistribution depending on the level of inequality, on their relative position on the income scale and on the perceived source of this inequality. Some evidence shows that student sample responses tend to differ from population-representative samples. However, Belot, Duch and Miller (2010) compare the behaviour of students and a population-based sample in a variety of money-incentivised lab-games. Their findings show that the students' tendency is to behave more like homo economicus agents, that is, prioritizing self-interest and the maximisation of their personal payoff. Thus, if we find that our student-based sample reduces its own payoff due to fairness considerations, we can hypothesise that the effect would be bigger in population-representative samples.

Results

In this section the results are analysed. Firstly, the impact of the varying level of inequality is assessed. Afterwards, the impact of the different sources of inequality is described. Finally, the varying influence of insurance and self-interest motives is depicted.

The level of inequality has no significant effect on participants' support for redistribution, contradicting thus hypothesis H1. Table 3 shows the average tax rate for participants in the low and high inequality groups in every pair of source and information treatments. It can be seen that in most cases, the average tax rate is higher in the high inequality treatment group. However, in some cases it is higher in the low inequality group. Additionally, we see that the difference is only statistically significant in one case. Therefore we cannot accept Hypothesis H1. In this experiment, the level of inequality had no impact on individuals' support for redistribution. Since the differences between the two groups were not statistically significant, all subsequent analysis will consider both groups together.

TABLE 3. Means comparison between inequality treatment groups

Information and source treatment	Average tax rate by inequality treatment group		t-value	Significance
	Low inequality	High inequality		
Unaffected Luck	48.9	45.8	0.67	0.50
Unaffected Merit	29.0	25.8	0.91	0.67
Unaffected Family	40.7	45.0	-1.00	0.38
Risk Luck	40.3	42.2	-0.43	0.36
Risk Merit	27.0	25.3	0.48	0.63
Risk Family	34.7	43.4	-2.01	0.56
Full-info Luck	42.1	46.7	-0.88	0.32
Full-info Merit	32.9	35.7	-0.58	0.05
Full-info Family	39.5	47.3	-1.58	0.12

Participants in the experiment chose different tax rates depending on what caused some of them to receive more than others. Therefore, hypothesis H2a can be accepted. Means comparisons between the average tax rates under different sources of inequality demonstrate that the demand for redistribution is significantly lower when inequality is caused by merit than when it is caused by luck or social factors. Figure 1 shows the aggregate average tax rate by source of inequality. Figure 2 shows this same average tax rate for each information treatment. It can be seen that the pattern is consistent for all levels of information and degree of being affected treatments. Due to the experimental setting, in which the only varying factor is the source of inequality, we can only attribute the difference in preferred tax rate to fairness considerations depending on the source of inequality.

FIGURE 1. Average tax rate by source of inequality with 95% CI

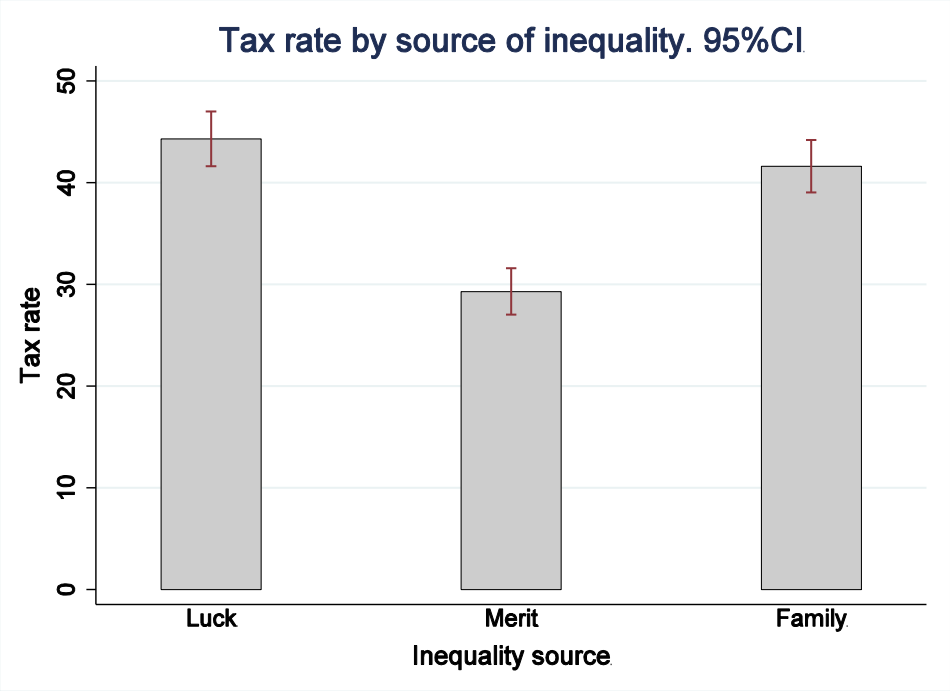
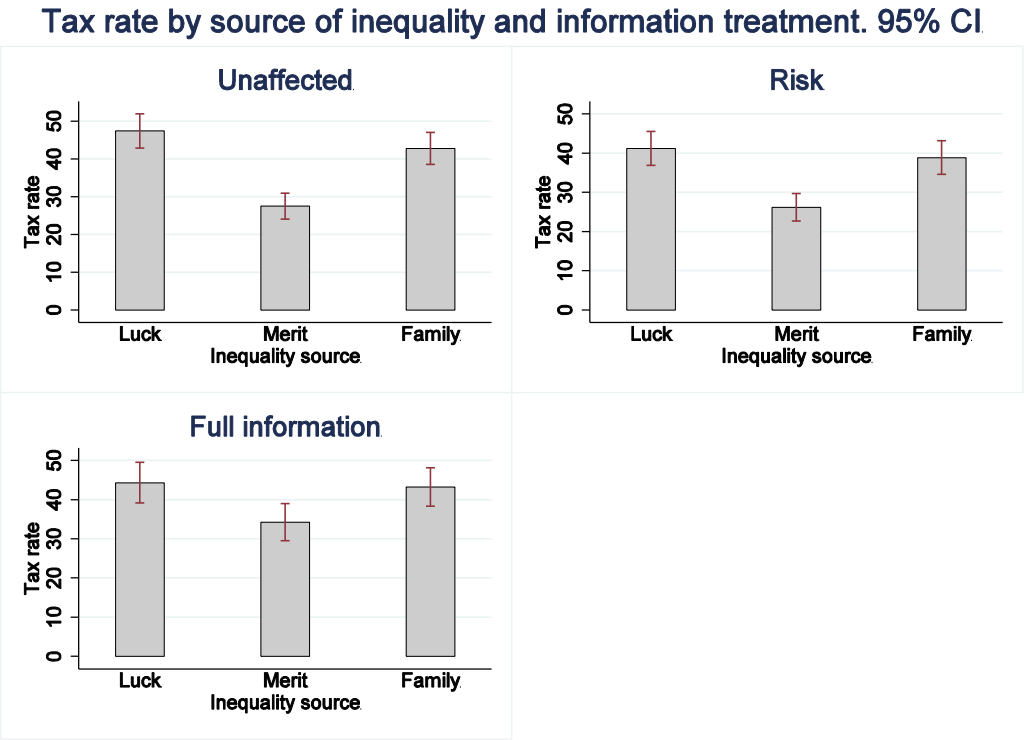


FIGURE 2. Average tax rate by source of inequality and information treatment with 95% CI



Participants did not choose higher taxes for inequality caused by family background than for inequality caused by luck or merit. Therefore, hypothesis H2b cannot be validated. The preferred tax rate for inequality due to family background is significantly higher than the preferred tax rate for inequality caused by merit. However, against our hypothesis, the tax rate is higher for inequality caused by luck then for inequality caused by family background. However, this latter difference is not statistically significant. These patterns are consistent in the three different information and source of inequality treatments. On the other hand, we can accept hypothesis H2c. The preferred tax rate for inequality caused by merit is significantly lower than the tax rate for inequalities caused by luck or by family background. Again, the pattern is consistent in the three different information and degree of being affected treatments. It has to be noted, though, that the difference between merit and the other factors is significant but lower under the full-information condition than in the unaffected and the risk condition.

Self-interest played a role in determining participants' preferred tax rate as hypothesised in H3a. Regression analysis shows that the lower position a participant had in the income scale, the higher his or her preferred tax rate tended to be. On the aggregate, for each position dropped in the 21 level income scale, his or her preferred tax rate increased by a three per cent. The model can explain 24 per cent of the total variability. Table 4 shows the regression analysis for the aggregate and for each source of income. As can be seen, the trend is similar for all sources of income. As expected, the effect of self-interest is only found in the full-information treatment. In the unaffected and in the risk treatment, the participants' position in the income scale did not have a significant effect on their preferences for redistribution.

TABLE 4. Self-interest effect by source of inequality

Source of inequality	B	Std. Error	Sig.	R Squared
Aggregate	3.04	0.22	0.000	0.239
Luck	3.25	0.39	0.000	0.247
Merit	2.87	0.35	0.000	0.238
Family	2.99	0.36	0.000	0.240

When analysing the impact of insurance motives on preferences for redistribution, we find statistically significant but milder effects than in the case of self-interest. As hypothesised in H3b, the preferred tax rate increases with one's expected relative position in initial income structure. Insurance motives, however, explain only 5.4% of total variability. Additionally, it is worth noting that its impact varies depending on the source of income inequality. There is a positive association in all cases, but it is not significant when inequalities are caused by luck. When the inequality is generated by merit or by family background, the relationship is positive and statistically significant. The effect is higher and explains higher variability in the inequalities generated by family background. Table 5 illustrates these findings.

TABLE 5. Insurance effect by source of inequality

Source of inequality	b	Std. Error	Sig.	R Squared
Aggregate	9.10	1.49	0.000	0.054
Luck	5.09	3.20	0.113	0.012
Merit	8.16	2.03	0.000	0.071
Family	11.63	2.50	0.000	0.096

It is worth noting that both self-interest and insurance motives moderate the effect of fairness considerations but do not suppress them. As figure 2 showed, the average tax rates differed between the different sources of inequality in both cases. Compared to the unaffected condition, in which only fairness considerations mattered, the variation between sources was slightly lower in the risk condition. This can be attributed to the mild effect of insurance motives. Similarly, in the full information condition, variation between sources also exists but it is fairly low, due to the important impact of self-interest in the preferred tax rate.

Discussion

This experiment shows that citizens do take fairness considerations into account when deciding their support for redistribution. Specifically, they choose different levels of redistribution depending on the cause of inequality. Thus, inequality generated by merit triggers significantly lower support for redistribution than inequalities generated by luck or family background. These findings are consistent with previous research that claimed that citizens' support for redistribution is higher when inequality depends on factors outside the individuals' control. On the other hand, no evidence has been found of higher support for redistribution in cases of socially-caused inequality than in those of inequality caused by luck. Similarly, results show that, at least in this setting, the level of inequality did not trigger statistically different levels of support for redistribution. These findings suggest that beliefs and discourses based on the attribution of responsibility of individuals for their own fate might be a key element in shaping individuals' preferences for redistribution. In the context of the economic crisis, the conception of who and why has been mainly affected by the crisis might lead to different levels of support for redistribution. Additionally, results show that self-interest and, to a lesser extent, insurance motives contribute to shape individuals' support for redistribution. However, these considerations moderate but do not supress the effect of fairness considerations.

Further research may generate contextually rich experiments using larger and more representative samples to check whether these findings travel outside the lab when analysing countrywide or EU-level contexts. Additionally, further research may look deeper into the differences between different factors outside and within the individuals' control.

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Lab experiment 2. Risk of income loss, fairness considerations, self-interest and support for redistribution

Introduction

The economic crisis that started in 2008 represented an income shock for different segments of the population (OCDE, 2015). Several discourses emerged, pointing at different groups as the most affected by the crisis. Previous research on citizens' attitudes towards redistribution and the welfare state argued that individuals' support for redistribution varied depending on what caused those in need of redistribution to be in such a situation.

This research aims to assess the impact on citizens' support for redistribution of beliefs regarding what led people to be hit by the crisis in the form of an income shock. The focus is placed on the effect of four competing interpretations of who was most affected by the crisis: a) people who had bad luck, b) people who already were in a vulnerable positions before the crisis, c) people who did not work hard enough, and d) people who had greedy behaviour in the past and took financial risks. Therefore the research looks specifically at support for redistribution used to compensate those who lost out as a consequence of the crisis, as distinguished from other forms of redistribution or social assistance.

This was an economically incentivised laboratory experiment based on a convenience sample. Participants were asked to make some decisions regarding how to compensate those in the community who suffered an income shock. Their decisions could affect themselves and other participants in their final payment. This experiment allows us to see how people take into account fairness considerations based on the source of the income shock when deciding the level of taxes they are willing to impose in order to compensate the losses of those who suffered that same income shock. Additionally, the lab context allows us also to depict the potential interaction between fairness considerations and other motives, namely self-interest and self-insurance. The experiment shows that fairness considerations significantly influence citizens' support for redistribution. Participants contributed less to compensate losses caused by lack of effort than losses caused by other factors. The experiment also shows that insurance motives and self-interest moderate but do not supress the effect of fairness considerations.

Theory

Literature on redistribution has focussed on the role of self-interest on the one hand and on the role of values and fairness considerations on the other. A dominant trend in the literature has highlighted the role of self-interest (Meltzer and Richard, 1981; Korpi and Palme, 1998; Bartels, 2008). According to these theories, citizens favour redistribution if it will redistribute to them and oppose it if it takes away from them. However, extensive empirical evidence challenges these theories. Many studies show that a large number of citizens support redistribution that takes from them while others oppose redistribution even if it would benefit them. Several theories have arisen to explain this puzzle without fully challenging the logic of the self-interest principle. For instance, some authors have taken into account citizens' expected social mobility (Bénabou and Ok, 1998). Of special interest for this paper are those theories that highlight the importance of

self-insurance motives. According to these theories, citizens favour redistribution despite not benefiting from it, as a measure to minimise the economic consequences of a potential drop in their personal economic situation (Iversen and Soskice, 2001; Moene and Wallerstein, 2001). Recent research argues that in the context of the economic recession, an increased number of citizens feel economically insecure. This heightened insecurity triggers self-insurance motives and leads to an increase in the level of support for redistribution for self-insurance motives (Hacker, Rehn and Schlesinger, 2013).

On the other hand, there is an extensive literature that challenges the assumptions that citizens base their preferences for redistribution solely on their self-interest or on self-insurance motives. Some authors have proved that individuals often take the welfare of others into account in their preferences for redistribution. For instance, Fehr and Schmidt (1999) have shown that people tend to be inequity averse. They prefer wealth distributions that reduce the levels of inequality even if they involve a reduction in the agent's wealth. These findings challenge the model of the purely self-interested agent. However, this generosity with others is not unconditional, as many authors have shown (Fong, Bowles and Gintis, 2006). For instance, Bowles and Gintis (2000) propose a model in which people are willing to redistribute only towards those who cooperate to some extent for the common good. Additionally, these citizens are willing to assume economic costs to punish free riders and exclude them from the redistribution.

Some influential observational studied have shown that people's attitudes towards welfare and redistribution are influenced by citizens' perceptions of the deservingness and responsibility of the potential recipients of redistribution. For instance, Alesina and Angeletos (2005) show that believing that those in need of redistribution are perceived as responsible for their own situation leads to low levels of support for redistribution. On the other hand, believing that those in need are in that situation due to circumstances that are out of their control leads to high levels of support for redistribution, even among those individuals that will have to pay for it. Some recent experimental studies have shown that people's support for redistribution significantly changes depending on whether the assignment of resources to the participants is perceived as depending on participants' effort or merit or on causes they cannot be held responsible for (Durante, Putterman, van der Weele, 2014).

In the context of the recent economic crisis, the risk of losing income has increased. Several discussions regarding the crisis have presented the distribution of this shock as depending on four different factors: bad luck, previous socioeconomic status, lack of effort or greed. According to these interpretations, those affected by the crisis would have varying levels of responsibility for their situations. In the first two cases, those who suffered the consequences of the economic shock had no responsibility regarding their fate. On the other hand, when greed or lack of effort determined who received the shock, individuals could be held responsible for their situations. In this study, we differentiate between two different circumstances in each level of responsibility. We differentiate between luck and social background to check whether there are differences in attitudes to redistribution when the cause is external to the individual but caused by luck or by social circumstances. Similarly, lack of effort and greed are two different behaviours deemed to be punishable. The experiment attempts to assess to what extent they trigger different levels of support for redistribution. Additionally, it attempts to depict the possible interactions between fairness considerations and self-interest and insurance motives.

We hypothesise that fairness considerations influence support for redistribution. Specifically, we hypothesise that:

> H1.1 Levels of support for redistribution via taxes to compensate people hit by the crisis will vary depending on the causes that led people to be in economic difficulties.
>
> H1.2 When economic difficulties are due to factors outside the individuals' control (bad luck and social background) the willingness to contribute via taxes to support the needy is higher than when economic difficulties are due to causes for which individuals can be held accountable (lack of effort or greedy behaviour).
>
> H1.3 Support for redistribution is higher when the impact of the economic shock is determined by unfair social circumstances (social background) than when it is determined by luck.
>
> H1.4 Support for redistribution is higher when the impact of the economic shock is determined by greed than when it is determined by lack of effort.

Additionally, we hypothesise that self-interest and self-insurance motives moderate the impact of fairness considerations in support for redistribution. Specifically, we hypothesise that:

> H2 When people have full information about their position, self-interest motives moderate but do not suppress the effect of fairness considerations regarding support for redistribution.
>
> H3 When people face the risk of losing their income, self-insurance motives moderate but do not suppress the effect of fairness considerations regarding support for redistribution.

Design

In this research, we seek to depict the impact of fairness considerations based on the source of income loss risk on citizens' support for redistribution. We assume that the source of the income loss risk triggers different fairness considerations. We rely on experimental methods, which allow us to isolate the causal factors the researchers are interested in. Thus, while in observational analyses it is certainly complicated to control for all the possible confounding effects, the experimental method ensures that the only variation between different circumstances are the treatments that the experimenter manipulates.

The research is based on an economically incentivised laboratory experiment. In the experiment, participants received an initial payment of 8 euros and were told that one third of them would lose it while the rest would keep it. They were offered the possibility to compensate the losers by establishing a tax on the keepers. The experiment follows a 4x3 structure. Participants are exposed to two independent variables: on the one hand the source of income, with four possible sources, and on the other hand the source of inequality and level of information, with three different conditions. Participants were asked to make 12 tax rate choices in total. The treatments are described in the following paragraphs. The analysis is based on the different choices participants made.

Participants were informed that whether each participant would keep or lose his or her initial endowment would be decided by one of four different mechanisms: luck (based on a computer generated lottery), social background (based on participants' parents' professions and levels of education), effort (based on participants' performance on a logic test), and greed (based on participants' performance on a common good game)[4]. They could choose a different tax rate for each source of income loss. One of the sources of income loss and the corresponding tax rate decided by one of the participants would be randomly selected and applied, thus determining all participants' final payoffs. Hence, participants were aware that their decision could affect everyone's final payoff. Before making the choices, participants were shown the redistributive impact of different tax rates.

Participants had to make the four choices, one for each income loss risk source, on a single screen. Thus it was clear to them that there were four income sources and that they had to choose a tax rate for each one. They were informed that they could choose the same or different tax rates for each case. The order in which the different conditions appeared to each participant on the screen varied randomly in order to control for potential order effects.

Additionally, we tested the different impact of self-interest, self-insurance and fairness considerations. Participants were asked to make the aforementioned source-related tax rate choices three times. In one case, they did it as unaffected agents, thus triggering only fairness considerations since they had no stake in the decision. In another condition, they were asked to make the choices as an affected agent under risk. They were affected by the decision, and they knew they had one third of possibilities of losing their income, but they did not know whether they would lose it or keep it. This condition triggered both self-insurance and fairness considerations. Finally, another condition was as affected agents with full information. In this case, participants knew that they might be affected by the decision and they knew whether they were losers or winners in each income source. This condition triggered self-interest and fairness considerations. The different conditions appeared on consecutive screens. However, participants did not know that they would be asked to make the same choice on further occasions with varying causes of income loss and information circumstances. The order in which these conditions appeared was also random, in order to control for potential order effects. For example, some participants saw the screens in the following order: unaffected, risk, full-information, while others saw it in the following one: risk, full-information, unaffected. For logical reasons, the full-information condition could not appear before the risk condition, since it would contaminate the risk condition.

Participants entered the lab and were randomly assigned a computer. They were informed of the overarching aim of the research and they were provided information on the LIVEWHAT project. Then they were informed about the expected duration of the experiment and about its basic structure and they were given the opportunity to ask questions. Then they were asked to sign an

[4] During the experiment the wording referred to the different sources of income loss through the mechanism. Thus, they were informed that the mechanisms of assignment were based on a lottery (luck), their parents' education and occupations (social background), their performance on a previously performed test (effort), and their behaviour in a previously played common good game (greed). Further information on how these different sources were calculated is offered in following sections.

informed consent form. Once they had signed the consent form, the experiment started for everyone.

Once they started, they were asked to answer a brief questionnaire about themselves. The questionnaire included some basic demographic questions about them such as age and gender. It also included some questions about their parents' education and occupations. These answers were used to rank participants according to their families' socio-economic status, which was to be used as one of the mechanisms to determine who was going to lose the initial payment. When answering the questionnaire, participants did not know that it would be used for this purpose.

After completing the questionnaire, they were asked to complete a task measuring effort. They were informed that their performance on the task could influence their final payment. No further details were offered. Participants had to complete a "slider task", a real-effort task designed by David Gill and Victoria Prowse, 2011. Participants had to complete a repetitive task. They were shown a screen with 48 sliders. They were asked to position as many of them as they could to the 50% mark. They were given 2 minutes to perform the task. A test screen was offered to ensure that all participants understood the task and had the opportunity to try it. Participants were ranked according to the number of sliders correctly positioned. The ranking was used to determine which participants would lose their initial income when the loss was based on effort.

Participants were then asked to play a common good game. Each participant was assigned €2.5. They were told that they could contribute to a common pool. The total contribution would be increased by 30% by the experimenters and redistributed equally among all participants. They were offered several examples of varying contributions and final payoffs. Participants were not told beforehand that their contribution to this game could influence their payoff for the following games. The participants' contribution to the common good was used to determine which participants were to lose their income when the income loss was based on greed.

Then participants were told that one third of them would lose their initial income, that the loss would be based on different factors, and that they could choose to levy a tax on the keepers to compensate the losers. As previously stated in the experiment treatments section, participants had to choose a tax rate for each income loss source under three different conditions: unaffected, under risk, and with full information. Immediately after choosing the tax rates under risk, they were asked to disclose to what extent they considered that they were going to be among the losers or keepers in each income loss source. Reponses were collected in a 5 points Lickert scale ranging from 'I was sure I was going to lose everything' to 'I was sure I was not going to lose everything'. Knowing to what extent each participant thought he was to be among keepers or losers allows the researchers to assess the impact of the expected position on the participant's preferences.

After the tax choices were made, participants were asked to respond to a questionnaire which included some political attitudes questions. Then they were asked to play an economically incentivised risk aversion game. Afterwards, participants were informed of their final payment. The information screen included information of which was the income loss source selected, whether they were among keepers or losers for that income source, the selected tax rate, and finally their final payment. The final payment was the sum of their payment for the common good game, the payment for the main experiment game and the payment for the risk aversion game.

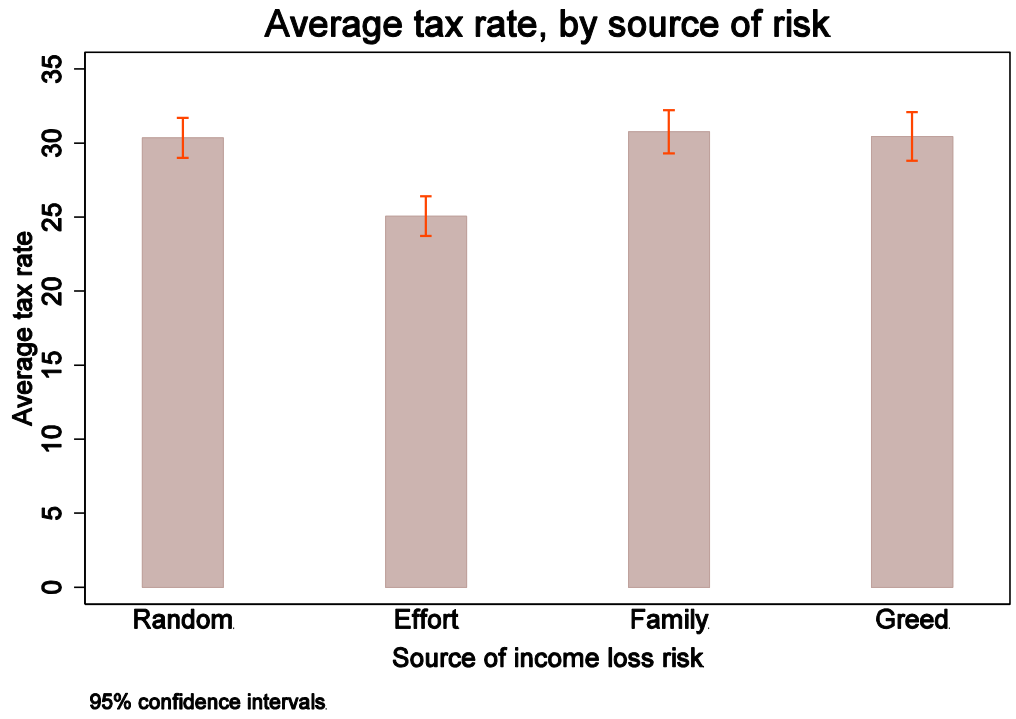
After being informed of the final payment, participants were shown a screen with some open-ended questions that were to be used as treatment check. Participants were asked whether they could recall what the income loss depended on, whether they found any of the sources unfair and why, whether they changed tax rate depending on the income loss, and whether they changed the tax rate depending on how much they had been affected or their position or expected position in the full-information and the risk condition. Additionally, they were asked whether there was anything that made them feel uncomfortable or uneasy during the experiment and they were offered the possibility of leaving messages for the researchers. Finally, they were thanked for their participation and paid individually.

The experiment was run in April 2016 at the Behavioural and Experimental Sciences Laboratory (BES Lab) at Pompeu Fabra University, in Barcelona. The experiment was programmed and run using Ztree software. There were 243 participants in 11 experimental groups. They were recruited through the BES Lab experimental subjects' pool. The sample was student-based. Therefore it is not a population representative sample. However, this is not a threat to our findings. In this experiment we are mainly concerned about the internal validity, which is the capacity to infer that the change in the measured outcomes can only be caused by the treatment. The key goal is to find evidence that people change their support for redistribution depending on fairness considerations based on the source of the income loss risk on one hand and on self-insurance or self-interests motives on the other. Additionally, some evidence show that student samples responses tend to differ from population-representative samples. However, Belot, Duch and Miller (2010) compared the behaviour of students and a population-based sample in a variety of money-incentivised lab-games. Their findings show that students' tendency is to behave more like homo-economicus agents, that is, prioritizing self-interest and the maximisation of their personal payoff. Thus, if we find that our student-based sample reduces their own payoff due to fairness considerations, we can hypothesise that the effect would be bigger in population-representative samples.

Results

We can see that Hypothesis 1.1 is confirmed. People decide the level of redistribution they support taking into account fairness considerations. As can be seen in Figure 1, the average tax rate varies depending on the source of the income loss risk. The average tax rate is lower when what causes participants to lose the initial payment is their lack of effort in the effort task. This difference is statistically significant at a 95% confidence interval.

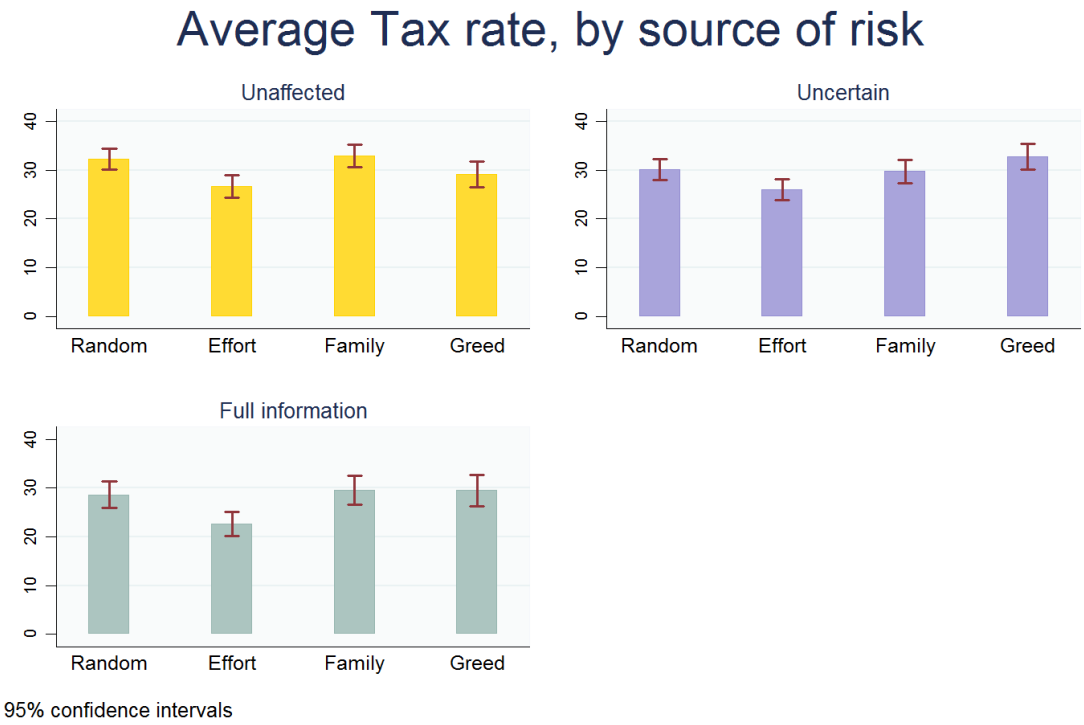
FIGURE 1. Average tax rate by source of income loss risk.



However, the graph shows that we cannot fully accept hypotheses H1.2, H1.3, and H1.4. First we have to reject hypothesis H1.2. We find similar average tax rates when the income loss is caused by greed and when it is caused by luck or social background, both of which are factors outside the individuals' control. Additionally, we have to reject hypothesis H1.3 because the average tax rate for income loss caused by luck and by social background are not statistically different at a 95% confidence interval. Finally, we have to reject hypothesis H1.4. Support for redistribution varies depending on whether the income loss is caused by lack of effort or by past greedy behaviour. However, against our expectations, support for redistribution is lower when the income loss is caused by lack of effort.

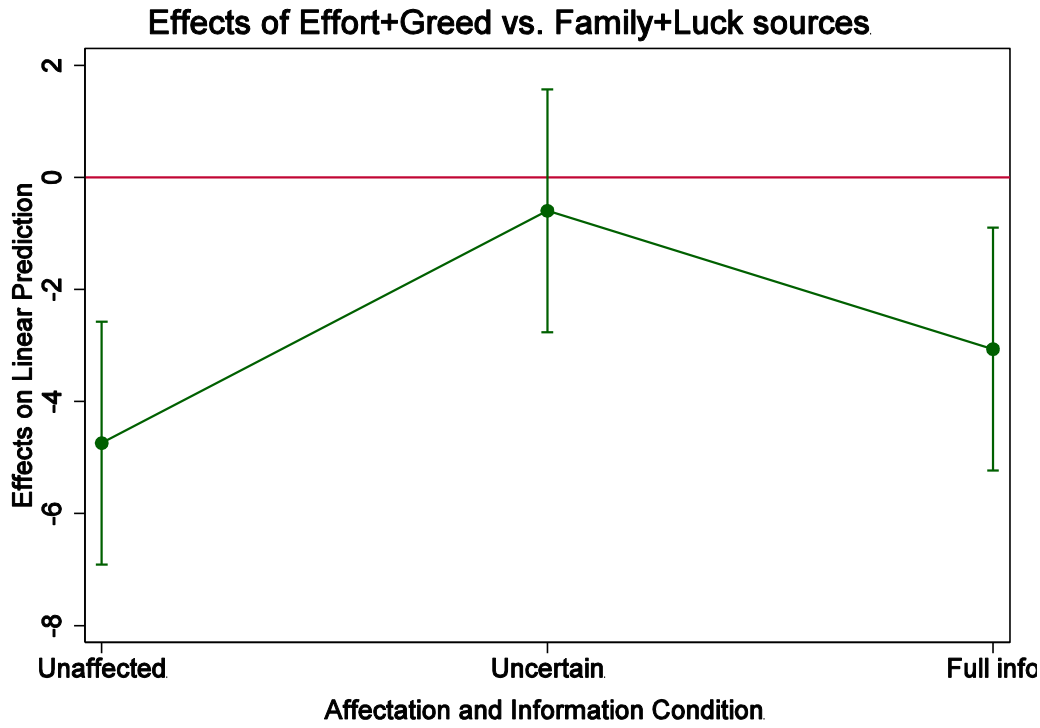
These findings are consistent under the three conditions of being affected and of information, that is, when participants made the choices as unaffected decisions-makers, under risk or with full information. Figure 2 shows the average tax rate for each condition. In all cases lower average tax rates are found when the income loss is caused by lack of effort. At the same time, the tax rate is similar for income losses caused by luck or social background in all the different cases. However, it is worth noting that the when the income loss is caused by greed there is a significant variation depending on whether the decision is made as an unaffected agent and therefore only taking into account fairness considerations than when it is done under risk or with full information, thus taking into consideration insurance and self-interest motives.

FIGURE 2. Average tax rate for each source of risk, depending on degree of being affected and information.



Similarly, it can be seen that when participants make the decision as affected agents without complete information, the average tax rates take on a different pattern. On the one hand, there is a reduction in the difference between tax rates chosen when the income loss is caused by factors outside one's control and when it is caused by lack of effort. At the same time, there is a noteworthy increase in the average tax rate chosen for cases when the income loss is caused by greed. This different pattern causes us to reject hypothesis H1.4. If we look at the average marginal effect of income loss being caused by factors within or beyond individuals' control, we can see that they are statistically significant when the decisions are made as an unaffected agent and as an affected agent with full information. Figure 3 illustrates these differential marginal effects.

FIGURE 3 Marginal effect of income loss source



When analysing whether fairness considerations interact with insurance and self-interest motives, we can see that they do indeed interact. We first look at hypothesis H3. It states that participants with full information will take their self-interest into consideration in choosing the tax rate, but that it will not suppress the effects of fairness considerations. Figure 4 shows how this was indeed the case. Those who kept their initial payment chose a significantly lower tax rate when they knew they were affected by the decisions and they would be among the keepers. On the other hand, those who were informed that they would lose their initial payment tended to choose higher tax rates. Thus in both cases, participants tended to increase their final payoff. Figure 5 shows the average marginal effect of losing the initial payment under the different conditions. As expected, the effect is only significant when participants knew whether they were among the losers or among the keepers.

FIGURE 4. Average tax rate by income loss source and condition

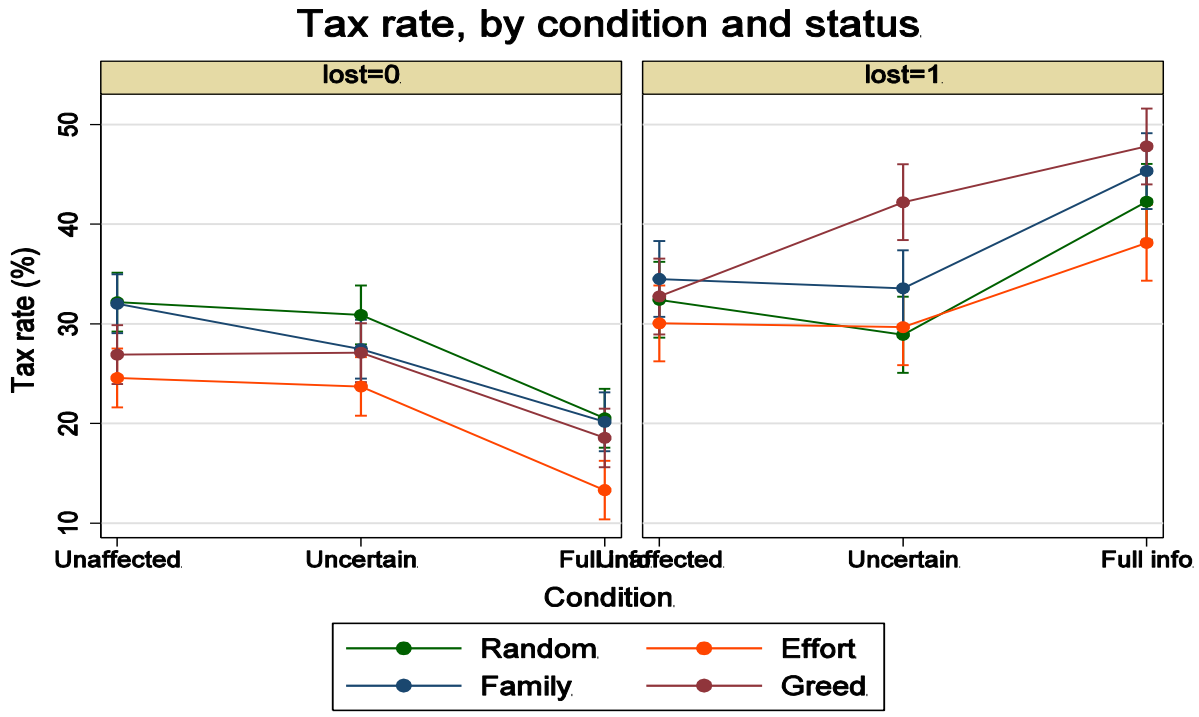
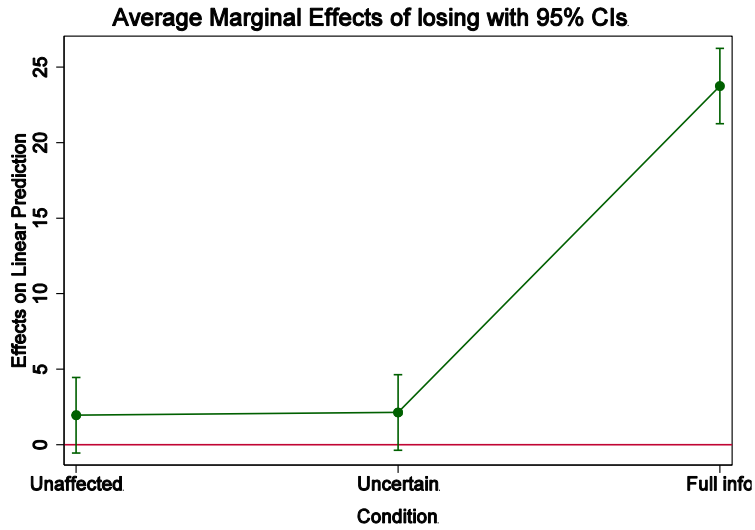


FIGURE 5. Average marginal effect of losing initial payment by condition

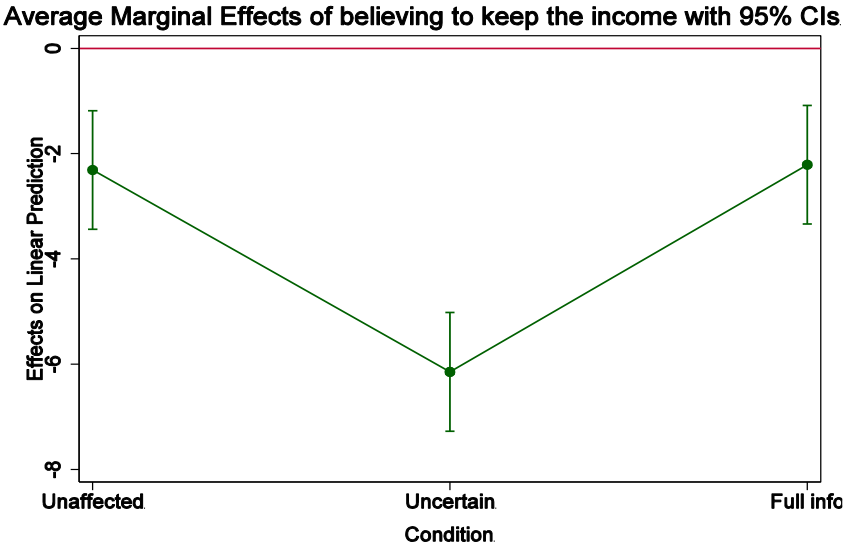


Additionally, in both cases, fairness considerations still played a role, as can be seen in Figure 3. Keepers did not choose, on average, a 0% tax rate, as purely self-interested agents would do. They chose a tax rate that partially compensated the losers. Furthermore, they chose different tax rates depending on the income loss source, which can only be explained by the presence of fairness considerations. For instance it can be seen how they chose higher tax rates, thus accepting lower payoffs for themselves, when the income loss was caused by luck or social background. Similarly,

losers took their self-interest into account and chose higher tax rates to obtain higher final payments. Like the keepers, they also chose different tax rates depending on the source of income loss. In this case, losers chose lower tax rates, and consequently a lower final payment, when the income loss was caused by their own lack of effort.

Similarly, it can be seen that H2 can be accepted. Under the risk condition, when participants were affected by their decisions but did not know whether they would be among the losers or the keepers, they tended to choose a tax rate which took insurance motives into account. Thus, those who thought they would be keepers tended to choose lower tax rates than those who thought that they were likely to be among the losers. Figure 6 shows the marginal effects on the preferred tax rate of believing that one would keep the initial income.

FIGURE 6. Average marginal effects by being affected and information conditions



Discussion

This experiment has shown that citizens take fairness considerations into account when deciding their support for redistribution. In contexts in which specific segments of the population suffer an income shock, citizens support different levels of redistribution depending on what caused the income loss. Specifically, citizens show less support for redistribution when the income loss is caused by lack of effort than when it is caused by other factors such as luck, social background or greed. Previous literature has highlighted the difference in support for redistribution depending on factors under or outside the individuals' control. However, in this experiment we found mixed results when analysing redistribution to compensate income loss caused by past greedy behaviour.

