Universitat Autònoma de Barcelona

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*Al Rueda*
*Vam ser, som, i serem*

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# Abstract

The aim of this thesis is to contribute to the understanding of how public preferences for redistribution can be affected by contexts of economic crisis. The analysis is focussed on two different mechanisms by which crises can influence redistributive preferences: changes in personal economic circumstances and the activation of crisis-specific fairness considerations.

The first empirical chapter of the thesis is focussed on the impact of personal experiences with the crisis on individuals' preferences for a very specific redistributive policy: progressive taxation. I use original data from a survey conducted in nine European countries in the aftermath of the Great Recession. The results show that European citizens' redistributive preferences correlated with their personal experience with the crisis. Those who reported higher retrospective relative deprivation tended to show higher support for progressive taxation. Nevertheless, results also show that the aggregate association was moderate. Partly because the effects of changes in personal economic circumstances were not homogeneous. Among those who were hit by the crisis, only right-leaning citizens and those who were pessimistic about their personal economic prospects showed increased support for tax progressivity.

In the second and third empirical chapters of the thesis I analyse how fairness considerations relative to who and why suffered the negative economic consequences of crisis influence citizens' redistributive preferences. Firstly, using an economically incentivised laboratory experiment I show that fairness considerations based on whether individuals suffered an income-loss due to factors under or beyond the individual control influence individuals' support for redistribution. With this experiment I also show that fairness considerations continue to matter when

self-interest and insurance motives are primed. The lab experiment allows me to test the mechanism in a context with high internal validity.

To test whether crisis-specific fairness considerations can influence public's support for redistribution in a more realistic and contextually rich setting I relied on a vignette-based survey experiment. The treatments made direct references to the economic crisis and its consequences. Through this experiment I analyse whether frames attributing the causes of being affected by the crisis to factors under or beyond individual control affected people's support for redistribution towards crisis losers in the aftermath of the Great Recession. Interestingly, the results show that frames attributing being affected by the crisis to factors beyond individual control did not significantly increase support for redistribution. Contrarily, frames attributing the crisis impact to one of the factors under the individual control (past speculative behaviour) did reduce support for redistribution.

Overall, the thesis shows that a context of economic crisis can influence citizens' preferences for redistribution. However, we should not expect recessions to have automatic and homogeneous effects on citizens' redistributive preferences. On one hand, I show that personal experiences with the crisis can affect the levels of support for redistribution, but the effect is conditional to individuals' ideological standings and economic expectations. Additionally, I have shown that not only personal material circumstances can influence people's redistributive preferences. Their interpretation of the crisis and its effects can also influence their support for redistribution. This opens the door for political influence of political elites through framing practices.

# Sumari

L'objectiu d'aquesta tesi és contribuir a la comprensió de com les preferències de la ciutadania cap a la redistribució es poden veure afectades per un context de crisi econòmica. L'anàlisi se centra en dos mecanismes pels quals les crisis poden influencia les preferències cap a la redistribució: els canvis en la situació econòmica personal i l'activació consideracions de justícia específicament relacionades amb el context de crisi.

El primer capítol empíric de la tesi se centra en l'impacte de les experiències personals amb la crisi sobre les preferències dels individus per un tipus de política redistributiva en concret: la progressivitat fiscal. Utilitzo dades originals d'una enquesta elaborada en nou països europeus després de la gran crisi de 2008. Els resultats mostren que les preferències redistributives dels ciutadans europeus correlacionaven amb la seva experiència amb la crisi. Aquells que expressaven major privació relativa retrospectiva mostraven major suport per la progressivitat fiscal. De totes formes, els resultats mostren que l'associació era moderada. En part perquè els efectes dels canvis en la situació econòmica personal no van ser homogenis. Entre aquells més afectats per la crisi, només els ciutadans de dretes i aquells que eren pessimistes sobre el seu futur econòmic mostraven un major suport per la progressivitat fiscal.

Al segon i tercer capítols empírics de la tesi analitzo com les consideracions de justícia sobre qui i per què va patir les conseqüències econòmiques de la crisi influeixen les preferències per la redistribució dels ciutadans. En primer lloc, a través d'un experiment de laboratori amb incentius econòmics demostro que les consideracions de justícia basades en si les persones pateixen una pèrdua d'ingressos a causa de factors sota o aliens al control individual influeixen en el suport a la

redistribució. Amb aquest experiment també demostro que les consideracions de justícia continuen tenint importància quan s'introdueixen altres motivacions com l'interès personal i la seguretat econòmica. L'experiment de laboratori em permet provar el mecanisme en un context amb una alta validesa interna.

Per comprovar si les consideracions de justícia específicament referides a la situació de la crisi poden influir el suport ciutadà a la redistribució en un entorn més realista i contextualment ric, he utilitzat un experiment d'enquesta. Els tractaments feien referències directes a la crisi econòmica i les seves conseqüències. A través d'aquest experiment analitzo si els marcs conceptuals que atribuïen les causes de patir els efectes de la crisi a factors sota o més enllà del control individual van afectar el suport popular a la redistribució cap als perdedors de crisis després de la Gran Recessió. Curiosament, els resultats mostren que els marcs conceptuals que atribuïen el fet de patir els efectes negatius de la crisi a factors més enllà del control individual no van augmentar significativament el suport a la redistribució. Per contra, els marcs que atribuïen l'impacte de la crisi a un dels factors sota control individual (comportament especulatiu en el passat) si van reduir el suport a la redistribució.

En conjunt, la tesi mostra que un context de crisi econòmica pot influir en les preferències per la redistribució de la ciutadania. De totes formes, no hem d'esperar que les crisis econòmiques tinguin efectes automàtics i homogenis sobre aquestes preferències. D'una banda, he mostrat que les experiències personals amb la crisi poden afectar els nivells de suport a la redistribució, però l'efecte està condicionat per les posicions ideològiques i les expectatives econòmiques dels individus. A més, he demostrat que no només les circumstàncies materials personals poden influir en les preferències per la redistribució. La interpretació que fan els individus de la crisi i els seus efectes també pot influir en el seu suport a la redistribució. Això obre les portes a la influència política de les elits polítiques a través de pràctiques de discursives i l'ús de marcs conceptuals específics.

# Figures and Tables

## Figures

## Tables

# Chapter 1

# Introduction

In this thesis I analyse citizens' preferences for redistribution in times of economic crisis. I focus on depicting how a context of economic shock can influence redistributive preferences. The research is empirically oriented and uses original data. It combines a cross-sectional analysis of European citizens' preferences in the aftermath of the Great Recession with experimental analyses that investigate how redistributive preferences operate in times of economic shocks more generally.

The Great Recession was the most important crisis since the end of WW2. It had a dramatic impact on the patterns of economic growth of Western democracies. As a consequence of the economic downturn and the policy responses to it, the crisis had an impact on the economic circumstances of a high number of citizens. Around the globe, many suffered the consequences of the crisis through a variety of impacts (experiencing unemployment or being exposed to higher unemployment risk, experiencing worsening working conditions, suffering cuts in the generosity of benefits and pensions, facing stricter eligibility criteria for accessing benefits, etc.). Additionally, during these years redistributive issues were very salient in the public debate and the redistributive role of state intervention came to the fore.

A context of crisis like the one described above is likely to have influenced citizens' preferences for redistribution. The literature has shown that preferences for redistribution are influenced by many factors, including self-interest, insurance motives and social considerations among others (Alesina and Giuliano 2011). In

times of crisis, the influence of these factors may vary, leading to changes in citizens' preferences. For instance, changes in personal material circumstances can lead to changes in individuals' self-interest. This would be the case for people who lost their job and became a net recipient of, instead of a net payer into, the tax and transfers system. This change could lead in turn to a change from opposition to support for redistribution. Similarly, in a context of increasing risk of unemployment, insurance motives can lead people to increase support for redistribution to prevent possible future economic shocks. Additionally, in a context in which many people are experiencing economic shock, citizens can change their preferences for redistribution due to social considerations. For instance, the perception of an increasing number of people facing serious financial difficulties may lead some citizens who are not experiencing the negative consequences of the crisis to support higher redistribution towards those in need.

Nevertheless, research has shown that there has not been an overwhelming shift in public opinion towards higher support for redistribution, nor a shift towards higher electoral support for parties that promote more redistribution (Bartels 2014; Soroka and Wlezien 2014). This has puzzled several authors, since several social theories predicted a rise in support for redistribution in a context of crisis, with increasing social hardship and inequality levels (Kenworthy and Owens 2011). However, the lack of an aggregate shift in one specific direction does not imply that attitudes remained unchanged. Changes may have been concentrated among certain sectors of the society. Similarly, there may have been changes in opposing directions among citizens. This thesis explores some of these changes, with a focus on the effect of changing personal economic circumstances and on the effect of fairness considerations linked to the effects of the economic crisis.

## 1.1 Understanding citizens' preferences for redistribution in times of crisis

This thesis analyses how citizens' preferences for redistribution were affected by the context of economic crisis. I show that, in a context of crisis, redistributive preferences can be affected by individuals' changing economic circumstances and by fairness considerations.

Firstly, I analyse how personal experiences of the crisis influence citizens' support for redistribution. Research has already shown that people who experienced the negative impact of the crisis at a household level tended to increase their support for redistribution (Hacker, Rehm, and Schlesinger 2013; Margalit 2013; Naumann,

Buss, and Bähr 2016; Owens and Pedulla 2014). However, other studies have found no correlation between experience of the crisis and support for redistribution (Fernández-Albertos and Kuo 2015a). While the aforementioned analyses were focussed on a single country, my research surveys the relationship between crisis impact and redistributive preferences in 9 European countries.

In my analysis I show that those who experienced the negative consequences of the crisis at a household level tend to show higher support for a specific redistributive policy: progressive taxation. The focus on a specific redistributive policy is important. Recent studies have shown that preferences for redistribution are multidimensional and they compellingly claim that it is interesting to analyse preferences for different policies separately (Cavaille and Trump 2015; Roosma, Van Oorschot, and Gelissen 2016).

My analysis provides evidence that the individuals' redistributive preferences can change in times of crisis as a consequence of changing personal economic circumstances. Results also show that the aggregate effect was modest, partly because the effects of changing personal experiences were not homogeneous. Among those who were hit by the crisis, only right-leaning citizens and those who were pessimistic about their personal economic prospects showed increased support for tax progressivity. However, these findings do not tell us how this change came about. The effect of worsening personal economic circumstances on redistributive preferences could be channelled through different mechanisms. It could be based on changes in self-interest, on insurance motives or on social considerations.

In the second part of my thesis I analyse one of the mechanisms by which preferences for redistribution may change in times of crisis. I analyse how a context of crisis can affect preferences for redistribution through one specific type of social considerations: fairness considerations. Fairness considerations are based on a concern about procedural fairness. Specifically, they are built on individuals' judgment that some inequalities are fairer and more acceptable than others depending on how they came about. For instance, people tend to perceive inequalities arising from effort as fairer than those arising from luck. Research has shown that people tend to support higher redistribution to address inequalities arising from factors they perceive as unfair than for inequalities arising from factors they perceive as fair (Alesina & Angeletos, 2005; Alesina & Giuliano, 2011; Benabou & Tirole, 2006; Corneo & Grüner, 2002; Durante et al., 2014; Fong, 2001; Gilens, 1999; Konow, 2000).

I show that crisis-related fairness considerations matter in a context of crisis. Citizens' support for redistribution in a context of economic shock varies depending on the perceived causes that lead some individuals to suffer an income loss. If people perceive that those affected by the crisis suffered the shock for causes under their control (i.e. lack of effort), they tend to be less supportive of redistribution than if they perceive that the crisis hit people for reasons they could not control (i.e. bad luck).

This finding shows that in the aftermath of the Great Recession, not only objective material circumstances mattered in determining citizens' responses to the crisis. Rather, citizens' interpretation of the crisis, specifically their belief about what led some people to suffer the consequences of the crisis, was also relevant. This has important implications. It shows that elite frames describing the effects of the crisis could influence citizens' reaction to it.

Interestingly, results indicate that frames leading to an erosion of popular support for redistribution were more effective than frames leading to an increase of such support. Frames implying that people were hit by the crisis due to factors they could control were able to erode support for redistribution. On the other hand, frames implying that people were hit by the crisis for reasons they could not control were not as capable of increasing support for redistribution. This finding also contributes to explaining why on the aggregate there was not a shift towards more support for redistribution in the aftermath of the economic crisis, as many theories predicted.

## 1.2 Contribution to literature debates

The thesis' main contribution is showing how citizens' preferences for redistribution can be affected by a context of economic crisis. As described in the previous section, I show the influence of changing personal material circumstances on the one hand and the effect of fairness considerations linked to the context of economic shock on the other. However, the thesis also makes other contributions to several bodies of literature.