The experiment has also shown that the influence of fairness considerations on preferences for redistribution are also found in contexts in which individuals have some stake in the issue. In these cases individuals still choose lower redistribution when the income loss is caused by lack of effort. However, they also take into account their self-interest. When they know whether they are among those who will lose their income, they tend to choose taxes that increase their final

payment. When they are affected by the decision but they do not know whether they will be among the losers or the keepers, their preferred tax rate increases the more they fear being among the losers. In both cases, however, taking into account their own interests does not suppress the influence of fairness considerations. People still choose tax rates that do not maximise their final payment. They choose different tax rates depending on what caused the income loss. The differences are consistent with the variations found in contexts in which participants made the decision as an uninterested agent that is taking into account only fairness considerations.

Further analysis will look at how these findings travel outside the lab (via survey experiment 4), and to what extent the perception that the crisis has supposed an income shock to several groups depending on different factors has led to an increase in citizens' demand for redistribution.

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Lab experiment 3. Deprivation and collective action

Introduction

What are the effects of economic deprivation on political participation?

The Great Recession has brought a reduction in economic resources for many citizens. In Spain public workers have suffered cuts in salaries (an average of 5%), the purchasing power of citizens and household expenditure has plummeted (INE 2014), and the poverty gap has widened (Addabbo, García-Fernández, Llorca-Rodríguez, & Maccagnan, 2013). The purpose of this paper is to assess to what extent these experiences of economic deprivation and shrinking resources affect political protest.

According to the literature we have two contradictory expectations.

On the one hand, classical theories of protest have explained contentious action as a form of publicly expressing discontent and grievances arising from deprivation, frustration or perceived injustice (Berkowitz, 1972; Gurr, 1970, Opp 1988). From this perspective, we should expect that aggrieved people should protest more than those that are not aggrieved.

On the other hand, many individual accounts of protest highlight the fact that resources are positively related to political engagement (Verba et al 1995) and also to political protest (Dalton et al 2012). Having resources seem to be the condition under which aggrieved individuals choose to get involved in protests (Klandermans, 1984; McAdam, 1982; McCarthy and Zald, 1977; Opp, 2009). Material deprivation and economic injustice do not necessarily bring political engagement, because political protest involves costs that are typically high for people with less financial security, and who also tend to lack time and political skills (King, Cornwall, and Dahlin 2005; McCarthy and Zald 1977)" (J. Smith & Fetner, 2009, p. 14). This perspective assumes that resources are related to other elements that facilitate protest, but in themselves resources should allow individuals to meet the economic costs of participation.

The literature on both cost and deprivation topics is large and crosses disciplinary boundaries, but there is an opportunity for theoretical integration and quantitative synthesis, especially considering the practical consequences of a greater understanding of the interplay between deprivation and costs of political engagement. In this study, we manipulate economic resources in a similar logic to that of the economic recession (to the extent of a lab game). The crisis has seriously affected the resources of thousands of people who struggle to survive with dignity and has also generated situations of relative deprivation on account of the political changes that have deprived people (and certain groups more than others) of their income and social security expectations. We are also able to manipulate the cost of protest, so as to estimate its potential effect on the likelihood of engaging in protest and its interactive effect with deprivation.

We use an experimental setting in which we manipulate the extent of deprivation (no deprivation, deprivation, relative deprivation and collective relative deprivation) and the cost of protesting (cost and no cost). We intend to clarify to what extent and under what conditions deprivation leads to lower levels of political protest due to reduced resources, or, on the contrary, it generates

perceptions of injustice and emotional reactions such as anger that encourage participation in protests.

The experiment creates a situation in which participants face (or not) different types of resource deprivation as a result of unexpected and unfair conditions and need to decide whether to protest (under different cost conditions) to try to revert to the previous situation. They can either engage in collective action – i.e. take action directed at improving the conditions of the group as a whole (Wright, Taylor, & Moghaddam, 1990)- or choose to improve their personal situation, i.e. take individual action. In the former case, participants engage in a protest campaign to palliate the group's loss and in the latter case, the participant focuses on his or her personal situation and takes actions to exclusively restore his or her individual position.

We find that deprivation (a loss of resources that affects everyone) and relative deprivation (a loss or resources that affects a random selection of participants) reduces collective action: individuals who lose their earnings prefer to continue playing in order to restore their own losses instead of participating in a collective campaign to restore everyone's earnings by protesting about unfair conditions. These findings are in line with expectations regarding deprivation, but contrary to expectations regarding relative deprivation, for which we expected a positive effect.

Individuals are more likely to engage in collective action only when deprivation is produced by intergroup discrimination (e.g. participants are deprived because of their gender). Moral outrage mediates the effects of collective relative deprivation on collective action. Finally, cost has a negative effect on both behavioural outcomes and most importantly, the combined effect of collective relative deprivation and cost on protest is not significant.

Our findings contribute to the literature on deprivation and protest in three ways.

First, we provide an empirical account of relative deprivation following on experimental designs (Bernstein & Crosby, 1980; Martin, Brickman, & Murray, 1984; Zhang, Liu, & Tian, 2016) and extend the research to other conditions of relative and collective deprivation. An empirical test of relative deprivation needs to determine the scope of comparison between the deprived and non-deprived conditions, to ascertain a causal effect of the deprivation condition on the behavioural outcome, and to identify the affective mechanism. This makes it difficult to obtain proper evidence, since surveys that question motives for protesting may be influenced by the action itself. Relative deprivation proxies are usually constructed by making reference to expected future outcomes or family benchmarks, but it is difficult to assess personal awareness of deprivation, and to do so when it is produced by multiple referents.

We address standing critiques regarding the inconsistencies between relative deprivation theory and empirical operationalizations (H. J. Smith, Pettigrew, Pippin, & Bialosiewicz, 2008) with a pseudo-game experiment in the lab where we provide participants with an explicit entitlement (an expected payoff) and then take it away in an illegitimate way to induce three analytically different deprivation conditions: a general deprivation condition, a relative deprivation condition with a clear comparison referent, and a collective deprivation condition with a group prime based on gender that defines deprivation as a product of intergroup references (participants are deprived because of their gender).

A second contribution of the paper is to analyse the importance of the interaction between deprivation and cost. Relative deprivation theory has been usually addressed as a psychological explanation for participation. However, deprivation also implies changes in the material conditions of individuals, thus running against the resource mobilisation theory where individual costs are the crucial factor in explaining participation. As the experimental design is restricted to individual action, participants only face uncertain outcomes and the costs of participation with no organisational mobilisation. In this way, our design addresses this puzzle directly by treating deprivation and cost simultaneously in order to shed light on their joint effects. Furthermore, the cost of participation is hard to operationalize in observational studies.

The third contribution made by this piece is to identify the incidence of deprivation independently from the emotional reactions which have usually been considered as an intrinsic element in the definition of relative deprivation. Treating cognitive judgments and measuring affective responses is a step forward in testing RD theory. We combine a classical survey battery to measure moral outrage with quantitative text analysis of open-ended responses that allow individuals to openly express their feelings regarding illegitimate deprivation.

Theory

Deprivation studies have focussed on objective inequality as a predictor of political action, but have also shifted their attention towards the importance of subjective experience, the perceived gap between personal expectations and attainments (van Zomeren, Postmes, & Spears, 2008 for a review). In this sense, the study of the effects of egoistic or individual-based deprivation generated a debate between those who argue that deprivation has no effect or a negative effect on contentious action (Herman 2005, 152; Olzak and Shanahan 1996, 949; Olzak, Shanahan, and McEneaney 1996, 604 Koomen & Frankel, 1992; Walker & Mann, 1987; Walker & Pettigrew, 1984) and those who argue that deprivation explains contentious action (Piven and Cloward 1992; Useem 1998). The later argue that those who are deprived perceive societal institutions as illegitimate and that they have nothing to lose if they are repressed as a consequence of contentious action. They also point to an indirect effect of deprivation as they argue that those who are deprived are restricted to engaging via representative politics or by partaking in social movement organizations. In this case, individuals do not have the resources, cognitive or material, that political engagement demands.

Evidence from a meta-analysis with a vast review of the literature on relative deprivation (H. J. Smith, Pettigrew, Pippin, & Bialosiewicz, 2012) supports the negative effect of absolute deprivation on collective action and highlights the importance of judging deprivation as a comparison to a meaningful standard or expected outcome.

Relative deprivation (RD) has been consistently identified as a source of grievance which is especially important in explaining political participation (Gurney & Tierney, 1982; H. J. Smith et al., 2012). Relative deprivation is defined as a perception that is a result of comparing one's own situation with a standard which may well be the past itself, the situation of another person, or a value or cognitive expectation such as fairness or justice (Folger, 1986). We therefore expect relative deprivation to encourage protest when compared to deprivation.

While relative deprivation can be thought of as an individual condition based on interpersonal comparison (egoistic deprivation), collective relative deprivation (CRD) is produced by intergroup comparisons in which individuals perceive that their group is worse-off than other groups (Runciman 1966). Research suggests that collective deprivation is particularly important for participation in protest (Dubé and Guimond, 1986; Major, 1994). This confirms the importance of group identification for political action (Klandermans, 2014), Klandermans & de Weerd, 2000; Koch, 1993; Miller et al. 1981).

CRD involves cognitive and affective components. The cognitive component implies a belief that an expectation has been contravened. Individuals must acknowledge that they are in an objective position in a distribution of outcomes where they are deprived, as compared to their own expectations or the outcomes of others (Martin et al., 1984). This belief leads to an affective reaction regarding the injustice. However there is no agreement regarding the line between cognitive and affective components in the literature. Most authors directly consider emotional reactions as part of the definition of deprivation (H. J. Smith et al., 2012), while others include injustice as an element in the contravention (Guimond & Dubé-Simard, 1983).

Although the cognitive and affective components are closely connected, they are substantively different, as the awareness of being in an unequal position may elicit feelings of injustice in some cases, but it may be deemed legitimate in other situations (van Zomeren et al., 2008). We follow this logic in the line of van Zomeren and his co-authors and address both components independently in order to test the causal effects of the cognitive and affective reactions.

This distinction is theoretically important as it connects relative deprivation theory with related explanations of protest behaviour. The affective component implies the emotional reactions of anger and resentment which have been consistently associated with protest (Goodwin, Jasper, & Polletta, 2009; Van Stekelenburg & Klandermans, 2010). Relative deprivation theory emphasizes the centrality of anger, resentment, and outrage as drivers of behaviour, especially in the case of CRD where intergroup dynamics come into play (van Zomeren, Spears, Fischer, & Leach, 2004). In this line, we expect moral outrage to have a mediating effect between CRD and protest.

On the other side, the cognitive dimension is important when considering the decision to protest. The relative position of the individual when compared to others who are expected to undertake collective action can definitely shift the balance within a rational choice model.

The cost of collective action has consistently been considered as a relevant explanatory factor. The C term is customarily included in all rational choice models of political participation and more specifically of contentious action (see Muller and Opp 1986). However, the C term is often hard to operationalize in observational studies and it is often measured through perceptions that can be endogenous. We expect objective cost to demobilise participants from protesting against arbitrary changes in the conditions of the game, but we expect these effects to differ between types of deprivation.

Deprivation, relative deprivation and collective relative deprivation

H1.1: Deprivation hinders protest (both participation and intensity) compared to no deprivation.

H1.2: Relative deprivation encourages protest (both participation and intensity) compared to no deprivation.

H1.3: Collective deprivation encourages protest (both participation and intensity) more than relative deprivation.

Moral outrage

H2.1: The effect of (collective) relative deprivation on protest (both participation and intensity) is expected to be mediated by moral outrage.

Costs

H3.1: Cost of participating reduces protest (participation).

H3.2: Cost matters less for those that are relatively deprived compared to those that are not deprived.

H3.3: Cost matters less for those that are collectively deprived compared to those that are not deprived.

Design

This study is based on an experimental 4x2 between-subjects design. It is a lab experiment with individual treatment (single user computer with no interaction) in which individuals believe that the final outcome depends on collective decisions made by all players. Participants were told that they were participating in a "public opinion study." The entire study took place on the computer with no interaction between participants, or visual contact with any other individual during the experiment. A non-representative sample of 288 individuals took part, divided between 6 sessions. They were recruited by the Democracy, Elections and Citizenship research group at Universitat Autònoma de Barcelona. Participants were debriefed via email after the session.

Participants were randomly assigned to one of four deprivation conditions: 1. Deprivation, 2. Relative deprivation, 3. Collective relative deprivation, 4. No deprivation; and one of two conditions for participation costs: 1. Participation costs (2€ to take part in the campaign) and 2. No cost of participation (no cost to take part in the campaign).

TABLE 1. Experimental conditions

		Deprivation			
		G1 - Deprivation	**G2 – Relative Deprivation**	**G3 – Collective Relative Deprivation**	**G4 – Control No deprivation**
		Deprivation condition. Participants get a reduction (3 €) in the money they have earned + they are told that everyone is getting the cut	Relative deprivation condition - Participants get a reduction (3 €) in the money they have earned money + they are told that they are part of a group chosen randomly for getting the cut	Collective relative deprivation condition - Participants get a reduction (3 €) in the money they have earned money + they are told that everyone in their group (gender) is getting cut	Control condition - Participants do not get any reduction (3 €) in the money they have earned + They are told that everyone else is getting a 40% cut in the money they have earned
Cost of participation	**No cost** – the action to reverse the decision does not have a direct cost				
	Cost – the action to reverse the decision has a direct cost (2€)				

The design is intended to replicate deprivation as the product of the economic crises by providing individuals with an expected payoff for completing a task and then taking away part of the earned payoff by changing the conditions with no justification. The design is not expected to have external validity, since it recreates a condition of incidental disadvantage and leverages a non-politicized identity (gender – in the context of this game) in contrast to the structural disadvantages posed by the economic crises based on established class identities (van Zomeren et al., 2008).

Participants take part in a test about the economic crisis. They can earn 3€ in each of four rounds given that they provide one correct answer to two questions. When the rules of the game are presented, emphasis is given to the potential outcome in order to produce an expectation which can then be divested. After the third round of the game, the rules are changed for all the participants and 3€ is subtracted from the partial earnings only for the three deprivation groups. A different explanation for each group is provided in order to treat them according to their condition (no deprivation, deprivation, relative deprivation, collective relative deprivation). This implies that, in Gurr's terms, we are treating decremental deprivation by providing a comparison to an ideal value expectation (Gurr, 1970). This means that participants desire an outcome (earning the maximum possible payoff in the game: 12€) that they lack (because they are deprived of 3€ by changing the conditions of the game). This manipulation is used to generate different forms of deprivation, which may lead to emotional reactions (moral outrage) to different extents. Participants were expected to

be aware that the anticipated payoff was 12€ in order to have a comparison referent. This condition was explicit in the rules of the game (introduction before the knowledge test) and in order to test for this we used an instructional manipulation check to test whether respondents actually paid attention to the instructions (correct responses vary between 66 and 80% among treatment groups, Table A7).

We comply with Crosby's (1976) definition of relative deprivation as participants perceive that they will not obtain the payoff that someone else receives (relative deprivation conditions); that they want this payoff (the only incentive to attend the study), they feel entitled to the payoff (as discussed previously) and they feel no personal responsibility for not receiving the expected payoff.

After the rules are changed, all the participants are presented with two alternatives: to keep on playing in the fourth round (individual action) or to engage in a campaign in order to restore the rules of the game and recover the money of everyone who has lost it (collective action). Participants are told that the campaign will be successful only if sufficiently convincing arguments are provided by all those who choose to protest. The have 5 minutes to write arguments against the decision.

Participants are told that the questions are increasing in difficulty so they are uncertain about the probability of getting a correct answer in the last round. They are also told that the success of the protest campaign depends on their efforts in writing arguments, but the instruction is explicitly uncertain by telling them that "sufficiently convincing arguments" will determine the outcome. This is intended to provide similarly uncertain outcomes both for protesting or playing on. The final outcome of the protest campaign is successful for every participant who protests independently of the individual or the collective performance in providing arguments[5].

We use two dependent variables: protest and intensity of protest. The former measures whether the individual decides to take part in the protest campaign or to continue with the fourth round of questions. The second measures the number of arguments provided against the change in the rules by each participant (Descriptive statistics are presented in table A1 in Appendix 1).

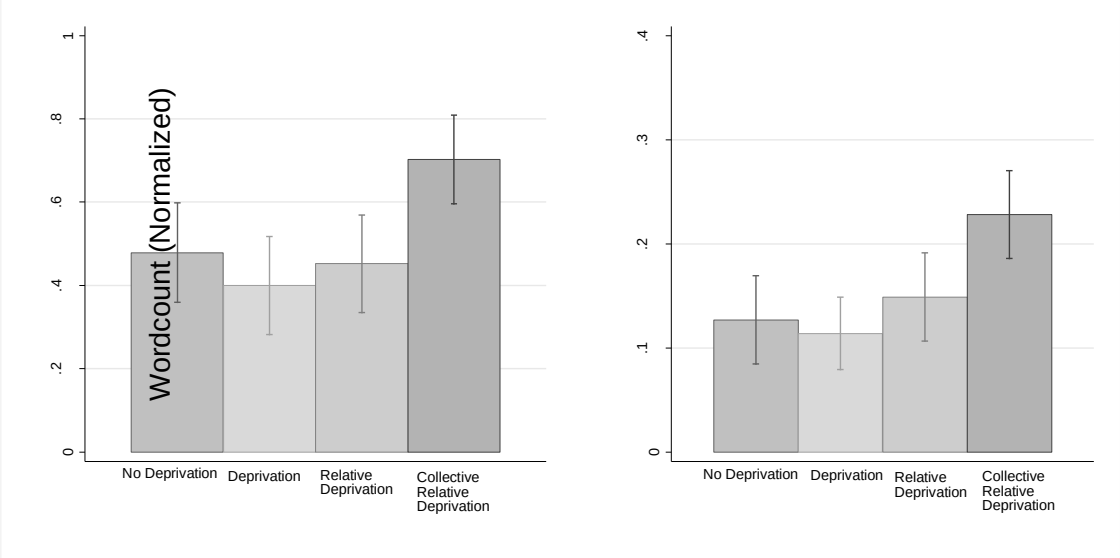
We measure the emotional reactions to deprivation with a scale of moral outrage (Bastian, Denson, & Haslam, 2013; Haidt, 2003). We then use an index that captures nine items[6] in order to test the mediating effect of emotional reactions on behaviour.

Results

Our first set of hypotheses questions the effects of different types of deprivation on protest (H1). The main effects for the three deprivation conditions show similar patterns in both behaviour - decision to protest- and intensity outcomes -providing arguments against the change in the rules of the game. (Figure 1).

[5] This explains why the design is a simulated game; individuals believe that the outcome is conditioned by collective performance (which gives the game more externally validity as it replicates a collective action condition). However there is no interaction between subjects and the outcome depends only on their individual choices and knowledge.
[6] Grossed out, disgusted, queasy, angry, mad, furious, contempt, disdain, scorn (scale reliability coefficient 0.925) – Spanish translation is presented in the appendix.

FIGURE 1. Effects for decision to protest and intensity



To compare the reported levels of protest resulting from the different deprivation conditions, we estimate models with the decision to protest and the number of arguments provided for protesting as dependent variables (Table A2). The first expectation is that the likelihood of protesting decreases when participants are deprived of part of the income they have earned (H1.1). The negative values point in the expected direction but differences between the control group (no deprivation - baseline) and the treatment group (deprivation) do not turn out to be significant at a 95% confidence level (models 1 and 4).

We then test the relative deprivation hypothesis (H1.2), namely whether relative deprivation encourages protest both in the decision to protest and the intensity of participation (Table A2, models 2 and 5). The effect of relative deprivation condition on protest does not differ significantly from the control condition and the effects are not consistently positive between both models as expected. One shortcoming that could have contributed to the null findings regarding the relative deprivation hypothesis (H1.2) may be that participants did not pay much attention to the RD conditions. Fifty-six per cent of the participants were not aware that the RD condition did not affect everyone equally (Appendix) and only 25% perceived that the changes in the rules of the game affected them personally.

Next, we estimate the main effect of collective relative deprivation on protest (H1.3). Here, we find a significant main effect of collective relative deprivation on protest as expected. On average, participants who are deprived because of their gender are 22% more likely to protest than those who are not deprived. Furthermore, those in the CRD condition provide ~10% more arguments than those who are not deprived (Table A2). These effects are statistically significant at a 95% level, thus confirming the CRD hypothesis.

In our second hypothesis we test the mediating effect of moral outrage. The emotional mediation hypothesis (H2) considers whether affective reactions associated with anger, resentment, and outrage mediate the effect of collective relative deprivation on protest. This implies two

requirements: that collective relative deprivation significantly accounts for variations in moral outrage, and that the later significantly accounts for the reduction in protest levels. We find increasing differences in the intensity of emotional reactions between the control, D, RD and CRD conditions (Figure 2). Differences are in the expected direction and the differences between the control and the CRD condition are significant at the 95% level. We also find important differences in moral outrage between groups in the number and the contents of arguments provided against the deprivation condition (change in the rules of the game). Mentions of injustice and illegitimacy were more salient in the CRD condition with an explicit emphasis on gender discrimination (Table 2).

FIGURE 2. Moral Outrage by type of deprivation

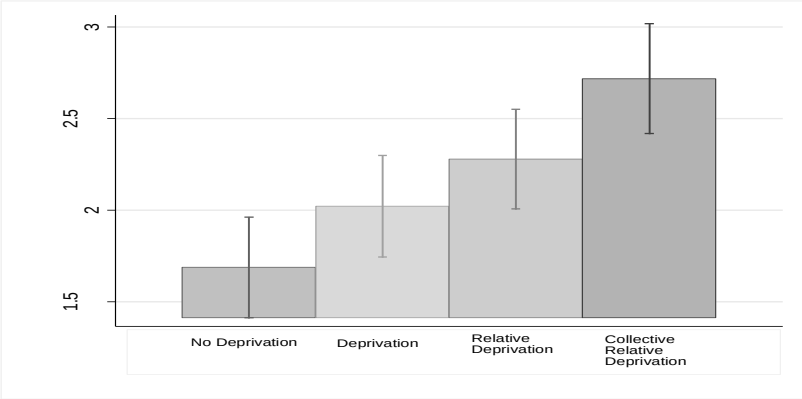


TABLE 2. Moral Outrage by arguments provided (Number of terms – Dictionaries in Appendix)

	Immoral (term freq)	Unjust (term freq)	Arguments (N)
Deprivation	11	13	28
Relative deprivation	12	24	33
Collective relative deprivation	19	64	52

The second requirement is that a stronger feeling of moral outrage will result in stronger effects of CRD on protest. To test for this, we move beyond the average treatment effects and quantify the effect of a treatment that operates through the moral outrage mechanism. In order to calculate how much of the deprivation effects are transmitted by moral outrage we model causal mediation effects[7]. The first panel in table 3 indicates that both CRD and moral outrage have a positive effect on protest and intensity, but the effect of CRD is statistically significant only for protest but not for intensity at an ~82% level (model 4).

[7] 1000 simulations using the parametric approach in the MEDIATION module for causal mediation and sensitivity analysis in Stata (Hicks, Tingley, & Imai, 2011; Hicks & Tingley, 2012)

TABLE 3. Mediated and direct effects of Collective relative deprivation on intensity of protest

	Protest (marginal effects after logit)		Intensity (number of arguments) (OLS)	
Moral outrage	0.815***	(0.237)	0.033	(0.018)
CRD	0.108	(0.136)	0.025*	(0.011)
Cons	-1.488**	(0.473)	0.069	(0.038)
N	144		144	
R-sq			0.101	
pseudo R-sq	0.111			

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

	Collective relative deprivation (Protest)		Collective relative deprivation (Intensity)	
ACME			0.011	[-0.0001, 0.0229]
Direct Effect			0.025	[0.0019, 0.0468]
Total Effect			0.035	[0.0147, 0.0554]
% of Tot Eff mediated			**0.306**	**[0.1941, 0.7301]**
ACME1	0.057	[0.026, 0.091]		
ACME0	0.056	[0.027, 0.09]		
Direct Effect 1	0.025	[-0.034, 0.086]		
Direct Effect 0	0.025	[-0.035, 0.086]		
Total Effect	0.081	[0.023, 0.137]		
% of Total via ACME1	0.692	[0.409, 2.354]		
% of Total via ACME0	0.691	[0.409, 2.349]		
Average Mediation	0.056	[0.027, 0.091]		
Average Direct Effect	0.025	[-0.034, 0.086]		
% of Tot Eff mediated	**0.692**	**[0.409, 2.352]**		

95% Confidence interval in brackets

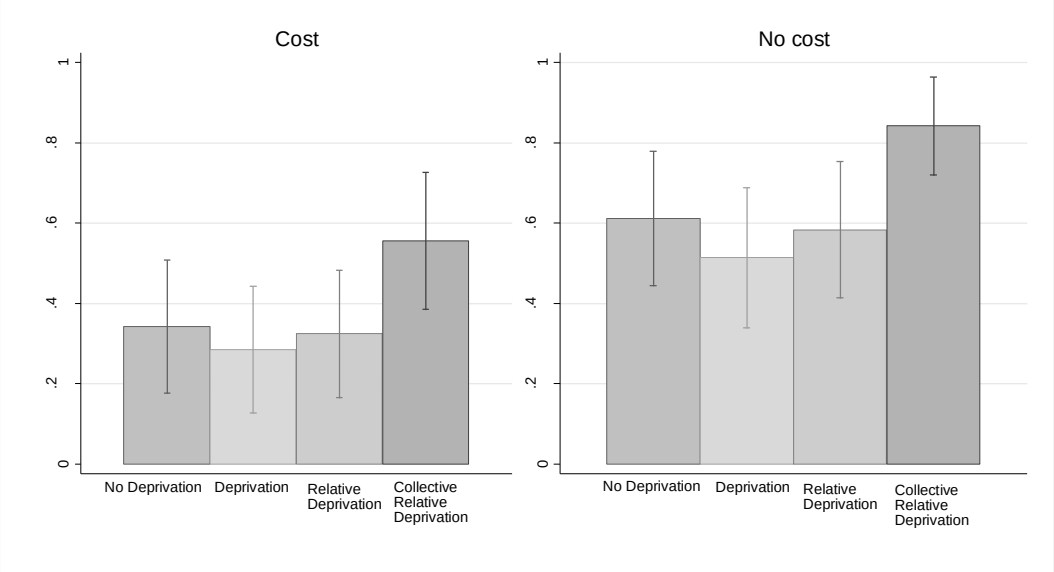
The second panel shows that the Average Causal Mediated Effect (ACME) of CRD is larger than the effect for the control condition (no deprivation). The mediation hypothesis (H2.1) is substantiated, since the indirect effect of moral outrage represents 21% of the total effect on intensity.

The results for the mediating role of moral outrage between CRD and collective action follow similar patterns for protest and for intensity. Moral outrage plays a more important role in explaining protest than intensity, as it accounts for 70% of the total effect on protest as compared to a 31% of the effect on intensity. This means that stronger emotional reactions have a greater effect on the decision to protest than on the intensity of protest once the decision is taken.

The third set of hypotheses deals with the combined effect of cost of participation and deprivation on protest (H3). To test for this, we compare conditions of costly protest in the three deprivation

conditions. Firstly, we test the negative effect of cost on a participation hypothesis (H3.1). The results in figure 3 show that having a cost for taking part in the campaign reduces protest for all groups.

FIGURE 3. Effects of cost on decision to protest



Group means with 95% confidence intervals

The results are confirmed as negative and significant by regressing cost on protest (Table 4). Having a cost for the campaign reduces the probability of protesting by ~26%. This result confirms hypothesis 3.1.

Secondly, we test the differential effect of cost on different deprivation conditions. We expect cost to matter less for those in the RD and in the CRD conditions as compared to those that are not deprived (H3.2 and H3.3). We find that differences between groups regarding cost (interactions terms in table 4) are not significant. This means that H3.2 and H3.3 are not substantiated.

TABLE 4. Interaction between cost and relative deprivation conditions

		Protest (Margins after logit)
Cost	-0.261***	(0.055)
Deprivation	-0.097	(0.117)
Relative Deprivation	-0.028	(0.116)
Collective Relative Deprivation	0.231*	(0.101)
Deprivation *Cost	-0.057	(0.111)
Relative Deprivation *Cost	-0.019	(0.111)
Collective Relative Deprivation *Cost	0.213	(0.115)
N	288	
pseudo R-sq	0.094	

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Discussion

The aim of this study was threefold: (1) to clarify the distinct effects of three types of deprivation on protest, (2) to establish the role of moral outrage as a mediating mechanism, and (3) to assess the effects of cost.

The first set of questions sought to determine the effects of three types of deprivation on protest and intensity of protest. We find support for our expectations that collective deprivation encourages protest (H1.3) but no significant effects neither for deprivation or relative deprivation. A negative relationship between deprivation and protest has been reported in the literature, but we find no empirical evidence to sustain it. Regarding relative deprivation, previous studies observed inconsistent results on whether it encourages protest. We expected that participants who were fully aware of their relative position under controlled conditions in the lab would be motivated to protest. However this was not the case. Taken together, these results suggest that the role of collective identity is crucial in explaining the effect of deprivation on behaviour.

A second question revised whether emotional reactions mediated the effect of collective relative deprivation on the decision to protest and the intensity of such protest. Our results suggest that approximately 70% of the treatment effect of collective relative deprivation on protest was mediated through moral outrage. This equated, on average, to a one-point reduction in the difference in mean protest participation between treatment groups. These results are in line with standing research focussing on relative deprivation measures that tap affective judgments or both affective and cognitive judgments (as reviewed in (H. J. Smith et al., 2012). Furthermore, our approach allows us to disentangle the affective component that mediates the relationship between collective relative deprivation and the potential outcomes. To the best of our knowledge, mediators within the context of relative deprivation theories of political protest had only been tested using structural equation modelling (P. Grant & Brown, 1995; P. R. Grant, 2008). In this way, this is the first study that strictly tests the assumptions required for making valid causal inferences of multiple conditions of relative deprivation on protest.

A third contribution of this study is testing the combined effects of cost and deprivation. Our results corroborate the assumptions of rational choice models of behaviour which suggest that cost is a central demobilising factor. We find cost to reduce the likelihood of protesting by almost 26% points independently of whether participants are deprived or not. However, contrary to expectations, we did not find a significant difference between deprivation conditions when protest has a direct cost.

Our design needs further controls to make sure that participants perceived the protest campaign as collective action, or if they incorrectly believed the success of the campaign depended exclusively on individual action. Using primes for free riding or collective efficacy could improve the internal validity of the design, and shed light on other factors intervening in the decision to protest.

We use a fixed cost for collective action. An extension of this study could aim to assess the sensitiveness of the cost/deprivation ratio.

We focus on legitimate forms of collective action when we limit participants to the organized campaign to restore the rules of the game. Strong emotional reactions could have led to other forms

of action if individuals were provided with the opportunity to protest in more disruptive or spontaneous ways.

The results of this study support a pessimistic view on the effects of deprivation regarding political participation. Only when deprivation is perceived to be relative to another group does it become a mobilising condition. Even then, in our design, a cost of participating that represents two thirds of the deprived amount overshadowed the effect of collective relative deprivation.

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Appendix

TABLE A1. Descriptive results

	Mean	SD	N	Categories	N
Protest	0.51	0.5	288	Individual Action	141
				Collective action	147
Intensity					
Number of arguments			113		
Number of terms	67.4	77.1	288		

TABLE A2. Marginal effects for relative deprivation conditions

	Protest (Logit)		Intensity (Normalized number of arguments) (OLS)	
Deprivation	-0.079	(0.083)	-0.013	(0.029)
Relative deprivation	-0.027	(0.083)	0.022	(0.029)
Collective relative deprivation	0.224**	(0.080)	0.101***	(0.029)
N	288		288	
R-sq			0.005	
pseudo R-sq	0.004			

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Manipulation checks (Shadowed cells indicate correct answers)

TABLE A3. Treatment check for deprivation condition - Luck
With regard to changes in the rules of the game, do you think you've been luckier than the other participants?

	Yes	No	Don't know	N
No deprivation	29.58	25.35	45.07	71
Deprivation	17.14	38.57	44.29	70
Relative deprivation	1.37	64.38	34.25	73
Collective relative deprivation	8.11	48.65	43.24	74
				288

TABLE A4. Treatment check for deprivation condition – Reference group

Please mark the correct choice for the following statements: The changes in the rules…

	adversely affected only the group of women / men			adversely affected everyone equally			adversely affected me but not others			did not affect me personally			N
	Yes	No	DK	Yes	No	DK	Yes	No	DK	Yes	No	DK	
No deprivation	50.70	0.00	49.30	28.17	36.62	35.21	83.10	1.41	15.49	32.39	53.52	14.08	71
Deprivation	72.86	1.43	25.71	8.57	77.14	14.29	80.00	1.43	18.57	55.71	38.57	5.71	70
Relative deprivation	53.42	0.00	46.58	12.33	43.84	43.84	68.49	5.48	26.03	61.64	24.66	13.70	73
Collective relative deprivation	32.43	41.89	25.68	41.89	31.08	27.03	86.49	1.35	12.16	64.86	27.03	8.11	74
N													288

TABLE A5. Instructional manipulation check

Please answer the following questions according to your experience in the game.

	What is the maximum value that you could have earned in the game if the rules had not changed?					What is the maximum value that you could have earned in the game with the changes in the rules of the game?					N
€	**6**	**9**	**11**	**12**	**DK**	**6**	**9**	**11**	**12**	**DK**	
No deprivation	0.00	15.49	1.41	76.06	7.04	4.23	30.99	4.23	52.11	8.45	71
Deprivation	1.43	22.86	1.43	65.71	8.57	11.43	64.29	2.86	8.57	12.86	70
Relative deprivation	1.37	16.44	0.00	79.45	2.74	9.59	78.08	2.74	8.22	1.37	73
Collective relative deprivation	2.70	17.57	2.70	70.27	6.76	10.81	71.62	2.70	5.41	9.46	74
N											288

TABLE A6. Moral outrage scale – Bastian et al. 2013
Los cambios en las reglas del juego te han hecho sentir ... (Nada, Poco, Bastante, Mucho)

Enfermo	Grossed out
Asqueado	Disgusted
Descompuesto	Queasy
Cabreado	Angry
Enfadado	Mad
Furioso	Furious
Despreciado	Contempt
Fastidiado	Disdain
Estafado	Scorn

Moral outrage dictionary

inmoral = c("moral", "legal", "honesto", "honrado", "íntegro", "neutral", "recto", "decente", "bienintencionado", "bueno", "correcto", "derecho", "entero", "escrupuloso", "ético", "exacto", "honesto", "honrado", "indigno", "inmerecido", "íntegro", "irreprochable", "lícito", "lógico", "merecido", "objetivo", "ponderado", "procedente", "racional", "razonable", "recto", "santo", "tiránico", "virtuoso"),

injustice = c("just*", "discrimin*", "abus*", "apropiado", "arbitrario", "cabal", "calibrado", "canónico", "centrado", "digno", "equitativo", "imparcial")

Lab experiment 4. Emotion elicitation and political attitudes

Introduction

Economic recession is arguably a powerful source of (mostly negative) emotions for citizens, since emotions regulate individuals' responses to changes in their wellbeing (Davou and Demertzis 2014). Research shows that perceptions of the economy may have substantial consequences on citizens' political attitudes and behaviours, including satisfaction with national democracy, trust in institutions, voting choice, and contentious participation, among many others (see, for example, Armingeon and Guthmann 2014; Bermeo and Bartels 2014; Giugni and Grasso 2015). However, adversity such as that produced by an economic recession may elicit distinct negative emotions, and these may in turn create distinct effects. Some individuals will react with anger, while others will experience anxiety, sadness, or different combinations of these, even if confronted with the very same situation. And the extent to which they feel anger, anxiety, or sadness will condition the type of subsequent response they will have, whether it is active or passive, aggressive or conciliatory, even though all of them are negative feelings.

The present experiment was designed to ascertain how emotional reactions typically elicited by an economic crisis shape citizens' political attitudes and behaviours. Specifically, the study examines the impact of three discrete negative emotions – anger, anxiety and sadness – on issues that are likely to be affected in times of crisis: people's political trust and anti-political feelings, interpretations of the crisis, intention to participate in contentious politics, and opinions about economic inequality and redistribution.

In order to better assess the independent effects of emotions themselves, the experiment focuses on the experience of emotions unrelated to the economic crisis. The discussion of such incidental emotions helps to elicit the intended emotions more distinctively and provides a stronger test of the causal role of the emotional factor on thoughts about the economic crisis.

Theory

Dimensional theories of emotions, such as the theory of affective intelligence put forward by Marcus and MacKuen (Marcus and MacKuen 1993; Marcus, Neuman, and MacKuen 2000), which guides most extant work on the influence of emotions on political judgment and behaviour, conceive emotions along two orthogonal dimensions, on the basis of their valence – positive and negative. This approach acknowledges the fact that emotional experiences with the same valence tend to correlate, i.e. feelings of anger, anxiety, or sadness appear to co-occur when their levels are measured across individuals and situations.

The case can be made, however, that there might exist relevant differences as to the antecedents and consequences of distinct emotions within the same valence dimension. Not all individuals react equally to identical negative stimuli, and their different reactions are likely to produce different effects on preferences and behaviour. Cognitive appraisal theories, allowing finer-grained discrimination among emotions, have greatly contributed to the understanding of the

origins and consequences of discrete emotions (Frijda, Kuipers, and ter Schure 1989; Lazarus 1991; Roseman 1996; Smith and Ellsworth 1985).

The basic tenet of appraisal theories is that people's reactions to stimuli depend to a large extent on the conscious and preconscious interpretations (i.e. appraisals) that each individual makes of the situation. Although scholars have not reached an agreement on the list of appraisal dimensions that explain the emergence of the most recurrent distinct emotions, a number of themes are invariably present in their proposals. Not all dimensions are relevant to distinguish between any pair of emotions. In the case at hand, anger, anxiety, and sadness may be distinguished on the basis of three main dimensions: certainty, concerning whether the (negative) event is certain to happen or not; responsibility, which refers to whether the situation is caused by some identifiable actor or by circumstances beyond anyone's control; and efficacy, regarding one's ability to influence the event.

Anger is likely to arise if a threat to personal rewards is certain to occur or has already materialized as a consequence of deliberate or negligent behaviour by an external agent in control, and is hence blameworthy, but is accompanied by the sense that one has some capacity to deal with the situation. Conversely, anxiety is caused by a highly uncertain threat and, as a consequence of the very uncertainty about the likelihood and nature of the danger being faced, is usually linked to appraisals of situational control (the perception that the situation is the result of the circumstances and no specific agent can be blamed for it) and low efficacy (the individual has no clear idea of how the threat can be prevented). Also sadness is associated with situational control and low coping potential, but, unlike anxiety, is characterized by the certainty of an irrevocable loss and the person's inability to remedy the harm done (Lazarus 1991).

A large body of research suggests that these distinct appraisal patterns translate into different responses to negative stimuli, even if some findings remain inconsistent across studies and differences between "similar" but discrete emotions are in some cases hardly discernible (Angie, Connelly, Waples, and Kligyte 2011; Brader and Marcus 2013). Anger typically triggers a behavioural approach, promoting a confrontational, rather than deliberative style, such that new considerations are forestalled in favour of prior convictions. Accordingly, anger has been found to boost political participation (Valentino, Brader, Groenendyk, Gregorowicz, et al. 2011) and protest (van Troost, van Stekelenburg, and Klandermans 2014), foster support for punitive and aggressive policies (Gault and Sabini 2000; Huddy, Feldman, and Cassese 2007), and heighten superficial information processing and reliance on prior convictions (Huddy, Feldman, and Cassese 2007; MacKuen, Wolak, Keele, and Marcus 2010).

In contrast, the sense of uncertainty governing states of anxiety usually translates into increased vigilance, searches for information, and more attentive and systematic processing in judgments, in an effort to avoid harm and reduce uncertainty. Anxious individuals tend to favour conciliation, prevention, protection, and other risk-aversive behaviours. Research on the political consequences of anxiety has found it to promote citizens' political learning and a more careful and less automatic processing of information in decision-making (Brader 2006; Huddy, Feldman, and Cassese 2007; MacKuen, Wolak, Keele, and Marcus 2010; Marcus, Neuman, and MacKuen

2000) and enhance support for precautionary and protective measures (Lerner, Gonzalez, Small, and Fischhoff 2003; Nabi 2003).

Given the similarity of their appraisal patterns, the effects of sadness appear to closely parallel those of anxiety as to the enhancement of reflection, effortful information processing, behavioural withdrawal, and support for compassionate policies, particularly when compared to anger, although results tend not to be as clear-cut and are sometimes inconsistent across studies (Small and Lerner 2008; Weber 2013).

An important strand of research in emotions extends the influence of affective states on judgments and decisions beyond the specific situations that have elicited them and onto normatively irrelevant domains. Scholars have thus found that incidental emotions may influence subsequent behaviours even when these are unrelated to the source of the affective state (Forgas 1995; Schwarz and Clore 1983). Moreover, research within the Appraisal Tendency Framework contends that emotions not only arise from cognitive appraisals but also prompt the interpretation of future events in line with patterns of appraisal that characterize those emotions (Lerner and Keltner 2000, 2001). That is, emotions give rise to an implicit predisposition, or appraisal tendency, so that people feeling a particular emotion tend to perceive (unrelated) situations in terms of the appraisals matching those of the emotions.