The thesis deepens our understanding of attitudes towards the revenue side of redistribution, which has been traditionally underexplored. Chapter 3 analyses how being hit by the crisis influenced citizens' preferences for progressive taxation. Although the literature has traditionally analysed preferences for redistribution as unidimensional, some authors have demonstrated that such attitudes are multidimensional (Cavaille and Trump 2015; Roosma, Gelissen, and van Oorschot

2013; Svallfors 1993). They demonstrate that analysing preferences for specific policies separately can lead to a better understanding of citizens' redistributive preferences. In this context, a rising number of studies are analysing preferences for the revenue side of redistribution, which has been traditionally underexplored (Ballard-Rosa et al., 2017; Bernasconi, 2006; Confalonieri & Newton, 1995; Hennighausen & Heinemann, 2015; Jaime-Castillo & Sáez-Lozano, 2014; Roosma, Van Oorschot, & Gelissen, 2016; Scheve & Stasavage, 2016). My analysis contributes to this literature by showing how personal economic experiences can influence citizens' preferences for one specific revenue-side redistributive policy: progressive taxation.

The thesis also deepens our knowledge of how fairness considerations operate. In chapters 4 and 5, I show how these considerations can be linked to a specific crisis context. Fairness considerations literature, especially the literature focussed on laboratory experiments, has tended to analyse fairness considerations applied to how people obtained their income. In this thesis I analyse how fairness considerations apply to situations of income losses. This is an important distinction, since research has shown that people react differently to gains and losses (Kahneman and Tversky 1979). Hence, it is worth exploring how fairness considerations influence preferences for redistribution in the case of losses.

Similarly, the thesis shows how fairness considerations apply to different sources of inequality. The literature has often broadly defined which inequalities citizens perceive as fair and unfair. It has tended to test the effect of fairness considerations using effort as the source of fair inequalities and luck as the source of unfair inequalities (Alesina and Giuliano 2011). Following Fong (2001), in this thesis I define fair and unfair inequalities based on the idea of individual control. Inequality caused by factors that the individuals can control (i.e. effort, investment decisions, contribution to public goods, free-rider behaviour, etc.) are perceived as fairer than inequalities caused by factors that they cannot control (i.e. pure luck, family origin, social background, etc.). Then I test the effect of two fair factors (effort and greedy behaviour) and two unfair ones (luck and social background). Thus, I broaden the number and type of sources analysed.

Furthermore, I test the effect of these different sources of inequality in two contexts. Firstly, in an economically incentivised lab experiment I test the mechanism. Several inequalities are generated. Participants know the sources of inequalities and choose a tax rate to compensate losers of each type of inequality. This design enables me to compare the revealed preferences for redistribution for

each source of inequality. Additionally, the design enables me to analyse the interaction of fairness considerations with relevant other motives. I show how fairness considerations are moderated but not suppressed by self-interest and insurance motives.

Secondly, in the survey experiment I test the effect of crisis-specific frames aimed at activating fairness considerations. The framing literature has already shown that framing wealth or poverty as caused by factors under or beyond individual control can affect citizens' support for redistribution (Fong and Luttmer 2011; Slothuus 2007). Similarly, it has already been shown that certain frames of the macro-effects of the crisis can affect citizens' support for Welfare State retrenchment (Marx and Schumacher 2016). My analysis shows how fairness-activating frames with direct reference to the crisis influenced support for redistribution.

## 1.3 Data and methods

In this thesis I use original data specifically designed to answer the research questions that guide the thesis. The data was obtained in the context of the European research project LIVEWHAT[2], which investigated how European citizens reacted to the Great Recession and how individuals deal with the consequences of economic crises more generally. The project was coordinated by Professor Marco Giugni (University of Geneva) and funded by the European Union's Seventh Framework Programme for research, technological development and demonstration. It involved 9 European universities from 9 European countries (France, Germany, Greece, Italy, Poland, Spain, Sweden, Switzerland, and the United Kingdom).

I use different types of data and methods. Firstly, I use cross-sectional data from a survey designed and implemented to assess citizens' reaction to the crisis in the aforementioned 9 European countries. The survey included a wide variety of questions, including questions about citizens' experiences of the crisis, their political views and their behaviour in the aftermath of the Great Recession. Secondly, I use

[2] The LIVEWHAT research project was funded by the European Union's Seventh Framework Programme for research, technological development and demonstration under the grant agreement no. 613237. It was coordinated by Marco Giugni (University of Geneva - Switzerland). The consortium was formed by Fondation Nationale des Sciences Politiques (France), University of Crete (Greece), Scuola Normale Superiore (Italy), Universitat Autònoma de Barcelona (Spain), University of Sheffield (United Kingdom), Universität Siegen (Germany), Uniwersytet Warszawski (Poland), Uppsala Universitet (Sweden). More information on the LIVEWHAT project can be found in the projects' webpage: http://www.unige.ch/livewhat/ (accessed 15 June 2019).

experimental data. Several experiments were designed and implemented as part of a work package aimed at analysing the causal links between the economic crisis and its consequences on citizens' attitudes and behaviour. In this context, I designed several experiments in collaboration with Dr. Jordi Muñoz[3]. The experiments used in this thesis test how in a context of economic shock fairness considerations can influence citizens' preferences for redistribution. Thus, the thesis combines a variety of methods. Each method is used to answer a different part of the thesis' argument.

The cross-sectional data used to assess how citizens' support for redistribution varied depending on their experience of the crisis was obtained through the LIVEWHAT survey. Using this dataset enables me to measure the difference in the level of support for redistribution between those who declare that their economic situation worsened during the crisis and those who declare otherwise. Importantly, the survey allows me to assess my hypothesis on an important and diverse sample of European citizens. The sample includes citizens from a variety of countries with different levels of crisis severity and with different institutional settings and welfare state configurations. It is worth noting, nevertheless, that my analysis is focussed at the individual level, and not on the differences between countries.

The use of cross-sectional data comes with some limits, especially to the possibility of deriving causal relationships. The covariation between the independent and the dependent variables could be caused by confounding factors. In my analysis, I include a variety of sociodemographic controls and robustness checks to reduce this possibility. Nevertheless, we must be cautious when reaching causal conclusions. Ideally, I would have used panel data to clearly assess the change in support for redistribution among those who experienced a shock. Unfortunately, obtaining panel data is much costlier, which makes this data much scarcer. To my knowledge, there is no panel simultaneously covering a variety of European countries that makes it possible to measure the relationship between economic experiences and redistributive preferences.

In the case of analysing the effect of fairness considerations I use experimental methods. Using experiments enabled me to isolate the effect of a particular variable and to establish clearer causal relationships (Druckman et al. 2011; Morton and

[3] Although the work presented in this thesis is my own work, I am indebted with Jordi Muñoz for the collaboration in the research on which chapters 4 and 5 are based. We aim at further collaboration to publish an article based on the experiments analysed in this thesis.

Williams 2010). In this case, it allows me to clearly isolate the effect of fairness considerations linked to a situation of economic shock.

I use two different types of experiment: an economically incentivised lab experiment and a vignette survey experiment. There are notable differences between the two types of experiment. Each one allows me to test different parts of my argument.

With the lab experiment I test the mechanism: fairness considerations regarding a situation of income loss can influence citizens' preferences for redistribution. In the lab I artificially generated a situation that resembled an economic recession. Participants received an initial endowment. Then, I generated income shocks that affected only some of them. The shocks were caused by different factors and affected different subjects each. Participants were informed about the shocks and its causes. Then, they could choose a level of redistribution for each income loss knowing which factor generated it. Their choices could affect their and other participants' final payoffs. Using a within-subject analysis, I tested whether or not subjects chose different levels of redistribution depending on the source of income loss.

This experimental design is highly stylised and prioritises internal validity. This design has significant advantages: it is conducted in a controlled setting and uses economic incentives, which ensures that there is no attrition and reduces non-compliance. Similarly, the treatment is clear and salient in the moment of the choice: participants have to choose a tax rate for each source of income loss simultaneously. Additionally, the experimental design enables me to measure the support for redistribution for each source of income shock at the individual level. This allows for an intra-individual analysis. Finally, the experiment also allows me to check how these fairness considerations interact with other factors, namely self-interest and insurance motives. All these features facilitate the identification and testing of the mechanism. However, this highly stylised design limits the external validity of the findings.

To complement the lab experiment I conducted a survey experiment. The lab experiment shows that fairness considerations influence attitudes in a context of artificially generated income shock. However, the survey experiment is also useful in testing how fairness considerations can affect citizens' preferences for redistribution in a real-life economic crisis situation. The experiment consisted of a vignette-based framing experiment. Participants were randomly assigned to a treatment or control group. Treated respondents were exposed to a text informing

them that some people were the most affected by the economic recession and that they were affected because of one or another specific factor. The factors presented were the same as in the lab experiment.

The survey experiment created a more realistic context than the lab experiment. The treatments were contextually rich. They included direct references to the crisis, to the effects of the crisis on specific groups of people, and to the causes that led some people to suffer the negative consequences of the crisis. Hence, participants expressed their redistributive preferences after being primed to think about the real economic crisis that affected their countries.

Importantly, the experiment analyses how fairness considerations can be mobilised. It shows how frames activating fairness considerations can influence citizens' support for redistribution. This is an important feature, as we know that citizens' opinions are formed through a combination of predispositions and available information (Zaller 1992). As the framing literature has extensively shown, presenting citizens with some specific information can trigger specific predispositions which can lead to attitude changes (Chong and Druckman 2007).

Finally, the survey experiment used three different samples. Two of the samples were from Spain, one from Switzerland. The samples, although not necessarily representative of the national population, were more varied than the student sample used in the lab. With the more realistic setting and the more varied samples, I gain external validity.

## 1.4 Structure of the thesis

The thesis is divided into 6 chapters. This introductory chapter is followed by a theoretical chapter. I review the relevant theory and I define the conceptualisation I will use in the empirical chapters; I also critically revise the literature on citizens' preferences for redistribution, with a focus on the factors more likely to influence such preferences in times of economic crisis: self-interest, insurance motives and social considerations. Special attention is paid to analysing and conceptualising one type of social consideration: fairness considerations, which will be a central factor in the experimental chapters.

Additionally, I review the literature that argues that preferences for redistribution are multidimensional. I show that it is important to analyse support for specific policies, and I especially argue for researching preferences for tax progressivity,

which has been traditionally underexplored in the literature. To conclude the theory chapter, I revise the literature that has analysed how crises affect citizens' preferences for redistribution.

Chapter 3 of the thesis contains the analysis of how changes in citizens' experience of the crisis affected their support for redistributive preferences. The chapter analyses whether those who declare that their economic situation worsened during the crisis show higher support for redistribution. The paper is based on cross-sectional data from 9 European countries.

Chapters 4 and 5 analyse one of the mechanisms by which preferences for redistribution can change during economic crises. I analyse the effect of fairness considerations in a context of economic shock. The analysis is divided into two chapters. In chapter 4 I use a lab experiment to show how fairness considerations apply in a context of income shock. I show that fairness considerations, which have been proven to matter when evaluating income gains, also apply in the context of income losses. Furthermore, I show how fairness considerations interact with other motives: self-interest and insurance motives.

In chapter 5 I extend the analysis from the lab to a more contextually rich experiment. I test how fairness considerations applied in the context of the Great Recession. I use a survey experiment to show that frames activating crisis-specific fairness considerations were able to influence citizens' support for redistribution towards crisis losers. Finally, in chapter 6 I discuss the main findings of the thesis.

# Chapter 2

# Preferences for redistribution in times of crisis

## 2.1 Preferences for redistribution

Empirical literature has tended to focus on preferences for redistribution as a broad category. They are often categorised as preferences for the state intervention in reducing inequality and ensuring everyone is provided for or as preferences for higher spending on specific issues. In this thesis I will focus on support for redistribution via taxes and transfers. In chapter 3 I will specifically focus on support for a particular redistributive measure: progressive taxation. In chapters 4 and 5 I will analyse support for redistribution to compensate the crisis losers.

In this theory section, I will first review the main influences on citizens' preferences for redistribution as a broad category as found in the academic literature. I will pay special attention to the factors I will use to analyse changes in individual preferences in times of crisis, such as self-interest or fairness considerations. Afterwards, I will analyse the multidimensional aspect of preferences for redistribution. I will review the literature that argues that it is worth analysing preferences for different redistributive dimensions or policies separately. Similarly, I will also review the scant but growing literature on citizens' preferences for progressive taxation. Finally, I will review the literature on how different factors influenced citizens' preferences for redistribution during the Great Recession.

## 2.2 Determinants of citizens' preferences for redistribution

Citizens' preferences for redistribution have been analysed by many authors from a variety of social science disciplines, including political economy, political science, sociology and political psychology. There has been a debate on which are the main determinants of citizens' support for redistribution. There are two main lines of argument: one claims that citizens' preferences are based on their material self-interest. It includes immediate self-interest, but it can also accommodate expectations of social mobility, insurance motives and concerns about the negative externalities of inequality in forms of crime or incentives.

The other line of research stresses the role of social considerations. It argues that individuals' support for redistribution is based on their self-interest but also on some level of concern for the well-being of others. This concern for others can take many forms, including a dislike of high levels of inequality or a taste for equity or reciprocity (the willingness to ensure that citizens receive in accordance with their contribution). Additionally, social preferences can also be based on considerations of procedural justice: citizens may support or oppose redistribution based on whether they consider that the processes that generated the pre-redistribution inequality were fair or unfair.

It is worth noting that social preferences, however, can be affected by affinity feelings such as in-group bias, ethnic prejudice or social proximity. They can lead to different levels of support for redistribution depending on the composition of the groups that are expected to gain and lose from the redistribution.

### 2.2.1 Self-interest and preferences for redistribution

In the literature on preferences for redistribution, it has often been assumed that citizens' preferences for redistribution reflect their self-interest. This assumption has been dominant in the social sciences. A variety of highly influential models and theories about citizens' preferences for redistribution have been based on the assumption that preferences for redistribution are solely based on material self-interest. Individuals seek to maximise their material well-being. Other factors are not taken into account or are considered secondary (Alesina & Giuliano, 2011; Dimick, Rueda, & Stegmueller, 2018).

The median voter model developed by Meltzer and Richard (Meltzer & Richard, 1981) has been the most influential model in recent decades. It was developed as a model for predicting redistribution preferences aggregation more than individual

preferences. However, the model predicts that citizens' support for redistribution will be determined by their position on the income scale. It assumes that citizens aim to maximise their material welfare, which is affected by the level of tax and transfers. Hence, they will support redistribution if they benefit from it and oppose otherwise. The model assumes that taxes are proportional and that they are used to provide flat transfers. Under these assumptions, the model predicts that self-interested individuals will support redistribution if they fall below the median income and that they will oppose redistribution if they are above it. Additionally, it predicts that rising inequality will increase demands of redistribution since the median voter will be more likely to be below the median income.

However, the empirical evidence shows that while income is correlated with support for redistribution it is a relatively weak predictor (Alesina & Giuliano, 2011; Fong, 2001; Gilens, 1999; Moene & Wallerstein, 2001). A significant number of relatively rich citizens support some levels of redistribution. Similarly, opposition to redistribution can be found among relatively poor citizens.

Some authors have developed more complex models that are still based on citizens' material self-interest. However, they claim that individuals calculate their self-interest considering some aspects other than their current relative income or wealth. These aspects include expected social mobility, insurance motives, or beliefs on the negative externalities of inequality or redistribution.

A line of research has focussed on citizens' expectations of upward mobility. It argues that citizens may be relatively poor but expect to be among the better off in the future. Since individuals assume that redistributive policies are relatively stable, they may oppose redistribution to prevent future high tax burdens. For instance, Benabou and Ok (2001) show that prospects of upward mobility reduce the demand for redistribution among the relatively poor. Interestingly, Alesina and La Ferrara (2005) provide evidence that both objective and subjective prospects of social mobility are negatively correlated with support for redistribution[4]. Citizens who think that their economic situation will improve in the future tend to be less supportive of redistribution. In the same way, those that by their economic position

[4] It is worth noting that Alesina and Ferrara's (2005) paper does not claim that self-interest is the only type of consideration influencing preferences for redistribution. They show that belief regarding the relative impact of luck and effort on individuals' economic prospects also influence citizens' preferences for redistribution.

are more likely to experience upward mobility also show a lower level of support for redistribution.

Similarly, several authors have shown that fearing a worse economic situation in the future leads citizens to support redistribution for insurance motives. These authors have compellingly shown that risk exposure correlates with citizens' support for social protection and redistribution (Iversen & Soskice, 2001; Moene & Wallerstein, 2001; Rehm, 2009). Those with more insecure future incomes tend to show higher support for redistribution. The effect of insurance motives contributes to explain why some relatively well-off citizens support redistribution.

Most of the literature on insurance motives is focussed on preferences for social protection. As noted earlier these policies have a redistributive impact, although sometimes they have not been conceptualised as support for redistribution. However, it is worth highlighting that risk exposure also impacts explicitly redistributive preferences. For instance, Rehm (2009) shows that individuals facing higher unemployment risk tend to show higher support for government intervention in reducing differences between the rich and the poor.

Another body of literature has highlighted the impact of citizens' concern about the negative externalities of inequality on their own welfare. This literature incorporates considerations of the wellbeing of others in the calculation of one's self-interest. These considerations do not arise from sympathy or a concern about the wellbeing of others. They are purely instrumental considerations. The wellbeing of others is taken into account as a factor influencing one's own material interest. For instance, Rueda and Stegumeller (2016) show that concerns about the negative externalities of crime increase demands for redistribution. Specifically, they show that the effect increases with income and that it is bigger in highly unequal areas. Thus, concern about the negative externalities of crime can explain why some wealthy citizens support redistribution as a form of maximising their material welfare. Similarly, concerns about the effect of inequality on the rich's wellbeing through education and human capital have also been analysed as shaping preferences for redistribution of the better-off (Alesina & Giuliano, 2011). Other concerns, such as worrying about negative incentive effects of taxation can also lower support for redistribution among the relatively poor (Piketty, 1995).

It is worth recalling that the theories highlighting the role of social mobility, insurance motives, and negative externalities do not argue that these factors eliminate the effect of immediate self-interest measured through current income. They argue that these factors complement the influence of income. Also, it is

important to recall that the idea of self-interest also extends to other theories that do not base self-interest in income but in class relationships. For instance, influential power resources theories (i.e. Esping-Andersen, 1990; Korpi & Palme, 1998) argue that different classes will support different levels and forms of redistribution and social insurance based on their material interest.

### 2.2.2 Social considerations and preferences for redistribution

Extensive research from a variety of disciplines has shown that self-interest is not the only human motivation affecting preferences for redistribution (Alesina & Giuliano, 2011; Fehr & Schmidt, 2006; Gintis, Bowles, Boyd, & Fehr, 2005; Oorschot, 2000). They have shown the existence of social considerations that influence individuals' preferences for redistribution. These types of considerations have been labelled differently by different traditions and authors. They have been labelled as social preferences, altruism, public values or ideological predispositions. Furthermore, different authors have defined them differently. For instance, some include self-centred considerations of the welfare of others as other-regarding preferences, while others exclude them.

In this thesis, by social preferences, I refer to preferences informed by two types of considerations. Firstly, I refer to considerations that take into account the material well-being of others for non-instrumental reasons. In these cases, the wellbeing of others is not a mean to maximise one's material welfare, in contrast with the self-centred considerations of the well-being of others described in the previous section. Hence, social preferences are one type of other-regarding preferences which does not discriminate whether the concern for others is instrumental or genuine. Secondly, I refer to considerations based on evaluations of justice of the processes of allocation of resources, of how the existing inequality came about. Obviously, this second type of consideration is also non-instrumental.

It is important to note that literature on social preference for redistribution does not necessarily claim that self-interest is irrelevant in shaping individuals' preferences for redistribution. It tends to show the complementarity of both motivations (see for instance Alesina & Giuliano, 2011; Alesina & La Ferrara, 2005; Corneo & Grüner, 2002; Durante, Putterman, & van der Weele, 2014; Fong, 2000; León, 2012).

The literature on social considerations is extensive. It includes a variety of considerations, ranging from a dislike for inequality to altruism or fairness considerations. In some cases, these social considerations are analysed separately. In

other cases, they are considered together as defining a type of deeply-rooted human motivation (i.e. strong-reciprocity) or a characteristic of one type of values (i.e. left-right ideology). In this subsection I will analyse some of the most relevant social considerations for the aim of this thesis: understanding citizens' preferences for redistribution in times of crisis.

#### 2.2.2.1. Aversion to inequality

Some authors have demonstrated that many citizens show some level of dislike for inequality. Using economically incentivised experiments, behavioural economists have shown that individuals do not behave as homo economicus (for a summary, see Fehr & Schmidt, 2006). Humans do not only seek to maximise their material welfare regardless of the consequences this might have on the welfare of others. Individuals tend to take economic decisions regarding the distribution of material resources that are at odds with the assumption that individuals care only about their own material welfare.

Much of this experimental evidence shows that individuals tend to oppose certain forms and levels of inequality. The most influential analysis of this type has been the inequity aversion model developed by Fehr and Schmidt (1999). They show that individuals oppose distributions that they regard as inequitable. Inequality of outcomes determines whether the distribution is regarded as equitable or inequitable. Inequity averse individuals tend to support redistribution to reduce inequality. They may do it through two different mechanisms depending on whether they experience advantageous or disadvantageous inequality. Those that are among the relatively well-off will feel altruism towards those that are worse off. On the other hand, those who are relatively poor will feel envy and will be willing to reduce the welfare of those who are better-off to improve the situation of those who are worst-off. The model has been tested in many specifications and can predict pro-redistribution behaviours that the standard assumptions of purely self-interested rational actors cannot (see for instance Tyran & Sausgruber, 2006).

Extensive empirical evidence shows that Fehr and Schmidt's (1999) findings apply outside the lab. Citizens' preferences for redistribution are influenced by concerns about inequality regardless of individuals' self-interested considerations. Pro-redistribution preferences show consistency with individuals' values and their belief on whether inequality is desirable, even after controlling for a variety of measures of self-interest (Alesina & Giuliano, 2011; Ballard-Rosa, Martin, & Scheve, 2017; León, 2012).

However, concerns for inequality can lead to many different forms of redistribution. Fehr and Schmidt (1999) assumed that inequity aversion would be based on pursuing egalitarian outcomes since they were focussed in highly stylised lab experiments. As Alesina and Giuliano (Alesina & Giuliano, 2011) noted, concern for inequality can be based on different normative principles and recommend other types of redistribution, such as prioritising those who are worse-off or maximising overall social welfare.

#### 2.2.2.2 Fairness considerations and preferences for redistribution

So far, we have seen that preferences for redistribution can be influenced by different forms of self-interested considerations and by individuals' concern about the wellbeing of others. However, preferences for redistribution can also be shaped by judgements of fairness of the circumstances that caused the existing inequality. These considerations are not based on the outcomes but on how these outcomes came about.

Citizens show higher tolerance to inequalities that they perceive as "fair" or "equitable" than to those they regard as "unfair" or "inequitable". Hence, citizens tend to show higher support for redistribution if they perceive that the existent inequality was unfairly produced than if they perceive it as the consequence of fair factors (Alesina & Giuliano, 2011; Bowles & Gintis, 2000; Fong, Bowles, & Gintis, 2006). Different judgments intervene in citizens' evaluation of what is "fair" or "unfair". When analysing preferences for redistribution, the literature has tended to differentiate between the loosely defined ideas of "effort" and "luck" as originating more or less acceptable inequalities respectively (Alesina and Giuliano, 2011).

Citizens tend to be more willing to redistribute to people who are worse off because they were hit by misfortune than towards those that are worse-off because they were lazy. Similarly, people show higher respect for individuals' entitlement to their wealth if it was obtained through hard work than those who obtained it through windfalls. On a macro level, people tend to show higher support for redistribution when the causes for poverty and wealth are perceived as arising from "luck" than when they are perceived as arising from "effort" or "lack of effort" (Alesina & Angeletos, 2005; Alesina & Giuliano, 2011; Benabou & Tirole, 2006; Corneo & Grüner, 2002; Durante et al., 2014; Fong, 2001; Fong & Luttmer, 2011; Gilens, 1999; Konow, 2000; Linos & West, 2003; Oorschot, 2000; Slothuus, 2007)[5].

[5] Some of these analyses have shown the existence of a mutual influence of aggregate beliefs in the role of luck and effort on individuals' economic circumstances and the existing level of inequality and

It is worth noting that beliefs about the role of "luck" and "effort" have an independent effect from income and ideology. Rich and right-leaning citizens tend to show higher belief on the role of "effort" and at the same time, they tend to show lower support for redistribution. Nevertheless, the effect of beliefs in the role of "luck" and "effort" is robust after controlling for income (Fong, 2001) and for ideology (Alesina & Giuliano, 2011).

However, in the literature, there is no consensus about what defines people's view of what is "luck" and what is "effort". Alesina and Giuliano (2011) define "effort" as aspects that impose costs on individuals and "luck" all the others. Other authors, however, base the distinction over whether individuals can be held responsible for their economic circumstances (Corneo & Grüner, 2002; Fong, 2001). Most of the empirical research has used similar survey questions to measure both conceptualisations. They tend to ask respondents a) about their perceived role of luck and effort in shaping individuals' economic prospects; b) whether the poverty (wealth) is caused by lack of effort (or by hard work or ability); or c) whether there are fair opportunities for everyone to thrive or to escape poverty. In this thesis, I will follow Christina Fong's (2001) criterion. Citizens consider more acceptable those inequalities that they perceive as caused by factors within the individuals' control than those perceived as caused by factors beyond the individuals' control. As a consequence, they will support higher redistribution to address the former than the latter. In a more general view, those citizens who believe in self-determination of economic circumstances will show lower support for redistribution than those who believe in exogenous-determination.