Building on these theoretical arguments, the following expectations can be derived concerning the consequences of anger, anxiety, and sadness on the four selected political themes:

H1. Appraisals of crisis

H1.1. Anger increases blame attribution, perceptions of predictability, and one's sense of efficacy with regard to the economic crisis

H1.2. Anxiety decreases blame attribution, perceptions of predictability, and one's sense of efficacy with regard to the economic crisis

H2. Political trust and anti-politics

H2.1. Anger decreases political trust

H2.2. Anger increases the willingness to punish politicians, by imposing harsher controls on them and restricting their prerogatives

H2.3. Anger increases the willingness to accept arguments in support of reducing the salaries of politicians

H3. Welfare attitudes

H3.1. Sadness enhances support for redistribution

H4. Political protest

H4.1. Anger increases willingness to participate in more contentious forms of political protest

Design

To test these hypotheses, a lab experiment using a computer interface and Qualtrics software was conducted in Spain and Switzerland. For the Spain experiment, we used a non-representative sample of 295 respondents selected from the pool of respondents of the Democracy, Elections and Citizenship Group at Universitat Autònoma de Barcelona (UAB), recruited on campus and online. The experiment took place in 8 different sessions between 23 September and 30 November 2015, using Qualtrics software. It includes data from 295 respondents, mostly students from the UAB. Each student was paid 7€ for participating in the study. The experiment in Switzerland took place in 19 different sessions between 2 October 2016 and 18 December 2015, using Qualtrics software. It includes data for 183 respondents, mostly students from the Université de Genève. The surveys took between 25 to 30 minutes to complete.

The survey first presents a short pre-test questionnaire. Next, participants are given a text to elicit the target emotions. The treatment consists of displaying a fictitious scenario designed to induce a specific emotional state (see, e.g., Keltner, Ellsworth, and Edwards 1993; Raghunathan and Pham 1999). Experimental subjects are randomly assigned to one of four conditions: anxiety, anger, sadness, and a control group. The last is designed to induce no specific emotion. The specific wording of each of the treatments can be found in the Annex.

Participants are asked to read the text carefully and try to put themselves in the place of the person in the story. In order to make sure that the participant reads the text we track the time spent reading the text. The dependent variables are measured immediately after the treatment. As a manipulation check, at the end of the questionnaire, respondents are asked how they felt while reading the story.

Table 1 lists the dependent variables used in the analysis and their operationalization.

TABLE 1: List of dependent variables and manipulation checks

Hypothesis	**Variable**	**Codification**
Manipulation checks: target emotions	Three composite indices based on the following items: How much emotion was felt when reading the story? - *Anxiety:* Fear; Fright; Distress - *Anger:* Anger; Rage; Upset - *Sadness:* Sadness; Sorrow; Grief	Not at all (1) A lot (4)
H1. Appraisals of crisis	Is someone or something responsible for the economic crisis? (Blame)	Not clear Responsible (0) Clearly responsible (10)
	Extent to which the crisis could had been predicted (Predictable)	Absolutely unpredictable (0) Absolutely predictable (10)
	Agreement with "When talking about the crisis, I often find it hard understand what's going on" (Efficacy)	Strongly disagree (1) Strongly agree (5)
H2.1 Political trust	Composite index based on the following items: Trust in: - Political Parties - Politicians	Not at all (1) A lot (4)
H2.2 Punish politicians	Composite index based on the following items: Agreement with the following: - Legally impose penalties on political parties for not accomplishing their platforms - Eliminate positions of trust - Reduce politicians' salaries - Eliminate public funding for parties - Restrict time that people can be in politics - Reduce the number of public officials	Strongly disagree (1) Strongly agree (5)
H2.3. Salaries of politicians	Composite index based on the following items: Agreement with the following: - Moderate politicians' salaries because they are publicly funded - Increase salaries to fight corruption (R) - Moderate salaries as a contribution to society - Increase politicians' salaries to assure good performance (R) - Moderate salaries to attract honest politicians - Moderate salaries to assure they keep in touch with the people	Strongly disagree (1) Strongly agree (5)

	- Increase salaries to compete with the private sector (R) - Moderate salaries as an example in times of crisis	
H3. Welfare attitudes	Agree with the following: - That large income differences exist is acceptable (Inequality) - Unemployed people do not actually try to find new jobs (Seek job) - Unemployed people should be forced to accept a job they are overqualified for (Accept job) - Governments should never spend more than they have (Austerity) - Spending cuts are unavoidable under the current circumstances - Governments should guarantee jobs for anyone willing to work - Governments must guarantee decent housing for all families in need	Strongly disagree (1) Strongly agree (5)
H4. Political protest	Likely to participate in the following: - Wear a sticker - Sign a petition - Support a political demand on a social network (Web) - Attend a demonstration - Join a strike - Participate in a sit-in - Block evictions - Participate in an *escrache* (public "exposure" protest) - Vandalism to urban equipment (Illegal) - Use violence against other people (Violent)	Very unlikely (1) Very likely (4)

Results

TABLE 2. Number of respondents per experimental condition

Condition	Spain	Switzerland
Anxiety	74	45
Anger	71	44
Sadness	75	46
Control	75	46
Total	295	181

Table 3 presents de summary statistics of the dependent and independent variables.

TABLE 3. Summary of statistics of the dependent and independent variables

Variable	Spain (N=295)				Switzerland (N=181)			
	Mean	SD	Min	Max	Mean	SD	Min	Max
Anxiety	2,01	0,82	1	4	2,14	0,91	1	4
Anger	1,74	1,03	1	4	1,56	0,86	1	4
Sadness	2,20	0,93	1	4	2,14	0,99	1	4
Blame	6,80	2,38	1	10	7,20	2,15	0	10
Predictable	6,74	2,35	0	10	6,17	2,03	0	10
Efficacy	2,34	1,16	1	5	3,14	1,05	1	5
Trust	1,96	0,53	1	3,5	2,24	0,61	1	4
Controls	3,94	0,64	1,5	5	3,12	0,69	1,17	5
Salaries	4,01	0,65	1,4	5	3,61	0,58	2,13	5
Inequality	2,20	1,14	1	5	2,89	1,08	1	5
Seek job	2,40	1,18	1	5	2,44	1,11	1	5
Accept job	1,99	1,07	1	5	2,65	1,10	1	5
Austerity	3,74	1,19	1	5	3,13	1,02	1	5
Spending cuts	2,88	1,13	1	5	2,97	0,97	1	5
Guarantee job	3,71	1,04	1	5	3,39	1,03	1	5
Guarantee housing	4,45	0,78	1	5	3,83	1,05	1	5
Sticker	1,96	1,09	1	4	2,00	0,92	1	4
Petition	3,16	0,92	1	4	3,24	0,86	1	4
Web	2,84	1,09	1	4	2,67	1,02	1	4
Demonstrate	3,15	0,93	1	4	2,78	0,93	1	4
Strike	3,03	0,98	1	4	2,41	0,94	1	4
Occupy	1,92	0,92	1	4	1,97	0,88	1	4
Eviction	1,83	0,78	1	4	1,85	0,87	1	4
Escrache	1,57	0,74	1	4	1,81	0,85	1	4
Illegal	1,18	0,48	1	4	1,19	0,57	1	4
Violent	1,24	0,53	1	4	1,18	0,53	1	4

The method of analysis consists of a series of OLS regression models with dependent variables corresponding to Hypotheses 1-4. The independent variables are the three treatment groups (the control group is used as the baseline for comparison).

In order to assess the extent to which we managed to elicit the target emotions, the analysis in Table 4 and 5 show how our treatments worked on the manipulation checks in the Spanish and Swiss studies, respectively.

As expected, the anxiety treatment substantially increases levels of reported anxiety in Spain. Subjects exposed to the anger and sadness treatments also report higher levels of anxiety, but to a

lesser extent than those in the anxiety condition. The same applies to anger/sadness: all three treatments increase reported levels of anger/sadness, but the anger/sadness treatment does so to a significantly larger degree.

TABLE 4. Manipulation checks, Spain

	(1) Anxiety	(2) Anger	(3) Sadness
Anxiety	1,278***	0,298***	1,313***
	(0,107)	(0,083)	(0,109)
Anger	0,718***	2,278***	1,052***
	(0,108)	(0,084)	(0,111)
Sadness	1,080***	0,351***	1,747***
	(0,107)	(0,082)	(0,109)
Constant	1,244***	1,027***	1,178***
	(0,076)	(0,058)	(0,077)
Observations	295	295	295
R^2	0,363	0,760	0,488

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

In the Swiss study, reported levels of anger and sadness are also singularly enhanced by the corresponding treatments. By contrast, the anxiety treatment fails to increase levels of anxiety significantly above the two other treatments, i.e. all treated subjects show similarly heightened levels of sadness regardless of the specific treatment they were exposed to.

TABLE 5. Manipulation checks, Switzerland

	(1) Anxiety	(2) Anger	(3) Sadness
Anxiety	1,256***	0,075	0,886***
	(0,153)	(0,110)	(0,159)
Anger	1,153***	1,691***	1,130***
	(0,154)	(0,111)	(0,160)
Sadness	1,362***	0,341**	1,797***
	(0,152)	(0,109)	(0,158)
Constant	1,203***	1,043***	1,188***
	(0,108)	(0,077)	(0,112)
Observations	181	181	181
R^2	0,370	0,631	0,428

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Our first hypothesis posits that anger will increase blame attribution for the economic crisis and the related appraisals of predictability and internal efficacy (H1.1), whereas anxiety will decrease blame attribution, perceptions of predictability, and efficacy (H1.2). To test this, we rely on three measures assessing (1) whether there is anyone responsible for the economic crisis, (2) the extent to which the crisis could have been predicted, and (3) the difficulties experienced by the

individual in understanding what is going on in the economic crisis – for this indicator variable of inefficacy we would expect a reversed coefficient. The evidence for Spain is displayed in Table 6. Although anger seems to give the expected indication when identifying someone responsible for the economic crisis, as well as the extent to which the crisis could have been predicted, the differences are undistinguishable from the control condition. The coefficient for the variable assessing the difficulties of the individual in understanding what is going on in the economic crisis is in the "wrong" direction and not significant. As for anxiety, the effects are "correctly" indicated in each of the three models, but the differences are undistinguishable from the control condition. It is worth noting, however, that differences between the anger and anxiety conditions in the responsibility and predictability models do attain statistical significance (at the $p < 0,1$ level), thus providing at least partial evidence in support of the hypotheses.

TABLE 6. Appraisals of the crisis, Spain

	(1) Blame	(2) Predictable	(3) Efficacy
Anxiety	-0,354	-0,569	0,259
	(0,390)	(0,384)	(0,190)
Anger	0,384	0,105	0,165
	(0,394)	(0,388)	(0,192)
Sadness	-0,053	-0,053	0,253
	(0,389)	(0,383)	(0,189)
Constant	6,813***	6,867***	2,173***
	(0,275)	(0,271)	(0,134)
Observations	295	295	295
R^2	0,012	0,012	0,008

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

In the case of Switzerland (Table 7), the anger treatment has a positive effect on blame attribution and perceptions of predictability and a negative effect on efficacy, as expected, yet the evidence is not significative either. As for anxiety, results indicate that respondents exposed to this treatment perceive the economic crisis as less predictable than those in the anger condition ($p < 0,05$), as well as compared to the individuals in the control and sadness conditions ($p < 0,1$). The impact on efficacy is positive, as expected, but far from significant, while that for blame attribution is undistinguishable from zero.

TABLE 7. Appraisals of the crisis, Switzerland

	(1) Blame	(2) Predictable	(3) Efficacy
Anxiety	0,044	-0,729^{+}	0,158
	(0,453)	(0,421)	(0,222)
Anger	0,523	0,237	-0,131
	(0,456)	(0,423)	(0,223)
Sadness	0,261	0,283	0,109
	(0,451)	(0,419)	(0,221)
Constant	7,000***	6,217***	3,109***
	(0,319)	(0,296)	(0,156)
Observations	181	181	181
R^2	0,009	0,040	0,011

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

We next hypothesised that anger would decrease individual levels of political trust (H2.1) and increase anti-political feelings, measured as support for harsher controls and restrictions on politicians (H2.2) and for a reduction in their salaries (H2.3). As shown in Table 8, in Spain all three treatments show a negative impact on political trust, but differences between them are not statistically significant. Neither the imposition of further controls on politicians nor the reduction in their salaries are significantly affected by the administration of the treatment. However, the effects of anxiety and anger go in the expected direction – negative and positive, respectively – and the difference between the two nearly achieves statistical significance (p = 0,11).

TABLE 8. Political trust and anti-political feeling, Spain

	(1) Trust	(2) Controls	(3) Salaries
Anxiety	-0,161^{+}	-0,082	-0,135
	(0,086)	(0,105)	(0,106)
Anger	-0,185*	0,091	-0,070
	(0,087)	(0,106)	(0,107)
Sadness	-0,207*	-0,027	-0,173
	(0,086)	(0,104)	(0,106)
Constant	2,093***	3,942***	4,103***
	(0,061)	(0,074)	(0,075)
Observations	295	295	295
R^2	0,024	0,009	0,011

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

In Switzerland, none of the treatments has any impact on either political trust or our measures of anti-political feeling, as the estimates in Table 9 make clear. The specific treatment a respondent was assigned to thus appears to have made no difference to his or her attitudes towards politicians.

TABLE 9. Political trust and anti-political feeling, Switzerland

	(1) Trust	(2) Controls	(3) Salaries
Anxiety	0,049	0,084	0,078
	(0,129)	(0,145)	(0,122)
Anger	0,010	-0,015	0,115
	(0,130)	(0,146)	(0,123)
Sadness	0,022	0,022	0,141
	(0,129)	(0,144)	(0,122)
Constant	2,217***	3,094***	3,530***
	(0,091)	(0,102)	(0,086)
Observations	181	181	181
R^2	0,001	0,003	0,009

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Tables 10 and 11 contain the results for the models using attitudes towards welfare policies as dependent variables. We hypothesised that sadness would promote sympathy and support for assistance measures in favour of the disadvantaged. The results of both the Spanish and the Swiss studies indicate that the treatments do not explain the differences in welfare attitudes. Individuals exposed to the sadness condition do not systematically show higher opposition to income inequality or austerity, nor are they more likely to support social assistance programs. The effects of the anxiety and anger treatments are similarly inconsistent and mostly not significant.

TABLE 10. Welfare attitudes, Spain

	(1) Inequality	(2) Seek job	(3) Accept job	(4) Austerity	(5) Spending cuts	(6) Guarantee job	(7) Guarantee housing
Anxiety	0,069	0,541**	0,147	-0,299	-0,109	0,130	0,046
	(0,187)	(0,192)	(0,176)	(0,195)	(0,185)	(0,171)	(0,129)
Anger	0,078	0,411*	0,050	-0,108	-0,103	0,105	0,063
	(0,189)	(0,194)	(0,178)	(0,197)	(0,187)	(0,173)	(0,130)
Sadness	0,133	0,427*	0,187	0,000	0,067	0,133	0,200
	(0,186)	(0,191)	(0,176)	(0,194)	(0,185)	(0,171)	(0,128)
Constant	2,133***	2,053***	1,893***	3,840***	2,920***	3,613***	4,373***
	(0,132)	(0,135)	(0,124)	(0,137)	(0,131)	(0,121)	(0,091)
Obs.	295	295	295	295	295	295	295
R^2	0,002	0,031	0,005	0,011	0,004	0,003	0,009

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 11. Welfare attitudes, Switzerland

	(1) Inequality	(2) Seek job	(3) Accept job	(4) Austerity	(5) Spending cuts	(6) Guarantee job	(7) Guarantee housing
Anxiety	0,241	-0,013	0,188	0,091	-0,198	0,338	0,391+
	(0,227)	(0,235)	(0,231)	(0,216)	(0,204)	(0,215)	(0,219)
Anger	-0,007	-0,071	0,453+	0,073	-0,245	0,146	0,345
	(0,228)	(0,236)	(0,232)	(0,217)	(0,205)	(0,216)	(0,220)
Sadness	-0,065	0,109	0,130	-0,065	-0,109	0,217	0,239
	(0,226)	(0,233)	(0,230)	(0,215)	(0,203)	(0,214)	(0,218)
Constant	2,848***	2,435***	2,457***	3,109***	3,109***	3,217***	3,587***
	(0,160)	(0,165)	(0,162)	(0,152)	(0,143)	(0,151)	(0,154)
Observations	181	181	181	181	181	181	181
R^2	0,012	0,003	0,022	0,004	0,009	0,014	0,021

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Finally, we assess the relationship between emotions and the likelihood of participating in politics. According to hypothesis 4, we expect that anger will increase the willingness to participate in more contentious forms of political protest. Should this hold, we would see anger

having a positive effect on unconventional, more direct forms of participation but not (or to a lesser extent) on conventional forms. The estimates displayed in tables 12 and 13 show that this is not the case. In Spain, we only find an effect for the anger treatment on the intention to participate in strikes and in vandalism to urban equipment. However, the results for the remaining variables do not follow the expected pattern.

TABLE 12a. Intention to participate, Spain

	(1) Sticker	(2) Petition	(3) Web	(4) Demonstrate	(5) Strike
Anxiety	0,041	0,070	-0,163	0,190	0,134
	(0,180)	(0,150)	(0,178)	(0,153)	(0,159)
Anger	-0,070	-0,018	0,038	0,129	0,402*
	(0,181)	(0,152)	(0,180)	(0,154)	(0,161)
Sadness	-0,187	-0,120	-0,227	0,107	0,027
	(0,179)	(0,150)	(0,178)	(0,152)	(0,159)
Constant	2,013***	3,173***	2,933***	3,040***	2,893***
	(0,127)	(0,106)	(0,126)	(0,108)	(0,112)
Observations	295	295	295	295	295
R^2	0,006	0,006	0,010	0,005	0,026

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 12b. Intention to participate, Spain

	(6) Occupy	(7) Eviction	(8) *Escrache*	(9) Illegal	(10) Violent
Anxiety	0,066	-0,096	-0,208+	0,163*	0,178*
	(0,151)	(0,128)	(0,121)	(0,079)	(0,086)
Anger	0,120	-0,020	0,036	0,132+	0,135
	(0,152)	(0,130)	(0,123)	(0,079)	(0,087)
Sadness	-0,040	-0,133	-0,107	0,067	0,053
	(0,150)	(0,128)	(0,121)	(0,078)	(0,086)
Constant	1,880***	1,893***	1,640***	1,093***	1,147***
	(0,106)	(0,090)	(0,086)	(0,055)	(0,061)
Observations	295	295	295	295	295
R^2	0,004	0,005	0,016	0,017	0,017

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

The results of the Swiss study also suggest that the intention to participate in contentious politics is unrelated to the administration of the treatments. The coefficient for anger is positive and statistically significant when explaining participation in demonstrations and strikes, but in both cases the effects of anxiety and sadness go in the same direction, such that differences between treatments are not statistically significant. Additionally, sadness appears to promote expressive actions like wearing stickers and willingness to participate in squatting buildings. The results, in sum, indicate that the contentiousness of participation, as well as the generic intention to participate, are unrelated to specific emotions.

TABLE 13a. Intention to participate, Switzerland

	(1) Sticker	(2) Petition	(3) Web	(4) Demonstrate	(5) Strike
Anxiety	0,018	0,180	-0,229	0,321^{+}	0,357^{+}
	(0,190)	(0,181)	(0,214)	(0,193)	(0,193)
Anger	0,218	0,164	0,124	0,521**	0,436*
	(0,191)	(0,182)	(0,216)	(0,194)	(0,195)
Sadness	0,543**	0,174	-0,087	0,457*	0,522**
	(0,189)	(0,180)	(0,213)	(0,192)	(0,192)
Constant	1,804***	3,109***	2,717***	2,457***	2,087***
	(0,134)	(0,127)	(0,151)	(0,136)	(0,136)
Observations	181	181	181	181	181
R^2	0,057	0,008	0,016	0,047	0,046

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 13b. Intention to participate, Switzerland

	(6) Occupy	(7) Eviction	(8) *Escrache*	(9) Illegal	(10) Violent
Anxiety	0,194	-0,027	0,171	0,092	-0,019
	(0,183)	(0,184)	(0,178)	(0,120)	(0,111)
Anger	0,261	0,149	0,122	0,051	0,097
	(0,184)	(0,185)	(0,179)	(0,121)	(0,112)
Sadness	0,457*	0,152	0,261	0,109	0,109
	(0,182)	(0,183)	(0,177)	(0,119)	(0,111)
Constant	1,739***	1,783***	1,674***	1,130***	1,130***
	(0,129)	(0,129)	(0,125)	(0,084)	(0,078)
Observations	181	181	181	181	181
R^2	0,035	0,009	0,013	0,006	0,012

Standard errors in parentheses $^{+}$ $p < .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

The results of our experiment are largely inconclusive, if not entirely null. Despite the fact that the analysis of the manipulation checks suggests that our treatments managed to elicit – at least retrospectively – the intended emotions, discrete emotions have been proved to be irrelevant for attitudes toward inequality and political participation. In contrast, we found partial evidence in support for the hypothesis that, in line with the appraisal tendency framework, distinct emotional reactions promote different perceptions about the economic crisis. Specifically, the experiment reveals at least marginally significant differences between individuals exposed to the anxiety and the anger treatments in their ability to attribute blame for the crisis and their perception of the predictability of the situation, if not in the sense of internal efficacy. In the Spanish study, some indication was also found that anger, compared to anxiety, increases individuals' willingness to punish politicians by enacting measures to further control their activity and restrict their privileges.

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Appendix

Treatment 1: Anxiety

Lee muy atentamente la siguiente narración. Trata de ponerte en la piel del personaje y sentir la situación tal como la siente el protagonista.

Acabas de volver de unas vacaciones con unos cuantos amigos. Algunas cosas del viaje han ido bien; otras no tanto. Ha sido un largo viaje y sientes algo de cansancio. Durante las dos semanas que habéis estado en México habéis pasado muchas horas al aire libre haciendo actividades muy diversas, y te ha dado mucho el sol. Aunque durante este tiempo has tenido cuidado de irte poniendo crema solar para protegerte, llegas con la piel bastante bronceada. Algunas zonas parecen quemadas y la piel comienza a desprenderse. Decides que, por precaución, te pondrás crema hidratante durante unos cuantos días. Te estás dando la crema y de repente te das cuenta de que en el hombro izquierdo, cerca del cuello, te ha aparecido un pequeño bulto bajo la piel. Tiene una forma extraña y es muy sensible cuando lo tocas. Te pones algo más de crema en esta zona para intentar solucionarlo y rápidamente te olvidas del tema. Aproximadamente un mes más tarde te das cuenta de que aquella protuberancia no solo no ha desaparecido sino que parece que se ha hecho más grande y además te empieza a picar. Cuando te rascas te hace daño. Le preguntas a una amiga si alguna vez ha tenido un problema como este. Lo inspecciona y rápidamente te tranquiliza diciéndote que ella tuvo algo similar y que al final acabó no siendo nada más que un grano que se había desarrollado, que es normal que pique y que cause dolor al tocarlo. Intentas no obsesionarte pero el bulto sigue creciendo y toda la zona se inflama. Dos semanas más tarde, cuando ya no puedes soportar la quemazón y el dolor, decides acudir al ambulatorio para que un médico le eche un vistazo y, si es posible, te dé algo para aliviar las molestias. El doctor lo inspecciona con detenimiento y te hace algunas preguntas acerca de la frecuencia con la que te expones al sol y sobre tus hábitos al aire libre. Te mira con cara de preocupación y te deriva a un especialista en problemas de la piel. Unas semanas más tarde acudes a la consulta del dermatólogo. Inspecciona el bulto y te pregunta, entre otras cosas, si algún miembro de tu familia ha tenido cáncer. Le explicas que sí, que dos familiares próximos murieron de cáncer. Sin darte más explicaciones te envía a hacer unos análisis de sangre y una biopsia del bulto y te dice que una vez que tenga los resultados se pondrá en contacto contigo. Al cabo de unos días recibes una llamada en la que te dan hora con el especialista para valorar el resultado de las pruebas. Cuando llegas, el doctor te recibe con cara de preocupación.

Treatment 2: Anger

Lee muy atentamente la siguiente narración. Trata de ponerte en la piel del personaje y sentir la situación tal como la siente el protagonista.

Estás en el tercer curso de grado de la universidad. De entre las asignaturas que tienes este semestre hay una que te gusta especialmente. La materia es muy interesante, aunque el profesor es muy exigente. Os manda hacer un trabajo que tiene un peso del 40% sobre la nota final y en el que es necesario tener al menos un 5 para aprobar la asignatura. Durante el curso has dedicado muchas horas a este trabajo y en líneas generales sientes satisfacción con el resultado final. De hecho el tema te ha atrapado de tal modo que estás pensando dedicar el Trabajo Final de Grado que deberás hacer durante el próximo curso a este mismo tema. El profesor fija una fecha de entrega del trabajo y os pide que se lo dejéis personalmente en su despacho. El día indicado por la mañana vas expresamente a la universidad para entregárselo en mano.

Cuando llegas, ves que está reunido con otros profesores, con los que charla animadamente. Apenas se cabe en el despacho. Por todo el suelo hay amontonados libros, carpetas y lo que parecen exámenes, además de botellas de plástico vacías. Ninguno de los que está allí te presta atención. Le entregas el trabajo al profesor y él, prácticamente sin mirarte, lo coge y lo deja una mesa desordenada y repleta de papeles. Tu sorpresa llega a los pocos días, cuando el profesor publica las notas de los trabajos: el tuyo aparece como "No presentado". En un primer momento no te preocupas demasiado e interpretas que el profesor se ha confundido. Le envías un correo electrónico para hacerle notar su error, pero no recibes respuesta. Esperas unos días y le envías otro correo pero sigue sin dar señales de vida. Como las clases han terminado, decides ir a verle en persona. Pese a que el profesor tiene marcadas unas horas de tutoría nunca parece estar en su despacho. Tu indignación crece a medida que se acerca el final del semestre y aún no sabes nada de tu nota. Cuando finalmente lo encuentras, el profesor no te reconoce ni sabe de qué asignatura vienes. Te hace pasar a su despacho mientras te dice que está muy ocupado y que no puede dedicarte mucho tiempo. Le expones el problema y le recuerdas que le entregaste el trabajo en mano el día indicado. Él asegura que no lo recuerda e insiste en que si él no tiene el trabajo es porque no llegaste a entregarlo. Tratas de convencerlo pero se mantiene inflexible. ¡Está decidido a suspenderte la asignatura! Estás convencido de que ha perdido tu trabajo por culpa de lo descuidado que lo tiene todo. Le pides que al menos te deje entregarlo fuera de plazo, aunque sea con una penalización, pero se niega en redondo. Seguidamente, y de manera algo brusca, te dice que te vayas del despacho y le dejes trabajar. Sales dando un portazo. No puedes creer que esto te esté pasando a ti. Sientes cómo te hierve la sangre. Sabes que tienes un suspenso y que tendrás que repetir la asignatura el próximo curso, muy probablemente con el mismo profesor.

Treatment 3: Sadness

Lee muy atentamente la siguiente narración. Trata de ponerte en la piel del personaje y sentir la situación tal como la siente el protagonista.

Se acerca el final del curso y tienes muchas ganas de que lleguen las vacaciones de verano. El semestre ha sido frenético y sientes satisfacción porque pronto tendrás tiempo para descansar y relajarte con tu familia y tus amigos. Es domingo y faltan solo dos semanas para acabar los exámenes. Te levantas temprano para estudiar. Estás en la ducha pensando cómo organizar el día y de repente suena el móvil y ves que es tu hermano. Sorprendido por la hora a la que llama, lo coges y por su voz pronto te das cuenta de que hay algo va mal. Te explica que tu madre está enferma en el hospital y que no saben lo que tiene. Sin pensártelo un segundo te vistes y sales corriendo a la estación para llegar a casa tan pronto como puedas. Durante el viaje sientes confusión y te obsesionas en intentar comprender qué es lo que puede estar pasando. No quieres hablar con nadie y vas recordando las pocas palabras que has intercambiado con tu hermano mientras intentas convencerte de que tu madre está bien y que no será nada grave. Cuando llegas a la estación coges un taxi que te lleva directamente al hospital. Una vez allí subes directamente a la habitación que te ha indicado tu hermano. Cuando entras ves a unos cuantos familiares con la cara pálida y los ojos llorosos. Están todos colocados alrededor de la cama de tu madre, que tiene una apariencia muy frágil y la piel amarillenta. De repente te inunda una sensación de pánico por lo mucho que la quieres y por el sufrimiento que se adivina en su cara. Te acercas a la cama y le coges la mano, que sientes un poco fría y débil. Su cara se balancea de manera semiinconsciente y parece que toda ella se encoge de dolor, emitiendo unos leves gemidos. Ella os mira a ti y al resto de la familia y parece que llora y sonríe al mismo tiempo. Te aprieta un poco la mano que le tienes cogida y dice "estáis todos aquí". "Claro que estamos aquí, mamá" le respondes inmediatamente. "Se hace un poco extraño estar en este sitio, ¿verdad?", dice. Intentáis tranquilizarla. Sin apenas fuerza, se queja de que la cabeza le da muchas

vueltas. Justo después cierra los ojos y muere. No puedes creer lo que está pasando. Tienes la sensación de que en cualquier momento despertarás de esta pesadilla. Te agachas y abrazas el cuerpo todavía caliente de tu madre. De repente te das cuenta de que todo ha acabado y de que nunca nada volverá a igual.

Treatment 4: Control

Lee muy atentamente la siguiente narración. Trata de ponerte en la piel del personaje y sentir la situación tal como la siente el protagonista.

Te despiertas. Es domingo, así que no tienes ninguna prisa. La semana pasada acabaste los exámenes y ayer por la noche lo celebraste con tus amigos. Hoy ya tienes decidido que pasarás el día en casa descansando sin hacer nada en especial. Duermes un rato más y cuando te vuelves a despertar decides levantarte y darte una ducha. La sensación del agua caliente te relaja y acabas estado un buen rato en la ducha. Después de la ducha te vistes con ropa cómoda de estar por casa y vas a preparar el desayuno. Te haces un café con leche y unas tostadas. Te instalas en el comedor con la tableta y mientras desayunas vas ojeando las redes sociales y consultas las noticias más relevantes del día, sin demasiado interés. Mientras tanto te suena el móvil. Algunos de tus amigos se van levantando también y comentáis lo que hicisteis anoche. Después de haber desayunado decides salir a dar un paseo por el barrio. El viernes fue festivo y apenas hay gente por la calle. Compras una barra de pan para la comida y vuelves tranquilamente a casa. En él coincides con un vecino y habláis sobre el buen tiempo que hace. Parece ser que la semana que viene el tiempo va a continuar igual. Una vez en casa te preparas la comida. En la nevera tienes tomates, pepino, cebolla y pimiento, además del pan que acabas de comprar, así que decides que prepararte un gazpacho. De segundo sacas un filete del congelador. Preparas el gazpacho y lo dejas dentro de la nevera para que se enfríe. Aun no tienes hambre, así que te pones música tranquila y lees un rato. Cuando llega la hora de comer el gazpacho ya está frío y el filete se ha descongelado. Pones un poco de aceite y pimienta en el gazpacho y preparas la sartén. Te gusta el filete al punto. Te lo llevas todo al comedor con una cerveza. Mientras comes pones el telediario. De postre te tomas una manzana y dejas las cosas sobre la mesa. No hay prisa ni esperas a nadie, y tienes ganas de tumbarte en el sofá a ver la película del domingo por la tarde. Aunque la película es entretenida, te vence el sueño. Cuando te despiertas empieza a anochecer. No sabes cómo has podido dormir tanto. Piensas que después de las duras semanas de exámenes y de poco dormir tu cuerpo pedía un día como este, de total relax, para reponer fuerzas.

Lab experiment 5. Repression and participation

Introduction

Since 2008, Spain has witnessed an unprecedented rise in contentious action as a response to the economic crisis. New organisations and singular social movements have sprung up in defence of social rights in Spain, the European country with the highest levels of protest activity. These vast mobilisations have arisen in low levels of public disorder both in terms of police sanctions or detainees[8], quite remarkable considering the despair and anger driving the demonstrators in response to the economic crisis. However, in the first months of 2013, the incumbent *Partido Popular* (PP) argued for the need to strengthen public safety by eliminating violence and pushed through changes to the Public Safety Act and the Penal Code (Ley de Seguridad Ciudadana – hereon LSC). The project, commonly known as the *Ley Mordaza* (Gag Law), has been widely criticised for its potential impact on the right to freedom of expression and assembly. The changes were approved by the PP's parliamentary majority and came into force on 1 July 2015.

Scholarly research on the effects of repression on political protest has found conflicting evidence when considering multiple contexts and types of repression. State repression can increase, decrease, or have no effect; and these effects vary when considering different timeframes and contexts (e.g., Francisco 1996, 2004; Gupta, Singh, and Sprague 1993; Gurr and Moore 1997; Hibbs 1973; Lichbach and Gurr 1981; Muller 1985; Rasler 1996; Davenport 2007). Most of the standing research has dealt with protest event analysis, thus considering group action and a broad operationalization of government repression that includes police coercion against demonstrators, arrests, banning assemblies, press censorship and martial law. This study is based on the particular political situation in Spain, where the change to the LSC was closely linked to the incumbent's reaction to the crisis and consequently became a highly polarised issue. The experimental design leverages the particular conditions for policy reform in Spain where changes to the LSC named four types of actions as very serious offenses punishable with substantial fines.

Repression is taken as the lawful attempt to deter participation in contentious action. However, broad mobilisation against anti-austerity policies has involved violent clashes and cases of police brutality against protesters. These cases have received unprecedented media attention and have therefore been closely related to citizens' reactions to the LSC.
We use an experimental design in order to manipulate public reactions questioning the legitimacy of the LSC for its potential impact on freedom of expression and rights to assemble. We also use factual data on the first cases in which the law has been enforced and the handed to protesters in order to prime threat and cost, respectively. We aim to shed some light on the mechanisms underlying individual responses to repression, in order to extend previous findings in three ways: (1) provide causal evidence for non-violent forms of protest in democratic contexts following survey-based studies (Opp & Roehl, 1990) (2) determine the role of attitudes toward protest and emotional reactions to repression in explaining reactions to repression; and (3) examine the contextual effect of public perceptions regarding the legitimacy of legal state repression.

[8] Data from the yearly reports on protest events and civil disobedience from the Home Office in Spain reveal an important peak of contentious activity in 2009 coinciding with austerity measures, and a minor rise in police interventions, arrests and street violence since then.

The experiment provides evidence of how far the perceptions of the illegitimacy of repression influence people's willingness to demonstrate and attitudes towards methods of protest. It also taps the emotional reactions to the threat of repression in order to test how fear and anger affect the intention to take actions against the LSC and to get directly involved in online campaigns by signing petitions and spreading the call through social networks.

Theory

Research on the behavioural effects of repression has a long tradition and has investigated multiple forms of repression and its outcomes. Studies of social movements as well as research on violent conflict have built multiple theoretical models and have carried out vast empirical research (for a complete review see Earl 2011). Multiple results regarding the effects of repression point to the importance of the contextual determinants of reactions to repression. This is the way to explain deterrence or withdrawal from political action in some cases, and backlash or radicalising effects in others, where the repressed increase their mobilisation in response to repression. Standing research deals with important methodological challenges for studying repression, considering the endogenous nature of the challenge-repression-response dynamic and the need to take into account the timeframe of reactions. This has led to approaches that deal with consequences of repression and those that look for the explicative factors of repression. The former have been widely guided by a reversed U-curve model where increasing political violence or dissent leads to repression, which consequently diminishes government-challenging behaviours (Gurr 1969; Muller 1985; Weede 1987). The latter have focused on how increased dissent turns into repression; they refer to this as the threat-response theory (Earl, Soule and McCarthy 2003) and propose a law of coercive responsiveness (Davenport 2007).

Most of the research on repression and dissent is based on protest event data and time series analysis. This approach emphasises explanations of the political opportunity structure and consequently provides a rich understanding of contextual level factors. Individual level data has been used as well for case studies on particular issues (Opp & Roehl 1990) and causality has been addressed through instrumental variable models (Ritter and Conrad 2015) and survey experiments with committed activists (Lawrence 2013). However, most of the research has largely ignored political attitudes. We suggest that attitudinal consequences of repression are also central for understanding the effects of repression. Attitudes have not only been consistently identified as precursors for behaviour but they are a critical goal when struggling for political change. We therefore expect that attitudes towards protesters change within similar logics than those of the behavioural reactions, and, most importantly, that they act as mediating factors between repression and behavioural responses.

Following on Opp and Roehl (1990) in the aim of identifying the conditions under which repression leads to withdrawal or mobilisation, we propose two conditions to explore the effects of repression on mobilisation: first, we test their assertion that repression is likely to fuel resistance when it is regarded as illegitimate, and second, we test how perceived threats and costs associated with repression affect individual perceptions and reactions.

We test a conception of legitimacy which is not based on the "legalistic" nature of State action opposed to violent actions, but on the illegitimacy associated with low popular support for the LSC and the allegations of potential human rights violations in the law.
In this sense, we expect that differences in the framing of the legitimacy of the legislative changes in the LSC will affect responses to repression. We thus expect legitimacy framing to have a demobilising effect and conversely, illegitimacy framing to provoke action and support for contentious politics.

Regarding the threats and costs associated with repression, we follow the rationalist paradigm which envisages a deterrent effect on behaviour when individuals face higher costs. However, we are particularly interested in studying the conditions and individual traits that may moderate this effect, as well as the mechanisms underlying the effects of threats on political action.

Threat and cost
H1 Threat/Cost produce fear and hence withdrawal/disengagement
H2 Threat/Cost produce anger hence support/engagement

Legitimacy
H3 Perceived illegitimacy of repression produces positive attitudes toward transgressive actions (confrontation of threatening policy) and hence mobilisation.
H4 Perceived legitimacy of repression produces fear/ negative attitudes towards transgressive actions (persuasion/alignment with threatening policy) and hence withdrawal.

Design

This study is based on an experimental 3x3 between-subjects design. It is a lab experiment with individual treatment. Participants were randomly assigned to one of nine conditions plus a control group: Threat (prime on repression) + Cost (prime on fines) + No prime x Legitimacy of repression (with 3 treatment groups) and one control group of 9.

[9] Treatment wording is presented in Appendix 1

TABLE 2 – Treatment design

		Legitimacy		
		Legitimate repression - Law justified in order to prevent violence	Illegitimate repression – Human rights violations	Control – No legitimacy frame
Threat	Prime on repression - arrest of demonstrators to enforce the measures of the LSC			
Cost	Prime on fines - example of the fines established in the LSC: 601€ to 30.000€ for demonstrating in front of public buildings or for refusing to disband a gathering or demonstration.			
Control	No prime			

The treatments administered were the following:

Threat
Prime by mentioning arrests on account of the new law and the possibility of jail sentences: *Currently, the first demonstrators have already been arrested under Article 505 of the new Penal Code. The Code, as amended by the Public Safety Act, contemplates sentences of six months to one year in prison for those who "severely disturb the order [...]".*

Cost
Prime by mentioning fines for a particular type of offense: *The law considers that demonstrating in front of the Congress, the Senate or regional parliaments or refusing to dissolve a gathering or demonstration are serious offenses, and establishes fines of 601 € to 30,000 € for such actions.*

Legitimacy
Prime by mentioning policy arguments with emphasis on security reasons: *Spain has approved changes to the Public Safety Act. The changes have been justified by arguing that they seek to ensure that the rights and freedoms of citizens can be exercised safely and without violence.*
The project promoters seek the proper functioning of democratic institutions. They emphasize the need to especially protect the most vulnerable and safeguard fundamental rights and especially the right to demonstrate. The change it is expected to ensure that demonstrations occur in an atmosphere of greater freedom, the protesters are more protected from violence and vandalism, and police intervention is always gradual and proportionate.

Illegitimacy
Prime by mentioning policy arguments with emphasis on security reasons: *Spain recently approved changes to the Public Safety Act. The changes have been criticized, accused of posing restrictions on freedom of assembly and participation recognized in the constitution, as well as on civil and political rights set out in the Universal Declaration of Human Rights. Opponents of the project have shown concern in many national and international institutions regarding the sanctions and restrictions on social protest that the law seeks to impose. With the changes, the exercise of freedom of expression and peaceful assembly will be limited to the extent that they give broad powers to prevent and punish dissent.*

In order to tap individual reactions to repression, we used both attitudinal and behavioural measures. Attitudinal measures include the intention to protest and support for actions and protesters. Behavioural measures include online participation such as signing petitions and posting them on Facebook or Twitter.
Subjects were asked whether they would take action in any of six repertoires to act on standing campaigns that either supported or rejected the LSC, according to their position on the issue.

We presented the behavioural questions (invitation to sign petitions and social media diffusion) with a reference to current campaigns. This was expected to provide external validity, but also to introduce an upward bias on our results towards mobilisation instead of withdrawal. The choice of multiple organisations promoting petitions or the reference to “Several citizen platforms of various ideologies” aimed at reducing the importance of the mobilisation source when generating expectations for acting against repression. Intention to mobilise was high for all the actions except for camping in public squares.