Empirical evidence shows that citizens perceive inequalities arising from factors beyond the individuals' control (brute luck, birth or social and contextual factors) as fairer than those arising from factors for which individuals can be held accountable (i.e. choices related to effort, risky behaviour) (Konow, 1996, 2000). Additionally, experimental evidence shows that citizens support higher redistribution for inequalities arising from factors beyond the individual's control (Cappelen, Sørensen, & Tungodden, 2010; Chavanne, 2018; Durante et al., 2014; Fong & Luttmer, 2011). Furthermore, some experimental analysis also shows that

redistribution which can lead to different equilibria. For instance, Alesina and Glaeser (2004) argue that higher belief in the role of luck in the USA than in Europe leads citizens to demand less redistribution. It generates lower redistribution from the state. Consequently, the role of effort is more important in determining individuals' economic prospects.

perceptions of individuals' responsibility for their economic circumstances account for the variation in support for redistribution (Slothuus, 2007).

It is worth noting that this literature also has some variation in what is considered as factors under and beyond the individual control. For instance, in some cases ability is considered a factor under the individual control, while in others it is considered a factor for which citizens cannot be held responsible. In this thesis I will go beyond the distinction between brute luck and effort. I will use choice as the cut between self-determined and exogenous factors of inequality and I will explore the impact of different factors within and beyond the individual control.

The logic underpinning fairness considerations is linked to that of other bodies of literature focussing on the conditionality of citizens' support for redistribution such as deservingness literature (Gilens, 1999; Oorschot, 2000; Petersen, Slothuus, Stubager, & Togeby, 2010) and strong-reciprocity theories (Bowles & Gintis, 2000; Fong et al., 2006; León, 2012). Both theories argue that conditional solidarity is based on several criteria[6], one of which is individuals' control over their own economic situation. Actually, in deservingness literature, individuals' past behaviour regarding their contribution to the common good or their past behaviour as a 'free rider' is often categorised as related to the reciprocity principle. In fairness literature this behaviour is described as laziness or predisposition to not contribute. It falls in the category of factors under individual control (Fong & Luttmer, 2011).

Additionally, deservingness literature tends to focus on the perception of responsibility of those who are in a situation of need and on the spending side of redistribution. It is based, therefore, on the 'redistribution towards' dimension of redistribution[7]. Fairness considerations literature, on the contrary, is not limited to perceptions about potential recipients. It includes considerations about the rich's entitlement to their income and wealth (Rowlingson & Connor, 2011). Hence, it includes aspects of both 'redistribution from' and 'redistribution towards' dimensions.

In this thesis, I will use the term fairness considerations to refer to considerations based on the perceived justice of the process by which inequalities were generated. However, it is worth noting that some of the literature that analyses the impact of this factor on preferences for redistribution do not use this concept. For instance,

[6] They include other factors such as reciprocity, level of needs, past or expected reciprocity and attitudes (see Bowles & Gintis, 2000 and van Oorschot, 2000).
[7] See next section for more details about the different dimensions of preferences for redistribution.

Christina Fong (2001) does not use the concept of fairness considerations. She uses 'belief in self- or exogenous- determination'. Similarly, Benabou and Tirole (2006) use 'belief in a just world', and Linos and West (2003) use 'belief about [the causes of] social mobility'. Contrarily, some authors from behavioural economics use the concept of fairness to refer to inequity aversion or to social considerations in general (Fehr & Schmidt, 1999, 2006; Tyran & Sausgruber, 2006).

It is also important to note that some authors have directly used beliefs in the role of luck and effort in determining individuals' economic prospects as a proxy for preferences for redistribution (i.e. Alesina & Giuliano, 2011; Giuliano & Spilimbergo, 2013). However, in this thesis I will use fairness considerations based on citizens' belief about self- and exogenous- determination as a factor influencing preferences for redistribution.

### 2.2.3 Other factors influencing preferences for redistribution

Other factors also influence preferences for redistribution. In some cases, these factors hinder the effect of some of the already mentioned motivations. For instance, misinformation can lead to making the wrong calculations of one's self-interest (Bartels, 2005; Slemrod, 2006). Also, feelings of social affinity impact preferences for redistribution. Literature has shown that feelings of closeness to different groups are associated with support for redistribution towards them (Lupu & Pontusson, 2011; Shayo, 2009). In this line, ethnic prejudice and fairness considerations linked to ethnic issues have been proven to have a major impact in reducing support for redistribution (Alesina & Glaeser, 2004; Luttmer, 2001). These factors, however, are not central to the main focus of this thesis.

## 2.3 The multidimensional aspect of preferences for redistribution

Redistribution, understood as reducing the level of material inequalities, has many aspects and can be accomplished by many forms. For instance, via progressive taxation and universal transfers, or through proportional taxation and transfers targeted to the poor. Similarly, it can take many forms, such as reducing inequality between the rich and the middle- and lower- classes or reducing inequality between the poor and the rest.

Most of the literature on individual redistributive preferences has analysed preferences for redistribution as unidimensional (Ballard-Rosa et al., 2017; Cavaille & Trump, 2015). It has not differentiated between different elements of

redistribution. Furthermore, it has tended to not reflect on what exactly it was measuring. Survey research has measured preferences for redistribution using individuals' responses to different questions (or the level of agreement to sentences). Table 2.01 includes several questions used to measure redistributive preferences from some of the most influential social surveys, including the European Social Survey, the General Social Survey, the World Values Survey, and the International Social Survey Programme.

**Table 2.01.** Redistributive preferences survey items

| Item | Wording | Source |
|---|---|---|
| 1 | "It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes" | ISSP* |
| 2 | "The government should reduce income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor" | GSS** |
| 3 | "Many social benefits and services are paid for by taxes. If the government had to choose between increasing taxes and spending more on social benefits and services, or decreasing taxes and spending less on social benefits and services, which should they do?" | ESS*** |
| 4 | "Some people think that the government (…) should do everything to improve the standard of living of all poor Americans. Other people think it is not the government's responsibility, and that each person should take care of himself" | GSS |
| 5 | 'People should take more responsibility to provide for themselves' versus 'The government should take more responsibility to ensure that everyone is provided for' | WVS**** |
| 6 | "Do you think that what the government is doing for people in poverty in this country is about too much, the right amount, or too little?" | WVS |
| 7 | "The government should take measures to reduce differences in income levels" | ESS |
| 8 | "The government should provide a job for everyone who wants one" | ISSP |
| 9 | "The government should provide everyone with a guaranteed basic income" | ISSP |
| 10 | "It should be a government's responsibility to ensure that there is (1) a job for everyone who wants one; (2) adequate health care for the sick; (3) a reasonable standard of living for the old; (4) a reasonable standard of living for the unemployed; (5) a sufficient range of child care services for working parents; (6) the provision of paid leave from work for people who temporarily have to care for sick family members" | ESS |

*International Social Survey Programme
**General Social Survey
***European Social Survey
****World Values Survey

The questions and sentences used to measure citizens support for redistribution measure preferences for a variety of issues. Some of them refer directly to the convenience of reducing inequality but others refer to government intervention in some specific policy areas. In some cases, reducing inequality is an abstract goal while in other items concrete mechanisms are specified. Some questions include evaluation of the current level of inequality or of the current level of government redistribution, but other questions do not. Similarly, in some items, support for the poor is specified, while in others it is not. Importantly, these different questions tap into different dimensions of redistribution. Some ask about the desirability of inequalities, some the role of the state in reducing inequalities, some about the role of the state in some specific policy domains, some about the level of the state intervention. Similarly, some tap into different types of redistribution such as universal or targeted transfers.

Furthermore, some of the survey items involve more than one aspect of redistribution. For instance, item 1 in the table combines desirability of inequalities with the role of the state in reducing them. Item 2 in the table further adds some specific mechanisms: taxing the rich and giving targeted assistance to the poor. Item 5 includes opinion about the role of the state and evaluation of its intervention.

Some authors have claimed that preferences for redistribution (and the Welfare State) are not unidimensional but multidimensional (Cavaille & Trump, 2015; Roosma, Gelissen, & van Oorschot, 2013; Sihvo & Uusitalo, 1995; Svallfors, 1993). According to these authors, citizens can hold varying preferences in different dimensions. Thus, citizens can support redistribution in one dimension but not in another one. For instance, one citizen may support reducing the level of inequality by heavily taxing the rich and simultaneously oppose unconditional transfers to groups he perceives as undeserving. This multidimensional aspect of preferences for redistribution contributes to explain variation in individuals' preferences for different redistributive policies.

Roosma, Gelisen and van Oorschot (2013), for instance, identified seven dimensions in support for the Welfare State. Their focus is not redistribution but the legitimacy of the Welfare State. Nevertheless, most of their dimensions are very much related to redistribution. Based on existing theory, they identified seven dimensions of Welfare State legitimacy: the welfare mix (the relationship of the state, market, family and civil society); the goals of state intervention (i.e. fostering equality of opportunities, or equality of outcomes, or offering social protection); the range of state intervention (in which policy domains should the state intervene); the level of

state intervention (the size of government), the redistribution designs (who should bear the costs and who should benefit from the state intervention), implementation (procedural consideration based on the efficiency and effectiveness) and outcomes (satisfaction with the intended and unintended outcomes of state intervention). They show that attitudes are multidimensional since individual preferences in different dimensions do not always correlate.

Charlotte Cavaille and Kris-Stella Trump (2015) analysed more specifically the multidimensionality of preferences for redistribution. They analysed citizens' attitudes towards a wide variety of redistributive issues, ranging from assessment of benefits recipients, conditional benefits and policies, the fairness of the tax system, or existing levels of inequality. They used factorial analysis to test whether these attitudes load in different dimensions. They found that citizens' preferences for redistribution are structured in two dimensions: "redistribution from" and "redistribution to". "Redistribution from" refers to the redistribution by taking from the those that are better-off. It is influenced by questions on whether reducing inequality is desirable and by questions that put the emphasis on those that are better off. On the other hand, "redistribution to" is influenced by questions that put the focus on the beneficiaries of redistribution, especially by descriptions of the recipient group and its deservingness. Cavaille and Trump found that attitudes within each dimension tend to be coherent while there is a bigger variation in attitudes towards different dimensions. Furthermore, they show that self-interest consideration is the main influence of attitudes towards the "redistribution from dimension", while social affinity considerations are the main driver of the "redistribution to" dimension.

Conceiving preferences for redistribution as multidimensional has important implications. It shows that survey questions mixing several redistributive dimensions can be problematic since preferences for the different dimensions can be contradictory. For instance, in the case of one individual that supports redistribution through progressive taxation and universal flat transfers and programmes but may respond negatively to the question "The government should reduce income differences between the rich and the poor, perhaps by raising the taxes of wealthy families or by giving income assistance to the poor".

Conceiving attitudes as multidimensional allows for analysing attitudes to different redistributive dimensions separately, having a more nuanced idea of citizens' redistributive preferences. Analysing them separately can inform, not about average support for the idea of redistribution, but about specific redistributive measures and

policies. This thesis, for instance, analyses support for taxation and support for redistribution to crisis losers as separate issues. Furthermore, analysing preferences for different dimensions of redistribution can shed light on how some factors differently influence different preferences in different dimensions. For instance, Cavaille and Trump (2015) cogently showed that self-interest considerations have a bigger impact in the "redistribution from" dimension than in the "redistribution to" dimension, which receives a higher influence of social affinity considerations.

## 2.4 Attitudes towards taxation and tax progressivity

Preferences for redistribution have been traditionally explored as a unidimensional, as I have discussed in the previous section. Additionally, literature has tended to focus on aspects of the spending side of redistribution. For instance, the literature on focusing on insurance motives (i.e. Iversen & Soskice, 2001; Rehm, Hacker, & Sclesinger, 2012) has often used support for social protection as a synonym of support for redistribution. Deservingness literature (van Oorschot, 2000; van Oorschot, 2006), has focussed on support for different spending programmes and social assistance. Power resources literature (Esping-Andersen, 1990; Korpi & Palme, 1998) tended to focus on how social protection was provided. In contrast, less is known about citizens' preferences for the revenue side of redistribution.