Results

TABLE 2. Number of observations per experimental condition

	Legitimacy			
	Legitimate repression - Law justified in order to prevent violence	Illegitimate repression – Human rights violations	Control – No legitimacy frame	Total
Threat	26	26	26	78
Cost	26	26	26	78
Threat+cost	26	26		52
Control	26	26	26	78
	104	104	78	286

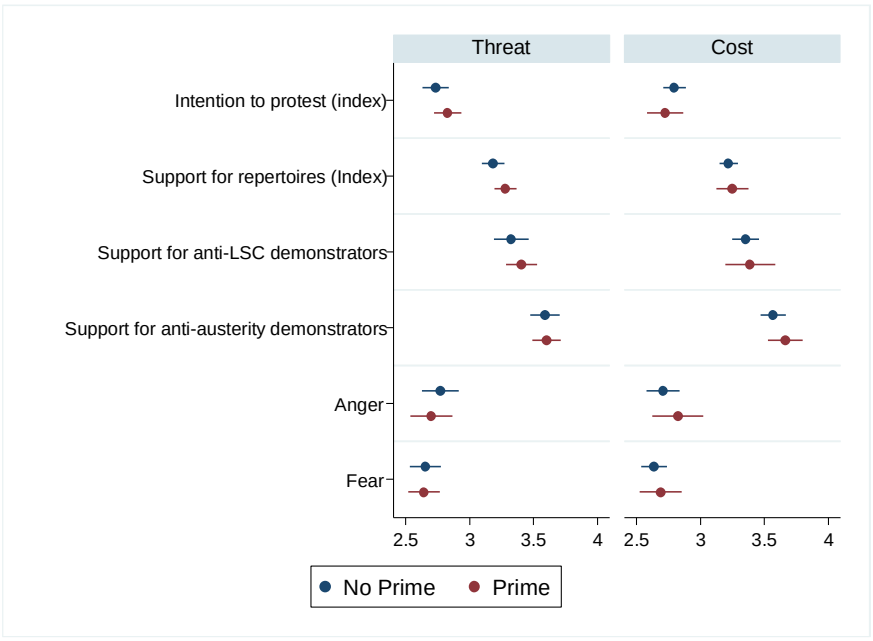
TABLE 3. Randomisation

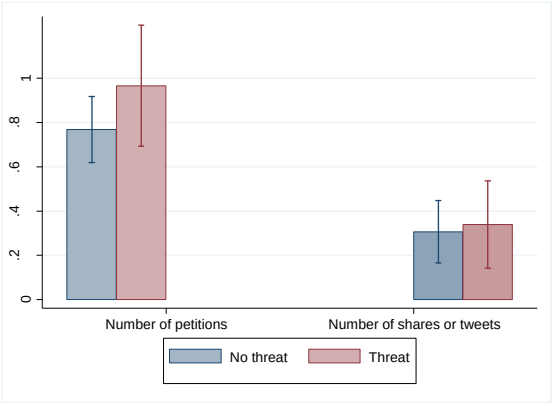
	Illegitimate		Legitimate		Threat		Cost	
Age	-0.040	(0.071)	-0.014	(0.069)	0.088	(0.060)	0.044	(0.060)
Gender	0.218	(0.309)	-0.360	(0.316)	0.316	(0.274)	0.267	(0.274)
Education	0.098	(0.132)	0.079	(0.130)	-0.138	(0.117)	0.044	(0.111)
Ideology	-0.019	(0.058)	0.050	(0.056)	-0.015	(0.050)	0.023	(0.049)

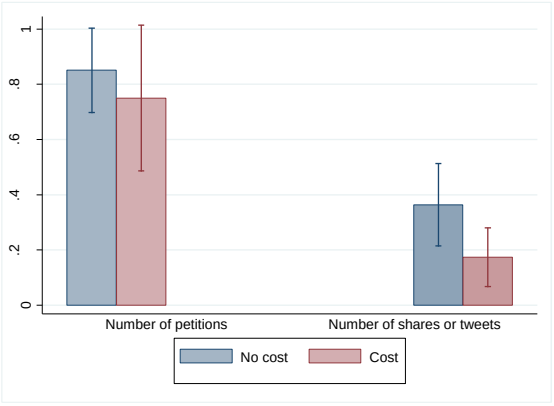
Table 3 shows no significant differences between treatment groups in terms of age, education, gender or ideology. This implies that the experimental set-up worked fine and it is possible to move on to the substantive results.

The first panel in Figure 1 shows the main effects for threat and cost treatments for our attitudinal indicators of mobilisation (intention to demonstrate and support for demonstrators and actions) and the second panel shows the results for the behavioural outcomes (petitions and social signal or expressive behaviour). The results for cost and threat groups provide evidence that the impact of threat and cost on support for actions and actors is quite similar and in the expected direction. However, both treatments increase the intention to protest, running opposite to the rationalist expectation of withdrawal under higher costs or threat conditions. The effect on issue-specific behaviour regarding the LSC (petitioning and social signal) is different for both groups. Individuals in the threat condition prefer not to support the anti-LSC campaign, while those in the cost prime (information on fines) sign more petitions and share them more on social media than those with no cost treatment. A third element of perceived risk may be mediating the effects as subjects perceiving the threat of being arrested may have a stronger disincentive than those perceiving the probability of being fined.

FIGURE 1 – Main effects for cost and threat treatments

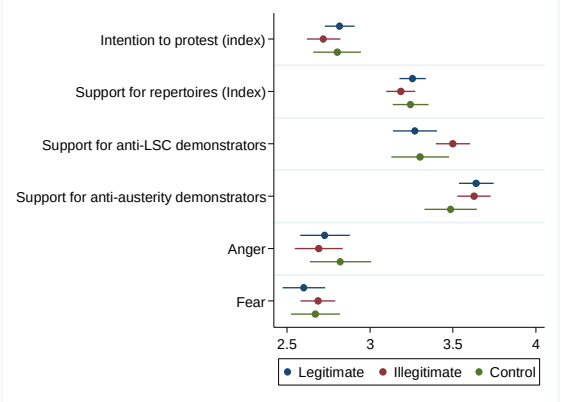


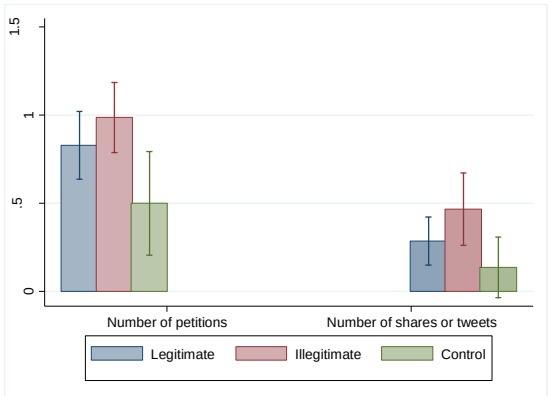




Mean differences; bars represent 95% confidence intervals.

FIGURE 2 – Main effects for legitimacy framing treatments





Mean differences; bars represent 95% confidence intervals.

Discussion

This paper revisits a central question on contentious political action by examining whether repression deters participation or has a backlash effect by further mobilising action. The experimental setup aimed to examine individual responses to fines, risk of getting arrested and a less material threat caused by the public perception of protest. In the context of a lab experiment it was possible to measure emotional reactions, attitudes and behavioural outcomes in order to draw conclusions regarding the causal effects of repression and the mechanisms underlying individual responses.

Our results provided innovative individual-level causal evidence on the impact of political repression on political engagement and support for contentious politics. Our focus on repression in reference to actual government responses to contentious politics in the context of the economic crisis in Spain provides external validity to our experimental design.

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Lab experiment 6. Deprivation and preferences for redistribution

Introduction

This lab experiment tests the effects of various forms of deprivation on the subjects' preferences for redistribution. The experiment addresses two research questions. First, what is the impact of feelings of deprivation on individual preferences about redistribution? Second, do different sources of deprivation have different impacts on preferences for redistribution? To answer these questions, it manipulates sources of deprivation (based on luck, merit, or family background) and distinguishes between in-group and out-group deprivation. Crossing the three sources of deprivation with the in-group/out-group distinction leads to a 3x2 design.

Theory

The theoretical baseline is that the economic crisis could be conceptualized as a form of relative deprivation, and thus it could increase feelings of unfairness (Kawakami & Dion, 1993 ; Kelly, 1993) and affect preferences for redistribution. We differentiate between different sources of deprivation because not all relative deprivations are equal. Economic failure or success based on luck, on family background, on personal ability or on merit may not have the same value for citizens (Durante et al., 2014). Individuals are thus not simply concerned about deprivation *per se*; they also want to understand the justification of the inequality (Alesina & Angeletos, 2005). The cognitive processing does not stop after the deprivation as individuals keep looking for its source.

Like Ku and Salmon (2013: 112), we believe that "the fairness in the procedures or mechanisms through which individuals believe initial positions or roles in society are determined" could influence citizens' behaviour. And as Brown-Iannuzzi et al. (2015) notice, the value of meritocracy plays an important part in the "judgement" of economic failures or successes. They predict that, *inter alia*, citizens who "performed better would support less redistribution" (Brown-Iannuzzi et al., 2015: 17). To put in others words, merit could justify less support for redistribution because it could be seen as fair by the citizens. Conversely, we could imagine that an event leading to deprivation based on luck or on family background (i.e. unfair reasons) leads to more support for redistribution.

It seems that this rationale is confirmed by one part of the literature. For example, in one of their experimental treatments, Brown-Iannuzzi et al. (2015) indicated to one group that they "performed better than the 89% of all players in the game" and found that these subjects were less supportive of redistribution than the other groups. In addition, Durante et al. (2014) manipulated different methods of income allocation. These were based on: socioeconomic background, a knowledge quiz, a skill game (Tetris), or were randomly assigned. They found that arbitrary and background methods of income allocation led to groups supporting higher tax rates compared to other groups where the allocation was based on merit. Individuals in the latter group thought that they deserved a low income tax rate as they earned their income due to their skills and knowledge and they perceived this allocation system to be fair.

In addition, we think that the effect of this factor could be reinforced by another factor: group identity. As Ku and Salmon (2013) notice, there is an *in-group favouritism bias* that could partly explain some preferences. We predict that an individual will support more redistribution in favour of his/her in-group because identification leads individuals to take care of their own group first. Group identification can be a strong predictor. For example, Klor and Shayo (2010: 270) found that "over a third of the subjects systematically deviate from monetary payoff maximization towards the tax rate that benefits the average member of their group. That is, they tend to vote for high levels of redistribution when their group is relatively poor – even if they themselves are relatively rich". The authors also underline that there is a threshold and that this phenomenon only works when the cost is not too high. In a same way, Shayo (2009) demonstrates that identification could influence preferences for redistribution. One of his findings (simplified here), *inter alia*, concerns two kinds of identification: class identification and nation identification. Identification with the lower class leads to support for more redistribution, conversely to nation identification, which leads to support less redistribution.

To conclude, we could say that each factor could influence the preferences for redistribution (and especially their interaction). Following all the elements above, we can formulate the following hypotheses:
H1: Deprivation based on luck engenders stronger preferences for redistribution than deprivation based on merit.
H2: Deprivation based on family background engenders stronger preferences for redistribution than deprivation based on merit.
H3: In-group deprivation leads to higher preferences for redistribution than out-group deprivation.

Design

Subjects are given a story about the financial stability of the University, referring to the balance between students' fees and professors' salaries. They are then given six different scenarios for dealing with budgetary cuts foreseen by the Canton (the University is managed by the Canton), corresponding to the six treatments groups: one with a substantial increase in students' fees (three times more) with no other conditions, one with a substantial cut in professors' salaries (30 per cent less) with no other conditions, one with a substantial increase in fees (three times more) for students below a certain level of achievement, one with a substantial cut in salaries (30 per cent less) for professors below a certain level of achievement in terms of students' evaluations, one with a substantial increase in fees (three times more) for students from rich families, and one with a substantial cut in salaries (30 per cent less) for rich professors. We choose to use the students/professors groups as the in-group and out-group because social comparisons works better with the *immediate* environment than with the *global* environment (Brown-Iannuzzi et al., 2015). The effect of the treatment was reinforced by stating that the Rector of the University and the professors, and respectively the students' associations, agree with this decision.

Manipulation checks are performed on the following variables: perceived deprivation, collective identity, source of deprivation, and perceived fairness of deprivation. Mediators such as emotions and group efficacy are included.

TABLE 1. Treatments

Groups	**Manipulation**
Luck/in-group	Identity: students 1000 CHF increase in university fees No deprivation for professors
Luck/out-group	Identity: professors 30 per cent decrease in salary No deprivation for students
Merit/in-group	Identity: students 1000 CHF increase in university fees for students who have an average grade lower than the average grade of the other students No deprivation for professors
Merit/out-group	Identity: professors 30 per cent decrease in salary for professors whose students' evaluation is equal or lower than 3 on a 0-4 scale No deprivation for students
Family/in-group	Identity: students 1000 CHF increase in university fees for students whose parents' monthly income is higher than the average income of all the students' parents No deprivation for professors
Family/out-group	Identity: professors 30 per cent decrease in salary for professors who have a yearly income higher than one million CHF No deprivation for students

We use two dependent variables. The first is categorical and the respondents answered the following question: "Imagine two people, one of whom earns a salary two times higher than the other. Which of the three following statements is closer to the way in which they should be taxed in your view?" The three possible answers are: "They should both pay the same amount of taxes", "They should both have taxes imposed on the same quota-part of income", or "The person who earns the most should have taxes imposed on a higher quota-part of income". The second dependent variable is continuous and the subjects answered the following question on a 0-10 scale: "To what extent do you agree with the following statement (0-10 scale): Governments should take measures to reduce differences in income among people."

Results

Table 2 shows the frequencies of the subjects in each treatment group.

TABLE 2. Experimental groups frequencies

	Subject of deprivation		Total
Deprivation	Ingroup (stud.)	Outgroup (prof.)	
Luck	33	31	
Merit	36	45	
Family	35	41	
Total			221

Table 3 shows that the allocation method is random. There are only non-significant results and this proves that the experimental groups do not hold specific characteristics. The subjects are distributed in groups due to chance.

TABLE 3. Multinomial logistic regression

	(1)	(2)	(3)	(4)	(5)
Variables	Lu*Out	Me*In	Me*Out	Fa*In	Fa*Oit
Sex	-0.341	-0.595	-0.670	-0.0999	0.173
	(0.611)	(0.578)	(0.555)	(0.599)	(0.589)
Age	0.0758	0.0580	0.0571	0.0923	0.0156
	(0.0729)	(0.0735)	(0.0700)	(0.0708)	(0.0753)
Political interest	-0.0158	0.145	-0.0451	0.0133	0.0664
	(0.337)	(0.328)	(0.311)	(0.324)	(0.312)
L-R Scale	0.00549	-0.133	-0.0348	-0.116	-0.174
	(0.127)	(0.124)	(0.116)	(0.125)	(0.121)
Trust in institutions	-0.0658	0.128	0.0699	-0.0355	-0.113
	(0.162)	(0.158)	(0.150)	(0.159)	(0.152)
Constant	-0.820	-0.767	0.00322	-1.129	0.903
	(2.502)	(2.463)	(2.337)	(2.435)	(2.432)
Observations	221	221	221	221	221

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1 Dep. Var.: Treatments where the Luck*Ingroup is the reference category

In order to give an initial idea about the relationship between the treatments and the preferences for redistribution, we present a cross tabulation (table 4). The columns correspond to the

treatments and the rows are the three possible answers to this question: "Imagine two people, one of whom earns a salary two times higher than the other. Which of the three following statements is closer to the way in which they should be taxed in your view?" As we can observe on this table, it seems that there is no clear relationship because there are no significant differences between groups and the frequencies are quite the same across cells. To put it in other words, it seems that our hypotheses (H1, H2, H3) are not confirmed. We also have to take note of the low frequencies in the first row that could strongly influence the statistical test.

TABLE 4. Cross tabulation: Treatments x preferences for redistribution

Cell percentage (N)	Lu*In	Lu*Out	Me*In	Me*Out	Fa*In	Fa*Out
They should both pay the same amount of taxes.	.90 (2)	0 (0)	1.36 (3)	0.45 (1)	0.45 (1)	1.81 (4)
They should both have taxes imposed on the same quota-part of income	6.79 (15)	3.62 (8)	6.33(14)	8.14 (18)	6.79 (15)	5.43 (12)
The person who earns the most should have taxes imposed on a higher quota-part of income.	7.24 (16)	10.41 (23)	8.60 (19)	11.76 (26)	8.60 (19)	11.31 (25)

Pearson chi2=10.36 ; p=.409 ; Cramer's V=.15

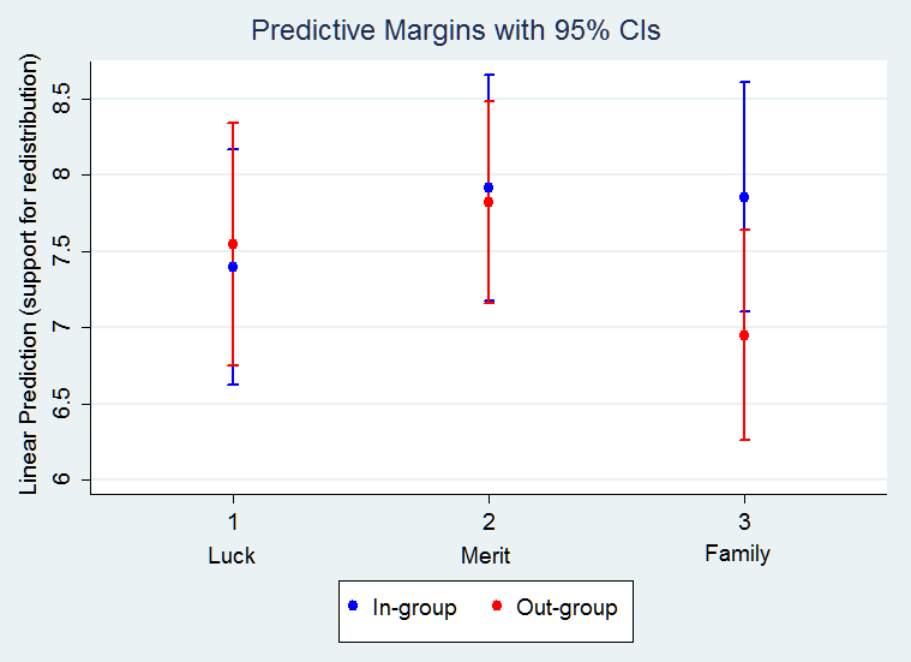
To assess the relationship between the two factors and the preferences for redistribution in a more precise way, we can use the second measure or the preferences for redistribution. The question is "To what extent do you agree with the following statement (0-10 scale): Governments should take measures to reduce differences in income among people" where 0 means "totally disagree" and 10 "totally agree". Using an ANOVA where the independent variable is the interaction between the two factors, we do not find any statistical differences between the groups ((5,215)=1.06 , p=.39). Consequently, H1, H2 and H3 are not confirmed. The results are presented in table 5. As is often the case, it is easier to understand a statistical test with a graph. The following one (Figure 1) shows the relation between the two factors and the level of support for redistribution.

TABLE 5. Mean comparison

Treatments	Mean	Std. Dev.
Lu*In	7.39	2.46
Lu*Out	7.55	1.82
Me*In	7.92	2.33
Me*Out	7.82	2.12
Fa*In	7.86	2.05
Fa*Out	6.95	2.58

F-test: (5,215)=1.06 , p=.39

FIGURE 1. Linear predictions of the support for redistribution regarding the 2x3 factorial design



As we can see in this figure, deprivation based on luck does not engender preferences for redistribution any stronger than deprivation based on merit (H1). Also deprivation based on family background does not engender preferences for redistribution any stronger than deprivation based on merit (H2). Contrary to our expectations, when the in-group is deprived, the preferences for redistribution are no higher than when the out-group is deprived (H3). Finally, there is no conditioning effect due to the identity treatment.

Now we turn to the manipulation checks that are exposed in table 6. We have to run these tests because we did not find any significant results in hypothesis testing. The following tests show that this absence of effects on the dependent variable is not due to the treatments failing. In fact, we can observe that the treatments work to manipulate subjects' feelings. To put it in other words, it proves that the relationships in our hypotheses are not significant because there are not relationships and not because the treatments fail to manipulate the respondents.

TABLE 6. Manipulation check

Manipulation check variables	Lu*In Mean	Lu*Out Mean	Me*In Mean	Me*Out Mean	Fa*In Mean	Fa*Out Mean	F-Test
Collective identification	1.77	1.59	1.76	1.69	1.77	1.65	$F(5,215)=.31^{n}$
Group efficacy	3.12	2.82	3.40	2.91	3.02	2.74	F(5,215)=6.31*
Unfairness	3.16	2.35	3.40	2.69	2.74	2.10	F(5,215)=18.62*
Perceived deprivation (indiv.)	3.79	3.29	3.64	3.24	3.4	3.02	F(5,215)=7.44*
Perceived deprivation (coll.)	3.76	3.29	3.69	3.18	3.37	2.85	F(5,215)=8.63*
Source of deprivation (merit)	1.85	1.77	2.72	2.51	1.54	1.93	F(5,215)=8.07*
Source of deprivation (soc. origins)	2.15	2.00	2.08	1.33	3.09	2.29	F(5,215)=12.85*

* p<.001

We will briefly describe the implications of each manipulation check. The first test on *collective identity* has non-significant results and means that the treatments do not reinforce collective identity directly. However, we can observe that means are slightly higher in the in-group treatments than in the out-groups treatments. Even if individuals do not identify more with other students, we can observe that the test on *group efficacy* is significant. Students think that they can "change things" together when their in-group is deprived. In that sense, we can say the treatments works because they reinforce group efficacy and the saliency of the in-group.

The students also judge the deprivation as more *unfair* when it concerns their in-group. The merit condition is the most unfair condition according to the participants. This means that the treatments manipulate the feeling of injustice. We also need to check if the participants perceived the deprivation. The *perception of deprivation* (at the individual and collective level) is always stronger when the in-group is deprived and we also notice differences across the sources of deprivation. Finally, the subjects understood the *source of deprivation* well. They did not consider that luck and family conditions were due to merit (contrary to the merit condition) and they considered that the family treatment was due to social origins (contrary to the luck and merit conditions).

Discussion

Even if the hypotheses are not confirmed and the results are not significant, the present findings are not pointless. First of all, the very interesting thing is that the experimental treatments effectively manipulate the feelings of the individuals but not their policy attitudes. When the students are deprived, they report higher levels of injustice and group efficacy. In general, these two feelings are powerful predictors of political behaviour but in this case it seems that feelings do not translate into political attitudes. The participants know that the deprivation is extensive

and unfair and that they could change the game if they acted collectively, but they do not support more redistribution.

One possible explanation is that students do not relate the *particular* deprivation of their in-group to the global welfare system. They probably do not see the indirect link between the increase in fees and the possibility of resolving this situation with more redistribution in their favour. Sometimes, individuals have some difficulties linking their personal situations to the state's macro policies. As Popkin notices, "even voters who have lost their jobs during a recession do not automatically connect their unemployment with the government and its policies" (Popkin, 1994: 31). To put it in a nutshell, students may judge the university's decision as unfair but they do not consider that the problem is linked to the redistribution system.

Another possible explanation is the sample bias. As we noticed before, a large part of the sample is in favour of redistribution (see table 5). If we consider the following dependent variable "To what extent do you agree with the following statement (0-10 scale): Governments should take measures to reduce differences in income among people" where 0 means "totally disagree" and 10 "totally agree", 50% of the sample answered '7' or more and only 10% of the sample answered between '0' and '4'. This skewed distribution could potentially influence the results since there is not enough variation on the dependent variable.

Finally, we should note that the "merit" condition systematically differs from the other conditions. This treatment leads to higher levels of unfairness and anger (results not shown), contrary to our expectations. We thought that the "luck" treatment would elicit more anger and feelings of unfair deprivation but it is not the case. This result indicates us that the subjects are also sensitive to the universality of the deprivation. Indeed, in the luck condition, the deprivation is random and can be seen as unfair, but the deprivation concerns all the students. However, in the "merit" condition, the deprivation does not concern all students but only those with the poorest academic performances. Consequently, participants are sensitive to the merit condition because it concerns only a few students and this is probably why they judge it to be more unfair than the other conditions.

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Appendix

Descriptive statistics

Variables	**Summary**
Manipulation check	
Collective identification[10]	α=.87 ; M=1.70 ; SD=.80 ; Range=1-4(strong identification)
Group efficacy[11]	α=.88 ; M=3.01 ; SD=.64 ; Range=1-4(strong feeling of efficacy)
Unfairness[12]	α=.91 ; M=2.73 ; SD=.80 ; Range=1-4(strong feeling of injustice)
Perceived deprivation (indiv.)[13]	M=1.62 ; SD=.66 ; Range=1-4(strong feeling of deprivation)
Perceived deprivation (coll.)[14]	M=1.67 ; SD=.76 ; Range=1-4(strong feeling of deprivation)
Source of deprivation (merit)[15]	M=2.08 ; SD=1.06 ; Range=1-4(deprivation due to merit)
Source of deprivation (soc. origins)[16]	M=2.13 ; SD=1.11 ; Range=1-4(deprivation due to soc. origins)
Dependent variables	
Pref. for redistribution (cat.)[17]	(1) n=11; %=4.98 ; (2) n=82; %=37.10 ; (3) n=128; %=57.92
Pref. for redistribution (cont.)[18]	M=7.58 ; SD=2.25 ; Range=1-11

[10] Refers to variables: identity_5 identity_6 identity_7 identity_8 (cf. questionnaire)
[11] Refers to variables: grpeff_1 grpeff_2 grpeff_3 grpeff_4 (cf. questionnaire)
[12] Refers to variables: depfair_1 depfair_2 depfair_3 depfair_4 depfair_5 depfair_6 depfair_7 (cf. questionnaire)
[13] Refers to variable : depri_1 (cf. questionnaire)
[14] Refers to variable : depri_2 (cf. questionnaire)
[15] Refers to variable : depsource_4 (cf. questionnaire)
[16] Refers to variable : depsource_5 (cf. questionnaire)
[17] Refers to variable : post_red_3 (cf. questionnaire)
[18] Refers to variable : post_red_2 (cf. questionnaire)

Survey experiment 1. Economic crisis and national identification

Introduction

Over the last few years many European countries have gone through a deep economic crisis. Some of these countries have also witnessed the electoral success of existing and new radical right wing parties. Media commentators have interpreted the success of these parties as the symptom of a more general *malaise*, nationalism, which has mainly touched those who are in a situation of economic vulnerability.

This quick diagnosis of the phenomenon matches cross-country evidence showing that poorer people tend to be more strongly attached to their nation than wealthier people (Shayo, 2009). The explanation behind this cross-country regularity relies on the idea that individuals' identification with a given group is based on the relative status of the group compared to other groups (Shayo, 2009). According to this, poor people would choose to identify with the nation, rather than with their socio-economic group, because they consider the nation as having a higher status.

The relative status of groups is shaped by comparison to other groups (Hogg and Abrams 1998). Nevertheless, the status of a group or -for the purpose of this research- the status of the nation can vary over time. Exogenous shocks, such as economic crises, hinder the nation's international and internal prestige, and damage its status, making national identity less attractive to people. Governments always try to offset the negative impact that economic crises have on citizens' assessment of the nation by promoting nationalism to divert citizens' attention from these problems (Solt, 2011). This can be done by emphasizing aspects where the nation excels (sports, culture, etc.), or by blaming others for the bad shape of the economy, e.g. the European Union (EU) or the International Monetary Fund (IMF). Previous research has extensively analysed the factors that contribute to making supra-national institutions and, in particular, the EU responsible for the crisis (Hobolt & Tilley, 2014). Less is known, however, about the spillover effects that this strategy has on citizens' nationalist attitudes.

This paper enters this discussion by asking three questions: does nationalism increase with economic crisis? Do exonerative strategies pointing to the responsibility of a significant other for the economic crisis increase nationalism? Is the effect of economic crisis unconditional or is it stronger for those who are more seriously hit by it? To answer these questions, this paper seeks to assess the impact that the loss of economic status of the nation and the "blaming the EU" strategy has on three attitudes: nationalism, national identification and national pride. The main expectation in the paper is, however, that heterogeneous effects prevail, and that people who are in a situation of economic vulnerability or belong to a low-status economic group become more nationalistic when the economy deteriorates and vice versa. To test this, the paper focuses on Spain, a European country that has been heavily hit by the economic crisis.

In the following pages, we briefly revise the literature that has directly or indirectly dealt with this topic, and we present the different expectations that can be derived from the literature. The experiment design and the results of the analysis are then presented. The final section in this paper discusses the main findings of the analysis.

Theory

Despite the established idea that nationalism increases with economic hardship, empirical research sustaining this argument is rather scant, and contradicts this view: the contraction of GDP and the increase in unemployment rates of a country negatively impact citizens' attachment to the nation (Ruiz Jiménez, Echavarren, & Aquino Llinares, 2016).

Three theories provide relevant insights into the relationship between economic crisis and nationalism: the group conflict theory, the social identity theory (SIT) and the diversionary theory.

The first theory defends that those individuals who are exposed to ethnic competition, due to their vulnerability in the job market, are also more likely to develop not only anti-immigrant attitudes (Scheve & Slaughter, 2001; Ortega & Polavieja, 2012, Kunovich, 2013; Lancee & Pardos-Prado, 2013; Polavieja 2016), but also ethno-nationalist attitudes.

The social identity theory calls into question the commonplace belief that nationalism increases with economic crisis. According to the SIT, individuals prefer to identify with high-status groups than with low-status groups (Hogg & Abrams, 1998, p. 14). So individuals' identification with the group should be weaker when the nation's economy deteriorates, as it loses status. While this expectation has not been directly examined, research has shown that individuals with different economic backgrounds have different levels of attachment to the nation (Shayo, 2009). This empirical regularity has been explained by the fact that poor individuals perceive the national identity as an identity with a higher status than their own socio-economic group (relative status), and feel closer to the typical individual in the nation (proximity) (Shayo, 2009).

The diversionary theory defends that states use nationalism to divert citizens' attention from economic inequality, to avoid social unrest (Solt, 2011). Although the theory originally focuses on economic inequality, it also applies to contexts of economic hardship. In countries that perform badly in economic terms, governments have a strong incentive to distract citizens' attention from harsh economic problems, and nationalism appears as a successful instrument to accomplish this endeavour. Unlike the conflict theory or the social identity theory, the diversionary theory does not predict a heterogeneous effect of the economic crisis on individuals' nationalism, as long as the tools used by the state to promote nationalism do not discriminate among groups of citizens (Solt, 2011).

While these three theories have been mainly tested in static terms, they also have dynamic or long-term implications that can help us hypothesise about the relationship between economic crisis and nationalism, and on the heterogeneous effects that economic crisis can potentially have on people with different economic backgrounds.

Because economic crises intensify socio-economic vulnerability, ethno-nationalist responses to the economic crisis could spread around at these times, especially among those who are more seriously hit by them. So, according to the group conflict theory, nationalism should increase

during these economic times, and the crisis should particularly affect those who are in a more vulnerable situation (e.g. unemployed people).

Economic crises also depreciate the appeal of the nation, because of the loss of international and internal prestige. This effect should be different, however, for individuals with a different economic background. People belonging to a high-income group or to the upper social class should become less attached to the nation because of the nation's loss of status, and because they become more distant to the typical member of the nation. However, people belonging to low-income groups or to the lower social class should become more attached to the nation because they become closer to the mean citizen, an individual who has lost economic status due to the economic crisis.

Countries' incentives to promote nationalism should also increase when the economy deteriorates, in order to appease potential revolts. But because the state's promotion of nationalism does not distinguish across groups, the increase of nationalism should occur in every socio-economic group.

TABLE 1. General expectations regarding the effect of economic crisis on nationalism

Theories	Main effects	Conditional effects
Conflict Group	Increase	Most vulnerable individuals to labour market competition should become more nationalist
Social Identity	Decrease	Individuals belonging to low-income groups or to the lower social class should become more nationalistic, individuals belonging to high-income groups or to the upper social class should become less nationalistic.
Diversionary	Increase	Unconditional

Against the expectations that can be derived from these three theories, Brubaker has argued that the relationship between economic crisis and nationalism is not a direct one, and depends on how "economic troubles are framed or interpreted" (Brubaker, 2011, p. 96). This claim is backed by recent research in the case of Greece showing that the discourse adopted by the Greek "political and media elites has been instrumental in framing responses to the economic crisis in patriotic terms" (Glynos & Voutyras, 2016, p. 201). Nationalism can appear as a response to out-group threats, where the out-group can be either foreign workers, foreign goods, foreign capital or international institutions such as the EU that can be presented as "imposing an unjust and punitive regime of austerity on the national economy" (Brubaker, 2011, p. 95).

Building on the research discussed here, we present the following hypothesis:

> *H1*. Economic crises produce opposite effects on the nationalistic attitudes of people with opposed economic background. These opposite effects cancel each other out so that the economic crisis' main effects on nationalistic attitudes fade away.

H2. More vulnerable people in the labour market (e.g. the unemployed) adopt more nationalistic attitudes during economic crises.

H3. Economic crisis makes people with a higher income or people belonging to the upper or upper-middle class less nationalistic (*hypothesis 3a*), and people with a lower income or people belonging to the lower social class more nationalist (*hypothesis 3b*).

H4. These heterogeneous effects should be accentuated when the responsibility of the crisis is attributed to a third party. More specifically, people with a lower income or people belonging to the lower class should adopt more nationalist attitudes when exposed to a "blaming the EU" strategy (*hypothesis 4a*). Conversely, people with a high income or people belonging to the upper or upper-middle class should become less nationalist (*hypothesis 4b*).

Design

As mentioned in the introduction, the focus of interest of this paper is to assess whether the loss of economic status of the nation and the attribution of responsibilities for the economic crisis to the EU modify nationalist attitudes: nationalism, national identification and national pride. But for Ruiz Jiménez et al. (2016), no previous research has examined how the contraction of GDP and the increase in unemployment levels affect nationalist attitudes. Actually, this paper only focuses on national attachment, and it leaves out other nationalist attitudes. Here we adopt a different strategy to the one followed by these authors and we propose a survey experiment where the negative economic status of the nation, and the responsibility of the EU in the economic status of the nation is primed to learn about the effect of these primes on nationalism.

The experiment presented here is part of the "Livewhat: Living with Hard Times" Project. This project examines European citizens' responses to the economic crisis. As part of the project, an online survey was carried out between the 1 June and the 7 June 2016 to a sample of over 2000 Spanish citizens aged 18 and older. The sample included sex, age and education quotas. After answering a series of questions related to the participants' socio-demographic characteristics, and their political attitudes, participants in the survey were randomized in three experiments. Approximately one third of the sample (N=706) were assigned the present experiment. Before concluding the survey, participants completed a final set of common questions and were debriefed.

In the experiment, participants were randomly assigned to three different groups. The control group did not receive any kind of information. The first treatment group received a short text containing information about the loss of economic status experienced in Spain in the last few years, and about its effects on economic activity and unemployment. As previously mentioned, this treatment was intended to prime the economic status of the nation. The other treatment group received exactly the same text but, in addition, it also received information on the role that the budget cuts imposed by the European Union have had on the decline of the Spanish economy. This information was placed at the beginning of the text, and the goal of the treatment was to

provide a different frame for the economic crisis, making the EU responsible for the downturn in the economy. The two treatments were presented in an aseptic manner to avoid participants in the survey considering the source of information and the credibility of the information provided. After receiving this information, participants were asked to convey their opinion about the information just received. This request was expected to reinforce the impact of the treatment (see Table 2).

TABLE 2. Treatment wording

Groups	Wording
Negative Treatment	Please carefully read the following information. Between 2007 and 2014 Spanish GDP fell by 6.3 %. As a result, Spain went from the 9th position to the 14th position in the world economy ranking. The decline in GDP has had serious consequences on business and employment. Now please write two or three phrases with your opinion about the information you have just read
Negative treatment + making the EU responsible for the decline in Spanish economy	Please carefully read the following information. Because of the harsh cuts imposed by the European Union, the Spanish economy has contracted sharply in recent years. Between 2007 and 2014 Spanish GDP fell by 6.3 %. As a result, Spain went from the 9th position to the 14th position in the world economy ranking. The decline in GDP has had serious consequences on business and employment. Now please write two or three phrases with your opinion about the information you have just read.
Control	[no information displayed]

The treatment and control groups were then compared regarding their identification with Spain,[19] nationalism and national pride (dependent variables). Participants in the survey were asked about

[19] Participants in the survey were also asked about regional and European identification. These two alternative forms of identification are not examined here. Nevertheless, it was important to include them, and in particular regional identification, so that respondents from Catalonia, the Basque Country and Navarre with low levels of identification with Spain could express their feelings of attachment to a territory. Respondents were also asked about the salience of their national identity as compared to other identities. The variable did not work as expected, and produced no significant results. The analysis for this variable is not reported here.

the extent of their identification with Spain and about the extent of their nationalistic feelings (*españolismo)* using two 11-point scales. [20] After these two questions, participants were also asked about their national pride, from 1 "not proud at all" to 4 "very proud". The wording of the dependent variables read as follows.

TABLE 3. Treatment wording

Spanish nationalism - "españolismo"	The following scale measures how Spanish you feel ("españolismo"). Where do you place yourself?
Identification with Spain	We all feel more or less attached to the territory in which we live, but some feel more connected to some areas than others. Using the following scale, to what extent do you feel identified with Spain?
Pride in being Spanish	To what extent do you feel proud of being Spanish?

The Spanish case is a hard one for testing the hypothesis posed above. Spanish people have been extensively exposed to news related to the bad state of the economy, and the role the EU has played during the economic crisis. This implies that people are very aware of the loss of status of the Spanish economy, and a number of them attribute part of the responsibility of the crisis to EU austerity policies.[21] Pre-treatment makes any effective manipulation of people's beliefs on this matter very difficult. Therefore, instead of directly testing the effect of the economic crisis, the experiment tests the effect that priming has on people nationalistic attitudes. Bearing this in mind, the effect of the treatments should be interpreted as the marginal effect of one additional exposure to this kind of information (Druckman and Leeper 2012). In any case, two manipulation checks were included in the questionnaire to learn whether individuals were influenced in the expected way as regarding their beliefs about the economic crisis and the EU's responsibility for the economic crisis.[22]

Results

In the final analysis, we exclude the non-Spanish citizens and people born outside Spain. For non-citizens and people born in other countries, other alternative national identities can be more relevant than the Spanish identity. Since participants in the survey were forced to answer all the questions, the reliability of the answers of this type of respondents can be lower. After excluding these cases, the total number of cases analysed in the experiment dropped to 669. Table 4 presents the distribution of cases among the different groups (control and treatment groups), before and after excluding these cases.

TABLE 4. Distribution of cases in the treatments and control conditions

[20] The order of the items about Spanish nationalism and identification with Spain (the region, and the EU) was randomized after the treatment. Their proximity to the treatment make these dependent variables more sensitive to it.

[21] See Appendix A for a discussion on the pre-treatment of the sample.

[22] See Appendix B for the analysis of the manipulation checks.

	Original sample		After excluding non-citizens	
	Freq.	%	Freq.	%
Control	237	33.57	224	33.48
Negative Treatment	238	33.71	227	33.93
Negative + Att EU	231	32.72	218	32.59
Total	706	100	669	100

Table 5 includes an analysis of the randomization process to check that all groups are equal and balanced. The table shows that the groups are fairly balanced in the characteristics that are relevant for the analysis in the paper, i.e. education, gender, age, ideology, region of residence, income, social class and employment status.

TABLE 5. Balance checks

	Neg. Treatment	Neg. + Attribution
Voc. Training I	-0.26	0.29
	(0.66)	(0.59)
Secondary	0.24	-0.23
	(0.57)	(0.54)
Voc. Training II	0.80	0.15
	(0.60)	(0.58)
College or more	0.48	0.05
	(0.58)	(0.55)
Woman	0.00	-0.27
	(0.21)	(0.21)
Age	0.01	0.01
	(0.01)	(0.01)
Ideology	0.01	0.04
	(0.04)	(0.04)
Region of Residence	-0.16	0.11
	(0.26)	(0.26)
Household income	-0.90	-0.13
	(0.59)	(0.60)
Subjective Social Class	0.30	-0.13
	(0.16)	(0.16)
Unemployed	0.28	-0.19
	(0.27)	(0.28)
Constant	-1.43	-0.04
	(0.80)	(0.76)
Observations	573	

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

Following these preliminary analyses of the randomization process, the dependent variables were regressed on the treatments, and on three variables that account for individuals' socio-economic

background: the employment status (being unemployed), the household income, and the social class to which participants belong.

Being unemployed is a dummy variable that takes a value 1 if the survey participant is currently unemployed. This variable seeks to measure the vulnerability of people in the job market. In the questionnaire, participants were also asked about their monthly household income (after taxes). The answer for this variable consists of a ten category scale, with each category in the scale reflecting an income band. The variable is weighted by the number of members of the household using the following equation: income / (1 + 0.5*adult + 0.3*child). The variable is thus rescaled into a 0 to 1 variable. Social class is a measure of the subjective social status of the respondent in five categories ranging from lower social class to upper social class. The variable has been recoded into a four category variable due to the limited number of respondents present in the top category (upper class).

Besides these three independent variables, the analyses also include age, sex, education, ideology, and a dummy for the region of residence as control variables. Education is a five category variable that takes the following values Primary (1), Vocational Training I (2), Secondary (3), Vocational Training II (4) and University or more (5). Ideology is measured using an 11-point scale ranging between 0 (left) and 10 (right). As mentioned above, left-wing people in Spain still have a complicated relationship with Spanish identity (Ruiz Jiménez et al., 2016), so it is important to control for the differences in nationalistic attitudes of people with different ideologies. Region takes a value 0 if the region of residence is Catalonia, the Basque Country and Navarre and 1 for all the other regions. This variable accounts for the heterogeneity of the feelings of identification with Spain within the territory.

Table 6 presents the results of the linear regression estimations. National pride is also estimated using OLS, although the results are similar to those obtained using an ordered logistic regression.

To start with, the table shows the positive and significant effect of some of the usual suspects on the dependent variables and, in particular, age, ideology and the region of residence. The older the respondent is and the more right wing he or she is, the more identified with Spain he or she declares to be. Respondents living in regions other than Catalonia, the Basque Country and Navarre show a higher degree of identification with Spain than the ones living in these three regions. These results are consistent with the results we find when we turn to the other dependent variables: nationalism and national pride. Education, however, behaves differently for each of the dependent variables. In general, people with a higher level of education feel less identified with Spain. Differences between respondents with Primary studies (reference category) and respondents with Secondary studies are smaller and not significant. This can be due to the fact that this category is the largest one and includes a more heterogeneous profile of people. Differences between the educational groups are not significant for the Spanish nationalism variable, and only significant between those who have a university degree and the rest of the groups for the national pride variable.

The three key independent variables, i.e. those measuring the economic situation of the individuals (unemployment, household income and subjective social class) do not appear to have any direct influence on the three dependent variables.