However, in recent years there has been a renewed interest in taxation as a redistributive policy. Social movements such as the Occupy movement have claimed that the 1% need to pay more taxes to contribute their fair share. Similarly, organisations such as Oxfam have been campaigning for a fairer tax system to revert increasing inequalities. In the academic field, influential actors have defended the importance of taxation for redistributive purposes (Atkinson, 2015; Piketty, 2014). In this context, a rising number of scholars have focussed on understanding citizens' attitudes towards taxation: (Ballard-Rosa et al., 2017; Barnes, 2015; Domonkos, 2016; Fernández-Albertos & Kuo, 2015b; Hennighausen & Heinemann, 2015; Jaime-Castillo & Sáez-Lozano, 2014; Roosma, Van Oorschot, & Gelissen, 2016; Scheve & Stasavage, 2016)

The historical paucity of research on attitudes towards the revenue side of redistribution could stem from persistent beliefs among scholars that citizens do not think about issues of redistribution in much detail, hold inconsistent attitudes towards issues of taxation and spending and, in general, do not fully understand tax-related issues (Citrin, 1979; Roberts, Hite, & Bradley, 1994). For instance, Roberts, Hite and Bradley (1994) found in laboratory experiments that respondents tended

to hold inconsistent preferences for tax progressivity depending on whether the question was framed in abstract or concrete terms. Respondents tended to support tax progressivity in abstract terms. However, when asked in concrete situations support for flat-rate or proportional taxations increased. The authors concluded that ordinary citizens don't understand the concept of progressivity. Consequently, they questioned the reliability of measuring citizens' preferences for progressive taxation using abstract survey questions.

On the other hand, Citrin (1979) showed that some citizens support increases in social spending and tax cuts simultaneously, which was interpreted as a sign of lack of understanding of how the tax and transfers system works. Bartels (2005) focussed on citizens' opposition to taxes. He analysed citizens' support for Bush tax cuts, a tax reform that most benefited the super-rich and had regressive consequences. He found that many non-wealthy citizens and citizens that favoured a reduction in economic inequality supported the tax cut. He found that the effect of citizens' evaluation of their own tax burden was bigger than the effect of the evaluation of the riches' tax burden. Citizens that thought that they were taxed too much supported the tax reform, even if they considered that the rich were taxed too little. Bartels concluded that this was due to miscalculations of self-interest or, in his own words, "unenlightened self-interest". It led many citizens to support the tax plan to get a small tax cut despite it implying a bigger tax cut for the rich and therefore a net loss due to the decline of redistribution from the rich.

However, other authors have shown that citizens are capable of expressing coherent opinions on tax issues. Edlund (2003) did a similar study to Roberts, Hite, & Bradley (1994). He tested whether Swedish citizens held coherent and stable attitudes towards taxation regardless of whether the questions are asked in abstract or concrete terms. In contrast with Roberts, Hite, & Bradley's findings, he found that citizens' attitudes were consistent. Citizens that supported progressivity in abstract terms tended to support progressivity when expressed in concrete terms. It is worth noting that Edlund's study was based on a large and representative sample, while Roberts Hite and Bradley's was based on a rather small student sample. However, it is important to highlight as well that Edlund analysed Swedish citizens while Roberts, Hite, & Bradley's analysed American citizens. Institutional and cultural differences may account for different levels of understanding of tax-related issues.

Other authors have shown that attitudes towards the tax system are also multidimensional (Ballard-Rosa et al., 2017; Barnes, 2015; Bernasconi, 2006; Confalonieri & Newton, 1995; Jaime-Castillo & Sáez-Lozano, 2014; Roosma et al.,

2016). Citizens' tax preferences have often been surveyed using questions about their preference for higher or lower taxation, assuming a uniform tax-rate or not specifying how the tax pressure would be distributed among the population. However, citizens hold richer attitudes towards taxation than just supporting higher or lower taxes for everyone as often measured in survey questions.

Some authors (Barnes, 2015; Bernasconi, 2006; Confalonieri & Newton, 1995; Jaime–Castillo & Sáez–Lozano, 2014; Roosma et al., 2016) have analysed citizens' attitudes towards taxation using a set of questions from the International Social Survey Programme Role of Government questionnaire. They have shown that respondents, when asked whether they think that low-, middle- and high-income earners are taxed too much, too little or about the right amount, tend to indicate a preference for less taxation of specific groups than of others. Arguably, many citizens thus support a different distribution of burdens, not simply a higher or lower level of revenue based on a uniform tax-rate. As Barnes (2015) has revealed, many citizens simultaneously support more progressive but lower overall taxation, which, though two independent attitudes, are not necessarily incoherent, for they express distinct levels of support for different redistributive mechanisms.

Such nuanced attitudes towards taxation are not identical but tend to show significant compatibility with other attitudes towards redistribution, including whether government should reduce income differences (Bernasconi, 2006; Confalonieri & Newton, 1995). Ballard–Rosa et al. (2017) found similar results after conducting a conjoint analysis in which they asked respondents to choose a tax-rate for different income brackets. They found that respondents tend to choose progressive tax schemes and that their general preference for tax progressivity correlates significantly with their general preference for reducing income inequality.

Following these trends in the literature, I assume that citizens are capable of holding true and consistent attitudes towards taxation. Similarly, I acknowledge that attitudes towards taxation have different dimensions, including the level of taxation, the principle of progressivity, or the design of progressivity. In this thesis, specifically in chapter 3, I will focus on citizens' support for progressive taxation.

Preferences for tax progressivity have remained largely underexplored, but have received renewed interest in recent years (i.e. Ballard–Rosa et al., 2017; Barnes, 2015; Domonkos, 2016; Durante & Putterman, 2011; Fernández–Albertos & Kuo, 2015b; Hennighausen & Heinemann, 2015; Jaime–Castillo & Sáez–Lozano, 2014; Roosma et al., 2016). Other authors have analysed popular support for taxes on the rich (see for instance Mccall & Kenworthy, 2009; Scheve & Stasavage, 2016) which have been

considered a proxy of support for progressivity. However, the idea of progressivity necessarily involves considerations about the taxes paid by different groups. As Ballard-Rosa et al. put it, relying on the tax of the rich instead of on the distribution of burdens may be over-simplistic (Ballard-Rosa et al., 2017)

Debates about citizens' preferences for tax progressivity have centred on the influence of self-interest and social considerations. Some studies have revealed that self-interest influences citizens' preferences—that, to minimise their tax burden, high-income earners tend to show less support than low earners for progressive taxes (Ballard–Rosa et al., 2017; Barnes, 2015; Bernasconi, 2006; Domonkos, 2016; Hennighausen & Heinemann, 2015). However, aside from self-interest, social considerations have also been shown to influence citizens' support for tax progressivity. For instance, Ballard–Rosa et al. (2017) and Hennihaussen and Heinemann (2015) have demonstrated that people who believe that luck determines individual economic prospects tend to support progressive taxes less than ones who think that factors beyond individual control shape personal economic success. Other scholars have shown that holding egalitarian and left-leaning values and supporting progressive parties are associated with greater support for tax progressivity (Ballard–Rosa et al., 2017; Bernasconi, 2006; Domonkos, 2016; Durante & Putterman, 2011; Hennighausen & Heinemann, 2015; Jaime–Castillo & Sáez–Lozano, 2014). Taken together, recent findings thus explain why, contrary to self-interest, many wealthy citizens continue to support some level of progressivity in taxation and why many low-income citizens do not.

However, attitudes toward taxation also have several aspects. We can differentiate between what Confalonieri and Newton (1995) label as fundamental and procedural attitudes towards taxation. The fundamental attitudes to which they refer are the principles guiding the design of the tax system. Fundamental attitudes are related to the idea of having a tax system that is regressive, proportional or progressive. Procedural attitudes, on the other hand, relate to citizens' evaluation of the existing tax system. Among procedural attitudes, therefore, we can find citizens' attitudes towards the current level of overall taxation, the current level and form of the progressivity, or the evaluations of the efficiency of the current tax system.

A variety of studies on citizens' attitudes towards tax progressivity have analysed different aspects of it. Some authors have surveyed citizens' evaluation of the existing tax system and whether they considered that the taxes paid by different income groups were too high, too low or about right (i.e. Barnes, 2015; Bernasconi, 2006; Jaime-Castillo & Sáez-Lozano, 2014; Roosma et al., 2016). Using these

questions, researchers can know which income groups respondents think should get a tax rise or a tax drop. With this information, they can infer whether respondents prefer the tax system to be more or less progressive than they think it is. However, as Durante and Putterman (2011) argued, this type of question mixes respondents' perception and evaluation of the current tax system and their preferred direction of change. Therefore, it is not appropriate to reveal respondents' preferred tax structure. Since researchers do not know respondents' beliefs on how much each income group pays in taxes they cannot be certain of whether respondents support a progressive tax system or not, or how progressive they want the system to be. These analyses mix procedural and fundamental attitudes.

Some researchers have assessed citizens' tax preferences with different strategies such as using conjoint analyses (Ballard-Rosa et al., 2017) or open-ended questions in which citizens can choose their preferred tax rate for different income groups (Fernández-Albertos & Kuo, 2015b). These types of questions allow researchers to see not only whether citizens prefer a progressive tax system but also how progressive they want it to be. Furthermore, they can reveal respondents' preferences for the type of progressivity. Citizens may support tax progressivity by redistributing from the very rich to everyone else. However, others may support progressivity by redistribution from top- and middle- earners to those with lower incomes. Unfortunately, these types of questions are not easily found on comparative surveys.

Other authors have focussed on fundamental attitudes towards taxation (i.e.. Domonkos, 2016; Durante & Putterman, 2011; Hennighausen & Heinemann, 2015). They have analysed whether citizens prefer progressive, proportional or regressive taxation. They have used survey questions asking respondents whether they think that people earning more than others should pay in taxes the same amount of money, the same proportion of their earnings, or a bigger proportion of their earnings. This type of question has the advantage of clearly identifying whether citizens support one or another type of taxation. However, it does not assess citizens' evaluation of the current tax system, nor does it inform about the level of progressivity desired by those who favour progressivity. Similarly, it does not reveal which form of progressivity citizens support (i.e. low taxes for everyone but high taxes on the rich, or low taxes for the poor and moderate for middle- and high- income earners). Nevertheless, it offers a good understanding of the basic form of tax system that citizens prefer.

In my research, I will focus on preferences for progressive taxation. By support for progressive taxation I refer to one specific aspect of preferences for tax progressivity: namely, support for progressive taxation ahead of other forms of taxation.

## 2.5 Economic crises and citizens support for redistribution

The global financial crisis that began in 2007 generated a massive shock to European economies, albeit, with important levels of variation between different countries. This thesis analyses the role of factors previously described as influencing preferences for redistribution during the context of the Great Recession.

The literature on how crises affect preferences for redistribution is scant. The most notable contribution is the paper by Paola Giuliano and Antonio Spilimbergo (2013). Nevertheless, their work is not specific about the Great Recession. They analyse the influence of experiencing a recession at regional (for the US case) or national level (for cross-country comparative analysis). Their analysis compellingly shows that citizens from cohorts who experienced an economic recession tended to hold more pro-redistribution attitudes and higher belief in the role of luck in determining individuals' economic prospects. They also show that experiencing a recession impacts on behaviour associated with these preferences. American citizens who experienced a recession are more likely to vote for Democrats. Interestingly, these effects were long-lasting. However, they were concentrated on people who experienced the recession under their impressionable years and declined with age. The highest effect was among people who experienced the recession when they were 26 to 35 years old and there was no effect among people who experienced the recession being older than 35.

Their analysis shows the existence of long term effects of crises experiences on preferences for redistribution and beliefs about self- and exogenous- determination. However, it does not inform us about how these effects take place. It does not reveal how different factors that have been shown to influence preferences for redistribution get activated in times of crisis. Piketty (1995) argued that citizens learn from their family history the chances of social mobility and the role of luck and effort in shaping individuals' economic fortunes. Beliefs on social mobility and on the role of self-determination of economic prospects are important influences on citizens' preferences for redistribution. Giuliano and Spilimbergo (2013) suggest that citizens can also learn from their own experience and from the macroeconomic circumstances they live in. Thus, young people who experience a recession "learn"

that there is a risk of worsening economic circumstances and that factors outside the individual control are important in shaping individuals' economic circumstances. These learnings influence their preferences for redistribution. Thus, the influence seems to be based on insurance motives and social considerations.

In the aftermaths of the Great Recession, however, there is no evidence of a shift towards the left or a rise in votes for progressive parties (Bermeo & Bartels, 2014). In this context, several authors have specifically analysed whether preferences for redistributive issues changed during the Great Recession. They studied how different factors influenced individual preferences for redistributive issues (Barr, Miller, & Ubeda, 2016; Brooks & Manza, 2013; Fernández-Albertos & Kuo, 2015a; Hacker, Rehm, & Schlesinger, 2013; Margalit, 2013; Naumann, Buss, & Bähr, 2016; Owens & Pedulla, 2014). A special interest has been placed in analysing how changes in material circumstances linked to the effects of the crisis affect preferences for redistribution. This is an aspect on which Giuliano and Spilimbergo (2013) did not focus. In their analysis, they just show that having had high incomes during the recession reduced the impact of having experienced the recession on preferences for redistribution. However, their data does not allow them to pursue a more detailed analysis.