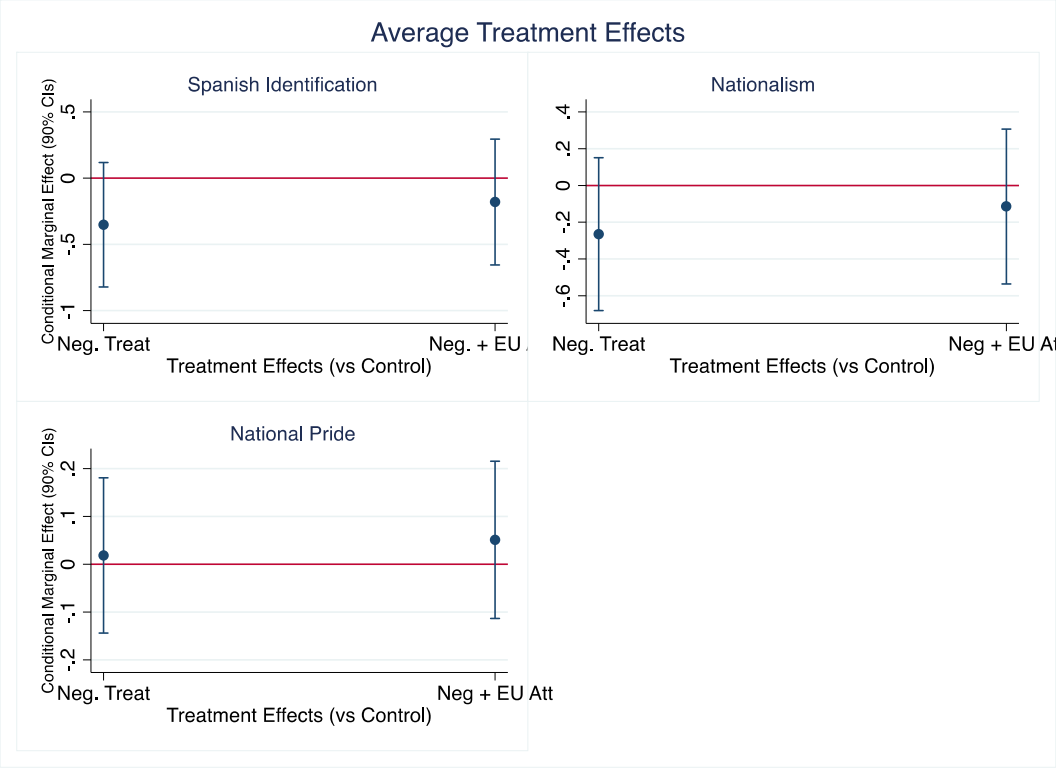
The analysis of the experiment presented in Table 6 and Figure 1 also reveal that the treatments do not have any direct effect on the surveyed population, which appears to support *hypothesis 1*.

TABLE 6. Exposure to treatments and effects on nationalist attitudes. Main effects

	National Identification	Nationalism	National Pride
Neg Treatment	-0.35	-0.26	0.02
	(0.29)	(0.25)	(0.10)
Neg + EU Att	-0.18	-0.11	0.05
	(0.29)	(0.26)	(0.10)
Age	0.03**	0.03**	0.01*
	(0.01)	(0.01)	(0.00)
Woman	0.10	-0.09	-0.09
	(0.24)	(0.21)	(0.08)
Voc. Training I	-1.18+	-0.77	-0.36
	(0.71)	(0.63)	(0.24)
Secondary	-0.82	-0.24	-0.23
	(0.63)	(0.56)	(0.22)
Voc. Training II	-1.04	-0.41	-0.36
	(0.67)	(0.59)	(0.23)
University or more	-1.29*	-0.72	-0.44*
	(0.64)	(0.57)	(0.22)
Left Right	0.51***	0.53***	0.12***
	(0.05)	(0.04)	(0.02)
Region	2.63***	2.58***	0.29**
	(0.30)	(0.26)	(0.10)
Unemployed	0.03	0.01	-0.09
	(0.31)	(0.28)	(0.11)
Household income	0.44	0.16	-0.34
	(0.68)	(0.60)	(0.23)
Subjective Class	-0.02	0.06	0.07
	(0.19)	(0.16)	(0.06)
Constant	6.24***	3.64***	2.32***
	(0.89)	(0.79)	(0.31)
Observations	573	573	573
Adj. R-squared	0.292	0.358	0.128

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, + p<0.10

FIGURE 1. Average Treatment Effects



Note: Values calculated from estimation in Table 1

Instead, the analysis shows that the treatments have heterogeneous effects and that the second treatment was far more effective than the first treatment in terms of significance. As hypothesised, the (objective and subjective) economic situation of the individual is an important moderator in the relationship between the treatments and the dependent variables, but only regarding household income and, particularly, individuals' subjective social class (see Table 7 below). These results refute *hypothesis 2a*, and make explanations based on the group conflict theory less plausible.[23] For ease of interpretation, we will present the marginal effects of the interactions in Figures 2 and 3 next.

[23] Although the results are not reported here, I have also checked for the existence of other effects of the interactions, without success. Respondents' education, ideology and unemployment status do not appear to moderate the impact that the treatments have on the dependent variables.

TABLE 7. Exposure to treatments and effect on nationalist attitudes. Heterogeneous effects.

	National Identification		Nationalism		National Pride	
	(1)	(2)	(1)	(2)	(1)	(2)
Neg Treatment	0.14	0.48	0.10	0.32	0.18	0.79*
	(0.56)	(1.06)	(0.50)	(0.94)	(0.20)	(0.37)
Neg + EU Att	0.72	2.11*	0.73	1.78*	0.16	0.76*
	(0.55)	(1.00)	(0.49)	(0.89)	(0.19)	(0.35)
Age	0.03**	0.03**	0.03**	0.03**	0.01*	0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)
Woman	0.09	0.09	-0.09	-0.09	-0.09	-0.10
	(0.24)	(0.24)	(0.21)	(0.21)	(0.08)	(0.08)
Voc Training I	-1.29+	-1.15	-0.88	-0.75	-0.37	-0.34
	(0.71)	(0.70)	(0.63)	(0.62)	(0.25)	(0.24)
Secondary	-0.92	-0.81	-0.33	-0.23	-0.24	-0.23
	(0.63)	(0.63)	(0.56)	(0.56)	(0.22)	(0.22)
Voc Training II	-1.14+	-1.02	-0.50	-0.38	-0.38	-0.37
	(0.67)	(0.67)	(0.59)	(0.59)	(0.23)	(0.23)
University or more	-1.42*	-1.30*	-0.84	-0.73	-0.45*	-0.44*
	(0.64)	(0.64)	(0.57)	(0.56)	(0.22)	(0.22)
Unemployed	0.06	0.06	0.04	0.04	-0.09	-0.09
	(0.31)	(0.31)	(0.28)	(0.28)	(0.11)	(0.11)
Income (hh)	1.78+	0.55	1.34	0.26	-0.09	-0.34
	(1.03)	(0.68)	(0.91)	(0.60)	(0.36)	(0.23)
Subjective Class	0.01	0.41	0.09	0.40	0.07	0.27**
	(0.19)	(0.29)	(0.16)	(0.26)	(0.06)	(0.10)
Left Right	0.51***	0.51***	0.53***	0.53***	0.12***	0.12***
	(0.05)	(0.05)	(0.04)	(0.04)	(0.02)	(0.02)
Region	2.61***	2.59***	2.56***	2.55***	0.30**	0.28**
	(0.30)	(0.30)	(0.26)	(0.26)	(0.10)	(0.10)
Neg * Income	-1.40		-1.03		-0.48	
	(1.41)		(1.25)		(0.49)	
Neg Att * Income	-2.56+		-2.40*		-0.30	
	(1.33)		(1.18)		(0.46)	
Neg * SSC		-0.33		-0.23		-0.30*
		(0.39)		(0.35)		(0.14)
Neg Att * SSC		-0.91*		-0.75*		-0.28*
		(0.38)		(0.34)		(0.13)
Constant	5.78***	5.08***	3.22***	2.71**	2.25***	1.82***
	(0.93)	(1.07)	(0.82)	(0.94)	(0.32)	(0.37)
Observations	573	573	573	573	573	573
Adj. R-squared	0.295	0.297	0.360	0.361	0.127	0.135

Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05

Figure 2 shows that the moderator effect of income is similar for all the dependent variables, although it is not significant in all cases. The effect of the treatment on the dependent variables (Spanish identification, nationalism and pride) becomes more negative the higher the individual's household income gets. Higher income respondents who received a piece of information blaming the budget cuts imposed by the EU for the economic crisis and were reminded of the loss of

status of the Spanish economy (*Neg + Att. EU)* declared that they felt less identified with Spain and less nationalist than low income respondents. This effect is only statistically significant at p < .10; this can be explained by the limited number of cases in the analyses, and the limited number of cases in these income bands.

FIGURE 2. Effect of the treatments on National Identification, Nationalism and National Pride, by income

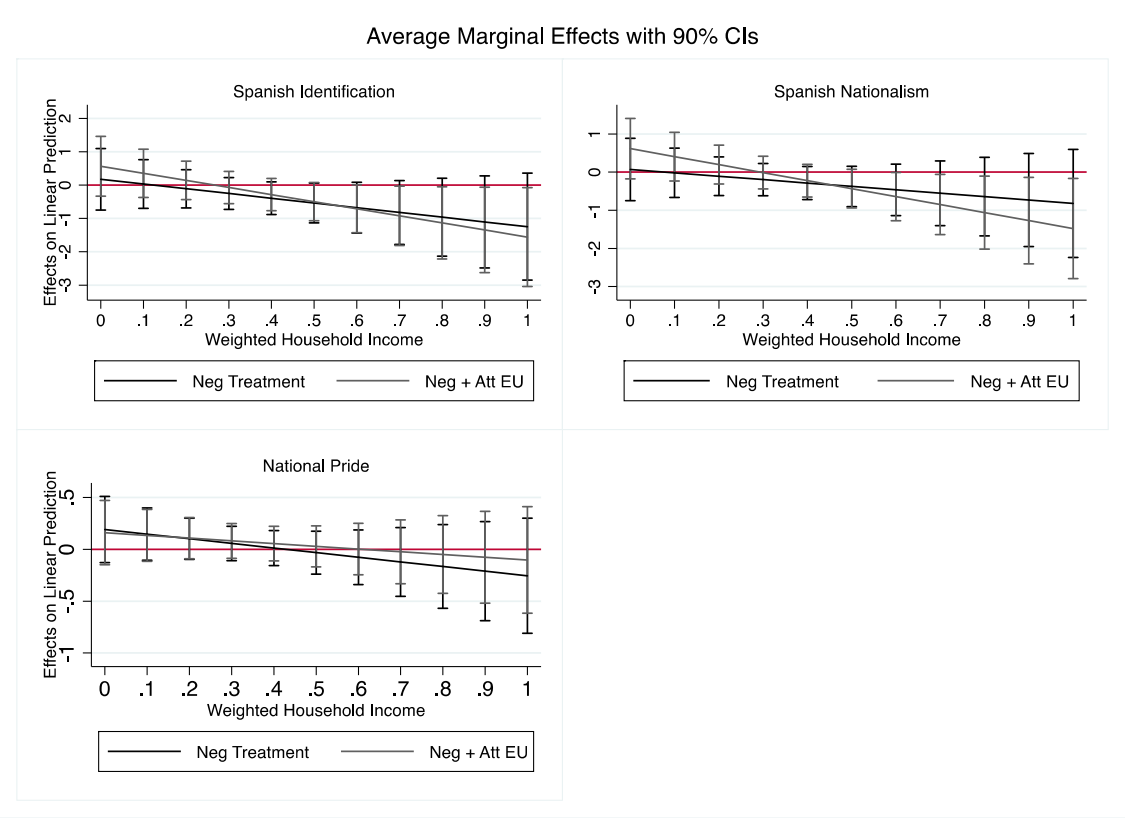
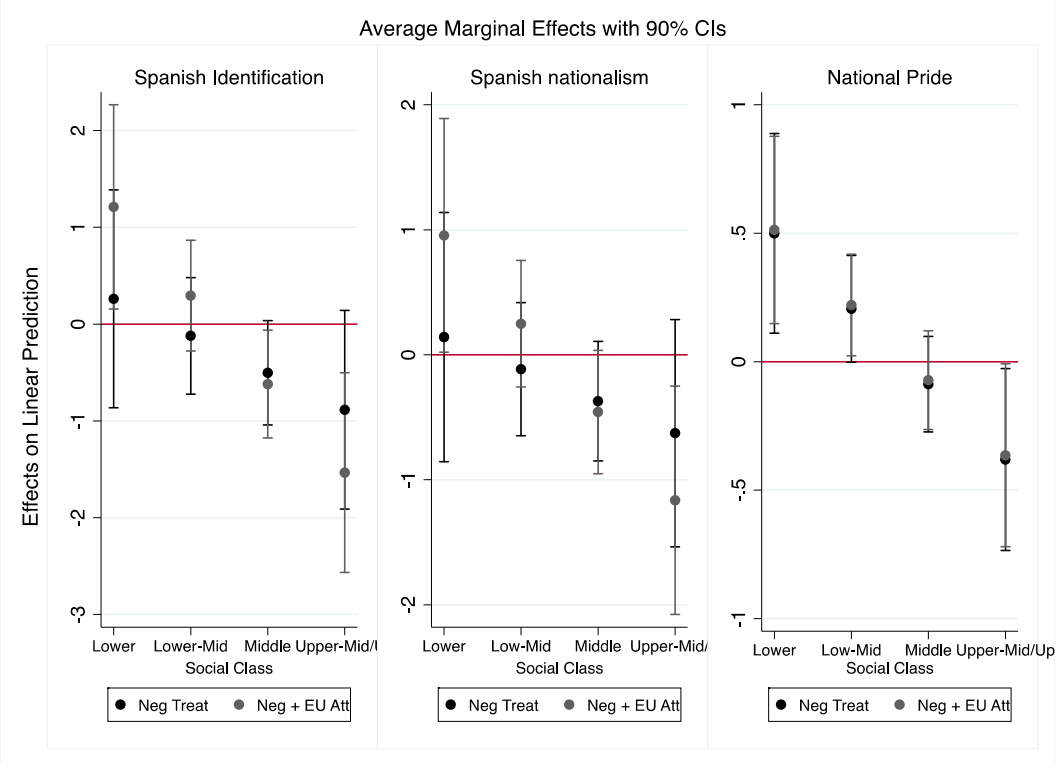


Figure 3 reveals that the moderator effect of subjective social class is similar to the moderator effect of income. However, the steep of the slope is more pronounced in this case. Exposure to a piece of information blaming the budget cuts imposed by the EU for the economic crisis, and being reminded of the loss of status of the Spanish economy (second treatment) had a stronger, more significant effect.

Focusing on the Spanish identification variable, it can be noticed that people who self-identify as lower class become more identified with Spain after being exposed to the *Neg + Att EU* treatment, while those who self-identify as middle or upper-middle/upper class become less identified with Spain. The statistical significant effect of the treatment on those categories is relevant if we take into consideration that these categories have a smaller number of cases, as can be seen for the greater confidence intervals. Notice too that the trend in the effect is similar for those receiving only the *Neg* treatment, although the effect is not significant in this case. A similar effect can be observed for the Spanish nationalism variable, although in this case the effect of the *Neg + Att EU* treatment is not significant in the middle class respondents.

Turning now to the national pride variable, it can be easily noticed that the effects of the two treatments overlap. The two treatments have a positive and statistically significant effect on the national pride of the people who self-identify as lower class and lower-middle class and a negative effect on the people who self-identify as middle class and upper-middle and upper class, although the effect is only statistically significant in the latter case ($p < .10$).

FIGURE 3. Effect of the treatments on National Identification, Nationalism and Pride, by subjective social class



Generally, it can be noted that the treatments have had opposite effects on people belonging to the lower social classes and people belonging to the upper social classes; this can explain the absence of effects in the whole sample: opposite effects in these groups cancel each other out.

Discussion

This paper's general goal was to assess the effect that economic crisis has on nationalist attitudes. More specifically, the paper has analysed how messages that prime the loss of economic status of the nation, and messages that combine this information with the attribution of responsibilities to a third party (the EU) influence people's national identification, nationalism and national pride. Using experimental evidence, the paper shows that the latter types of messages are more effective, and have heterogeneous effects on people with different economic backgrounds. People who belong to the lower social class identify more strongly with Spain, become more nationalistic and more proud to be Spanish when they are exposed to this kind of information.

The effect is the opposite among high-income people and people who belong to the upper or upper-middle class. The unemployed status, conversely, does not have any direct or indirect impact on individuals' nationalist attitudes.

These findings appear to suggest that, also at difficult economic times, people with a low economic status seek shelter in the nation, and people with a high economic status turn their backs on it. This result gives support to Shayo's theory, but it adds some nuances when showing that the frame of the economic crisis and, in particular, the strategy of blaming a third-party for it can reinforce and encourage the we-feeling and the nationalism of poorer people.

Before concluding the paper, two more considerations should be presented. First, the strategy of blaming the other has been usually seen as a strategy to avoid voters' punishment at the ballot box. This research has shown that blame attribution can also have spillover effects on citizens' nationalist attitudes that governments should also consider. Second, while the Spanish case adds complexity and interest to the effect that economic crisis has on nationalism, the extensive pre-treatment of the sample forces us to treat these results very cautiously. In this regard, it would be advisable to check whether these results can be generalised to other contexts, where pre-treatment is not so strong.

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Appendix

Appendix A. Pre-treatment and pilot study

Before this survey was administered, an online pilot survey experiment was conducted with a convenience sample of Spanish Facebook, Twitter and WhatsApp users between 27 April and 29 April. In the pilot experiment, the status of the nation was altered by framing the state of the economy in opposite ways (positive and negative), and by comparing the state of the economy in Spain with the state of the economy in Germany and the UK (two relevant out-groups for Spain). To make the treatments credible, the timeframe of reference in the first case was a year, and in the case of the second treatment the last few years. The control group was not given any information to read.

However, due to the sample negative pre-treatment, the effectiveness of the positive treatment was limited. This can be explained because arguments that contradict individuals' prior beliefs tend to be ignored or rejected (Zaller 1992, Druckman et al. 2012). The analysis of the results of the pilot experiment showed that the pre-treatment of the sample was relevant enough, and that the positive treatment did not manage to change people's perceptions regarding the economy. After the pilot experiment, different positive treatments regarding the status of the Spanish economy were tested in the manner of "cognitive interviews", without success. Altogether, the results of the pilot experiment and of the cognitive interviews advised us against the use of a positive treatment regarding the status of the Spanish economy in the final experiment. The final treatments were modified accordingly.

In any case, it might be worth mentioning that, as mentioned above, people are extensively pre-treated on the negative state of the Spanish economy and on the degree of responsibility that the EU has in the economic crisis. In June 2016, 29 per cent of the population considered the situation of the economy was only fair, 40 per cent considered that the economy was in bad shape, and 28 per cent in very bad shape (CIS, study number 3142). The most recent data on the attribution of responsibilities for the economic crisis comes from a study conducted in May-June 2014, after the European elections took place (CIS, study number 3028). This survey includes a question that asks respondents about the degree of responsibility for Spanish economic situation of different institutions. 25 per cent of people made the EU fully responsible for the Spanish economic situation, compared to 41 per cent that made the Spanish Government fully responsible. The mean value for the two eleven-point scale was 7.53 and 8.19, respectively.

Appendix B. Manipulation checks

Here we check whether the treatments managed to influence the opinions of the treated groups in what regards the evolution of the Spanish economy in recent times, and the responsibility of the EU for the economic crisis proper. These two variables, which were intended to work as manipulation checks, are examined here as dependent variables. Despite this, it is worth noting here that, as argued in the text, the effect of the treatments should be interpreted as a prime rather than as a manipulation of people beliefs.

In the first variable, the assessment of the evolution of the Spanish economy in recent times, the answer categories were presented in a range going from (1) very negative to (4) very positive. In the questionnaire, respondents were also asked about the extent to which different actors were responsible for the economic crisis. A battery of five actors was presented to the respondents (Spanish central governments, the EU, the banks, regional governments and the citizens). The answer categories range from not at all (1) to fully responsible (4).

TABLE B1. Assessing the success of the manipulation.

	Evolution of the economy in recent times	Extent of EU responsibility for the crisis
	(1)	(2)
Control	0.12	0.07
	(0.09)	(0.07)
Neg + EU Att	0.14	0.14*
	(0.09)	(0.07)
Age	0.00	0.00
	(0.00)	(0.00)
Woman	0.13+	0.08
	(0.07)	(0.06)
Education	0.06+	0.02
	(0.03)	(0.03)
Income	-0.42*	0.22
	(0.20)	(0.16)
Social Class	-0.13*	-0.00
	(0.06)	(0.05)
Left Right	-0.12	0.04
	(0.09)	(0.08)
Region	-0.10***	-0.06***
	(0.01)	(0.01)
Constant	-0.19*	-0.02
	(0.09)	(0.07)
Observations	578	578
Adjusted R-squared	0.128	0.049

Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10. The reference category is the negative treatment

The first thing to note here is that there are *not* significant differences between the control group and the group being exposed to the negative treatment for neither of the two dependent variables. This responds to the extensive pre-treatment of the surveyed population. Nevertheless, the differences are significant when we focus on the comparison between the control group and the group that was primed on the negative status of the Spanish economy, on the one hand, and the group that received a piece where information on the negative status of the Spanish economy was preceded by a phrase stating that the budget cuts imposed by the EU were the cause of the decline in the Spanish economy (*Neg. + Att EU*). Table C1 shows that, compared to the reference category (*Neg Treatment*), the latter group (*Neg. + Att EU)* considers that the economy has evolved more negatively in recent times (model 1), and that the EU has a greater responsibility for the economic crisis (model 2).

Survey experiment 2. Inequalities in Europe and attitudes towards the EU

Introduction

Does intra-EU inequality influence attitudes toward the European Union (EU)? We examine how citizens' perceptions of inequality *between* Member States (MSs) of the EU shape attitudes towards European institutions and the process of European integration.

Previous research has linked economic inequality to a range of political attitudes, including trust in political institutions (Letki & Mierina 2012, Schäfer 2012), satisfaction with how the political system works and trust in public figures (Anderson & Singer 2008, Schäfer 2012). The findings from these studies indicate that rising income inequality contributes to more negative feelings toward the functioning of the national political system and lower trust in public institutions. While extant scholarship has centred on the link between inequality and democratic legitimacy *within* nation-states, few studies have examined the potential effects of rising inequality between countries on public support for European institutions and integration. The present research aims to fill this gap.

A number of studies have documented a link between European integration and increasing economic inequality. Some scholars have offered evidence that in the process of European integration, MSs have lost some of their national economic sovereignty (Bartolini 2005, Ferrera 2005, Scharpf 2010) and have as a result loosened labour protection (Beckfield 2009). As a consequence, MSs are exposed to greater economic risks, including unemployment and poverty (Mills and Blossfeld 2005, Beckfield 2006), and rising income inequality (Boje et al. 1999). The link between European integration and economic inequality suggests that citizens may hold European institutions responsible for rising inequality and may, as a result, be less favourable to further integration (cf. Burgoon 2013).

A handful of studies have examined the link between levels of *within-nation* inequality and attitudes toward European institutions, or the degree to which citizens assign blame to European institutions for rising levels of inequality at home. Kuhn et al. (2016) find that the rise in income inequality at home is associated with increasing Euroscepticism, particularly among citizens with lower levels of formal education. Garry & Tilley (2015) show that rising income inequality in a MS boosts support for European integration, particularly among left-leaning voters, as further integration is expected to move public policy to the left. While both of these recent studies evince a link between rising levels of income inequality and European institutions, they tell us little about how inequality at the European level—that is, between MSs—influences attitudes towards Europe.

The present study tests the theoretically novel claim that inequality *between* nations in the EU influences attitudes toward European institutions. The topic is timely given the diverging economic paths taken by MSs as a result of the recent recession. While some countries have fared relatively well during the recession, others have experienced growing unemployment, poverty and income inequality. Given the central role that European institutions have played in managing the response to the oncoming recession, it is natural to ask whether citizens may perceive the EU

as a culprit for growing economic differences between countries. Furthermore, the present study improves on extant scholarship in testing for a *causal* link between citizens' perceptions of between-nation inequality and their attitudes towards Europe. Previous research has relied on observational evidence to link rising inequality to political attitudes, thus making it challenging to establish a causal relationship between these phenomena. The present study, in turn, relies on evidence from a survey experiment in which participants were first randomly assigned to an inequality treatment (or control group) and then completed a survey about their attitudes towards the European institutions.

Theory

While research on the attitudinal consequences of between-nation inequality has not been carried out thus far, a number of influential theories point to a set of preliminary expectations about how inter-nation inequality affects citizens' attitudes toward European institutions. Our theoretical argument is made up of several steps. First, we argue that citizens of nations with comparatively high levels of inequality are likely to hold negative feelings toward their position vis-à-vis other nations in the EU. Second, we expect further that citizens attribute blame to European institutions for rising levels of inequality. Finally, and as a result, we expect citizens to demonstrate higher levels of Euroscepticism, express distrust in European institutions and reject steps toward further economic and political integration. We develop each of these aspects in turn.

First, the theory of relative deprivation suggests that people tend to dislike their increasing relative 'distance' to others, regardless of whether or not inequality affects their absolute levels of prosperity (Andersen 2012). Taking relative deprivation to the level of nation-states, growing inequality between nation-states is likely to generate negative feelings among citizens of those nations falling behind. We expect this to be independent of the nation's absolute level of well-being. Hence, citizens of nations lagging behind the curve on economic prosperity will experience negative feelings towards their relative position, even though their nation may have a high standard of living in absolute terms.

Second, we expect that comparisons to other nations in the EU will trigger blame attribution toward European institutions. Previous literature has documented this to be the case for responsibility attributions at the national level (Hansen, Olsen and Bech, 2014; Kayser & Peress 2012). Namely, citizens blame their nation's public officials when the national economy underperforms compared to that of its neighbours or relevant reference nations. Responsibility attributions are influenced not only by the nation's absolute economic performance but also by cross-national comparisons. Extending this argument to responsibility attributions at the supranational level, we expect that a country's relative performance among its EU peers will shape responsibility attribution toward European institutions, such as the European Central Bank. Given the EU's prominent role in handling the economic recession, including in individual nations' responses to their on-going domestic crises, it is likely that citizens have perceived a shared responsibility, held both by national governments and European institutions.

Our final set of expectations relates to the transcendence of responsibility attributions toward European institutions and attitudes to further political and economic integration as well as trust in European institutions. Burgoon (2013) finds that income inequality triggers a backlash against European integration and globalization amongst political parties. Applying this to citizens who

take political cues from party elites, we expect that growing levels of inequality between MSs—and the EU's perceived responsibility for this trend—will dampen citizens' desire for further economic and political integration. As a further consequence, we expect that intra-EU inequality will erode trust in European institutions.

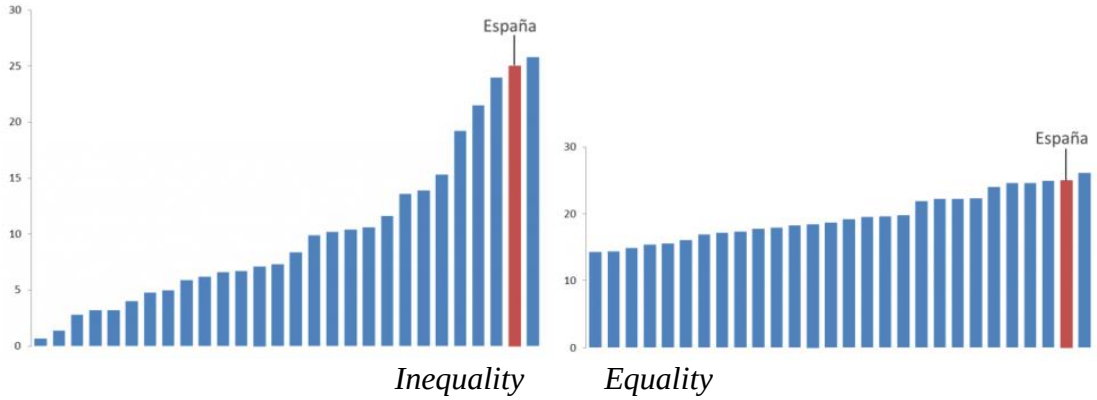
From here, we draw the next hypotheses:

> *H1.* Individuals confronted with a treatment showing high inequality among EU countries will express lower trust in European institutions.
> *H2.* Individuals confronted with a treatment showing high inequality among EU countries will express lower support for belonging to the EU / Eurozone.
> *H3.* Individuals confronted with a treatment showing high inequality among EU countries will express lower support for the EU having contributed to reduce differences in living conditions between countries and will be less predisposed to making sacrifices for poorer EU countries.
> *H4.* Individuals confronted with a treatment showing high inequality among EU countries will blame the European government for the economic crisis to a greater extent.
> *H5.* Individuals confronted with a treatment showing high inequality among EU countries will be less satisfied with the way democracy works in Europe and less supportive of further integration.
> *H6.* Individuals confronted with a treatment showing high inequality among EU countries will be less proud of belonging to the EU.

Design

In order to test the hypotheses laid out above, we use a survey experiment of 693 individuals in Spain. The experiment was carried out between 1 and 8 June 2016. The survey consists of two treatment and one control group with random assignment. In each of the treatment groups, individuals are shown a bar graph with the poverty rates across EU countries; the names of specific countries are not shown except for Spain, which occupies the penultimate position and is coloured in red (instead of blue). In the first treatment (Inequality), differences in poverty rates in the EU are large whereas in the second treatment (Equality) differences are insignificant. Figure 1 shows the bar graphs displayed to the individuals receiving the inequality treatment (left panel) and the equality treatment (right panel). Finally, a third group with no information on the level of poverty is used as a control.

FIGURE 1. Treatments (Spain visible)



Inequality *Equality*

The research design – through random assignment – allows us to assess the causal effects of each treatment on populist attitudes. The design controls for Spain's relative position (always among the poorer countries) and varies the degree of inequality among EU MSs. Spain's absolute level of poverty is kept constant –at 25 per cent– across treatments. Hence, when the differences among EU countries are small (low inequality), individuals will tend to support the EU to a higher extent than when the differences among MSs are higher.

We have a series of dependent variables, corresponding to the different hypotheses presented above. Table 1 shows each variable included in the analysis, as well as its exact wording.

TABLE 1. Dependent variables included in the analysis

Variable name	**Question**
H1. Trust	
Trust in the Spanish government	To what extent do you trust the Spanish government?
Trust in the European Union	To what extent do you trust the European Union?
Trust in the European Central Bank	To what extent do you trust the European Central Bank?
H2. Benefits of belonging to the EU	
Benefits of belonging to the EU	To what extent do you believe that Spain benefits nowadays from belonging to the EU?
Benefits of belonging to the Eurozone	To what extent do you believe that Spain benefits nowadays from belonging to the Eurozone?
H3. Sacrifices for poorer countries	
Commitment to make sacrifices for poorer countries	Do you believe that Spain should make more sacrifices to help other countries in the EU that are experiencing greater economic difficulties?
EU contributes to reduce inequalities between countries	To what extent do you believe that the EU has contributed to reduce differences in living conditions among Member States of the EU?
H4. Responsible economic crisis	
Responsibility of the Spanish government for the economic crisis	To what extent do you consider the Spanish government responsible for the economic situation in Spain?
Responsibility of the EU for the economic crisis	And to what extent do you consider the EU responsible for the economic situation in Spain?
H5. Satisfaction with the EU	
Satisfaction with the functioning of democracy in the EU	To what extent are you satisfied with the functioning of democracy in the EU?
Desire for further integration of the EU	Some people think that European integration should be deepened. Other people think that it has gone too far. Could you please tell me what your position is?
H6. Pride	
Pride in Spain	To what extent are you proud of being Spanish?
Pride in the EU	To what extent are you proud of being European?

The method of analysis consists of a series of OLS regression models with dependent variables corresponding to Hypotheses 1-6. The two treatment groups are the main independent variables

(the control group is used as the baseline for comparison). We present the results of a basic model with no controls, as well as the replication of the model with conventional controls –ideology, education, gender (male as the reference category), age and interest in politics.

Table 2 presents the summary statistics of the dependent and independent variables.

TABLE 2. Summary statistics of the dependent and independent variables

Variable name	N	Mean	Std. Deviation	Minimum	Maximum
Trust in the Spanish government	693	1.78	0.76	1	4
Trust in the EU	693	2.01	0.77	1	4
Trust in the ECB	693	1.80	0.76	1	4
Benefit EU	693	2.40	0.90	1	4
Benefit Eurozone	693	2.14	0.93	1	4
Commitment	693	2.12	0.65	1	3
Contribution EU	693	1.77	0.73	1	4
Spanish government responsible	693	3.45	0.67	1	4
EU responsible	693	2.96	0.75	1	4
Differential responsibility Spain - EU	693	0.49	0.84	-2	3
Satisfaction functioning EU	693	4.41	2.62	0	10
EU integration	693	5.79	2.73	0	10
National pride	693	6.11	3.23	0	10
European pride	693	5.88	2.74	0	10
Differentiated pride Spain - Europe	693	0.23	2.75	-10	10
Treatment					
Control	693	0.34	0.47	0	1
Equal	693	0.33	0.47	0	1
Unequal	693	0.33	0.47	0	1
Ideology	651	0.42	0.26	0	1
Education	693	2.28	0.57	1	3
Female	693	0.50	0.50	0	1
Interest in politics	693	2.78	0.83	1	4
Age	692	41.04	12.56	18	65

Results

Tables 3 to 8 present the results of a series of OLS regression models with the main independent variables, the treatment that the individual received, first regressed with the correspondent dependent variable, and later with controls for ideology, education, female, interest in politics and age.

TABLE 3. Trust in the European Union and the European Central Bank

	(1) Trust Spanish govt.	(2) Trust Spanish govt.	(3) Trust EU	(4) Trust EU	(5) Trust ECB	(6) Trust ECB
Control	[Ref.]	[Ref.]	[Ref.]	[Ref.]	[Ref.]	[Ref.]
Equal	-0.217**	-0.214**	-0.107	-0.092	-0.057	-0.051
	(0.070)	(0.065)	(0.071)	(0.069)	(0.070)	(0.068)
Unequal	-0.267***	-0.230***	-0.277***	-0.240***	-0.199**	-0.171*
	(0.070)	(0.065)	(0.071)	(0.069)	(0.070)	(0.068)
Ideology		1.255***		0.995***		1.031***
		(0.104)		(0.111)		(0.109)
Education		0.136**		0.058		0.066
		(0.048)		(0.051)		(0.050)
Female		-0.114*		0.026		-0.011
		(0.055)		(0.058)		(0.058)
Interest		0.037		0.110**		0.078*
		(0.034)		(0.036)		(0.035)
Age		0.002		-0.003		0.001
		(0.002)		(0.002)		(0.002)
Constant	1.944***	0.971***	2.137***	1.389***	1.884***	1.067***
	(0.049)	(0.175)	(0.050)	(0.186)	(0.049)	(0.184)
Observations	693	650	693	650	693	650
R^2	0.024	0.229	0.022	0.146	0.012	0.144

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table 3 shows that the equal and unequal treatments lead to lower levels of trust in the Spanish government, although the differences between the two treatments are not statistically significant. In contrast, the models on trust in the EU and in the ECB show that the unequal treatment is able to drive the levels of trust downwards, whereas the equal treatment has no effect.

TABLE 4. Benefits of belonging to the EU and the Eurozone

	(1) Benefit EU	(2) Benefit EU	(3) Benefit Eurozone	(4) Benefit Eurozone
Control	[Ref.]	[Ref.]	[Ref.]	[Ref.]
Equal	-0.169*	-0.153+	-0.106	-0.076
	(0.083)	(0.082)	(0.086)	(0.087)
Unequal	-0.157+	-0.165*	-0.205*	-0.183*
	(0.083)	(0.082)	(0.086)	(0.087)
Ideology		0.804***		0.795***
		(0.131)		(0.139)
Education		0.254***		0.116+
		(0.060)		(0.064)
Female		-0.149*		-0.023
		(0.069)		(0.073)
Interest		0.085*		0.087+
		(0.042)		(0.045)
Age		0.001		-0.004
		(0.003)		(0.003)
Constant	2.506***	1.376***	2.245***	1.603***
	(0.059)	(0.221)	(0.061)	(0.234)
Observations	693	650	693	650
R^2	0.007	0.108	0.008	0.073

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

When assessing the extent to which Spain has benefitted from being part of the EU, both the individuals treated with the equal and the unequal treatments show significantly lower levels of support than the control group. In contrast, only the individuals who received the unequal treatment consider that being part of the Eurozone has been beneficial for Spain to a lower extent; despite this, differences between the equal and the unequal treatment are not statistically significant.

TABLE 5. Sacrifices for poorer EU countries

	(1) Commitment	(2) Commitment	(3) Contribution EU	(4) Contribution EU
Control	[Ref.]	[Ref.]	[Ref.]	[Ref.]
Equal	0.203***	0.195**	-0.024	-0.018
	(0.060)	(0.061)	(0.068)	(0.069)
Unequal	0.170**	0.186**	-0.008	0.008
	(0.060)	(0.061)	(0.068)	(0.069)
Ideology		-0.127		0.432***
		(0.098)		(0.110)
Education		-0.047		0.022
		(0.045)		(0.050)
Female		-0.045		-0.121*
		(0.051)		(0.058)
Interest		-0.134***		-0.006
		(0.032)		(0.035)
Age		0.002		-0.003
		(0.002)		(0.002)
Constant	2.000***	2.465***	1.785***	1.727***
	(0.042)	(0.164)	(0.048)	(0.184)
Observations	693	650	693	650
R^2	0.019	0.054	0.000	0.034

Standard errors in parentheses
+ p<0.1, * p<0.05, ** p<0.01, *** p<0.001

The equal and unequal treatment show a positive impact on the need for Spain to make more sacrifices to help other countries in the EU that are experiencing greater economic difficulties. Although the coefficient for the equal treatment is slightly higher, differences between the two coefficients are not statistically significant. Moreover, none of the treatments has had an impact on the perception of the EU having contributed to reduce differences in living conditions among MSs.

TABLE 6. Responsible for the economic crisis

	(1) Spanish govt. responsible	(2) Spanish govt. responsible	(3) EU responsible	(4) EU responsible	(5) Different responsibility	(6) Different responsibility
Control	[Ref.]	[Ref.]	[Ref.]	[Ref.]	[Ref.]	[Ref.]
Equal	-0.070	-0.086	-0.009	-0.007	-0.060	-0.080
	(0.063)	(0.064)	(0.070)	(0.068)	(0.078)	(0.080)
Unequal	0.017	-0.018	0.038	0.012	-0.022	-0.030
	(0.063)	(0.064)	(0.070)	(0.068)	(0.078)	(0.080)
Ideology		-0.498***		-0.637***		0.139
		(0.102)		(0.109)		(0.128)
Education		-0.027		-0.072		0.045
		(0.047)		(0.050)		(0.059)
Female		0.058		0.124*		-0.067
		(0.054)		(0.058)		(0.067)
Interest		0.092**		0.119***		-0.027
		(0.033)		(0.035)		(0.041)
Age		0.002		0.007**		-0.005+
		(0.002)		(0.002)		(0.003)
Constant	3.464***	3.353***	2.948***	2.701***	0.515***	0.653**
	(0.044)	(0.172)	(0.049)	(0.184)	(0.055)	(0.216)
Observations	693	650	693	650	693	650
R^2	0.003	0.058	0.001	0.091	0.001	0.011

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

When assessing the responsibility of the Spanish government and the EU for the economic crisis, neither the equal nor the unequal treatment had any impact on the evaluation of responsibility. Neither do the treatments explain the differences in the perception of responsibility of the Spanish government and the EU.

TABLE 7. Satisfaction with the EU and support for further integration

	(1) Satisfied EU	(2) Satisfied EU	(3) EU integration	(4) EU integration
Control	[Ref.]	[Ref.]	[Ref.]	[Ref.]
Equal	-0.259	-0.187	-0.578*	-0.486+
	(0.243)	(0.239)	(0.253)	(0.251)
Unequal	-0.430+	-0.379	-0.673**	-0.688**
	(0.244)	(0.239)	(0.253)	(0.250)
Ideology		3.111***		2.198***
		(0.382)		(0.401)
Education		0.439*		0.095
		(0.175)		(0.184)
Female		-0.085		-0.111
		(0.201)		(0.211)
Interest		0.140		0.518***
		(0.124)		(0.130)
Age		0.012		0.015+
		(0.008)		(0.008)
Constant	4.639***	1.505*	6.202***	3.079***
	(0.172)	(0.643)	(0.178)	(0.674)
Observations	693	650	693	650
R^2	0.005	0.117	0.012	0.085

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

The level of satisfaction with the way that democracy works in the EU does not depend on the administration of the treatment. In contrast, the treatments are able to explain differences in the level of integration of the EU. In particular, those treated with the equal treatment show less will to deepen European integration; the beta coefficient for the ones that received the unequal treatment is higher than the recipients of the equal treatment, although the differences between the two values are indistinguishable from zero.

TABLE 8. National and European pride

	(1) National pride	(2) National pride	(3) European pride	(4) European pride	(5) Differentiated pride	(6) Differentiated pride
Control	[Ref.]	[Ref.]	[Ref.]	[Ref.]	[Ref.]	[Ref.]
Equal	-0.616*	-0.506+	-0.720**	-0.509*	0.105	0.003
	(0.300)	(0.290)	(0.253)	(0.247)	(0.255)	(0.261)
Unequal	-0.190	0.100	-0.528*	-0.346	0.338	0.446+
	(0.300)	(0.290)	(0.254)	(0.246)	(0.256)	(0.261)
Ideology		4.360***		3.490***		0.871*
		(0.464)		(0.394)		(0.418)
Education		0.017		0.203		-0.185
		(0.213)		(0.181)		(0.191)
Female		-0.093		-0.062		-0.031
		(0.244)		(0.208)		(0.220)
Interest		-0.104		0.142		-0.247+
		(0.150)		(0.127)		(0.135)
Age		0.033***		0.012		0.021*
		(0.009)		(0.008)		(0.009)
Constant	6.378***	3.362***	6.292***	3.413***	0.086	-0.051
	(0.211)	(0.780)	(0.178)	(0.663)	(0.180)	(0.703)
Observations	693	650	693	650	693	650
R^2	0.006	0.145	0.012	0.124	0.003	0.030

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Finally, only the equal treatment is able to drive the pride of being Spanish and European downwards. Surprisingly, the unequal treatment cannot explain differences in pride. The treatments cannot explain the difference between the pride of being Spanish and European, although the coefficient is positive, thus suggesting that the treatments seem to reduce European pride to a greater extent than the Spanish pride.

Discussion

The findings of our models show that priming the individuals with information on the level of inequalities in Europe worsens their opinions towards the EU. However, the differences between the treatment showing equality between the EU countries and inequality are mostly unable to explain detachment from the EU. The exception is the trust in the EU and in the ECB, for which differences between the equal and unequal treatments are statistically significant and in the expected direction: those who have received the unequal treatment are less likely to express trust in the EU or in the ECB.

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Survey experiment 3. Perceptions of economic hardship and populism

Introduction

This research assesses the causes that lead to the emergence of populist attitudes. According to Kriesi and Pappas (2015b) and Hawkins (2014), populist movements can be understood as responses to widespread economic crisis or political crisis. Our experimental design intends to disentangle the independent effect of each of these factors on the formation of populist attitudes. By relying on a sample of 900 individuals in Spain, we randomly show individuals information about the poor economic situation in Spain; information about the loss of sovereignty that has entailed the austerity measures ordered by the European Commission; no information; or the first and the second treatments at the same time. The expectation is that priming on the loss of sovereignty but, especially, on the economic crisis, will drive populist attitudes upwards. Additionally, the interaction of the two treatments will yield even higher degrees of populism.

Theory

One of the major hurdles in the quest for explaining the rise of populism has certainly been the many, sometimes divergent, and often hardly specified meanings that the concept has been given, not only within the academia but also by the media and among political commentators and politicians themselves. Even if authors still disagree on whether it should be thought of as an ideology, a discourse or communicational style, or even as an organizational strategy, a growing consensus is recently emerging around a minimal set of core features that would define populism. These have been succinctly conveyed by Mudde (Mudde 2004) when arguing that populism "considers society to be separated into two relatively homogeneous and antagonistic groups, 'the pure people' versus 'the corrupt elite', and which argues that politics should be an expression of the *volonté générale* (general will) of the people" (Abts & Rummens 2007; Albertazzi & McDonnell 2008; Mény & Surel 2002; Rooduijn 2014; Stanley 2008). Accordingly, populism is conceived of as a Manichean view that sees politics as the struggle between the worthy people's common sense and the harmful, self-serving power elite—a view that is deeply suspicious of any constitutional restraints to the democratic principle and hence advocates for the absolute primacy of popular sovereignty.

Such a minimal conceptual core renders populism ideologically ubiquitous (Taggart 2000). Lacking any true programmatic content, populism does not provide an internally coherent set of specific solutions to the major conflicts present in modern societies. Instead, populist rhetoric is easily attached to different fully-fledged ideologies on both sides of the left-right spectrum. Although the populist radical right has proved to be one of the most prolific party families in Europe over the last three decades, other distinct families have recently earned the same qualifier, such as neo-liberal populist parties or social-populist parties, not to mention the diverse crowd of contemporary leftist-populist movements in Latin America.

Relatedly, populism is not to be understood as a quality confined to a precise set of allegedly populist parties. Rather, populist rhetoric can be adopted in different degrees by any actor, not only by political parties and leaders but also by journalists and voters—provided that their

discourse complies with the minimal definition. Mainstream parties might also occasionally or even consistently voice populist appeals (Deegan-Krause & Haughton 2009; Jagers & Walgrave 2007; Pauwels 2011). Populism can vary in degree across actors and over time. It is not an "either–or" concept (Pauwels 2011) and hence is best used as a "descriptor" rather than as a "classifier" (van Kessel 2014).

This ideational conceptualization of populism has significant implications in terms of research strategy. Most of the existing research on the origins of populism as a mass phenomenon uses voting choice as the dependent variable, taking as a starting point some categorization of parties as populist and non-populist. Leaving aside the debates on how to classify parties as populist, individual populism in the analysis of voting choice is equated with support for populist parties, which in addition adopt much more diverse ideological stances that further condition their electoral support.

Using populist attitudes as the dependent variable, rather than support for populist parties, helps alleviate at least some of the methodological barriers associated with the study of the breeding ground of populism. First, it allows populism to vary across individuals regardless of their voting choice, thus avoiding an artificial dichotomization that overlooks differences of degree in the levels of populism in both the discourse of parties and the attitudes of their voters. Second, it helps discern the determinants of populism from those of the other (and often radical) ideological stances that individual populist movements happen to embrace – that is, to "separate populism from features that might regularly occur together *with* it, but are not part *of* it" (Mudde & Rovira Kaltwasser 2012). Finally, it allows us to better focus on demand-side factors – such as the degree to which people are in a vulnerable economic position, have experienced economic hardship, or how they perceive of the country's economy – rather than on explaining the electoral performance of specific individual parties or party families, a question for which supply-side factors – such as the characteristics of the parties and institutional constraints – have been shown to be overwhelmingly relevant.

The role of the crisis as a trigger of populist upsurge is a prominent idea in a number of works inquiring into the nature and origins of populism. In Taggart's (2004, p. 275) words, "populism is a reaction to a sense of extreme crisis" that "spills over into a critique of politics and into the sense that politics as usual cannot deal with the unusual conditions of crisis". According to Laclau (2005: 37–38), populism is the result of "a situation in which a plurality of unsatisfied demands and an increasing inability of the institutional system to absorb them differentially co-exist". In a similar vein, Panizza (2005: 11) argues that populism typically emerges out of critical circumstances that produce "a breakdown of social order and the loss of confidence in the political system's ability to restore it." The rationale behind such theoretical accounts is thus that the perception of persistent unresponsiveness to popular demands undermines the public's confidence in the political establishment to the point that it calls into question the whole institutional system's capacity to handle the situation satisfactorily.

Large-scale economic crises, such as the Great Recession and the sovereign-debt crisis recently experienced by several Eurozone member states, clearly provide the conditions for feelings of dissatisfaction and perceived unresponsiveness of the political elites to spread among citizens. It

is worth noting, however, that a populist upsurge is not inevitably restricted to times of crisis and structural transformation, as most strongly argued in studies of the Latin American experience (de la Torre 2000; Knight 1998). Populist attitudes must be conceived as the result of the interplay of various factors at multiple levels – the economy being but one of them.

Even if economic hardship is clearly not a necessary or even a sufficient condition for the emergence of populism, populist attitudes may arguably be nourished by economic crisis. That voters turn against governments in times of economic strain has been long established by the economic voting literature. *Continued* bad economic performance, often spanning across different governments and incumbent parties and/or concerning decisions taken by previous governments and parties may end up damaging the public's confidence in the entire political establishment. To the extent that crisis negatively affects the living conditions of citizens, economic crisis breeds dissatisfaction with the elites that are seen as responsible for governing the affairs of the country, and ultimately enhances the perceived antagonism between the "people" and the ruling elite, however defined.

Indeed, this is one of the working hypotheses guiding Kriesi and Pappas' (2015a) effort to examine the impact of the financial crisis on the performance of populist parties in Europe. They find that electoral support for populist formations experienced a moderate but non-negligible increase during the Great Recession. The evolution of populism was however far from uniform in the countries under scrutiny, with the growth being particularly strong in Southern and Central-Eastern Europe and almost non-existent in Western Europe. Their analyses provide partial empirical support for the hypothesis that populism benefits from economic crisis, as attested by the fact that populist formations did tend to perform better in countries more seriously affected by the global economic downturn – yet with some remarkable exceptions to the general trend (Pappas & Kriesi 2015). The crisis-breeds-populism thesis has gained additional, albeit indirect, empirical backing from other recent work looking at the influence of the Great Recession on related but distinct attitudes such as satisfaction with democracy and trust in political institutions, which experienced dramatic declines over the last decade (Armingeon & Guthmann 2014).

Overall, however, extant empirical work concerning the relationship between economic hardship and mass populism remains rather unsystematic, not very comprehensive, and lends mixed results. A case in point is the effect of unemployment on support for the populist radical right. Whereas several studies have found a positive relationship between unemployment rates and populist electoral performance (Anderson 1996; Arzheimer 2009; Givens 2005; Jackman & Volpert 1996), some other macro-level studies show no significant association (Lubbers and Scheepers 2002; Lubbers *et al.* 2002; Swank & Betz 2003) or even a weak negative correlation (Arzheimer & Carter 2006; Knigge 1998).

The apparent contradiction raised by the negative associations found in some studies has been explained by virtue of bad economic conditions providing higher salience to socioeconomic issues, which have been traditionally owned by mainstream parties, over immigration and other debates where populist radical right parties play a more visible role (Mudde 2007; Rydgren 2007; Bornschier 2010). Accordingly, the combination of issue salience and issue-specific perceptions

of party competence would offset or even reverse the influence of economic hardship on citizens' adherence to populist discourse.

Another alternative approach criticizes the conventional understanding on the basis of its tendency to conceive crisis as a purely exogenous factor. To the extent that crises are socially constructed, populism may become a trigger of crisis rather than crisis being a precondition of populism, since the crisis discourse is a key instrument for populist leaders to convey to the public the Manichean worldview that sees politics as antagonism between the people and the elite (Moffitt 2015). It is in the interests of populist challengers to fuel the perception of crisis regardless of actual conditions, since their appeal stems from their self-proclaimed ability to fix that very problem. Indeed, the criticism of a crisis has been found to be one of the most recurrent themes of the populist rhetoric (Rooduijn 2014).

In our view, this interpretation qualifies but does not detract from the analysis of the influence of crisis on populism, once the definition of crisis is expanded beyond objective indicators to also include subjective perceptions and there is an acknowledgement that such perceptions affected by factors other than actual conditions. Crises may be real or imaginary, but the sense of threat and emergency they give rise to may be vividly perceived by a significant portion of the people (Taggart 2004), and its effects are worth investigating. If it is a major concern when explaining a populist's party support, the distinction becomes less of a problem when the focus is on populist attitudes, and it appears as nearly irrelevant when the analysis is set in the aftermath of the unquestionably critical context of the Great Recession.

The aim of this paper is to disentangle to what extent different dimensions of economic hardship enhance populist attitudes at the individual level. For this purpose, we distinguish two different facets that the Great Recession has brought about: (1) economic crisis and austerity measures, and (2) loss of sovereignty of the European Union State members. Hence:

> *H1.* Individuals confronted with a treatment regarding the (bad) economic situation in Spain will show higher levels of populism
> *H2.* Individuals confronted with a treatment regarding the loss of sovereignty that Spain suffers in favour of the European Commission will show higher levels of populism
> *H3.* Individuals confronted with the two treatments will show higher levels of populism than individuals treated with only one of the dimensions

However, which is the specific mechanism that may be driving each of these treatments to higher levels of populism? Our argument is that this relationship is mediated by the feeling of anger that the different treatments may provoke. Anger is likely to arise if a threat to personal rewards is certain to occur or has already materialized as a consequence of deliberate or negligent behaviour by an external agent in control, and is hence blameworthy, but is accompanied by the sense that one has some capacity to deal with the situation.

Thus, the fact that anger entails a harm or offense that is perceived as unfair and depreciating and that there is certainty about who is to blame, along with the sense that one nonetheless has control over the situation and the risks are low, typically triggers a behavioural approach. Anger

motivates people to take action against the responsible agent, promoting a corrective response. The style of the angry citizen is confrontational rather than deliberative, such that new considerations are forestalled in favour of prior convictions. Accordingly, anger has been found to boost political participation (Valentino *et al.* 2009) and protest (Van Troost *et al.* 2013), foster support for punitive and aggressive policies (Gault & Sabini 2000; Lerner *et al.* 2003; Petersen 2010), and heighten superficial information processing and reliance on prior convictions (MacKuen *et al.* 2010). In line with this literature, we argue that those confronted with the economy and the sovereignty treatment will experience more anger.

H4. Individuals confronted with a treatment regarding the economic situation/loss of sovereignty in Spain will experience more anger

Design

In order to test the hypotheses laid out above, we use a survey experiment of 782 individuals in Spain. The experiment was carried out between the 1 June and 8 June, 2016. For the experiment , individuals were randomly assigned to three different treatment groups and a control. Each treatment group ended with a question asking the extent to which the individual agreed with the measure. Each treatment group is conceived as a main independent variable in our empirical analysis. The content of each group treatment wording is as follows.

TABLE 1. Treatments' wording

Groups	Wording
Sovereignty	On 18 May, the European Commission requested that Spain make new cuts in public expenditure of more than 8.000M € before 2018; at the same time it postponed a fine of more than 2,000M € until July for the excessive public deficit. The Commission also is considering sending new missions to survey the application of specific austerity measures in Spain. Using the following scale, to what extent do you agree or disagree with the measures required by Brussels to reduce public spending?
Economy: List of the major economic problems in Spain	Next, we will show you a list of some of the main problems in Spain. Please drag them to the right panel, from the least serious (1) to the most (5) serious: - The public deficit. More than 5% of GDP, the highest in Europe. - The fall in the average salary. It has dropped 25% since 2007.

	- La unemployment rate. Over 20%. - The growth in the poverty rate. More than 29% of the population is at risk of poverty and social exclusion. - The bad quality of the job market. Only 8% of new contracts are unlimited contracts. - The unemployment rate among young people. More than 46% of young people are unemployed.
Sovereignty & Economy treatments altogether	
Control	[No information displayed]

The main dependent variable is a composite scale of populism, coded to run from 0 to 4. Following the growing consensus around the definition of populism, in recent years several indicators have been suggested to measure populist attitudes at the individual level (Elchardus & Spruyt 2016; Rooduijn 2014; Stanley 2011). We adopted the measure proposed by Akkerman et al. (2014), itself developed from previous efforts by Hawkins and colleagues (Hawkins *et al.* 2012; Hawkins & Riding 2010). We use six different statements designed to tap the core ideas that make up populist discourse, namely, people-centrism, anti-elitism, the antagonism between the people and the elite, and the primacy of popular sovereignty.

1. The politicians in [country] need to follow the will of the people
2. The people, and not politicians, should make our most important policy decisions
3. The political differences between the elite and the people are larger than the differences among the people
4. I would rather be represented by a citizen than by a specialised politician
5. Elected officials talk too much and take too little action
6. What people call "compromise" in politics is really just selling out on one's principles

The second dependent variable of the study is the feeling of anger related to the economic situation. Thus, we rely on a question assessing to what extent the economic situation in Spain provokes 1) Anger, and 2) Rage in the individual. The two measures originally range from 1 (not at all) to 4 (a lot), and have been transformed so that the new measure on anger is a composite index of the two variables ranging from 0 to 1.

We will run the same empirical models for populist attitudes and anger. These will be a series of OLS regressions, with and without controls. The first and the second model will regress populist attitudes/anger on the economic treatment. Model 3 and 4 will do the same with the sovereignty treatment, and lastly model 5 and 6 will include the interaction between the sovereignty and the economy treatment. Models 2, 4 and 6 include controls for Age (continuous), education (secondary and university, with primary education being the reference category), ideology (from 0 to 1) and interest in politics (from 1, a lot, to 4, no interest at all).

Results

Table 2 presents the results of a series of OLS on populist attitudes, with the different treatments included in the experiment, in order of sequence.

TABLE 2. The correlates of populist attitudes

	(1) Sovereignty	(2) Sovereignty	(3) Economy	(4) Economy	(5) Sovereignty &Economy	(6) Sovereignty &Economy
Sovereignty	-0.005	0.011			0.029	0.042
	(0.049)	(0.047)			(0.068)	(0.066)
Economy			-0.007	0.032	0.025	0.061
			(0.049)	(0.047)	(0.066)	(0.064)
Sov. *Economy					-0.071	-0.066
					(0.099)	(0.096)
Age		-0.001		-0.001		-0.001
		(0.002)		(0.002)		(0.002)
Primary		[REF.]		[REF.]		[REF.]
Secondary		0.031		0.038		0.046
		(0.111)		(0.111)		(0.112)
University		-0.068		-0.062		-0.053
		(0.115)		(0.115)		(0.116)
Ideology		-0.777***		-0.778***		-0.780***
		(0.090)		(0.090)		(0.090)
Interest		0.052+		0.051+		0.051+
		(0.031)		(0.031)		(0.031)
Constant	3.648***	3.834***	3.649***	3.820***	3.637***	3.794***
	(0.033)	(0.167)	(0.034)	(0.168)	(0.045)	(0.172)
Observations	705	675	705	675	705	675
R^2	0.000	0.121	0.000	0.121	0.001	0.122

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

The evidence in Table 2 clearly shows that the treatments considered are not able to explain differences in populist attitudes. In Models 1 and 3, with the sovereignty and the economy treatment and with no controls, the beta coefficient is negative and non-significant. In model 2 and particularly in model 4 (economic treatment), the beta coefficients become positive but still remain statistically insignificant. Finally, the treatment on the economy and the sovereignty altogether does not show any pattern of behaviour at all.

Table 3 present the results of a series of OLS on anger, with the different treatments included in the experiment introduced in order of sequence.

TABLE 3. The correlates of anger

	(1) Sovereignty	(2) Sovereignty	(3) Economy	(4) Economy	(5) Sovereignty &Economy	(6) Sovereignty &Economy
Sovereignty	-0.045	-0.042			-0.047	-0.049
	(0.054)	(0.052)			(0.076)	(0.072)
Economy			0.044	0.061	0.043	0.057
			(0.054)	(0.052)	(0.072)	(0.069)
Sov.*Economy					0.003	0.012
					(0.109)	(0.104)
Female		0.084		0.082		0.084
		(0.052)		(0.052)		(0.053)
Age		0.005**		0.005**		0.005**
		(0.002)		(0.002)		(0.002)
Primary		[REF.]	[REF.]	[REF.]	[REF.]	[REF.]
Secondary		0.049		0.060		0.059
		(0.116)		(0.116)		(0.116)
University		-0.077		-0.070		-0.070
		(0.119)		(0.119)		(0.120)
Ideology		-0.891***		-0.893***		-0.891***
		(0.097)		(0.097)		(0.097)
Interest		-0.089**		-0.090**		-0.091**
		(0.033)		(0.033)		(0.033)
Constant	3.287***	3.604***	3.246***	3.557***	3.266***	3.576***
	(0.036)	(0.177)	(0.037)	(0.178)	(0.050)	(0.182)
Observations	782	745	782	745	782	745
R^2	0.001	0.128	0.001	0.129	0.002	0.130

Standard errors in parentheses + p<0.1, * p<0.05, ** p<0.01, *** p<0.001

The results from Table 3 confirm that anger is not explained by our treatments. In the case of the sovereignty treatment, the slope of this variable is negative, contrary to what was expected, yet insignificant. In the case of the economy treatment the beta coefficient is positive but also non-significant, in the same way as the case of the interaction between the sovereignty and economy treatments.

Discussion

In this paper we analysed the extent to which the economic crisis and the loss of sovereignty related to the Great Recession have affected populist attitudes. To do so we used a survey experiment including 782 individuals interviewed in Spain through an online survey. The evidence showed that our treatments on the economic situation and the loss of sovereignty had no impact on the level of populist attitudes.

Next, our purpose was to analyse the causal mechanism linking the economic crisis and populist attitudes. Our hypothesis was that the link between the two variables could be explained by the feeling of anger. However, the results from our analysis show that this is not the case: there is no

relation at all between our economic or sovereignty treatments and the feeling of anger.

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Survey experiment 4. Framing of crisis consequences and support for redistribution

Introduction

Does framing of the crisis as affecting different groups lead to different levels of support for redistribution?

The economic crisis that started in 2008 represented an income shock for different segments of the population (OCDE, 2015). Several discourses emerged pointing to different groups as the most affected by the crisis. Previous research on citizens' attitudes towards redistribution and the welfare state has argued that individuals' support for redistribution varies depending on what caused those in need of redistribution to be in such situation.

This research aims to assess the impact of beliefs on what led people to be hit by the crisis in the form of an income shock on citizens' support for redistribution. The focus is placed on the effect of four competing interpretations of who was most affected by the crisis: a) people who had bad luck, b) people who already were in a vulnerable position before the crisis, c) people who did not work hard enough for their future, and d) people who had a greedy behaviour in the past. The analysis looks at a very specific type of redistribution: that used to compensate those who lost out as a consequence of the economic crisis, as distinguished from other forms of redistribution or social assistance.

The experiment was run in Spain and in Switzerland, thus assessing the effect of more contextually rich treatments. The experiment consisted of a vignette experiment in which participants were randomly exposed (or not) to a text stating that the crisis hit people who a) where unlucky in their job situation; b) were already poor before the crisis; c) did not want to study and went for easy jobs; or d) went for easy money by speculating on the real estate market. Participants were asked whether they were willing to accept a tax rise to compensate the income loss of those most hit by the crisis. Any variation between the different treatments on the participants' average willingness to accept higher taxes can be attributed thus to fairness considerations linked to the source of the income loss. The experiment was run three times using different samples. Two samples were from Spain and one from Switzerland. In all cases respondents tended to be willing to pay less taxes to compensate people hit by the crisis when those people were depicted as people who took risks speculating in the real estate market. Additionally, respondents tended to be less willing to compensate those who did not study and who went for easy jobs. In the latter case, however, the difference was not statistically significant relative to the other two sources, which tended to generate very similar levels of willingness to pay more taxes.

Theory

Literature on redistribution has focussed on the role of self-interest on one hand and on the role of values and fairness considerations on the other. A dominant trend in the literature has highlighted the role of self-interest (Meltzer & Richard, 1981; Korpi & Palme, 1998; Bartels, 2008).

According to these theories, citizens demand redistribution if it will redistribute to them and oppose to it if it takes from them. However, extensive empirical evidence challenges these theories. Many studies have found support for redistribution among those who are net contributors and opposition to redistribution among those who are net beneficiaries. Several theories have arisen to explain this puzzle, without fully challenging the logic of the self-interest principle. For instance, some authors have taken into account the expected social mobility of citizens (Bénabou & Ok, 2001). Other theories have highlighted the importance of self-insurance motives. According to these theories, citizens favour redistribution despite not benefitting from it as a measure to minimise the economic consequences of a potential drop in their personal economic situation (Iversen & Soskice, 2001; Moene & Wallerstein, 2001). Recent research argues that in the context of the economic recession, an increasing number of citizens feel economically insecure. This increased insecurity triggers self-insurance motives and leads to an increase in the level of support for redistribution for self-insurance motives (Hacker, Rehn & Schlesinger, 2013).

On the other hand, there is an extensive literature that challenges the assumptions that citizens base their preferences for redistribution solely on their own self-interest or on self-insurance motives. Some authors have claimed that individuals often take into account the welfare of others in their preferences for redistribution. For instance, Fehr and Schmidt (1999) have shown that people tend to be inequity averse. They prefer wealth distributions that reduce the levels of inequality even if they involve a reduction in the agent's wealth. These findings challenge the model of the purely self-interested agent. However, this generosity with others is not unconditional, as many authors have shown (Fong, Bowles & Gintis, 2006). For instance, Bowles and Gintis (2000) propose a model in which people are willing to redistribute only towards those who cooperate to some extent to the common good. Additionally, these citizens are willing to assume economic costs to punish free riders and exclude them from the redistribution.

Some influential observational studies have shown that people's attitudes towards welfare and redistribution are influenced by citizens' perceptions of the deservingness and responsibility of the potential recipients of redistribution. For instance, Alesina and Angeletos (2005) show that believing that those in need of redistribution are perceived as responsible for their own situation leads to low levels of support for redistribution. Conversely, believing that those in need are in that situation due to circumstances out of their control leads to high levels of support for redistribution, even among those individuals that will have to pay for it. Some recent experimental studies have shown that people's support for redistribution changes significantly depending on whether the assignment of resources to the participants is perceived as depending on participants' efforts or merit or on causes that they cannot be held responsible for (Durante, Putterman, & van der Weele, 2014).

In the context of the recent economic crisis, the risk of losing income has increased. Several discussions of the crisis have presented the distribution of this shock as depending on four different factors: bad luck, previous socioeconomic status, lack of effort or greed. According to these interpretations, those affected by the crisis would have varying levels of responsibility for their situation. In the first two cases, those who suffered the consequences of the economic shock had no responsibility on their fate. Instead, when greed or lack of effort determined who received the shock, individuals could be held responsible for their situation. In this study we differentiate between two different circumstances in each level of responsibility. We differentiate between

luck and social background to check whether there are differences in attitudes to redistribution when the cause is external to the individual but caused by luck or by social circumstances. Similarly, lack of effort and greed are two different behaviours which are deemed as punishable. The experiment attempts to asses to what extent they trigger different levels of support for redistribution.

We hypothesize that fairness considerations affect levels of support for redistribution via taxes, leading to different levels of willingness to accept tax rises to compensate those most affected by the crisis.

> *H1.* Level of support for tax rises to compensate people hit by the crisis will vary depending on the causes that led people to be in economic difficulties.
> *H2.1.* When economic difficulties are due to factors outside individuals' control (bad luck and social background), the willingness to contribute via taxes to support the needy is higher than when economic difficulties are due to causes for which individuals can be held accountable (lack of effort or greedy behaviour).
> *H2.2.* When economic difficulties are due to social background, the willingness to contribute via taxes to support the needy is higher than when economic difficulties are caused by bad luck.
> *H2.3.* When economic difficulties are due to lack of effort the willingness to contribute via taxes to support the needy is higher than when economic difficulties are caused by greedy behaviour.

Design

The experiment was an online survey vignette experiment. After having been asked a few socio-demographic questions, participants were randomly assigned to different treatment and control groups. Each treatment group was shown a text. The text claimed that the crisis especially hit different people and that these people were going through a difficult economic situation. Four different causes were described as leading people to be among those especially hit by the crisis: bad luck, social background, lack of effort, and greedy behaviour. The control group was not shown any text at all. Table 1 shows the different treatment texts that were show to each group[24]. Additionally, in the Swiss experiment a further control group was added. This group primed the crisis effects but did not identify any group as specially hit. Aside from this difference, the texts were the same in all versions of the experiments.

[24] In order to make the treatment credible in the Swiss context, where the crisis had been milder than in Spain, a further sentence was added between the headline and the text. The sentence stated 'Although to a lesser extent than in other countries, the economic crisis that has affected Europe in recent years also had an impact in Switzerland.'

TABLE 1. Treatments texts.

Luck	The crisis hits those who have had bad luck One of the groups most affected by the crisis are people who have been unlucky in their work or personal situation. Today many of these people are suffering very difficult economic situations.
Social background	The crisis hits the poorest One of the groups most affected by the crisis are people who during the years of economic growth already had very little, starting out in a worse economic situation. Today many of these people are suffering very difficult economic situations.
Effort	The crisis hits those who drop out of their studies One of the groups most affected by the crisis are people who, during the years of economic growth, rather than go into further education, decided to leave school to go and do easy jobs that were then were very lucrative. Today many of these people are suffering very difficult economic situations.
Greed	The crisis hits those who tried to make easy money One of the groups most affected by the crisis are people who, during the years of economic growth, tried to earn a lot of easy money, for instance buying real estate (flats, land) to sell it later. Today many of these people are suffering very difficult economic situations.
Control-Priming	The crisis hits some people Some people have been most affected by the crisis. Today many of these people are suffering very difficult economic situations.
Control	-

After having read the text, participants were asked whether they would accept paying higher taxes in order to support people who had suffered the consequences of the crisis. The exact wording of the question was as follows: 'Currently, some people want to improve social benefits for people who are going through a difficult economic situation. It would be necessary to raise taxes for other taxpayers. To what extent would you personally be willing to pay more taxes to improve these benefits?' Participants had to position themselves in a 0 to 10 scale ranging from 'I am not at all willing' to 'I am very willing'. Their response is used as the dependent variable.

The experiment was run three different times with three different samples. In all cases the experiment was online. It was programmed and administered using Qualtrics. The basic structure of the experiment was as follows: first, participants where asked a few socio-demographic questions. Then they were shown the vignette and were asked the question about whether they were willing to pay more taxes to offer better social benefits to those going through difficult economic circumstances. Afterwards, they were asked some political attitudes questions. Finally, they were debriefed.

There were three samples. A snowball sample from Spain, a Qualtrics-Toluna sample from Spain, and a Qualtrics sample from Switzerland. The Spanish snowball sample was recruited

through social networks. People could log in and respond the survey, which included the experiment. The survey was run between the 4 March and 9 March 2016. It collected 2,328 responses. The sample had a clear gender bias (65.7 per cent of respondents were men). Additionally, the respondents tended to be highly educated and left-leaning. Tables 2 to 4 show the basic demographic characteristics of the different samples.

The second sample was recruited using Qualtrics recruitment services in Spain. The survey was conducted between the 14 June and 17 June 2016. The sample included over 2,500 participants, and had sex, age and education quotas. Participants were assigned to different experiments. Among the 2,500 participants in the survey, 868 were assigned to this particular experiment. In contrast to the snowball sample, women are slightly overrepresented in this sample. As can be seen in table 2, there is a 54 per cent of women in the sample.

The Swiss sample was recruited using Qualtrics recruitment services in Switzerland. The survey was conducted between 24 August and 21 September 2016. The sample included sex, age and education quotas. It was responded by 1040 participants. The survey could be answered in French or German. 267 participants responded to the French version and 773 responded to the German one.

TABLE 2. Gender distribution by sample

Gender	Spain Snowball	Spain Qualtrics	Switzerland
Male	65.7	45.7	50.1
Female	34.3	54.3	49.9
Total	100	100	100

TABLE 3. Educational level distribution by sample

Education	Spain Snowball	Spain Qualtrics	Switzerland
Primary	3.13	3.69	6.15
Secondary + Vocational	23.11	52.18	70.19
University	73.76	44.12	23.56
Total	100	100	100

TABLE 4. Left-Right self-identification distribution by Sample

Ideology	Spain Snowball	Spain Qualtrics	Switzerland
Left (0-4)	82.5	49.5	26.2
Centre (5)	9.8	19.0	21.7
Right (6-10)	7.9	31.5	43.8
Total	100	100	100

Results

In this section we present the main results of the three replications of the experiment: the snowball sample in Spain, the Qualtrics sample in Spain and the Swiss sample.

In all three cases we present the same set of results:

1. Table with the number of cases per experimental condition.
2. Table with randomization tests (to check that all groups are equal and balanced) with basic socio-demographics and relevant attitudes.
3. Table with comparison of means across the treatments.
4. The results of a linear regression of willingness to redistribute on out treatments. The 1st figure for each study presents the predicted values of the willingness to pay taxes by treatment, and the 2nd one plots the coefficients of all treatments vs. the control group.

Sample 1: Snowball

TABLE 5. Distribution by treatment in Spain-Snowball

Treatment group	Freq.
Control	259
Luck	453
Unfair	461
Effort	395
Greed	449
Total	2017

TABLE 6. Randomization in Spain-Snowball

Treatment	Age	Male	Ideol	Upper and upper-middle	Middle	Lower-middle and lower
Control	39.31	60.62	3.06	15.83	51.8	32.37
Luck	38.53	68.08	3.08	16.12	52.27	31.61
Unfair	37.88	64.95	3.09	15.05	51.88	33.07
Effort	37.97	69.87	3.12	16.09	50.11	33.8
Greed	39.29	64.13	3.17	17.5	45.83	36.66
Total	38.53	65.89	3.10	16.13	50.27	33.59
Test	F=1.25	Chi2(4) = 8.79	F=0.34	Chi2(16) = 14.3337		
p-value	0.2891	0.067	0.8543	0.574		

TABLE 7. Distribution by treatment in Spain-Snowball

Treatment group	Mean	Std. Dev.	Freq.
Control	7.05	2.59	259
Luck	7.14	2.37	453
Unfair	7.12	2.33	461
Effort	6.69	2.45	395
Greed	6.42	2.58	449
Total	6.87	2.47	2017

FIGURE 1. Predicted values by treatment in Spain-Snowball

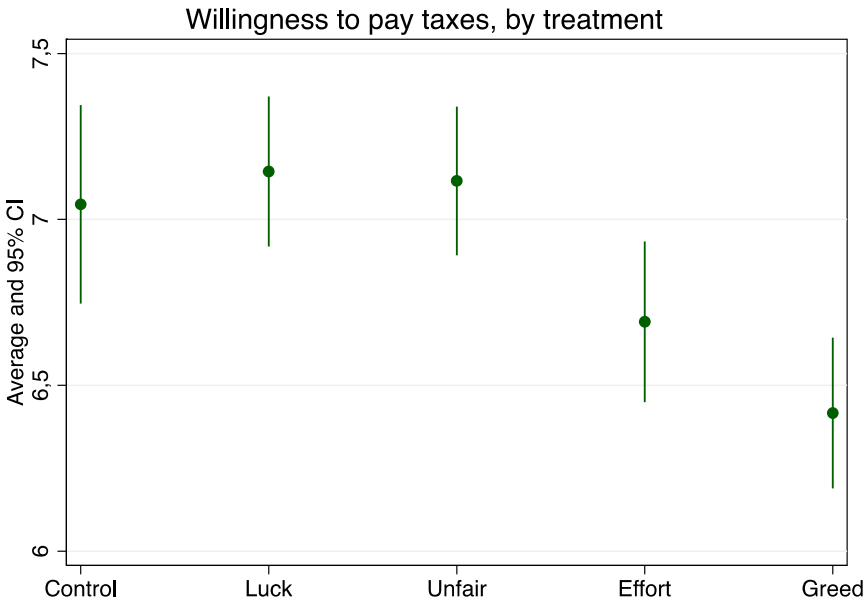
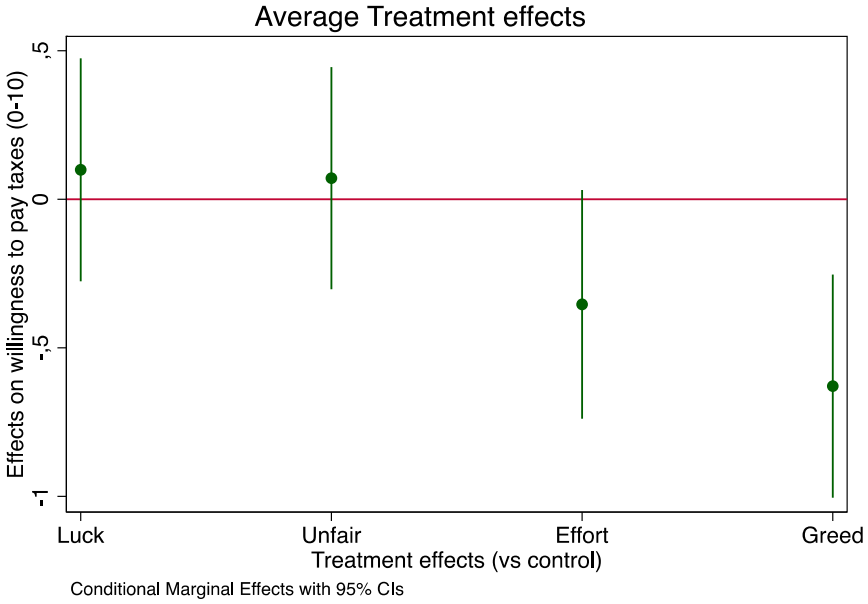


FIGURE 2. Average Treatment Effects (ATE) in Spain-Snowball



In this case we see how the 'luck' and 'unfair' treatments produce the same willingness to redistribute as the control group (around 7 points in the 0-10 scale on average), while the 'effort' and, especially, 'greed' groups display a significantly lower willingness to redistribute (less than 6.5). The effect for greed is clearly statistically significant, while in the case of effort it is marginally significant.

Sample 2: Qualtrics Spain

TABLE 8. Distribution by treatment in Spain-Qualtrics

Treatment group	Freq.
Control	275
Luck	123
Unfair	131
Effort	135
Greed	156
Total	820

TABLE 9. Randomization in Spain-Qualtrics

Treatment	Age	Male	Ideol	Upper and upper-middle	Middle	Lower-middle and lower
Control	38.13	48.08	5.66	8.82	44.54	46.64
Luck	38.67	45.93	5.93	5.26	52.63	42.1
Unfair	37.94	46.43	6.01	11.76	38.66	49.58
Effort	39.21	49.65	5.79	6.6	48.11	45.28
Greed	37.4	37.42	6.13	6.57	44.53	48.91
Total	38.22	45.74	5.87	7.98	45.38	46.63
Test	F=0.84	Chi2= 6.08	F=0.72	chi2(16) = 12.1910		
p-value	0.5007	0.193	0.576	0.731		

TABLE 10. Distribution by treatment in Spain-Qualtrics

Treatment group	Mean	Std. Dev.	Freq.
Control	4.46	3.02	275
Luck	4.77	2.5	123
Unfair	4.82	2.6	131
Effort	4.53	2.74	135
Greed	4.09	2.9	156
Total	4.51	2.82	820

FIGURE 3. Predicted values by treatment in Spain-Qualtrics

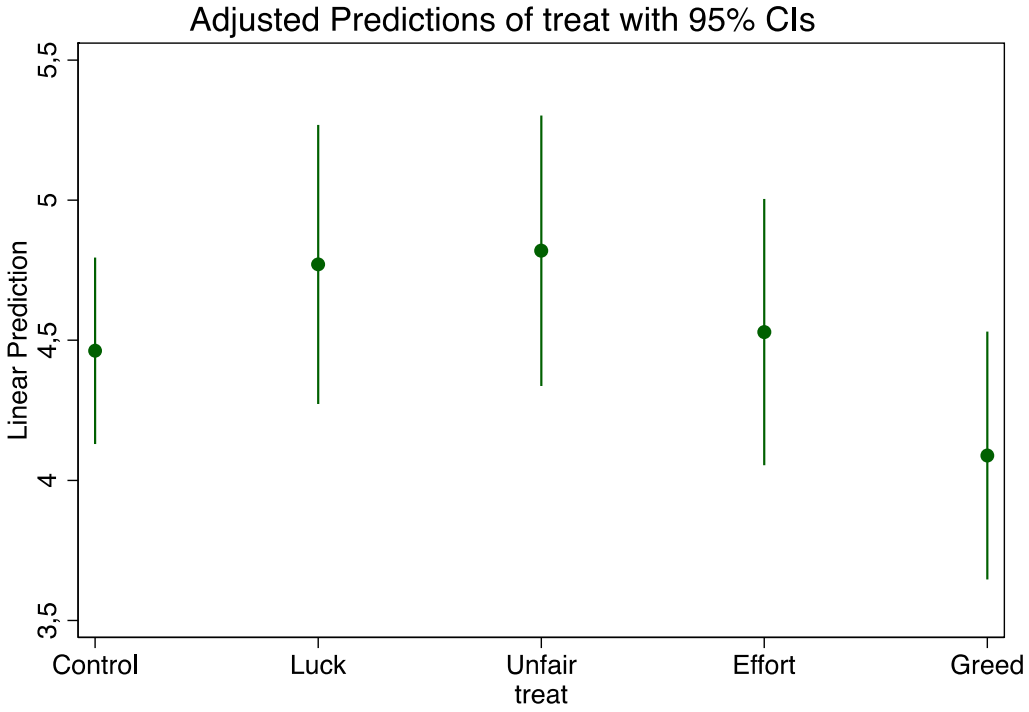
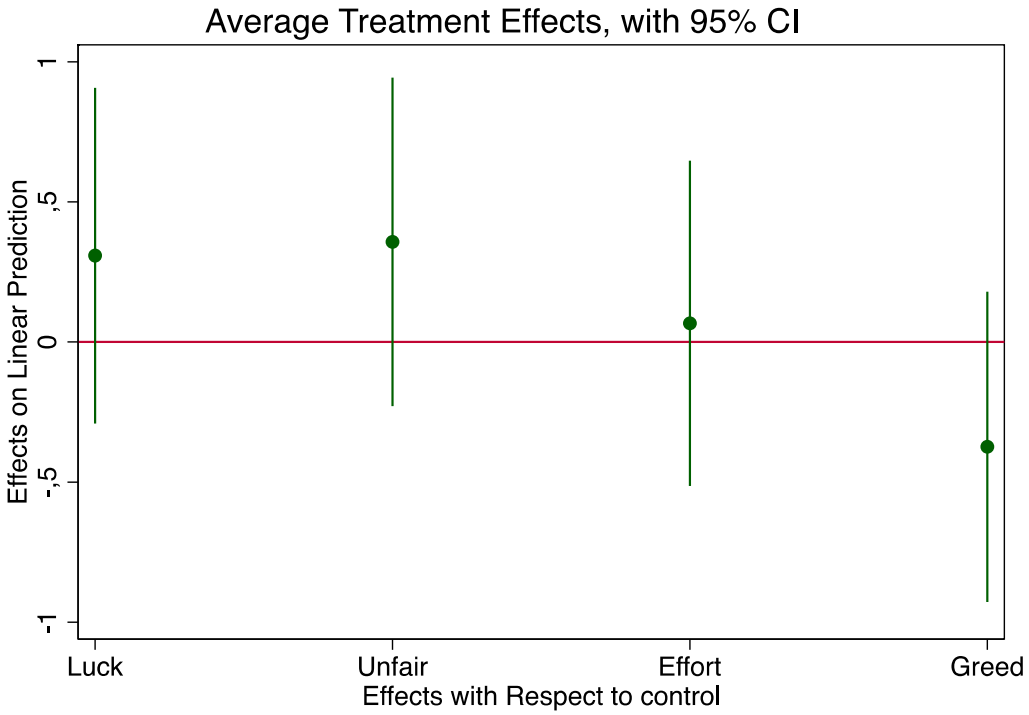


FIGURE 4. Average Treatment Effects (ATE) in Spain-Qualtrics



With this sample we have a slightly different pattern. While ‘luck’ and ‘unfair’ are still indistinguishable from the control, the effort treatment produces the same result as the control group, and only the ‘greed’ elicits among respondents a substantially lower willingness to redistribute.