Research has shown that, during the Great Recession, experiencing unemployment or drops in income increased support for redistributive policies and welfare spending. For instance, using panel data, Margalit (2013) Owens and Pedula (2014), Nauman Bass and Bähr (2016) and Hacker, Rehm and Schlesinger (2012) showed that citizens who became unemployed during the recession tended to increase their support for redistributive issues. Similarly, Barr et al. (2016) used repeated lab experiments with the same individuals throughout the crisis. They proved that citizens who became unemployed during the crisis tended to increase their pro-redistributive behaviour in the lab. Specifically, they showed that becoming unemployed reduced individuals' acknowledgement of entitlement to earned income. Those who lost their job during the crisis tended to take more from those who had more in order to redistribute to those who were worse-off in lab experiments.

Research has also shown that shocks other than being laid-off or experiencing unemployment have impacted citizens' preferences for policies with important redistributive impact. For instance, experiencing income drops have impacted citizens' preferences for social spending (Margalit, 2013), for a variety of risk-buffering social policies (Hacker et al., 2013) and for the role of government in

reducing economic differences between the rich and the poor (Owens & Pedulla, 2014). However, it is worth noting that in some cases this relationship was not found. For instance, using cross-sectional data, Fernández-Albertos and Kuo (2015a) found that Spanish citizens who experienced an income drop during the crisis did not show higher support for raising taxation and spending. However, this may be due to the specific survey question, which mixes tax pressure without specifying the distribution of the burdens and social spending, and without specifying the areas and priorities of spending. As the authors claim, their results may be caused by the fact that the redistributive impact of state intervention tends to benefit the middle-class rather than those that are worse-off in Spain[8].

Thus, research shows that experiencing negative economic circumstances tended to increase support for redistributive policies. This change in preferences may have been caused through a variety of mechanisms. Obviously, immediate self-interest can explain higher support for redistribution among those who have become unemployed. As long as they are receiving unemployment protection and financial assistance, they benefit from social spending. However, the increased support for redistribution could stem from other considerations. Hacker, Rehm and Schlesinger (2012) showed that those who experienced economic shocks expressed higher worries about their economic fortunes. Economic shocks therefore increased risk perceptions, which, as analysed in previous sections, is a key influence in increasing support for redistribution. Indeed, in their analysis, the authors show that economic shocks increased both economic worries and support for redistribution. Interestingly, they show that economic shocks in one policy domain (i.e. employment) increased economic worries and support for redistribution not only in that domain but also in others (i.e. health or wealth). This suggests that the cause of increased support for redistribution is not (only) immediate self-interest. Insurance motives seem to get activated in contexts of economic insecurity linked to the economic crisis.

Margalit (2013) found in his analysis of US citizens' preferences that the attitude change was temporal. Those who became unemployed during the crisis showed increased support for welfare spending. However, when they became reemployed, their level of support decreased, returning to levels shown before the job loss. Margalit concludes that this indicates that short-term self-interest guided attitude changes. If the unemployment experience had affected risk perceptions or social

[8] This case exemplifies the importance of analysing support for concrete redistributive policies, or at least paying special attention to the type of redistribution one is focussing on when analysing citizens' preferences for redistribution.

concerns, individuals who had suffered unemployment should maintain increased support for redistribution even after recovering from the economic shock.

On the other hand, Nauman Buss and Bähr (2016) analysed Dutch citizens' attitudes using a similar panel data analysis. They did find a persistent effect of unemployment experiences during the crisis on support for unemployment benefits. After being reemployed, citizens did not recover pre-unemployment levels of support for redistribution. On the contrary, their support for redistribution was higher than before the unemployment experience. As the authors argue, this could be based on insurance motives or to changes in perceived deservingness of unemployment benefit recipients. Unemployment experience may increase citizens' perception of risk. Furthermore, the authors also recall that change in preferences could be based on fairness considerations. Experiencing economic unemployment during the crisis may change citizens' perception of the role of luck in shaping one's fortunes, which in turn can increase the perception of deservingness of those in need.

According to a recent study, fairness considerations have also influenced citizens' preferences for redistribution during the crisis. Limberg (2019) argues that in the aftermath of the crisis citizens tended to perceive that the rich benefited from advantageous regulations before the crisis and that they were bailed out. This influenced citizens' perception of the deservingness of those that are better off reducing thus their entitlement to earned income and activating compensatory arguments. His comparative analysis shows that fairness considerations, especially those referring to the deservingness of the rich, influenced citizens' support for progressive taxation during the crisis. Furthermore, he shows that the effect was bigger in those countries most severely hit by the crisis.

## 2.6 Conclusion

In this chapter, I have developed the theoretical framework for the thesis. I have analysed the main factors influencing individuals' preferences for redistribution that have special importance in times of crisis. I have shown that self-interest influences preferences for redistribution. However, I have shown that self-interest considerations better predict individuals' preferences for redistribution if aspects such as insurance motives or expected mobility are taken into account. Additionally, I have shown that self-interest is not the only relevant motivation influencing citizens' redistributive preferences. On the contrary, social considerations are also important. Thus, concerns about the well-being of others, dislike for high levels of inequality and fairness considerations can influence individuals' preferences for

redistribution. These social considerations explain why many wealthy citizens support redistribution and why many relatively poor individuals oppose it.

Additionally, I have also analysed the multidimensional aspect of preferences for redistribution. I have reviewed the literature arguing that preferences for redistribution are not uniform. This literature has compellingly shown that citizens' preferences for different redistributive dimensions and policies may differ. Finding variation in individuals' preferences for different redistributive measures is not necessarily a sign of citizens' incompetence or lack of understanding of redistributive issues. On the contrary, this variation can express real and coherent attitudes towards different policies with different implications. Furthermore, research has shown that some factors known to influence redistributive preferences can have a varying impact on different redistributive dimensions and policies. I have argued that it is therefore important to carefully specify which type of preferences for redistribution one is analysing, as well as analysing attitudes towards concrete redistributive policies.

Following the importance of analysing preferences for different redistributive policies separately, I have defended the importance of analysing attitudes towards taxation. I have argued that citizens' attitudes towards the revenue-side of redistribution, and towards taxation more specifically, have been traditionally underexplored. I have shown how recent research has proved that preferences for taxation have some particularities that make them worth being explored. For instance, I have shown that preferences for the level of taxation and for the progressivity of the tax system are two separate issues. Analysing support for redistribution through measures that gauge citizens' support for higher or lower taxation without specifying how the tax burden is distributed can be misguided. Consequently, I have claimed that analysing citizens' preferences for progressive taxation is important if we want to know citizens' preferences for redistribution via taxation.

Finally, I have argued that we still know little about how factors influencing citizens' preferences for redistribution shape such preferences in times of economic crises. I have shown that previous research has proven that experiencing a recession can have long-term effects on preferences for redistribution. Additionally, I have shown that recent research has shown that during the Great Recession some factors such as self-interest, insurance motives or fairness considerations were activated and shaped individuals' redistributive preferences. However, there is not a clear consensus on which factors are activated and what is their effect.

# Chapter 3

# Economic Crisis and Support for Progressive Taxation in Europe[9]

## 3.1 Introduction

This chapter addresses whether changes in economic circumstances are associated with citizens' attitudes towards redistribution. In particular, I analyse to what extent citizens who experienced financial setbacks during the Great Recession at home show higher support for progressive taxes. Additionally, I analyse whether the influence, if any, of their experiences with the crisis has been uniform or varied depending on citizens' financial expectations and ideological leanings.

I discuss attitudes towards tax progressivity, which, though once underexplored, have received increased attention in recent years (i.e. Ballard–Rosa, Martin, & Scheve, 2017; Barnes, 2015; Domonkos, 2016; Fernández–Albertos & Kuo, 2015b; Hennighausen & Heinemann, 2015; Jaime–Castillo & Sáez–Lozano, 2014; Roosma, van Oorschot, & Gelissen, 2016). The growing body of literature on the topic[10] has

[9] A version of this chapter is published as a journal paper in the journal European Societies: Garcia-Muniesa, Jordi. 2019. "Economic crisis and support for progressive taxation in Europe". *European Societies*, 21:2, 256-279, DOI: 10.1080/14616696.2018.1547836

[10] Literature on the issue has assessed different aspects of tax progressivity, including support for progressive or other types of taxation; perceived and desired level of progressivity, and the preferred type progressivity (i.e. focussed on high taxes only on the rich, or on low taxes for the poor and higher taxes for both middle- and high-incomes). This chapter assesses citizens' support for progressive taxation as opposed to proportional or regressive taxation.

shown the impact of self-interest others-regarding considerations and ideology. It has also analysed the effect of other factors such as social and political trust, misinformation, employment status and other sociodemographic characteristics. To date, however, researchers have not analysed whether changes in economic circumstances influence attitudes towards tax progressivity. The question nevertheless warrants attention, especially in the aftermath of the Great Recession, during which the financial situations of millions of citizens worldwide suffered, albeit to various degrees. As I have reviewed in the theoretical chapter, several authors have already shown that shifts in individuals' material circumstances during the crisis altered their attitudes towards a variety of issues related to redistribution (Barr, Miller, and Ubeda 2016; Brooks and Manza 2013; Hacker, Rehm, and Schlesinger 2013; Margalit 2013; Owens and Pedulla 2014). In contribution, I sought to analyse whether changes in economic circumstances during the crisis correlated with European citizens' support for tax progressivity.

In my analysis, I applied logistic regression to data collected from a 2015 survey in nine European countries. The survey includes data on respondents' support for progressive taxation, their subjective experiences with the effects of the crisis and various attitudinal and socio-demographic characteristics. In general, results revealed that attitudes towards progressive taxation correlated with the impact of the crisis at the household level and that citizens who considered that their economic circumstances had worsened during the crisis were more likely to support tax progressivity. However, the correlation was not homogeneous among all citizens. In particular, citizens positioned on the left of the ideological spectrum or who perceived their financial setbacks to be temporary and expected that their economic situations would improve in the near future did not show increased support for progressive taxation. The results thus seem to support previous research that showed that the effects of citizens' experience with the crisis on aggregate preferences for redistribution were limited since they were short-lived and there was no increase in support for redistribution among people on the left (Margalit 2013).

The results of the study contribute to two growing bodies of literature. First, they inform mounting research on citizens' support for tax progressivity as a specific redistributive policy by revealing how such attitudes relate to citizens' economic experiences in times of crisis. Second, they show that changes in material circumstances can influence citizens' preferences for redistributive policies. More specifically, with respect to findings that experiences with financial hardship during times of crisis influence attitudes towards redistribution, the results of the study

clarify that such influence applies to attitudes towards one redistributive policy in particular: progressive taxation.

## 3.2 Theoretical background

As I have already explained in this thesis, research on citizens' preferences for redistribution has been focussed on attitudes towards redistribution as a broad category or towards the spending side of redistribution11. Attitudes towards the revenue-side of redistribution has been underexplored. The paucity of research on these attitudes is partly due to the persistent belief among scholars that citizens lack the capacity or the interest to analyse and hold true and informed attitudes towards tax issues (Bartels 2005; Citrin 1979; Roberts, Hite, and Bradley 1994). Nevertheless, research has shown the importance of analysing attitudes towards redistribution as multidimensional (Ballard-Rosa, Martin, and Scheve 2017; Barnes 2015; Bernasconi 2006; Cavaille and Trump 2015; Confalonieri and Newton 1995; Jaime-Castillo and Sáez-Lozano 2014; Roosma, Van Oorschot, and Gelissen 2016). Additionally, several authors have shown that citizens do hold differentiated attitudes towards tax issues and that they are capable of holding preferences that are consistent with their more general values (Ballard-Rosa, Martin, and Scheve 2017; Bernasconi 2006; Confalonieri and Newton 1995). In this context, a growing body of literature is paying attention towards preferences related to revenue side of redistribution.

In this chapter I focus on analysing citizens' support for tax progressivity. In recent years a raising number of academics have paid attention to preferences tax progressivity (i.e. Ballard–Rosa et al., 2017; Barnes, 2015; Domonkos, 2016; Durante & Putterman, 2011; Fernández–Albertos & Kuo, 2015b; Hennighausen & Heinemann, 2015; Jaime–Castillo & Sáez–Lozano, 2014; Roosma et al., 2016). Some of these studies have shown that self-interest influences citizens preferences for tax progressivity (Ballard–Rosa et al., 2017; Barnes, 2015; Bernasconi, 2006; Domonkos, 2016; Hennighausen & Heinemann, 2015). Other studies have also shown that social considerations also shape citizens' preferences for progressivity. For instance, Ballard–Rosa et al. (2017) and Hennihaussen and Heinemann (2015) have cogently shown that fairness considerations influence support for tax progressivity. Similarly, some studies have demonstrated that holding left-leaning and egalitarian values correlates with higher support for redistribution (Ballard–Rosa et al., 2017; Bernasconi, 2006; Domonkos, 2016; Durante & Putterman, 2011; Hennighausen & Heinemann, 2015; Jaime–Castillo & Sáez–Lozano, 2014). Hence some of the main

[11] See section 3.3 for a discussion on the multidimensionality of preferences for redistribution.

drivers of preferences for redistribution also apply to preferences for tax progressivity.