Sample 3: Switzerland

TABLE 11. Distribution by treatment in Switzerland

Treatment group	Freq.
Luck	159
Unfair	167
Effort	155
Greed	181
Control1	203
Pure cont	175
Total	1040

TABLE 12. Randomization in Switzerland

Treatment	Male	Ideol	Upper and upper-middle	Middle	Lower-middle and lower
Luck	47.17	5.41	9.44	49.06	41.51
Unfair	55.09	5.37	12.57	44.31	43.12
Effort	49.03	5.45	12.26	43.87	43.87
Greed	46.96	5.45	9.94	47.51	42.54
Control1	50.25	5.46	12.81	45.32	41.88
Pure cont	52.00	5.41	7.43	53.14	39.43
Total	50.10	5.43	10.77	47.21	42.02
Test	chi2(5) = 3.2476	F=0.04	Pearson chi2(20) = 33.8549		
p-value	0.662	0.9991	0.027		

TABLE 13. Distribution by treatment in Switzerland

Treatment group	Mean	Std. Dev.	Freq.
Luck	3.71	2.80	159
Unfair	4.01	2.85	167
Effort	3.51	2.58	155
Greed	2.85	2.30	181
Control1	3.52	2.55	203
Pure cont	3.55	2.61	175
Total	3.51	2.63	1040

FIGURE 5. Predicted values by treatment in Switzerland

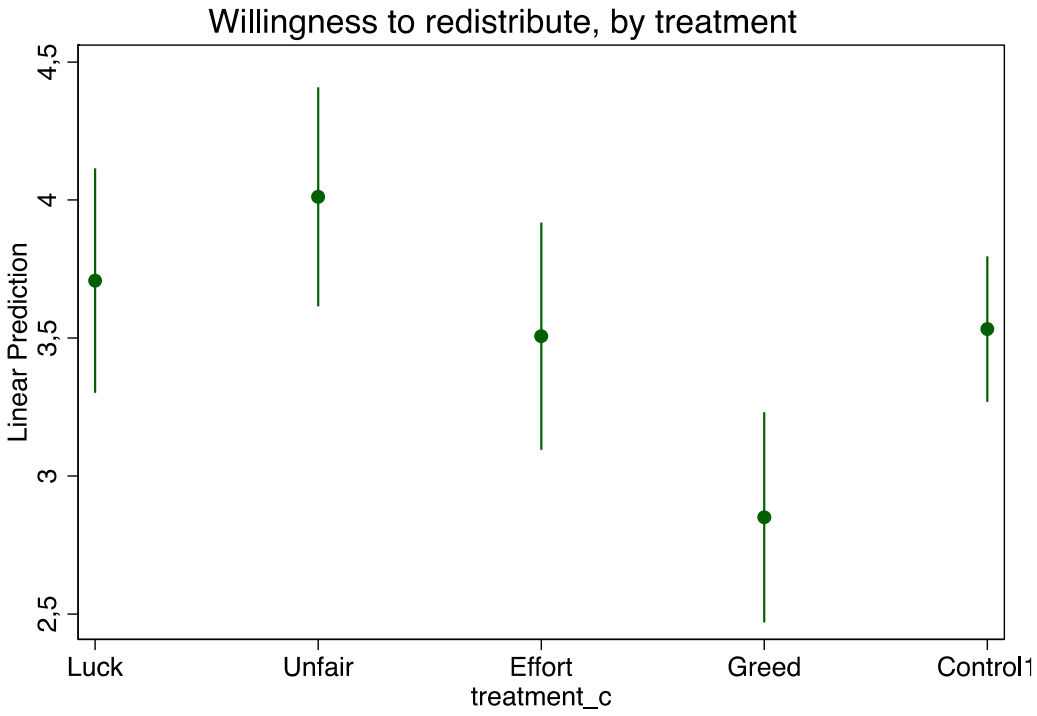
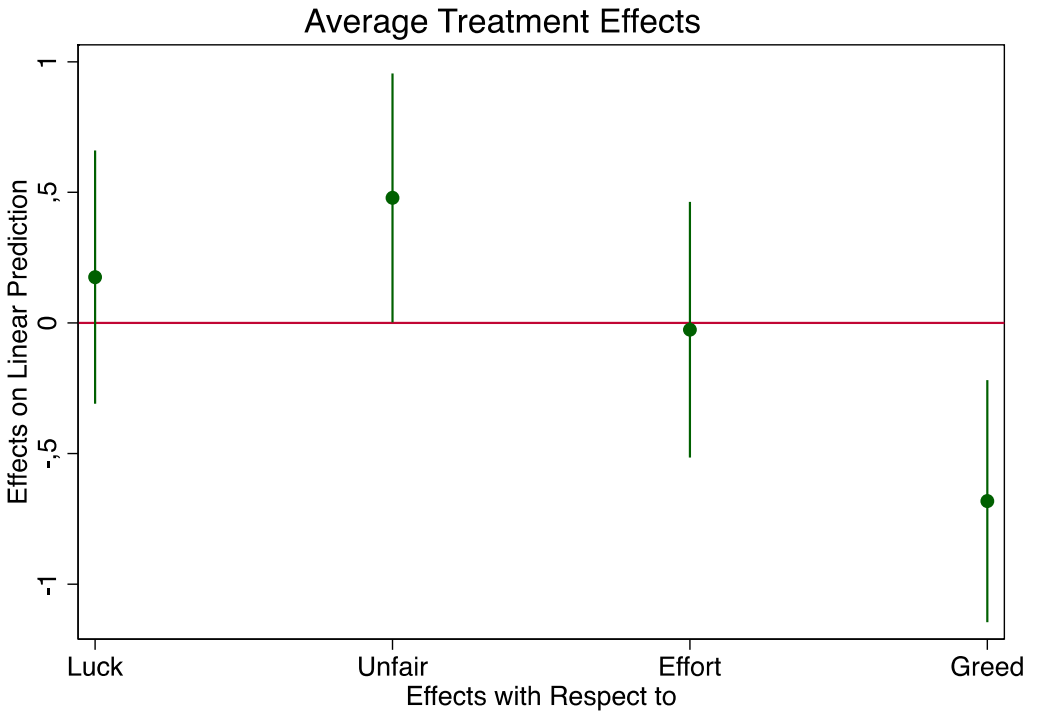


FIGURE 6. Average Treatment Effects (ATE) in Switzerland



In Switzerland we find the usual pattern of greed being the only treatment that significantly decreases the probability of supporting redistribution, while the social origin treatment ('unfair') seems to increase willingness to redistribute (borderline significant). Luck and effort are indistinguishable from the controls.

Discussion

We can summarize the main findings across the three studies. Table 14 displays the significant effects across the three replications of the experiment.

TABLE 14. Findings Summary: Effects by treatment and sample

	Spain snowball	Spain quota	Switzerland
Luck	NS	NS	NS
Unfair	NS	NS	+0.5*
Effort	-.3***	NS	NS
Greed	-.6***	-.4*	-.7***

*** p<0.01, ** p<0.05, * p<0.1

The consistent pattern we have found is that when crisis-related losses are framed as being dependent on greedy/risky behaviour related with real estate investments, respondents are consistently less willing to redistribute to compensate these losses. This pattern is consistent across the three samples, although in the Spanish quota sample it is not statistically significant due to a reduced sample size and a slightly lower effect. However, the overall magnitude of the effect, which varies between a lower limit of -0.4 and an upper limit of -0.7 is fairly consistent across replications. Substantively, the effect does not seem to be dramatic, but it is nonetheless consistent.

All the other framings of the crisis losses do not produce a significant change in respondents' willingness to redistribute. Neither the luck, the socially unfair nor the (lack of) effort treatments are consistently distinguishable from the control group. The only clear exception is the social origin (unfair) treatment in Switzerland, that has a positive effect of +0.5 points in the willingness to redistribute, significant at the 10% level of confidence (p=0.071). Although not significant, this treatment has also a positive effect in the Spanish quota sample.

In terms of our hypotheses, we can state that we have confirmed H1 (there is variation in support for redistribution depending on the framing of the crisis exposure), and partially confirmed the H2.1 and H2.2 hypotheses. As hypothesised in H2.1, when crisis losses are represented as stemming from factors that are beyond the control of individuals, there seems to be more support for redistribution, but this is only significant with respect to greed. Similarly, as hypothesised in Hypothesis H2.2, when economic difficulties are caused by social background, citizens tend to be more willing to contribute than when they are caused by bad luck. However, this variation is not statistically significant. Finally, and at odds with our expectations in Hypothesis H2.3, when economic difficulties are due to greedy behaviour, the willingness to contribute via taxes to support the needy is higher than when economic difficulties are caused by lack of effort.

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Survey experiment 5. Economic performance and corruption voting

Introduction

Are economic considerations responsible for the low levels of electoral punishment of corrupt candidates? The coexistence of a strong disapproval for corruption and its consequences, and the low levels of punishment of corrupt politicians is still a puzzle in social sciences (Kurer, 2001). Different hypotheses have been used to explain this discrepancy but there is still no clear empirical evidence that can explain why voters do not punish corrupt politicians more. Zechmeister and Zizumbo-Colunga (2013) argue that individuals trade corruption off for economic wellbeing. According to their research, in good economic contexts, the perception of corruption does not decrease presidential support; while in a bad economic context, perceived corruption can decrease presidential approval up to 10 per cent. Although these results seem to be consistent, it is essential to corroborate them in an experimental setting in order to determine the causal link between these variables and fully dismiss the possibility that the causality runs in the inverse direction.

In this paper, we would like to further assess whether voters only care about corruption in difficult times and forgive corrupt candidates when the economy is doing well. In order to depict the causal link between the economic situation and the support for corrupt candidates we design a conjoint experiment. In this type of experiment, respondents are confronted with two profiles, in this case mayors, that have a set of attributes with randomly assigned categories and are asked to rate the profile of each of the candidates. Each respondent is asked to repeat the same task three times. This procedure allows us to include different hypotheses in one experimental setting and determine the relative effect of each hypothesis and assess how they interact with each other (Hainmueller, Hopkins, & Yamamoto, 2014; Kessels, Goos, & Vandebroek, 2008). Assessing the interaction of economic considerations with other hypotheses that have been used to explain the support for corrupt candidates allows us to posit a harsh test for the economic wellbeing hypothesis. Consequently, we are also able to assess whether this hypothesis holds even when interacting with party preferences and with highly credible information about corruption.

Theory

Zechmeister and Zizumbo-Colunga (2013) consider the economic situation as a moderator in the relationship between the perception of corruption and presidential evaluation. According to their results of a survey analysis across sub national regions of 19 countries, perception of corruption has a significant negative effect on the evaluation of incumbents in bad economic contexts; however this effect ceases to be significant when the economic situation improves. Hence voters seem to forgive corrupt politicians in good economic times. Although these results seem to be consistent, it is essential to corroborate them in an experimental setting in order to determine the causal link between these variables and fully dismiss the possibility that the causality runs in the inverse direction, i.e. dismiss the possibility that the evaluation of the politicians is driving the perception of corruption and perhaps also the evaluation of the economy.

Muñoz, Anduiza and Gallego (2012) using experimental data, show that a good management record does attenuate the electoral punishment of corrupt candidates. According to their results, a candidate's good performance raises the probability of voting for a possibly corrupt politician up to 14 per cent. Furthermore, Esaiasson and Muñoz (2014) in two survey experiments carried out in Spain and Sweden prove that respondents in both countries would rather vote for a corrupt but competent candidate than for an honest but incompetent candidate. On the other hand, Winters and Weitz-Shapiro (2013) do not find evidence of the competence trade-off hypothesis: according to their results, when Brazilians learn about cases of corruption, they punish those candidates even if they perform well. As these studies have obtained contradicting results, we propose further testing the effect of the economy on the support for corrupt candidates. Furthermore, while these studies mainly focus on the performance of the candidate, in our experiment we want to focus purely on economic outcomes of the previous term and consequently see whether respondents only care about economic outcomes no matter what the actual qualities of the candidate are.

In order to test this hypothesis thoroughly, we assess whether it holds even when including other conditions that have been proven to be significant in the support of corrupt politicians, such as partisanship and the credibility of the information about corruption. Partisanship has been used in order to explain how citizens evaluate the credibility of the information but also on how they assess the severity of the corrupt cases. In line with the theory of cognitive dissonance, the authors that defend this hypothesis consider that the punishment of corrupt politicians is attenuated by party identity. Dimock and Jacobson (1995) in their study of the electoral effect of the House Bank scandal found that those that had voted for an incumbent whom they thought had written bad checks were less prone to take a harsh position against this issue. In the same line, Anduiza, Gallego and Muñoz (2013) find in a survey experiment that respondents consider corruption less severe when it affects the party they feel closer to.

Scholars concerned with voting for corrupt candidates also increasingly emphasize the importance of the credibility that voters give to the information. In a survey experiment, Weitz-Shapiro and Winters (2015) show how citizens differentiate between different pieces of information. They do find that any information on corruption has an effect on the candidates' vote shares, but that the effect is much stronger when respondents are confronted with credible allegations (federal audits) rather than less credible allegations (opposition party). (Muñoz et al., 2012), also using a survey experiment, find that generating noise over the corruption allegations that affect a candidate, by claiming that these allegations are baseless attacks form the opposition, diminishes the electoral punishment of co-partisans.

Our experiment tests these three hypotheses: the credibility of information, the effect of economic outcomes and the partisanship hypothesis in a multidimensional setting. Vote decision is a multidimensional phenomenon; citizens have to take into account many different dimensions when casting their vote (Hainmueller et al., 2014). However the majority of the previous research on voting for corrupt candidates has only been able to focus on one or two dimension of this phenomenon at a time and can therefore not depict which combination of variables decreases the impact of corruption in the voting decision. Previous research, however, has been useful in understanding the individual causal effect of each hypothesis. Our research proposal allows us to

understand the relative effect of each hypothesis, as we are able to observe how the different hypotheses interact with each other in a multidimensional setting. As far as we know, this is the first attempt to determine how these hypotheses interact in a multidimensional setting.

Our expectations are the following: as proposed by Weitz-Shapiro and Winters (2015), we expect that respondents differentiate between credible and less credible information. Consequently, we expect that the decreasing effect of corruption on the support for a candidate is higher when the accusations are made by a judge (more credible source) than when the accusations are made by other parties (less credible source).

We also expect that the credibility of information interacts with the economic outcomes of the previous term. We expect that the information about corruption with low credibility has a significant negative effect on the support of a candidate when the candidate obtained a bad economic outcome; however, when the candidate obtained a good economic outcome, the effect will not be significant. In the case of credible information, we expect that the negative effect is constant no matter what the economic outcomes of the previous term were.

We also expect that respondents trade off corruption allegations for party preferences. Therefore, support for corrupt candidates increases when the corrupt candidate is from a preferred party. Furthermore, we also expect that the effect of party preferences is stronger when the information about corruption is less credible than when the information is credible.

> *H1.* The credibility of the information about corruption has a negative effect on the support for candidates.
> *H2.* The economic outcomes of the previous term have a strong effect on the support for a candidate, while education and the experience of the candidate don't have an effect on the support.
> *H3.* The effect of the information about corruption on the support for a candidate is moderated by the economic outcomes of the previous term. When the economic outcomes of the previous term are good, the effect of corruption allegations are less strong than when the outcomes are bad.
> *H4.* The effect of the information about corruption on the support for a candidate is moderated by partisanship. Information about corruption has a significant negative effect when the candidate is from a party that the respondent doesn't like, whereas the effect is not significant when the candidate is from a favoured party.

Design

The experiment that is presented in this paper is part of a study conducted under the project titled "Livewhat: Living with Hard Times", that analyses European citizens' reactions to the crisis. As part of this project, an online survey was conducted between the 1June and 7 June 2016 to a sample of over 2500 Spanish citizens aged 18 and over provided by Qualtrics, along with a subcontracted local partner. The sample included sex, age and education quotas. After providing information on their socio-demographic characteristics, and answering a series of questions related to respondents' political attitudes, participants in the survey were randomly assigned to

different experiments. Before finishing, all participants answered a final set of questions and were provided with debriefing information on all experiments.

In the conjoint experiment, respondents are presented with the profiles of two mayors with a set of attributes with randomly assigned levels and are asked to imagine that there are local elections in their municipality. After reading the two profiles, respondents are asked which mayor they would prefer for their municipality and the probability of them voting for each candidate on a scale of 0 to 10. Each of the respondents is asked to complete three "tasks". In our experiments we do not restrict any combination of attribute levels and therefore we obtain complete randomization. In addition, the order of the attributes is also randomized across each respondent but kept constant over the three tasks of each respondent. Randomizing the order of the attributes presented to each respondent allows us to avoid possible order effects across respondents. Conversely, keeping the order constant in the three tasks of each respondents minimizes their cognitive burden.

For each mayor, respondents look at five attributes or traits with different randomly assigned levels per attribute. In order to achieve full randomization, the attributes in our experiment are the following: gender, party id, qualities of the candidate, outcomes of previous term and information on corruption. In order to assess hypothesis 2, we disentangle the operationalization of competence into two dimensions; the qualities of the candidate (such as education and experience) and the outcomes of his previous term. As far as the categories of each attribute are concerned, gender takes either the value of female or male. For the information on the candidates' political party, we select the four most voted organisations in the December 2015 election: PP, PSOE, Podemos and Ciudadanos. Qualities of the politicians take two values: low qualities and high qualities in terms of education and management skills. Performance in the previous term is also randomized across two values: good economic outcomes and bad economic outcomes operationalized with the increase (or decrease) of investment in the municipality and consequently the decrease (or increase) in the unemployment rate. Finally, the information on corruption is randomized over three categories: honest, accused of corruption by other parties and accused of corruption by a judge. Table 1 shows the text used in the experiment for each level of attribute.

TABLE 1. Text for each level of attribute

Sex	Woman
	Man
Party	PP
	PSOE
	Podemos
	Ciudadanos
Qualities	Has secondary school education and little management experience
	Has university education and wide management experience
Outcomes	The investments in the municipality have increased so that unemployment has decreased by 5 per cent
	The investments in the municipality have decrease so that unemployment has increased by 5 per cent
Mandate	Has been characterised for his/her honesty
	Has been accused by other parties of corruption for awarding contracts in exchange of gifts
	Has been accused by a judge of corruption for awarding contracts in exchange of gifts

Results

Overall, we have 13510 evaluated profiles or 6755 pairings. Respondents expressed the probability of their voting for each candidate on a scale from 0 "would never vote" to 10 "would definitely vote". The answers are rescaled from 0 to 1. Table 2 shows the distribution of the vote probability across the different treatments. We can see that the vote probability for an honest candidate is on average 0.48 and this probability decreases considerably for corrupt candidates. In order to check whether the randomization was successful, we provide a multinomial logistic regression comparing individual socio-demographics across the different groups (table 3). As the chi squared is not significant we can be sure that the randomization was successful.

TABLE 2. Descriptive of DV: Vote probability

Treatment	Mean	Std Dev	Obs
Honest	0.48	0.34	4630
Accused by parties	0.28	0.30	4430
Accused by judge	0.24	0.29	4450
Total sample	0.33	0.33	13510

TABLE 3. Randomization Test. Multinomial Logistic Regression Model. Dependent Variable: Corruption Treatment.

	Accused by parties	Accused by judge
Gender	-0.04	0.06
	(0.05)	(0.05)
Age	-0.00	-0.00
	(0.00)	(0.00)
Education	0.02	0.03*
	(0.01)	(0.01)
Income	0.01	0.01
	(0.01)	(0.01)
Unemployed	0.08	0.02
	(0.06)	(0.06)
Ideology	-0.00	-0.01
	(0.01)	(0.01)
Political sophistication	-0.01	-0.00
	(0.02)	(0.02)
(Unsatisfied with democracy)		
Neither satisfied nor unsatisfied with democracy	0.07	-0.03
	(0.08)	(0.08)
Unsatisfied with democracy	-0.08	-0.01
	(0.05)	(0.05)
(No party id)		
Party id: PP	0.14	0.08
	(0.09)	(0.09)
Party id: PSOE	0.06	-0.09
	(0.08)	(0.08)
Party id: Podemos	0.08	-0.01
	(0.08)	(0.08)
Party id: Ciudadanos	0.08	-0.04
	(0.08)	(0.08)
Other party id	0.04	-0.03
	(0.08)	(0.08)
Constant	-0.15	-0.11
	(0.13)	(0.12)
Chi2	33.68	
P	0.21	
Observations	12446	

Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001
Note: Dependent Variable: Corruption treatment. Base category: Honest

The complete randomization of our experiment allows us to estimate the average marginal component effects (AMCEs) by fitting a linear regression and clustering for respondents, since each respondent repeated the same task three times (Hainmueller et al., 2014). Table 4 and figure 1 show the AMCEs; these can be interpreted as the expected change in the probability of voting for a candidate when a given attribute value is compared to the baseline condition. According to our results, all components of attributes significantly change the probability of supporting a candidate in comparison to the baseline component (table 4).

Being a female candidate, having high qualities and having obtained good economic outcomes increases respondents' expressed probability of voting for a candidate, whereas disliking the party[25] of the candidate and the candidate being accused of corruption substantially decreases the expressed probability of voting for that person. Interestingly, having a very low probability of voting for a party leads to a lower support of a candidate than the accusation of corruption by a judge. This is surprising as in real scenarios, candidates usually do not run for re-election when they are accused of corruption by a judge; therefore we expected this treatment to lead to the strongest decrease in the support of a candidate. Seeing the profile of a candidate belonging to a party that the respondent expressed very low probabilities of voting for (between 1 to 0 per cent) instead of a party the respondents expressed a very high probability of voting for (between 9 and 10 per cent), decreases the support for a candidate by 36 percentage points. As a matter of fact, support for a candidate belonging to a party that the respondent has 7 to 8 per cent probability of voting for already decreases support by 8.6 percentage points, compared to a candidate of a party that the respondent expressed between 9 and 10 per cent probability of voting for. On the other hand, as expected in hypothesis 1, respondents differentiate between credible and less credible information. The more credible the source of the accusation is, the more it decreases the probability of supporting a candidate. Moving from an honest candidate to a candidate accused of corruption by other parties decreases support by 19.7 percentage points and when the candidate is accused of corruption by a judge, the drop in support is 24 per cent over the baseline level.

TABLE 4**.** Average marginal component effects

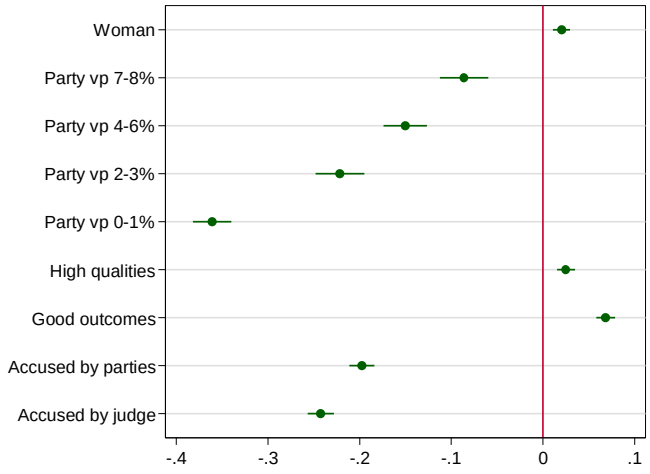
	Vote probability
(Man)	
Woman	0.0203***
	(0.00482)
(Party vp 9-10%)	
Party vp 7-8%	-0.0860***
	(0.0134)

[25] We created the variable party preferences by unifying the probability of voting for a party if a municipal election were held, expressed by respondents before performing the experiment, and the party tag they saw in the experiment. These variables cover the categories of a probability of voting for a party from 9 to 10 per cent, from 7 to 8 per cent, from 4 to 6 per cent, from 2 to 3 per cent and a vote probability from 0 to 1 per cent.

Party vp 4-6%	-0.150***
	(0.0120)
Party vp 2-3%	-0.221***
	(0.0135)
Party vp 0-1%	-0.361***
	(0.0107)
(Low qualities)	
High qualities	0.0253***
	(0.00499)
(Bad outcomes)	
Good outcomes	0.0684***
	(0.00524)
(Honest)	
Accused by parties	-0.197***
	(0.00696)
Accused by judge	-0.242***
	(0.00729)
Observations	13,510
R squared	0.2819

Clustered by respondents
*** p<0.01, ** p<0.05, * p<0.1

FIGURE 1. Average marginal component effects



With the results of the AMCEs we are able to look at hypothesis 1 and 2. And we see that as suggested by hypothesis 1, the credibility of the information on corruption has a negative effect on the support for candidates. As far as hypothesis 2 is concerned, we see that in contrast to what

we expected, the attributes of competence of the candidate, qualities of the candidate and the economic outcomes of the previous term significantly increase support for a candidate compared to the baseline conditions.

In order to assess hypotheses 3 and 4, we need to look at the interactions between party preference and economic outcomes with the credibility of the information about corruption. As far as hypothesis 3 is concerned, our expectations were that respondents do trade off the integrity of the candidate for good economic outcomes. However, we also expected that this trade-off to be moderated by the credibility of the information regarding the corruption. Therefore, we expected the trade-off to be occurring when the candidate is accused by other parties but not when accused by the judge.

Figure 2 shows the predicted probabilities of the interaction between economic outcomes and credibility of corruption. We can see how having good outcomes increases significantly the support of both corrupt categories by 5 per cent: both candidates accused of corruption by other parties and candidates accused of corruption by the judge. However, contrary to results of Esaiasson & Muñoz (2014), respondents in our experiment do not prefer the corrupt candidate with good economic outcomes over the honest candidate with bad economic outcomes. Nevertheless, it is worth pointing out that there is no statistically significant difference between the probability of voting for candidates with bad outcomes accused by other parties and candidates with good outcomes accused by a judge (see table A1 in the appendix)[26]. The interaction between economic outcomes and credibility of the information about corruption shows that the effect that good economic outcomes have on the support for a candidate are not statistically different in the different credibility types (figure 5). Hence, in contrast to what we were expecting, good outcomes have the same effect in highly credible allegations of corruption as in allegations with low credibility. As far as the qualities of the candidate are concerned, our second variable measuring their competence, the results show that having high qualities increases the support for candidates accused by other parties by 3 per cent (figure 3). However, when the candidate is accused by a judge, high qualities is a factor that does not increase support for them (table A2 in the appendix).

According to these results, we can say that good economic outcomes seem to explain part of the support for corrupt candidates, since the vote probability of a malfeasant candidate increases 5 per cent when candidates have good outcomes. However, the effect of information about corruption is so strong in our experiment that we do not find a preference for the corrupt candidate with good economic outcomes over the honest candidate with bad economic outcomes.

[26] In table A.1 we can see how the confidence intervals for both categories overlap and therefore we cannot reject the null hypothesis.

FIGURE 2. Predicted probabilities of interaction between outcomes and corruption

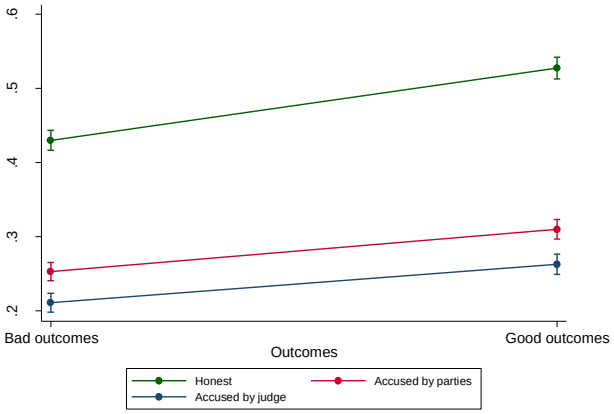
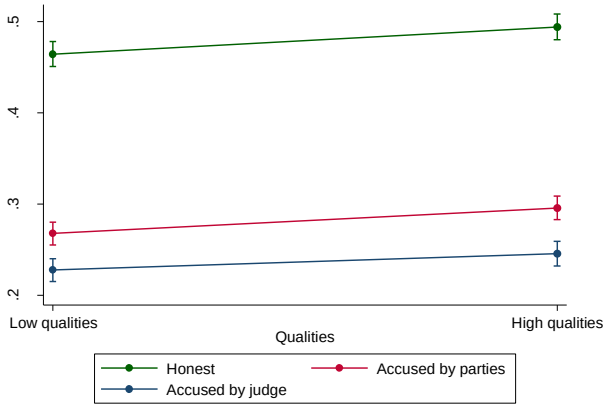


FIGURE 3. Predicted probabilities of interaction between qualities and corruption



As far as hypothesis 5 is concerned, our expectations are that partisanship moderates the effect of information about corruption. According to our results, we see how respondents do trade off party preferences for honesty (figure 4). Respondents are more likely to support candidates of a party they express having a great likelihood of voting for but are accused of corruption by a judge (whose information is credible), than to support honest candidates of a party that they generally have very low probabilities of voting for. Furthermore, respondents even prefer candidates of a party they have between 4 and 6 per cent probabilities of voting for but are accused of corruption by other parties, than honest candidates of parties they have very low probabilities of voting for (0 to 1 per cent) (table A3 in the appendix). The interaction between party preference and credibility of the information about corruption (figure 5) shows that indeed favouring the party of the candidate has a stronger positive effect on candidates accused with less credible allegations than on a candidate accused with highly credible allegations. Hence, respondents do trade off integrity for party preference; however, this trade-off is stronger when information about corruption is from a source with low credibility than from a source with high credibility.

FIGURE 4. : Interaction between party preference and corruption

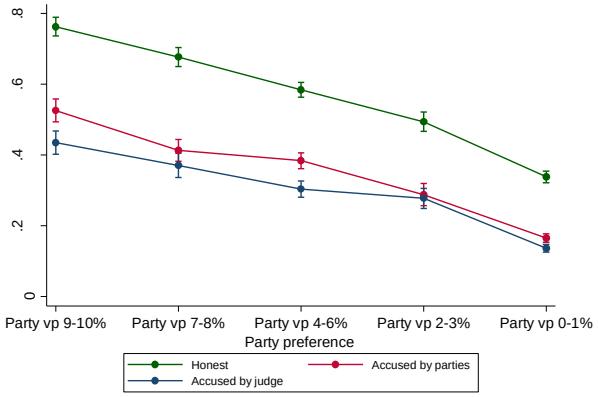
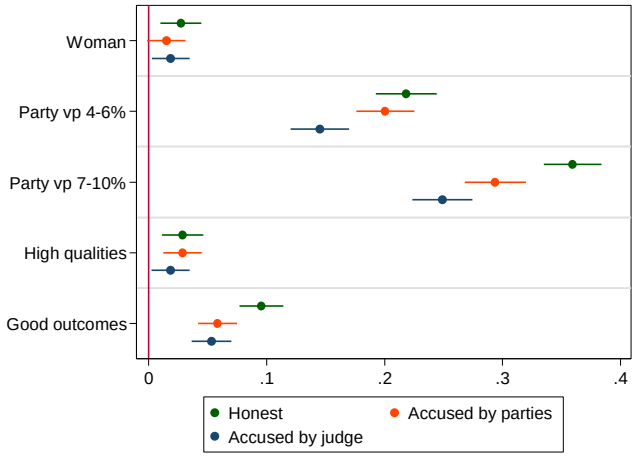


FIGURE 5. Average marginal interaction effects with credibility of information about corruption



Discussion

The results of our experiment show that being a female candidate, having high qualities and having obtained good economic outcomes increases respondents' expressed probability of voting for a candidate, whereas disliking the party of the candidate and being accused of corruption substantially decreases the expressed probability of voting for a candidate.

When it comes to support for corrupt candidates, we see that respondents differentiate between less and more credible information and that they punish candidates more when the information comes from a highly credible source. Furthermore, good economic outcomes seem to explain part of the support for corrupt candidates, since the vote probability for malfeasant candidates increases 5 per cent when they have good outcomes. However, the effect of information about corruption is so strong in our experiment that we do not find a preference for the corrupt candidate with good economic outcomes over the honest candidate with bad economic outcomes.

Finally, we see that respondents do trade off integrity for party preference and that trade-off is stronger when information about corruption is from a source with low credibility than from a source with high credibility. According to our experiment, even though good economic outcomes increase the support of corrupt candidates, partisanship seems to be a better explanatory factor of the support for corrupt candidates.

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Appendix

TABLE A1. Margins of interaction between outcome and credibility of corruption

	Vote Probability	Se	Ci_low	Ci_high
Bad outcomes#Honest	0.431	(0.00694)	0.418	0.445
Bad outcomes#Accused by parties	0.253	(0.00626)	0.241	0.266
Bad outcomes#Accused by judge	0.211	(0.00646)	0.198	0.224
Good outcomes#Honest	0.527	(0.00746)	0.512	0.542
Good outcomes#Accused by parties	0.31	(0.00675)	0.297	0.323
Good outcomes#Accused by judge	0.263	(0.00694)	0.249	0.276
Observations	13,510			

Clustered by respondents

*** p<0.01, ** p<0.05, * p<0.1

TABLE A2. Margins of interaction between qualities and credibility of corruption

	Vote probability	Se	Ci_low	Ci_high
Low qualities#Honest	0.464	(0.00693)	0.451	0.478
Low qualities#Accused by parties	0.268	(0.00641)	0.255	0.280
Low qualities#Accused by judge	0.228	(0.00638)	0.215	0.240
High qualities#Honest	0.494	(0.00720)	0.480	0.508
High qualities#Accused by parties	0.296	(0.00653)	0.283	0.309
High qualities#Accused by judge	0.246	(0.00684)	0.232	0.259
Observations	13,510			

Clustered by respondent

TABLE A3. Margins interaction between party preference and credibility of corruption

	Vote Probability	Se	Ci_low	Ci_high
Party vp 9-10%#Honest	0.762	(0.0134)	0.736	0.788
Party vp 9-10%#Accused by parties	0.526	(0.0164)	0.493	0.558
Party vp 9-10%#Accused by judge	0.434	(0.0167)	0.401	0.467
Party vp 7-8%#Honest	0.677	(0.0135)	0.650	0.703
Party vp 7-8%#Accused by parties	0.413	(0.0157)	0.382	0.443
Party vp 7-8%#Accused by judge	0.371	(0.0173)	0.337	0.405
Party vp 4-6%#Honest	0.584	(0.0109)	0.563	0.606
Party vp 4-6%#Accused by parties	0.384	(0.0114)	0.362	0.407
Party vp 4-6%#Accused by judge	0.304	(0.0118)	0.280	0.327
Party vp 2-3%#Honest	0.494	(0.0138)	0.467	0.521
Party vp 2-3%#Accused by parties	0.288	(0.0158)	0.257	0.319
Party vp 2-3%#Accused by judge	0.277	(0.0145)	0.249	0.306
Party vp 0-1%#Honest	0.339	(0.00845)	0.322	0.355
Party vp 0-1%#Accused by parties	0.165	(0.00609)	0.153	0.177
Party vp 0-1%#Accused by judge	0.136	(0.00575)	0.125	0.148
Observations	13,510			

Clustered by respondent

Survey experiment 6. Event characteristics and protest

Introduction

In this conjoint experiment, we analyse how different specific characteristics of protest modes may affect the choices made by individuals with respect to different action repertoires, and their probabilities of participating in these modes of action. We situate respondents in actions with specific characteristics through a conjoint experiment (Raghavarao, Wiley, & Chitturi 2011). Individuals are confronted with two actions that differ in their attributes (mode, efficacy, turnout, party cue, issue). They must choose one of them (the one they would rather take part in) and also state the probability of participating for each of the two actions. By analysing their choices and intention to participate, we assess how these specific event characteristics are related to participation and whether the effect of these event characteristics is contingent on individual characteristics. In particular, we confront the impact of austerity issues, derived from the economic crisis, with other alternative issues (corruption, taxes, refugees).

Theory

We focus on three different modes of protest: going to a rally, signing a petition and producing a social signal. Rallies and petitions are traditional modes of individual political protest.[27] We consider the social signal as an additional mode of protest, following recent revisions of the concept of political participation (Hooghe, Hosch-Dayican & van Deth 2014; Hamlin & Jennings 2011). We follow Halupka's characterisation of clicktivism as engagement in small, impulsive, political actions, that involve the use of memes, social buttons (like clicking 'like' on Facebook) and social media more broadly, in an attempt to bring about social change through raising awareness (Halupka 2016; Halupka 2014).

Although these modes differ in a number of aspects (for instance whether they take place in the streets, online, or both) we will focus on their differences in terms of time involved, as a proxy for cost. We are aware of the emotional costs of expressing political views on social media and the potential risks of online activism in particular contexts. However, for the sake of simplicity and comparability, we focus on time-related costs of participation in order to compare forms of political action based on social media (social signals) with those which are making the transition to an online environment (petitions) and those that necessarily take place in the streets (rallies).

Following on the rational action paradigm, we expect cost to deter participation (Downs 1957). This implies that, all things being equal, less costly actions (such as social signalling) will be preferable over those that involve higher costs (such as attending a demonstration). In this sense, we expect social signals to be preferred over petitions and petitions over demonstrations (H1.1), as the amount of time involved in each of them increases progressively.

[27] We exclude strikes since they largely depend on occupational status and union affiliation. They are also mostly limited to labour and economic issues.

A second core element of the rational paradigm is the perceived efficacy of protest, since it constitutes an expected utility derived from a successful participation outcome. That is, the belief that protest can be successful in providing desired public goods and individual benefits. Efficacy refers to individuals' expectations that it is possible to change the situation through collective action (Gamson, 1992). Furthermore, considering that efficacy is part of collective incentives, especially for non-electoral forms of participation (Verba, Schlozman, & Brady 1995), we expect individuals to prefer actions which are expected to be successful over those that are not (H1.2).

We also consider the relative importance of issues that trigger the decision to participate. Most activists would probably argue that the reason they take action is because they are interested in a particular cause. However, the literature on issue importance in protest politics is rather narrow and entwined with the role of grievances. While issue importance is related to self-interest, social identification, and value relevance (Krosnick 2008), grievances denote discontent with personal or social problems. Nevertheless, the usual approach to tap grievances is to identify "most important problems" thus signalling the relative importance of a particular problem over others and consequently indicating personal interest in a particular issue. As such, we question whether some issues are more successful than others in mobilizing action by comparing the issue-specificity of the actions with grievances.

We follow on the concept of issue-specific mobilisation potential (Kriesi, Saris, & Wille 1993) to contend that the propensity to engage in collective action is directly linked to the correspondence between the issue that triggers the action and the personal perceptions of most important problems (H1.3a).

The importance of problems can however be defined at different levels. We thus look into differences between sociotropic (when the issue is considered important for the country) and egocentric (when the issue is relevant for the individuals' daily life). We expect the latter to be more powerful motivations to participate, as these can respond to personal interest and expected personal benefit (H1.3b).

The most salient research dealing with the role of social movement organizations (hereafter SMOs) in explaining individual participation is perhaps Snow's micromobilisation theory (Snow, Rochford, Worden, & Benford, 1986). He brings forward the importance of SMOs to mobilize or influence target groups when following common interests. Micromobilisation involves both the cognitive dimension underlying the provision of informational heuristics that lead to frame alignment processes, as well as the emotional component underlying group processes (Goodwin, Jasper, & Polletta, 2009). The essential idea behind the role of SMOs in the mobilisation to action is that individuals join a movement because of shared beliefs and attitudes; participation then comes about as a matter of converting ideological affinity into motivation to act (Ward 2015). We are interested in the role of SMOs, but also in understanding the ideological affinity and identity processes which can underlie participation driven by other actors. We thus turn to parties, considering both their presence, wider than that of single SMOs, and the broader nature of party identification as compared to SMO involvement.

The importance of party identification for participation in protest has been explained largely through the provision of selective incentives (Bäck, Teorell, & Westholm 2011; Finkel & Opp 1991). Party identification may positively affect the propensity to participate in an event endorsed by the party, since for those partisans, participation provides a way of expressing their loyalty and signalling particular positions. We contend that parties play a micromobilisation role by providing heuristics for issue support equivalent to SMOs. We thus expect party cues to have a positive effect on the decision to take action (H1.4).

In our analysis, we also consider the expected turnout for each action. Turnout is important in the rational action paradigm because it sets the probability that the contribution of a single individual decides the outcome. In this sense, low turnout expectations would imply that the participation of a given individual would be more valuable. This would imply that low expected turnout would drive participation. High expected turnout makes this probability very small, and from this perspective could make freeriding a dominant strategy, hence reducing participation (H1.5a). The idea is: "if everyone else is going, why bother?" (H1.5a).

However, high turnout could attract participants through different mechanisms. As high turnout implies wide support, individuals would prefer to take part in widely supported events rather than those in which support is low. The idea in this case is "if everyone else is going I can't miss it" (H1.5b).

We can summarise our first set of hypotheses related to event attributes as follows:

> *H1.1.* Social signal actions are preferred over petitions and petitions are preferred over demonstrations
> *H1.2.* Events expected to be effective are preferred over events expected not to be effective
> *H1.3a.* Events that involve important issues are preferred over events that involve other issues.
> *H1.3b.* The effect of egotropic issue importance is larger than the effect of sociotropic issue importance
> *H1.4.* Events endorsed by preferred parties are preferred over those endorsed by other parties.
> *H1.5a.* Events with an expected high turnout are not preferred over events with a low turnout expectation
> *H1.5b.* Events with an expected high turnout are preferred over events with a low turnout expectation

Beyond the direct effects of different event characteristics, we may consider to what extent the preference for a specific mode of participation (more or less costly) depends on the characteristics of the action such as issue importance, perceived efficacy, the presence of party cues or expected turnout. Stated in a different way, this interaction effect would imply that the effect of these event characteristics is different for different modes of participation.

We outline a few expectations regarding how different modes may interact with different event characteristics.

Costly actions would need the strongest motivations to be chosen. Participating in a rally is hence expected to be the more sensitive to efficacy, turnout and issue importance.

Petitions always have a concrete demand with a verifiable outcome, while social signals and rallies may have more diffuse outcomes and may also involve expressive motives. That is why we expect petitions to be most sensitive to efficacy.

Social signalling can be considered as a mode of participation particularly suitable for expressing concerns regarding issues that are personally perceived as important. We expect egotropic issue importance to be more important for social signalling.

Our second set of hypotheses regarding trade-offs between modes of action and event attributes can be stated as follows:

H2.1. Rally is most sensitive to efficacy, turnout and issue importance
H2.2. Petition is preferred when the campaign is expected to be effective
H2.3. Social signal is most sensitive to egotropic issue importance

Individual attributes that explain political engagement have largely been expected to be independent of mode preferences and other event attributes (Opp & Kittel, 2009 is an exception). We look into event attributes (mode, grievances, efficacy, party cue and turnout) in order to test how individuals weigh up each attribute differently in order to find trade-offs between them. As the three modes we are concerned with are presented as forms of action in protest events, we expect them to be perceived as quite similar. This implies a tough test when establishing differences between individual traits.

To begin with, we expect age, gender, education, income and political sophistication to be related to the probability of taking part in any mode, confirming previous findings (McAdam, 1986, 1992; Dalton, 2002; Verba, et al., 1995; Putnam, 2000).

Furthermore, we expect past behaviour, attitudes and demographic traits to affect individuals' choices and particularly their likelihood of participating in different events. Research comparing experienced protesters with novice ones (Saunders et al., 2012; Verhulst & Walgrave, 2009) as well as research on the consequences of political behaviour more generally (Quintelier & Van Deth, 2014) has underlined the importance of previous engagement in explaining participation. We thus expect individuals who have protested in the past to be more willing to assume more costly actions. Within a similar logic, we expect costly actions to be preferred by individuals who report higher disposition to assume risky actions.

Following on the research on protest and post-materialist values (Inglehart, 1977; Barnes et al., 1979), individuals who are less concerned about material issues will be more willing to express their dissatisfaction and grievances through non-electoral and elite-challenging forms of

collective action. We thus expect these individuals to be willing to choose more direct and costly forms of action such as rallies over petitions or social signals.

This reasoning on the strength of values is also valid when looking at differences in the effects of ideology on participation preferences. If challengers of the status quo are more extreme than its defenders (Bäck & Lindholm, 2014), this pattern may also reflect individual preferences when choosing more defiant forms of action or when taking part in events with lower possibilities of success. We thus expect individuals with less extreme positions or those who prefer not to position themselves on a left-right ideology to prefer less costly forms of action and events with higher probabilities of success.

Lastly, since we are interested in comparing rallies with petitions which can take place online or offline, and social signals which occur only on social media, we look into social media use patterns between individuals. Social media has been largely viewed as having possibilities for facilitating protest (Valenzuela, 2013; Anduiza et al., 2013) but it has also been associated with changing forms of political participation that are allegedly superseding more traditional modes of action that take place offline (Morozov, 2011). We expect intensive social media users to have higher probabilities of signing petitions and using social signals as compared to rallying.

> *H3.1* Rallies are preferred by individuals who have participated more in the past and those who are not risk averse.
> *H3.2* Petitions and social signals are preferred by those with moderate ideological positions and materialist values
> *H3.3* Use of social media should increase the likelihood of social signalling.

Design

We use conjoint analysis, an experimental technique that is ideal for dealing with situations in which individuals face options that simultaneously vary across multiple attributes (Green, Krieger, & Wind, 2001). This technique has been used for research on preferences for redistribution (Bechtel et al., 2014; Neustadt & Zweifel, 2010), media effects (Dropp, 2014) and policy preferences (Gallego & Marx, 2016). Choice-based conjoint analysis is based on the assumption that choices can be modelled as a process in which attributes of the alternatives are evaluated in terms of their perceived utility. Individuals are expected to integrate the part-worth utilities associated with each of the attributes into overall utilities of the alternatives and choose the one with the highest overall utility. This allows us to measure alternative specific effects on preferences.

Respondents were asked to choose between two hypothetical alternatives of protest events defined by five attributes: mode, issue, efficacy, party involvement and turnout (table 1). The task was repeated three times. They were also asked to indicate the probability that they would take part in each of the alternatives.

By randomly varying the levels of attributes, different event profiles are generated. By comparing pairs of events, it is possible to infer which attitudes are associated with the event attributes.

Trade-offs among attributes can be explicitly taken into account and values of attributes explaining support for the event can be estimated separately. We present respondents with three scenarios in which they find descriptions for two actions with randomly varying attributes. We use a fully randomized design, which facilitates causal inference, as differences in the respondents' post-treatment attitudes and behaviour are attributable solely to the experimental manipulations. However, this fully random design comes at the cost of having some unlikely combinations of attributes. In our case, party cues and issues may be problematic in the cases of the parties responsible for austerity related cuts (PP or PSOE) supporting actions against the cuts. However, considering that both parties were incumbents and in opposition and both were responsible for anti-austerity measures, the scenarios are not impossible.

Participation modes have an explicit prime to cost as indicated by the estimated time next to each option. This solves the problematic question of how to measure the cost associated with each mode of participation, but leaves out other potential dimensions of cost such as the degree of conflict involved.

Some attributes may seem very close to others, such as turnout and efficacy. However, using both of them allows us to control for potential interpretations of turnout as instrumentality by varying the levels of efficacy.

TABLE 4. Dimensions and Attributes Characterising Actions

Issue	Mode	Efficacy	Party cue	Turnout
Against cuts in health and education Against high levels of taxes Against the situation of the refugees in Greece Against corruption	Rallying (takes 3 hours including commuting time and participating in the event) Petition (takes 5 minutes to register your personal data and sign the petition) Social signal (takes two minutes)	The action will reach its objective The action will not reach its objective	Multiple NGOs and [PARTY] are staging the action Multiple NGOs are staging the action	Massive turnout 100,000 expected Modest turnout 500 expected

[Party] includes 5 categories for PP, PSOE, Podemos, Ciudadanos and Izquierda Unida. Turnout figures were treated equally between issues assuming that turnout levels are similar between issues. This simplifies our analysis but it can create an unlikely combination of high turnout for refugees and tax issues, which may actually have smaller publics than the anti-austerity or corruption issues in different regions.

The lead for our treatment was the following: "On the screens you will now see three pairs of actions. For each pair of actions you will find some questions. Please carefully read the attributes of each action in order to answer precisely."

As we are interested in determining preferences for participation, we analyse two types of dependent variables. Respondents are presented with two alternative scenarios of action varying in particular sets of attributes. In the first outcome, respondents are forced to choose the one they prefer. This is a measure of individual preferences. In the second outcome, respondents assign a probability of participating in each scenario of action[28]. This measures their intention to participate, which is an attitude. The experiment tries to replicate real life situations in which the respondent may not always feel comfortable in making a choice, since he or she may not prefer any of the available alternatives. In this case, the forced choice does not reflect an optimal preference, but this would then be captured by a low probability of participation in both alternatives. The rating outcome (in our case the probability of participating) represents their degree of preference and consequently provides more direct, more detailed information about respondents' preferences.

Partisanship and issue importance were measured prior to the administration of the treatments. In the cases where the respondents' party identity coincided with the party staging the action, responses were coded as receiving a party cue. Respondents that did not identify with any of the five parties included in the design were considered to have no party cue treatment.

Issue importance was measured by asking respondents to put four social problems in order according to their perceived relative importance (sociotropic importance) and to the perceived personal consequence (egocentric importance). The most important problems were then matched with the grievance presented in each action in the conjoint design. Respondents ordered the following social problems according to their perceived importance: cuts in health and education, corruption, the situation of refugees in Greece, high levels of taxes.

With high levels of protest action and a rapidly changing context of contention in recent years in response to austerity policy, Spain is an ideal case for testing varying attributes of protest events. We rely on an online survey representative of the Spanish population, which was run over a sample of 2,000 Spanish internet users in June 2016 (before the electoral campaign for the general election held on June 26) with quotas for age, gender and education. The survey was first pre-tested using an online convenience samples (N=224).

Results

We present models explaining forced choice (Model 1 in Table 2) and probability outcomes (Model 2 in Table 2), which differ in the magnitudes of the coefficients, but the relative effect of the attributes is similar. Individuals in our sample are more likely to prefer petitions and social signals than attending rallies. We hence find partial evidence supporting our expectations on differences between modes of action (H1.1). Cost turns out to be important only when selecting

[28] We measure the probability of participating in a particular action using the following wording and options: "Some people take part in certain political actions but prefer not to take part in others. How likely do you think it is that you will take part in each of these types of action? (Would definitely take part, Would probably take part, Would probably not take part, Would definitely not take part)

between rallies and other modes, but not between the lower cost modes. The differences between social signals and petitions is very small and not significant at conventional levels.

Individuals prefer to participate in actions that are related to the issues that affect them personally or in those which concern them the most. They also prefer to participate if the action is endorsed by their preferred party, is expected to achieve its purpose, and if high turnout is expected. H1.2 to H1.4 are supported by the data. The effect of turnout is positive, as anticipated by hypothesis 5b.

Party cue is the strongest predictor both of preference and probability to take action. The effects of issue importance and efficacy follow. Only issue importance changes between specifications of the dependent variable. Issue importance becomes relatively less important than modes of action in the probability outcome. Turnout is not significant in the probability of participating outcome.

TABLE 5. Average Marginal Component Effects

	(1)		(2)	
Issue alignment (Egotropic)	0.100***	(0.011)	0.038***	(0.007)
Issue alignment (Sociotropic)	0.096***	(0.011)	0.032***	(0.007)
Petition	0.065***	(0.011)	0.043***	(0.008)
Social signal	0.066***	(0.011)	0.067***	(0.007)
High efficacy	0.088***	(0.009)	0.028***	(0.006)
Party cue	0.153***	(0.013)	0.142***	(0.009)
High turnout	0.035***	(0.009)	0.009	(0.006)
N	12748		12748	
R-squared	0.0423		0.0329	

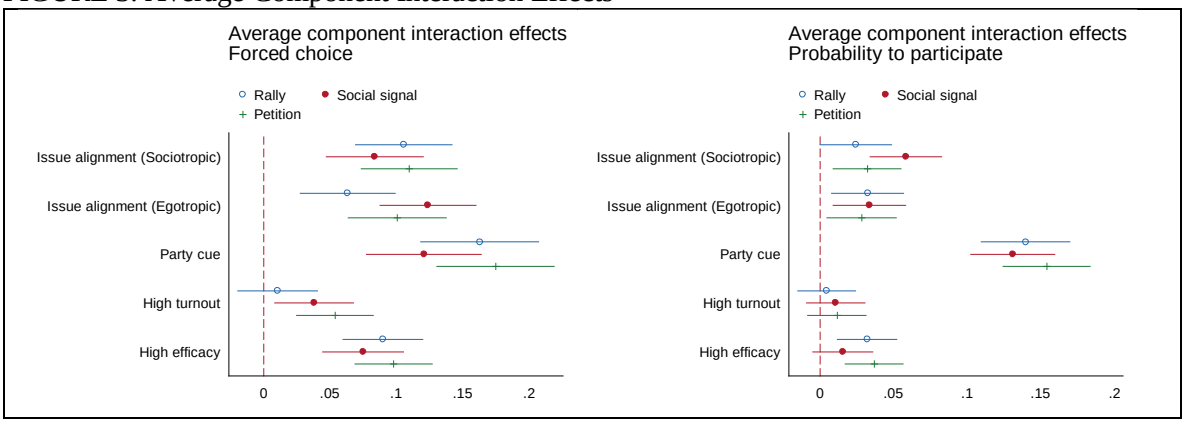
Coefficients are marginal effect of attribute and averaged over the joint distribution of the remaining attributes. Dependent variables: (1) Forced Choice (2) Probability to participate.
Standard errors in parentheses clustered by respondent. *** p<0.01, ** p<0.05, * p<0.1.

The theoretical arguments presented above suggest that preferences for mode of action should be sensitive to the other attributes of the event. This means that we need to consider whether changes in the attributes of the events are decisive to changing individual preferences for action. Figure 2 presents the average component effects of interaction, which result from interacting mode of action with the other event attributes (estimates are presented in Table A2 in the appendix). Contrary to our expectations, the effect of mode of action is mostly homogeneous regardless of the other characteristics of the action.

Only one of our hypotheses concerning the effects of interaction between modes of protest and other features of the action is supported by the data, H2.3. Respondents are approximately 6% more likely to choose social signals than rallies when the issue is important to them personally. This can be interpreted alternatively as egotropic issues having larger consequences for social

signalling than for rallies. Sociotropic issue importance, party cues, turnout and efficacy bear the same importance whether they relate to rallies, petitions or social signalling.

FIGURE 3. Average Component Interaction Effects

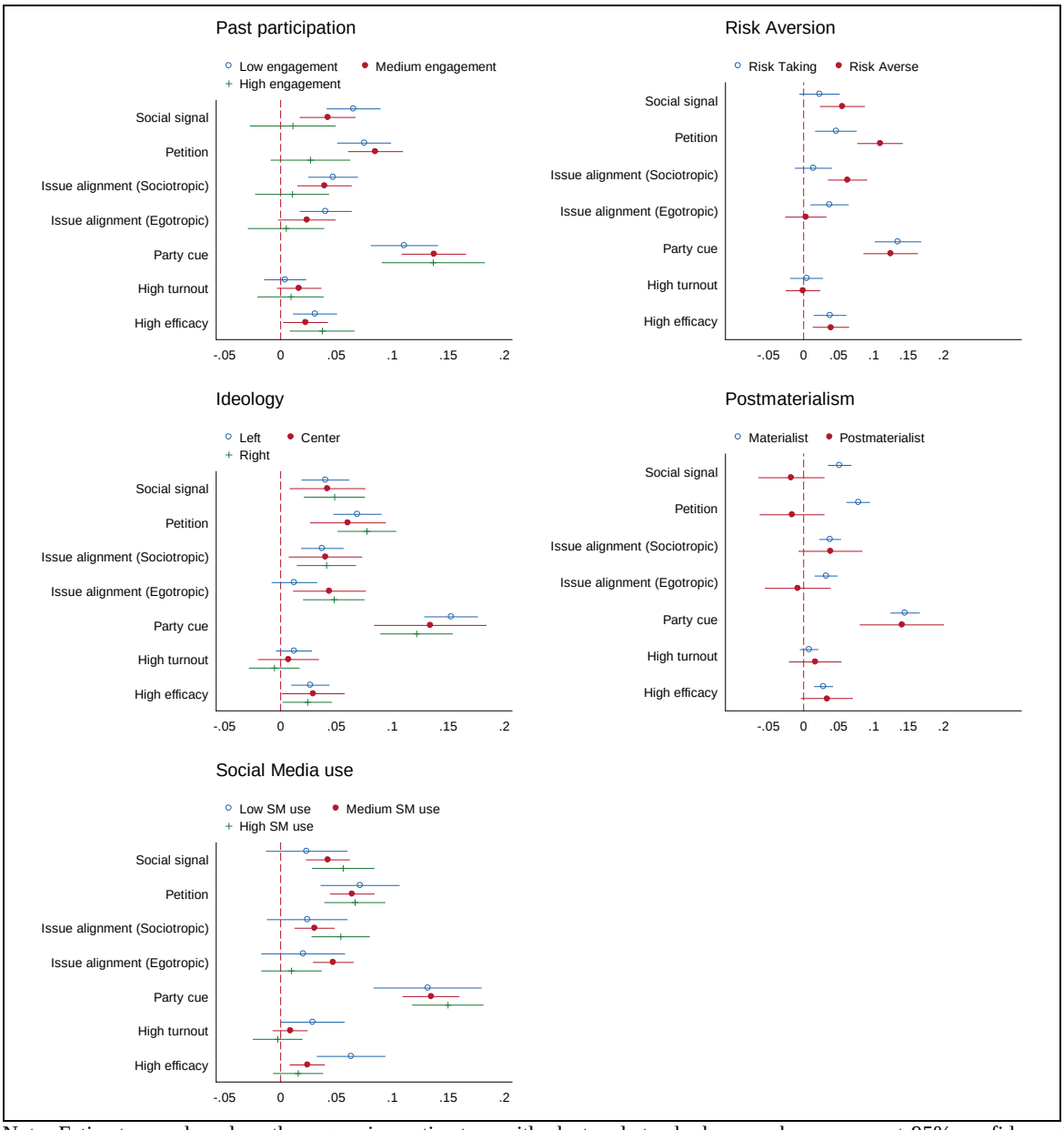


Note: estimates are based on the regression estimators with clustered standard errors; bars represent 95% confidence intervals. The baseline probability of participating is 0.34 for the forced choice option and 0.4 for the probability model.

So far, our results suggest that preferences for modes of action are insensitive to changes in the characteristics of the events. Alternatively, the choice of modes and the probability of participating may depend on the respondent's individual characteristics. To see if individual characteristics account for the variation in intention to participate, we estimate average marginal conditional effects by interacting event attributes with categories of demographic traits, previous behaviour and attitudes.

Figure 2 presents conditional AMCEs broken down by respondents' levels of past participation, risk aversion, post-materialist values, ideology and social media use. We find very little variation on probability to participate on account of individual traits. These results support the idea that differences between modes of protest are marginal. However, we do find partial evidence for some of our expectations.

FIGURE 2. Heterogeneous effects – Average marginal component effects for probability to participate in the Event



Note: Estimates are based on the regression estimators with clustered standard errors; bars represent 95% confidence intervals. Models for each individual trait are presented in table A3.

As seen in the top panels of Figure 2, individuals with high levels of political engagement seem to be quite indifferent to event attributes. Concerning participation modes, we do not find evidence that those who have participated more in the past prefer rallying to other modes of action. We do find some differences between risk-averse and risk-taking individuals concerning participation modes. However, rallying is always the least preferred mode independently of risk aversion, and the evidence runs opposite to our expectations (H3.1), as risk takers prefer petitions to rallies more than risk-averse people.

Our second expectation dealt with differences in ideology and materialist values between respondents and their relation with participatory preferences. We find no significant differences on probabilities to participate between all event attributes regarding ideology. This means that moderate as well as extreme respondents are indifferent to variations in event attributes when deciding to participate. Petitions and social signals are indeed preferred over rallying by every respondent, independently of their ideological position. However, we do find that individuals with materialist values prefer petitions and social signals to rallies. This provides partial support for our second expectation (H3.2).

Concerning social media use, our results show that medium and high level users have a higher likelihood of participating by social signalling as compared to low level users, thus confirming H3.3. Furthermore, those with high and medium levels of social media use prefer petitions and social signals to rallies with a significant difference, but this is not the case for low levels of social media use.

Discussion

This paper has addressed the factors that may influence individuals' choice for a specific mode of protest. Through a conjoint survey experiment we estimate to what extent people prefer participating in a rally, signing a petition or producing an online social signal, and whether the issue, the presence of party cues and the expected efficacy and turnout matter for this choice.

Our results show that individuals prefer less costly forms of protest (social signalling, petitions) to other forms that involve higher costs (attending demonstrations). Individuals also prefer actions that are supported by their preferred party, which is the characteristic that shows the largest effect. They also prefer to take part in events that deal with issues that they consider important, particularly if they personally care about or are affected by the issue. Finally, individuals are more likely to choose events that are expected to be efficacious in achieving their goals and that are expected to gather a large number of people, but in this case the effect is milder.

The effect of these characteristics of different actions seems to be very stable and cumulative: party cues, sociotropic issue importance, efficacy and turnout matter equally for rallies, petitions and social signalling. Our expectations concerning variations in mode preferences are only marginally supported by the evidence. Mode preferences are quite stable and have little relation to event attributes. In other words, party cues, issue importance, efficacy and turnout matter equally for all protest modes. However, we find support for the idea that egotropic issue importance matters more for social signalling than for other modes of action. Social media also seems to be an environment that is particularly suitable for expressing personal concerns.

The preference for these modes and the effect of the characteristics of each protest event is also quite homogeneous across individuals. While individual characteristics affect the probability of participating in ways anticipated by the literature, they do not affect the choice of modes or the relative importance of event characteristics. The preferences for certain modes and the effect of event characteristics are similar regardless of individuals' previous participation experiences,

degree of risk aversion, or ideology. We do find, however, that intense social media users prefer petitions and social signals to rallies, but the difference in the preference for the two online modes is not large. We need not be concerned about social media promoting only clicktivism and threatening offline participation.

Our results provide evidence to support the idea that event characteristics have important, independent and cumulative effects on protest participation, which are homogeneous across individuals. We do not find evidence of individuals with different profiles giving more importance to specific event characteristics, or preferring some modes to others. Overall, this all suggests that participation in different protest modes responds to the same stimuli and can be understood with the same explanatory factors. Further analysis is required to assess the differential effect of varying issues.

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Survey experiment 7. Opportunities for movement mobilisation and protest

Introduction

This survey experiment tests the effect of perceptions of political opportunities on protest behaviour, one of the main consequences of the economic crisis. Already in one of the very first accounts in the political process research tradition we can see the seeds for a micro-level theory of political opportunities (Tilly, 1978). Moreover, scholars have stressed the importance of perceptions of opportunities (Kurzman, 1996; Meyer, 2004). Yet, previous research has mostly focused on a structural account of the impact of political opportunities on movement mobilisation (Eisinger, 1973; Kitschelt, 1986; Kriesi, Koopmans, Duyvendak, & Giugni, 1995; Tarrow, 1989). This has led, among other things, to a strong criticism pointing to the "structuralist bias" of political opportunity theory (Goodwin and Jasper 2004). Here we would like to bring the micro-level and perceptions back into political opportunity theory and test a number of hypotheses concerning their effect on people's willingness to participate in collective action and protest activities.

The main research question is the following: what is the impact of perceived political opportunities on the intention of participating in protest activities? Four concrete opportunities are distinguished: facilitation, repression, chances of success, and reform/threat. These are motivational derivatives of the political opportunity structure that directly affect the costs and benefits of collective action. Two of these factors influence the costs and benefits of collective action itself (the "means" side), while the other two relate to the goals of such action (the "ends" side). Concerning the former, facilitation stands for any action taken by other groups that lowers the costs of collective action, while repression includes any external action that increases such costs. Concerning the latter, chances of success refers to the likelihood that collective action will contribute to the realization of the movement's goals, while in the reform/threat pair, reform stands for a situation in which collective benefits are expected even if no collective action is undertaken, and threat refers to a situation in which collective "bads" are expected if the movement does not act.

Theory

Kriesi et al. (1995) identify four concrete opportunities which can be seen as motivational derivatives of political opportunity structures (POS) that either encourage or discourage people to engage in collective action: (1) facilitation refers to those actions by political authorities which lower the costs of collective action; (2) repression implies exactly the opposite; (3) the reform/threat pair refers to external responses to movement goals without any action by the movement—reform if a change is favourable for the movement, threat if it is unfavourable; and (4) success chances refers to the likelihood that collective action will have positive results for the movement.

To our knowledge, individual perceptions of POS have not been empirically tested for their effects on intentions of participating in political protest. We thus propose an experimental design in order to address this causal relationship. In particular, we focus on four research questions:

1. What is the impact of perceived police behaviour on the likelihood of engaging in protest activities?
2. What is the impact of perceived government responsiveness on the likelihood of engaging in protest activities?
3. What is the impact of perceived consequences of acting on the likelihood of engaging in protest activities?
4. What is the impact of perceived consequences of not acting on the likelihood of engaging in protest activities?

Perceived opportunities are expected to have an effect on the intention of taking part in protest activities. Firstly, research on protest policing (della Porta and Reiter 1998; Eggert et al. 2016) and attitudes towards the police (Decker 1981) show that when the police have a neutral or – even more so - a facilitative role during mass demonstrations, this increases the chances that people will attend future events of this kind. Conversely, when the police have a more repressive stance, this will lead parts of the population to refrain from participating. Secondly, studies conducted in the social-psychological tradition (Klandermans 1997) and in the structural tradition (Passy and Giugni 2000) point to the fact that people are more likely to participate when they feel that their own participation will matter. Research in the political participation tradition similarly shows that political efficacy is a key factor in explaining participation (Verba, Schlozman, & Brady, 1995a). Thirdly, in addition to police behaviour and expectations about the impact of protest, the perception of how the state would respond to the protest or its absence is also expected to affect the likelihood of engaging in protest activities. This follows on the logic of integrative strategies where states encourage cooperation with challengers, subsidize the non-governmental sector, and are responsive to public engagement (Kriesi, Koopmans, Duyvendak, & Giugni, 1995). More specifically, if people think that the state will respond positively to the protest, they will be encouraged to participate. In contrast, if they think that it will respond negatively or not respond at all, they will be less likely to participate. This leads us to the following hypotheses concerning the effects of perceived opportunities on the likelihood of participation in protest activities.

H1. Perceived facilitation increases the likelihood of participation in protest activities as compared to perceived repression.
H2. Perceived repression decreases the likelihood of participation in protest activities.
H3. Perceived likelihood of government response increases the likelihood of participation in protest activities.
H4. A high reform/threat ratio increases the likelihood of participation in protest activities.

We then move on to question how event attributes, such as turnout, and the issue at stake may interact with different POS characteristics. We perform a very exploratory analysis of the potential trade-offs between the consequences of not acting and different scenarios for repression, unlikely government response, and low turnout. No theoretical expectations are presented, since we are moving on unexplored terrain concerning these interactions.

Finally, we move on to examine the potential effect of individual attributes that explain political engagement due to contextual perceptions. We look into POS characteristics (repression, responsiveness and threat) in order to test how individuals weigh up each attribute differently

according to their own perceptions of politics and previous experience in political action. We thus follow up central questions like the changing importance of some individual characteristics associated with engagement in protest across different political contexts (Quaranta, 2015).

Following the literature on demographic determinants of political behaviour and protest (Dalton, 2000; McAdam, 1986; Verba, Schlozman, & Brady, 1995b), we expect age, gender, education and income to be related to the probability of protesting.

We also look into potential behavioural differences between individuals with varying attitudes towards politics and with different value frames. Firstly, research comparing experienced with novice protesters (Saunders et al., 2012; Verhulst & Walgrave, 2009), as well as research on the consequences of political behaviour more generally (Quintelier & Van Deth, 2014) has highlighted the importance of previous engagement in explaining participation. In addition to previous engagement, associational involvement has been adequately demonstrated to be a critical determinant of participating in protest (Diani, 2010; Somma, 2010).

We thus expect individuals who have protested in the past, those with high levels of associational involvement and the more politically sophisticated to be more willing to protest when facing unfavourable opportunity structures.

Political values and attitudes towards risk are another important source of heterogeneity. We look into post-materialist values, risk aversion and ideology. Individuals who are less concerned about material issues have been found to be more willing to express their dissatisfaction and grievances through non-electoral and elite-challenging forms of collective action (Inglehart, 1977; Barnes et al., 1979). Concerning risk aversion, there is evidence confirming that risk-averse individuals have a lower likelihood of protesting than those who feel comfortable taking risks (Lichbach, 1998). Ideology is also expected to make a difference, not only in regards to a stronger tradition of leftist organizations and unions in protest, but also in terms of the strength of positions or the avoidance of taking a position on a left-right ideology frame.

We expect materialist values, risk aversion and weak ideology to be negatively related to intention of demonstrating under varying levels of opportunity structures.

Design

Individual decisions to protest are circumscribed in particular contexts with varying attributes. We intend to recreate these situations by placing respondents in multiple scenarios where they face options that vary across simultaneous multiple attributes through the use of conjoint analysis (Green, Krieger, & Wind, 2001).

Respondents were asked to choose between two hypothetical alternatives of protest events defined by five attributes: Police behaviour, Government response, Consequences of not acting, Turnout and Issue (table 1). The task was repeated three times and respondents were also asked to indicate their probability of taking part in each one of the alternatives. Every decision-making situation consisted of two scenarios of protest events in which these five attributes varied randomly. A fully

randomized design facilitates causal inference, as differences in the respondents' post-treatment attitudes are attributable solely to the experimental manipulations. This approach ensures the large range required for estimating the parameter needed for the discrete choice analysis. By randomly varying the levels of attributes, different event profiles are generated. It is then possible to infer which attitudes are associated with the event attributes by comparing pairs of events. We leverage the trade-offs between attributes and values of attributes to separately estimate the likelihood of taking part in the event.

TABLE 6. Dimensions and Attributes characterising Actions

Police behaviour	Government response	Consequences of not acting	Turnout	Issue
The police is expected to repress the demonstration	The government is likely to respond to the movement's demands	Favourable legislative changes will still take place	More than 10,000 people expected to attend the event	For measures to combat climate change
The police is expected to remain neutral		Favourable legislative changes we attempt to achieve will not take place	Fewer than 500 people expected to attend the event	For receiving and treating refugees humanely
The police is expected to facilitate the demonstration	The government is unlikely to respond to the movement's demands	Unfavourable legislative changes we attempt to avoid will take place		For more equitable taxation
				Against unemployment measures

Turnout figures were treated equally between issues, assuming that turnout levels are similar between issues. This simplifies our analysis but it can create an unlikely combination of high turnout for refugee and tax issues, which may actually have smaller publics than the anti-austerity or corruption issues in different regions.

The lead for our treatment was the following: "On the screens you will now see three pairs of demonstrations. For each pair of demonstrations, you will find some questions. Please carefully read the attributes of each demonstration in order to answer precisely."
As we are interested in determining preferences for demonstrating, we analyse two types of dependent variables. Respondents are presented with two alternative demonstrations, varying in

the particular sets of attributes. In the first outcome, respondents are forced to choose the demonstration they favour the most. This is a measure of individual preferences. In the second outcome, respondents assign a probability of participating in each demonstration. This measures their intention to participate, which is an attitude. The experiment tries to replicate real life situations in which the respondent may not always feel comfortable in making a choice, since he or she may not prefer any of the available alternatives. In this case, the forced choice does not reflect an optimal preference, but this would then be captured by a low probability of participation in both alternatives. The rating outcome (in our case the probability of demonstrating) represents their degree of preference and consequently provides more direct, more detailed information about respondents' preferences.

Issue importance was measured prior to the administration of the treatments by asking respondents to put four social problems in order according to their perceived relative importance (sociotropic importance) and to the perceived personal consequence (egocentric importance). The most important problems were then matched with the grievance presented in each action in the conjoint design. Respondents ordered the following social problems according to their perceived importance: Climate change, refugee crisis, high taxes, and unemployment.

We rely on an online survey representative of the Swiss population, which was pre-tested using convenience samples and run over a sample of 1040 Swiss internet users in August 2016 (25% French speaking and 75% German speaking respondents) with quotas for age, gender and education.

Results

We estimate the preferences for one of the two demonstrations and the intention of participating according to the concrete opportunities and demonstration attributes such as issue and turnout. Table 2 presents models explaining forced choice (Model 1) and probability outcomes (Model 2) which differ in the magnitude of their coefficients, but the direction and relative effect of the attributes is similar.

We start by analysing the effect of police response, taking police facilitation as the reference category in the average marginal component effects. Police repression has a net effect of decreasing the likelihood of participation and reducing preferences for that type of demonstrations. However, contrary to our expectations, police neutrality increases the likelihood of participation in protest activities as compared to facilitation. Respondents thus prefer neutrality as they seem to be discouraged by the presence of police as facilitators.

TABLE 7. Average Marginal Component Effects

	(1)		(2)	
Police intervention (facilitate)				
Neutral	0.0459***	(0.0160)	0.0164*	(0.00907)
Repress	-0.0994***	(0.0158)	-0.0232***	(0.00880)
Government response (likely)				
Response unlikely	-0.0435***	(0.0125)	-0.0194***	(0.00735)
Consequences of not acting (No favourable change)				
Favourable change	0.000237	(0.0159)	-0.00586	(0.00893)
Unfavourable change	-0.0103	(0.0155)	-0.00865	(0.00938)
Turnout (High)				
Low turnout	-0.0125	(0.0128)	0.0140*	(0.00767)
Issue alignment (No)				
Sociotropic	0.103***	(0.0169)	0.0279***	(0.00958)
Egocentric	0.0733***	(0.0168)	0.0276***	(0.00929)
Observations	6,066		6,066	
R squared	0.0333		0.0103	

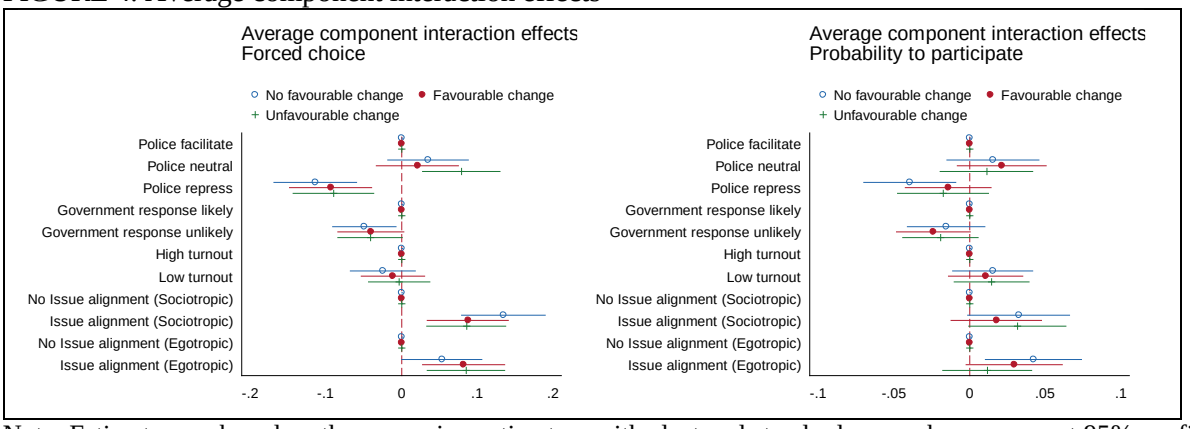
Standard errors in parentheses** p<0.01, ** p<0.05, * p<0.1
Dependent variables: (1) Forced Choice (2) Probability

The likelihood of obtaining a government response is the second concrete opportunity that we test in our model. We find that an unlikely response from government has a negative and significant effect on the intention to protest. This can be interpreted in the opposite direction as a mobilising effect of perceiving a successful result concerning government response. This result substantiates our third hypothesis.

The third dimension in our operationalization of POS is the effect of not acting. We test three possible outcomes for the consequences of not acting: no favourable change (reference category in our analysis), favourable change and unfavourable change. Our results show no significant differences between the three levels; this means that neither expecting a favourable change, not expecting a favourable change nor preventing unfavourable change make any difference in the likelihood of participating in protest activities.

We are also interested in modelling potential combinations of event attributes in order to explore preferences for particular scenarios in which some opportunities are favourable while others are not. We estimate average component interaction effects to estimate the effect of each concrete opportunity and demonstration attribute for each of the potential outcomes of not acting. Figure 1 clearly shows that the estimates for each factor are not significantly different between the three levels of the consequences of not acting. This means that respondents are indifferent to the consequences of not acting when considering them side by side with other concrete opportunities and demonstration attributes. We replicate this interaction analysis for all possible combinations of our five dimensions (three concrete opportunities and two demonstration attributes) and find similar, non-significant differences in all cases.

FIGURE 4. Average component interaction effects



Note: Estimates are based on the regression estimators with clustered standard errors; bars represent 95% confidence intervals.

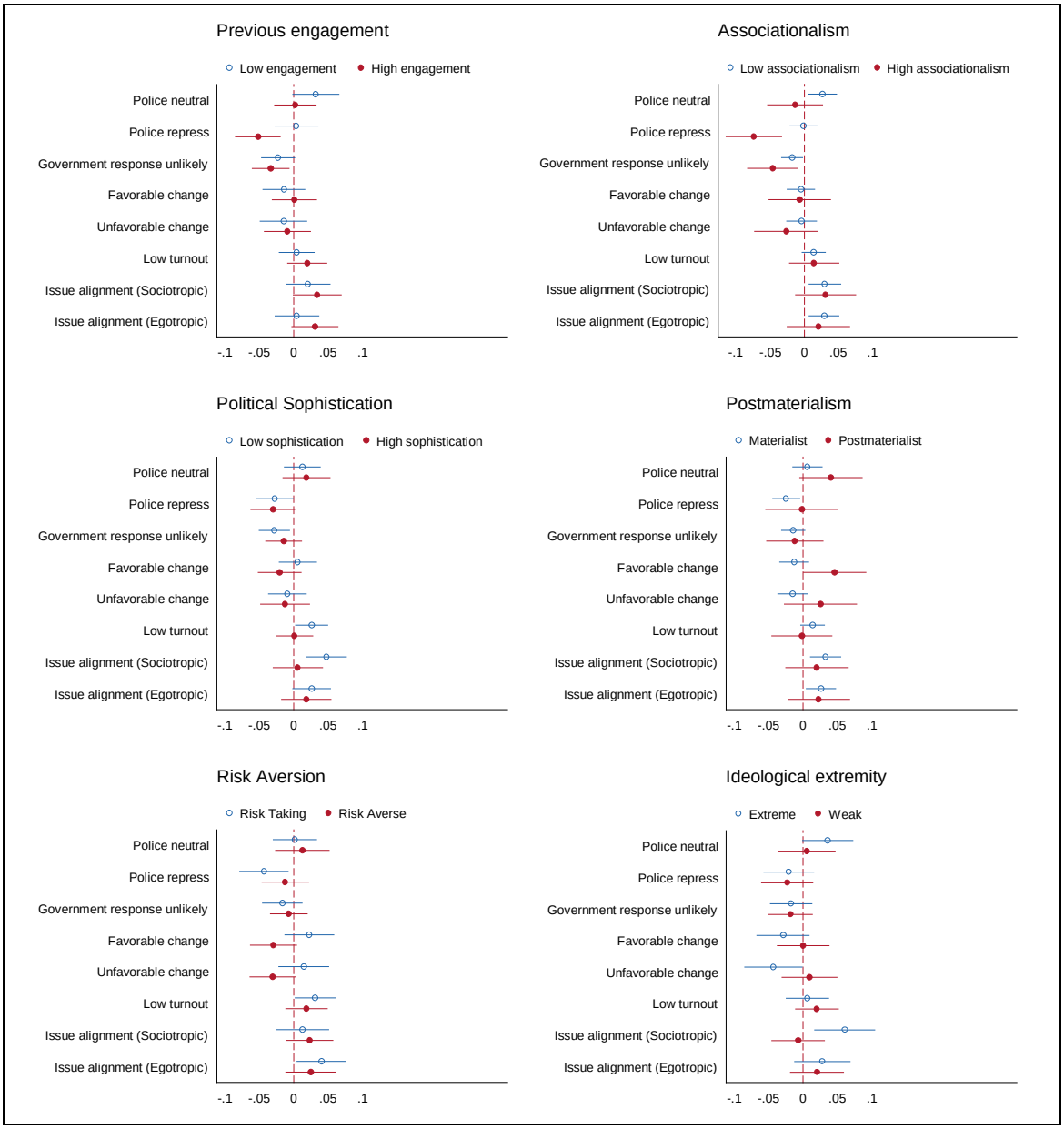
The last aim of our analysis is to determine the extent to which concrete opportunities are perceived differently by respondents, according to their personal traits, political attitudes and values. In order to assess variations in the effects of the opportunities (demonstration attributes) depending on the characteristics of the respondents, we estimate their likelihood of demonstrating with six linear regression models that interact concrete opportunities with each individual trait (Figure 2).

In the first set of models for previous engagement, associational involvement and political sophistication we leave out the central category (medium level) and compare the lowest and highest levels for every concrete opportunity. We find that respondents with high levels of engagement in the past differ significantly from those with the lowest levels of engagement; when deciding whether to demonstrate or not, the former are more sensitive to police repression and whether they care about the issue of the demonstration. Individuals who are more involved in associations are also more sensitive to police repression, but they care less about the issue of the demonstration than individuals who are less involved. Regarding political sophistication, it is possible to find heterogeneous effects between the more and the less sophisticated only with regards to the demonstration issue, but not to any of the opportunity structures.

We then move on to interpret the results for our second set of expectations; those regarding materialist values, risk aversion and ideological strength. We find that when expecting police repression, materialist respondents are less likely to demonstrate than post-materialist respondents, as repression makes no difference to the latter. We also find that post-materialist respondents are more likely to demonstrate when they perceive favourable change even if they do not act. This reflects the more expressive nature of participation that characterizes post-materialist issues. Moving on to risk attitudes, it is possible to see that risk-averse respondents are not sensitive to police repression, but risk-taking individuals are, as they are less likely to demonstrate when they expect repression. Risk-taking individuals are also significantly more likely to demonstrate when they expect low turnout and when they personally care about the issue as compared to risk-averse individuals. The pattern for ideological extremes is quite different from the other values and attitudes as respondents with strong ideological positions only differ from weak ideologues in their sensitivity to the risk of unfavourable change and to sociotropic

issue interest. That is, strong ideologues are more likely to participate when they face the chance of unfavourable change when not acting, and when the demonstration is about sociotropic problems that they personally consider relevant.

FIGURE 2. Heterogeneous effects – Average marginal component effects for probability of participating in the event



Note: estimates are based on the regression estimators with clustered standard errors; bars represent 95% confidence intervals.

Discussion

This paper has addressed the event and contextual factors that may influence individuals' likelihood of demonstrating.

We find that individuals are quite sensitive to police repression and, to a lesser extent, they also consider the issues that they care about the most in their decision to demonstrate. It is also relevant that the perceptions of opportunity structures such as police repression depend on particular traits, attitudes and previous behaviour. Respondents who have been involved in protest in the past or those with high associational involvement and risk taking attitudes are less willing to demonstrate when they expect police repression.

Regarding our question about how individuals face potential trade-offs under multiple combinations of favourable and unfavourable concrete opportunities and demonstration attributes, we find that our respondents' preferences are quite stable.

These findings are relevant for broadening the standing knowledge on how individuals perceive the political context when making decisions on whether to engage in political protest. Our experimental approach enabled us to disentangle the effects of event attributes from those of contextual opportunities on individual decisions. At a theoretical level, this research sheds light on the micro-level theory of political opportunities and adds to the research on the linkage between individual-level and structuralist approaches; but on a more substantive level, it also provides evidence for the tendency that can be expected from the recent hardening of police repression on demonstrators as a consequence of anti-austerity protests all over the EU.

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