Tax progressivity has several aspects, ranging from the level of progressivity to the type of progressivity. Existing research on tax progressivity has analysed different aspects. It has studied preferences for different types of taxation (i.e. Domonkos, 2016; Durante & Putterman, 2011; Hennighausen & Heinemann, 2015) as well as perceptions of the current tax systems and preferred directions of change (i.e. Barnes, 2015; Bernasconi, 2006; Jaime-Castillo & Sáez-Lozano, 2014; Roosma et al., 2016). In my analysis I will focus on preferences for one specific dimension of tax progressivity. I will analyse support for progressive taxation in front of other forms of taxation, namely regressive and proportional taxation [12].

In my study, I investigated whether having been affected by the economic crisis at the household level had influenced citizens' attitudes towards progressive taxation. Recent studies have shown that having personally experienced economic hardship during the Great Recession shaped citizens' attitudes towards redistributive issues. In particular, they have revealed that having been laid off or having experienced unemployment during the crisis increased an individual's support for redistribution (Barr, Miller, and Ubeda 2016; Hacker, Rehm, and Schlesinger 2013; Margalit 2013; Owens and Pedulla 2014). The impact, however, was not limited to experiences with the labour market. On the contrary, suffering income shocks or perceiving that one's economic situation had deteriorated also prompted support for redistribution (Brooks and Manza 2013; Hacker, Rehm, and Schlesinger 2013; Margalit 2013; Owens and Pedulla 2014). According to the findings of such studies, economic shocks affected attitudes towards a range of redistribution-related policies, including unemployment protection (Hacker, Rehm, and Schlesinger 2013; Naumann, Buss, and Bähr 2016), government spending on welfare (Margalit 2013) and state intervention in various domains of policy, including risk-buffering policies (Brooks and Manza 2013; Hacker, Rehm, and Schlesinger 2013; Owens and Pedulla 2014). Even more, Hacker, Rehm and Schlesinger (2013) observed that shocks in one domain of policy (i.e. job loss) were liable to affect attitudes towards state intervention in other domains (i.e. healthcare) as well. By contrast, in their study in Spain, Fernández–Albertos and Kuo (2015a) detected that having suffered losses in income during the crisis had not significantly affected attitudes towards simultaneously increasing taxes and state intervention. Interestingly, those authors speculated that their findings could reflect the fact that Spanish citizens affected by

[12] See section 3.4 for a critical review of the research focussed on different aspects of tax progressivity.

the crisis might not have perceived themselves to be beneficiaries of state intervention or did not want to bear the cost of financing the policies. This example underscores the importance of analysing support for different policies separately.

However, to my knowledge, no researchers have depicted how being affected by the Great Recession has affected attitudes towards tax progressivity. Among related scholarship, Hennighausen and Heinemann (2015) and Ballard–Rosa et al. (2017) investigated the role of experience with economic hardship as a measure of the effect of social mobility but found no statistically significant correlations. Nevertheless, Hennighausen and Heinemann's (2015) analysis considered whether citizens believed that their economic situations were worse than a decade prior, and in turn, they tracked long-term social mobility, not relatively recent economic shocks. Moreover, their data were limited to German citizens and, in being from 2000, could not reflect experiences during a context of economic crisis. As for the other study, although Ballard–Rosa et al. (2017) identified social mobility as being unemployed or having recently experienced unemployment, they did not distinguish being unemployed from having suffered unemployment in the past, which might have reduced the impact of the experience, given the short-term effect of unemployment observed by Margalit (2013). Additionally, the authors did not consider economic shocks other than unemployment experience. Although they did detect increased support for progressive taxes among citizens who had experienced or were experiencing unemployment, the association was not statistically significant.

## 3.3 Economic Crisis and Support for Tax Progressivity

Experiencing the hardships of economic crisis at the household level can promote support for tax progressivity, although the mechanisms directing its influence can vary. Among them, changes in immediate self-interest caused by financial losses can prompt support for progressive taxes, as can increases in the salience of or weight given to self-interest vis-à-vis other considerations. For instance, non-wealthy citizens who once opposed tax progressivity due to their values (i.e. entitlement to earned income) are liable to shift their attitudes and support progressivity in order to reduce their tax burden in moments of personal financial stress. Research has shown that worsening economic conditions during the Great Recession activated considerations of self-interest that prompted changes in attitudes towards several redistributive policies (Margalit 2013; Owens and Pedulla 2014).

The effect of worsening personal economic conditions can also bear the influence of their impact on social considerations. Individuals who have suffered an economic

shock might reassess their former beliefs about the relative role of luck and effort in determining individuals' success and consequently attribute more influence to luck. Believing that factors beyond individuals' control shape their economic fortunes reduces perceived entitlement to earned income and is associated with support for higher taxation (Alesina & La Ferrara, 2005; Durante, Putterman, & van der Weele, 2014; Fong, 2000, chapters 4 and 5 in this thesis) and tax progressivity (Ballard–Rosa et al., 2017; Hennighausen & Heinemann, 2015). Hence, I hypothesised that being affected by economic crisis at the household level increases one's support for tax progressivity:

> Hypothesis 1: Support for progressive taxation depends on the extent of the direct impact of the crisis. The more an individual experiences the consequences of economic hardship at the household level, the more likely he or she is to support progressive taxation.

However, the effect of experiencing worsening economic conditions might not be homogeneous. For one, it may be mitigated if citizens consider the setback to be temporary, for they would not need to rethink their beliefs or their considerations of self-interest in the meantime. Furthermore, even if citizens affected by the crisis initially shifted their attitudes towards progressivity, they could have shifted them again as soon as they forecast the improvement of their economic situations. Margalit (2013) found that though citizens who had lost their jobs tended to increase their support for redistributive measures, they also tended to revert to their previous preferences once they had found new jobs. I therefore hypothesised that believing that one's economic situation will improve soon can anticipate the effect of an actual improvement of the economic situation. Thus, individuals who change their beliefs and attitudes amid an economic setback might change them again as soon as they believe that their situation will improve in the short term, even before actual recovery occurs. In that sense, I hypothesised that having positive financial expectations can moderate the effect of economic shock at the household level.

> Hypothesis 2: Support for progressive taxation depends on the interaction of the direct impact of the crisis and the individual's perceived economic prospects for his or her household. The effect of the direct impact of the crisis on attitudes towards progressivity is less among citizens with positive financial expectations.

The effect of suffering an economic setback on preferences regarding tax progressivity might also depend upon the individual's political standing. Research has shown that ideological factors and partisanship heavily influence support for tax

progressivity (Ballard–Rosa et al., 2017; Bernasconi, 2006; Durante & Putterman, 2011; Hennighausen & Heinemann, 2015). More particularly, studies have revealed that the effect of hardship during the financial crisis on attitudes towards issues related to redistribution differs according to personal political leanings (Brooks and Manza 2013; Margalit 2013). Consequently, I expected that being affected by the crisis would correlate with the attitudes about progressivity of citizens on the right of the ideological spectrum more than with ones on the left. First, because conservative citizens tend to support progressive taxation less than their more progressive counterparts in the first place, a higher proportion of right-leaning citizens are available to shift from not supporting to supporting progressive taxation. Second, as Margalit (2013) has observed, economic shock can exert greater impact upon conservative citizens, who tend to attribute individual economic fortunes to effort and ability. After suffering a negative external economic shock, however, they are liable to reconsider that belief and, in turn, develop attitudes in favour of tax progressivity. Thus, I hypothesised that:

> Hypothesis 3: Support for progressive taxation depends on the interaction of the direct impact of the crisis and personal ideology. The further right a citizen falls on the ideological spectrum, the greater the effect of the direct impact of the crisis on his or her preference for progressive taxes.

## 3.4 Data and methods

The analysis is based on an online survey conducted from June to August 2015 in nine European countries: France, Germany, Greece, Italy, Poland, Spain, Switzerland, Sweden and the United Kingdom. The survey was designed and implemented as part of the European research project LIVEWHAT, which analysed citizens responses to the economic crisis[13]. The survey was administered by YouGov and had 18,368 respondents, about 2,000 respondents per country. It included quotas for gender, age, level of education, region, socio-economic class and partisanship. The sample matches the different countries' national population statistics.

The survey posed a variety of questions about political attitudes, socio-demographic background and the consequences of the economic crisis at the personal and

[13] More information on the LIVEWHAT project can be found in the projects' webpage: http://www.unige.ch/livewhat/ (accessed 1 March 2018).

household levels.[14] Among them, a question regarding the preferred form of income taxation—regressive, proportional or progressive—provided the basis for measuring the dependent variable. The question was based on the question used in the European Social Survey - Welfare Attitudes Module (2008). The question was as follows: 'Please think of two people, where one is earning twice as much as the other. Which of the three following statements comes closest to how you think they should be taxed?' The response options were, 'Both should pay the same amount of money in tax', 'Both should pay the same share of earnings in tax', 'Higher earner should pay a larger share of earnings in tax', and 'Don't know'. The question focussed on what Cavaille and Trump (2015) have called the 'redistribution from' dimension of redistribution. It focussed on respondents' preferences for a specific form of taxation (progressive, proportional or regressive) and not on their evaluation of the current tax system. Additionally, it is neutral regarding the recipient of the redistribution and other aspects such as the size of tax revenue and the scope of state intervention. Since the number of respondents who supported regressive taxation was quite low and my analysis focussed on support or opposition to progressive taxation, I recoded the responses to a binary variable measuring whether respondents supported progressive taxation or not.[15] Those cases (1,045) in which the respondent chose the "Don't know" option were excluded from the analysis.[16]

The direct, personal impact of the crisis was measured according to respondents' retrospective relative deprivation[17]—that is, each individual's subjective evaluation of changes in his or her economic situation from the past to the present. To that end, I gathered responses to a question about whether respondents considered their economic conditions to be better or worse than they were 5 years prior. The exact wording was, 'On a scale from 0 to 10 where 0 means "much worse" and 10 means "much better", would you say that the economic situation of your household now is better or worse to how it was 5 years ago?' I recoded responses to invert their

[14] More information on the survey, including descriptive statistics for all variables, the wording of questions and number of respondents by country, is available in Tables A1.1 to A1.3 in the appendix.
[15] It is worth noting that the question did not offer respondents the possibility to choose different levels of progressivity. This may lead some respondents that would prefer mild progressivity but strongly oppose high levels of progressivity to choose proportional taxation instead of progressive taxation.
[16] The low proportion of respondents who answered 'don't know' (5.7%) suggests that the question was not too complex for the sample.
[17] Relative deprivation has been traditionally used to refer to an individual's comparisons with others. However, I use retrospective relative deprivation to refer to comparisons of the personal present situation with the situation of the self in a specific time-point in the past.

order so that greater values indicated greater retrospective relative deprivation and thus a greater direct impact of the crisis.

Respondents' financial expectations were measured with their responses on an 11-point scale to a question about whether they expected their household economic situation in the near future to be better or worse than they were at the time of the survey. The question was, 'Do you expect the financial situation of your household in the near future to be better or worse than it is now?' Greater values indicated that respondents more strongly believed that their economic situation would improve.

Finally, respondents' ideology was measured according to their self-positioning on the standard 11-point left–right scale representing the ideological spectrum, on which lower values indicated a more left-leaning ideology. Additionally, I used several variables often associated with political attitudes and preferences for tax progressivity and redistribution as supplementary controls. I controlled for household income (adjusted by household size), age, age squared, gender, educational level measured in three groups (less than secondary education, secondary education, and university), political knowledge, union membership and religiosity, as well as implemented country-level fixed effects.

It is worth noting that the analysis is based on cross-sectional data. Ideally, the analysis would have considered citizens' ideology before the crisis, since I was interested in gauging the effect of suffering a financial setback on people who had different political leanings before bearing the impact of the crisis. Such impact could have affected not only their support for progressive taxation but also their ideological stance. For instance, having been affected by the crisis could have shifted citizens towards the left of the spectrum. However, the cross-sectional data precluded considering that dynamic because I could not compare respondents' attitudes towards tax progressivity before and after the crisis. Therefore, I compared the association between worsening economic conditions and support for progressive taxation among citizens with the same ideology after the crisis.

The analysis is based on logistic regression. I transformed the dependent variable into a dichotomous one, indicating either support for progressivity (1) or support for other forms of taxation (0), and performed a robustness check to ensure that re-codification did not affect the results. The robustness check replicated the analysis using an ordered logit model that distinguished support for regressive, proportional or progressive taxation. Additionally, to control for inner-country variations at the

regional level, I replicated the model with clustered standard errors by country. Both robustness checks returned results similar to those of the primary model.[18]

## 3.5 Results

Regarding the distribution of the dependent variable in the nine countries surveyed, support for progressive taxation exceeded 50% in all of them (Table 3.01). However, variations among the countries can be found.[19] These variations may be partially explained by different institutional factors at a country level.[20] However, because I analysed differences at the individual level, not country-to-country differences, I had the models control for institutional-level factors by adding country-level fixed effects.

I used logit analysis to scrutinise support for progressive taxation at the individual level. Results appear in Table 3.02. Model 1 considered the correlates of the impact of the crisis with socio-demographic controls; Model 2 added financial expectations and ideology; Model 3 included the interaction of retrospective relative deprivation and financial expectation; and Model 4 added the interaction of retrospective relative deprivation and ideology.[21]

**Table 3.01.** Percentage of support for different types of taxation by country

| | FRA | GER | GRE | ITA | POL | SPA | SWE | SWI | UK | Average |
|---|---|---|---|---|---|---|---|---|---|---|
| Progressive | 62.4 | 52.1 | 74.2 | 73.3 | 58.9 | 71.8 | 52.0 | 56.4 | 60.9 | 62.5 |
| Flat-rate | 33.2 | 43.1 | 23.1 | 22.2 | 32.3 | 24.4 | 45.7 | 41.8 | 35.7 | 33.2 |
| Regressive | 4.4 | 4.9 | 2.7 | 4.5 | 8.8 | 3.8 | 2.3 | 1.8 | 3.4 | 4.4 |

[18] Results of the robustness checks appear in Table A1.4 in the appendix.

[19] Although the relatively low level of support for progressive taxes in Germany and Sweden may seem surprising, in other surveys posing a similar question (i.e. European Social Survey, 2008) respondents from both countries also exhibited relatively low levels of support for the principle of progressive taxation when asked whether they preferred regressive, proportional or progressive taxation.

[20] Other comparative analyses have revealed the influence of national-level institutional factors such as tax visibility, tax burden and the progressivity of the current tax system (i.e. Domonkos, 2016; Jaime–Castillo & Sáez–Lozano, 2014; Roosma et al., 2016).

[21] Previous research has shown that citizens' evaluation of the economy and their life-satisfaction is affected by their ideology (Butz, Kieslich, and Bless 2017; Napier and Jost 2008; Schlenker, Chambers, and Le 2012), their partisanship and whether they feel close to a party in government (Bartels 2002; Evans and Andersen 2006; Gerber and Huber 2010). I have conducted robustness checks to test whether ideology and feeling close to a party in government affects citizens' retrospective relative deprivation and their financial expectation (see tables A1.5 and A1.6 in the appendix). Results show that ideology is not associated with retrospective relative deprivation or financial expectations once we control for other sociodemographic factors included in the main model. On the other hand, feeling close to a party in government is associated with lower retrospective relative deprivation and higher financial expectations. However, controlling for support for a party in government does not alter the main findings of the models presented in the article.

**Table 3.02.** Logistic regression models used to predict support for progressive taxation

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Retrospective relative deprivation | 0.06*** | 0.04*** | 0.09*** | -0.01 |
| | (0.01) | (0.01) | (0.02) | (0.02) |
| Financial expectation | | -0.02 | 0.03 | -0.02 |
| | | (0.01) | (0.02) | (0.01) |
| Ideology | | -0.15*** | -0.15*** | -0.21*** |
| | | (0.01) | (0.01) | (0.02) |
| Retro. rel.dep * Financial expectation | | | -0.01* | |
| | | | (0.00) | |
| Retro.rel.dep * Ideology | | | | 0.01** |
| | | | | (0.00) |
| Household income | -0.05** | -0.02 | -0.02 | 0.00 |
| | (0.02) | (0.02) | (0.02) | (.) |
| Female | 0.02 | -0.05 | -0.05 | -0.05 |
| | (0.05) | (0.06) | (0.06) | (0.06) |
| Age | 0.02+ | 0.02 | 0.02 | 0.02 |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| Age squared | -0.00 | 0.00 | 0.00 | 0.00 |
| | (0.00) | (0.00) | (0.00) | (0.00) |
| Education (ref. less than secondary) | 0.00 | 0.00 | 0.00 | 0.00 |
| | (.) | (.) | (.) | (.) |
| Secondary | -0.14* | -0.17* | -0.16* | -0.17* |
| | (0.06) | (0.07) | (0.07) | (0.07) |
| University | -0.19** | -0.24** | -0.23** | -0.24*** |
| | (0.07) | (0.07) | (0.07) | (0.07) |
| Political knowledge | 0.10*** | 0.13*** | 0.13*** | 0.13*** |
| | (0.02) | (0.03) | (0.03) | (0.03) |
| Immigrant | -0.00 | -0.11 | -0.13 | -0.12 |
| | (0.16) | (0.19) | (0.19) | (0.19) |
| Benefit recipient | 0.05 | -0.00 | -0.00 | -0.00 |
| | (0.06) | (0.06) | (0.06) | (0.06) |
| Unemployed | 0.09 | 0.07 | 0.07 | 0.08 |
| | (0.08) | (0.09) | (0.09) | (0.09) |
| Union member | -0.01 | -0.14* | -0.14* | -0.14* |
| | (0.06) | (0.06) | (0.06) | (0.06) |
| Religiosity | 0.01 | 0.04*** | 0.04*** | 0.04*** |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Constant | -0.34 | 0.55+ | 0.22 | 0.86** |
| | (0.25) | (0.31) | (0.32) | (0.32) |
| Pseudo $R^2$ | 0.046 | 0.075 | 0.075 | 0.075 |
| N | 14370 | 12299 | 12299 | 12299 |

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

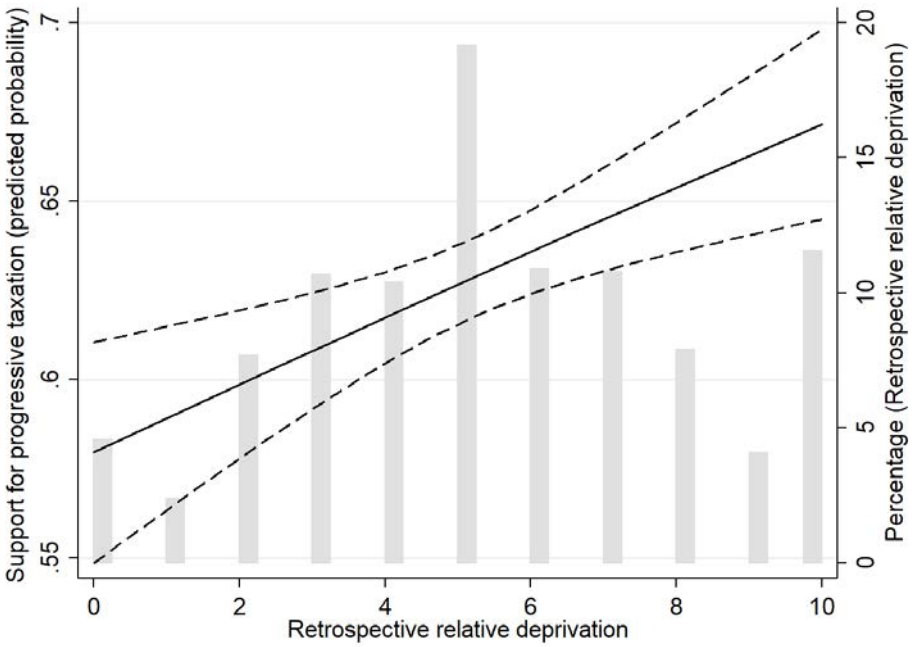



**Figure 3.01.** Support for progressive taxation by retrospective relative deprivation

Retrospective relative deprivation was positively associated with support for progressive taxation. As predicted in Hypothesis 1, citizens who believed that their household's economic situation had worsened in the previous 5 years showed greater support for progressive taxes. The model predicted that a citizen significantly affected by the crisis (i.e. 8 of 10 on the recoded scale for retrospective relative deprivation) has a 65% probability of supporting progressive taxation, compared to 62% for citizens not affected by the crisis (i.e. 5 on the scale) and 60% for ones whose situation improved during the crisis (i.e. 2 on the scale).[22] At the limits, the effects of the crisis changed the predicted probability of supporting progressivity by 10 percentage points, from 57% to 67%. Figure 3.01 illustrates the association.[23]

[22] I obtained predicted values with other variables at their mean (household income, prospective relative deprivation, ideology, age, age squared and political knowledge) or their mode (female, secondary level of education, non-immigrant, not unemployed, not a benefit recipient and not a union member).
[23] I created Figures 3.01, 3.02 and 3.04 using the Stata marhis command (Hernández 2016), which allows plotting histograms at the background to show the distribution of the variable on the x-axis.

At the country level, the association between having been affected by the economic crisis and supporting progressive taxation was weaker.[24] It was positive in seven of the nine countries (France, Germany, Greece, Italy, Poland, Spain and Sweden) but statistically significant at a 95% confidence interval in France and Germany only. By contrast, the association was negative and not statistically significant in Switzerland and the United Kingdom. Aggregated results support previous findings that dynamic personal economic experiences during financial crises influence citizens' attitudes towards some redistributive issues (Barr et al., 2016; Hacker et al., 2013; Margalit, 2013; Owens & Pedula, 2013).

Since attitudes about redistribution are multidimensional, the effect of having experienced financial hardship at the household level during the crisis on support for progressive taxes might have differed from the effect on attitudes about other issues. To test that possibility, I replicated the model to predict support for two other issues related to redistribution: whether government should increase taxes and spending and whether government should take more responsibility in providing for all members of society. Results, which can be seen in Table A1.8 in appendix 1, revealed that having been affected by the crisis exerted a varying impact on attitudes towards different redistributive policies. Having been affected by the crisis was associated with greater support for progressive taxes and greater support for the idea that the government should provide for everyone. It was also associated, however, with less support for increasing social benefits and services at the cost of higher taxation. Such varying effects were not limited to retrospective relative deprivation, as factors such as level of education, employment status and political knowledge had different impacts as well. Altogether, the results reflect the multidimensionality of attitudes towards redistribution. For one, they might indicate that citizens affected by the crisis do support government provision but only if wealthier citizens bear a greater share of the cost.

To elucidate the role of having been affected by the crisis at the household level on attitudes about tax progressivity, it was worth exploring the heterogeneous effects. To that end, I examined the relationship between retrospective relative deprivation and financial expectations. As Figure 3.02 shows, the average marginal effect of retrospective relative deprivation was greater among respondents who had negative financial expectations. In particular, the association was significant and positive among respondents who believed that their economic situation would worsen or

[24] Results of the analysis by country appear in Table A1.7 in the appendix.

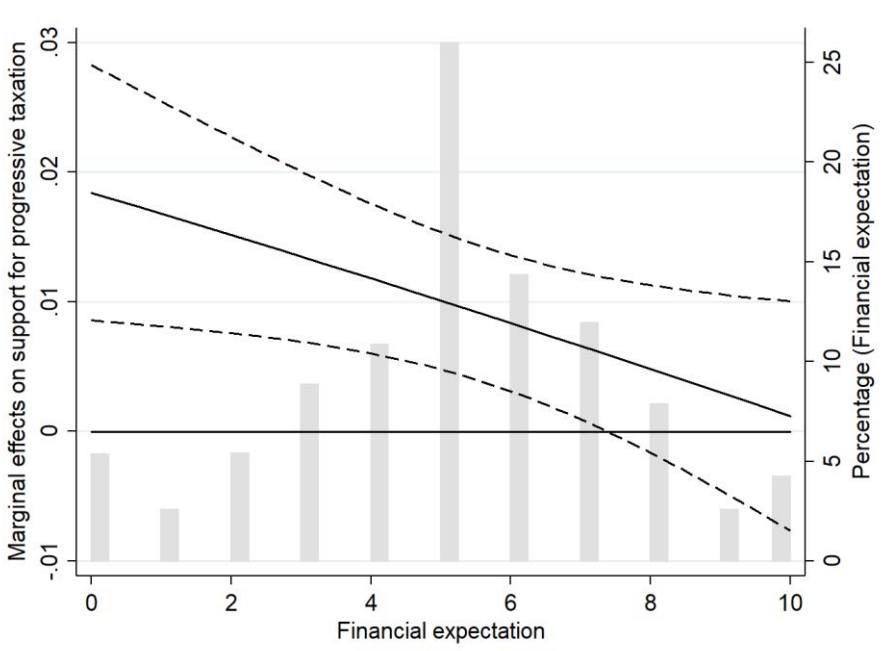



**Figure 3.02.** Average marginal effects of retrospective relative deprivation by financial expectations

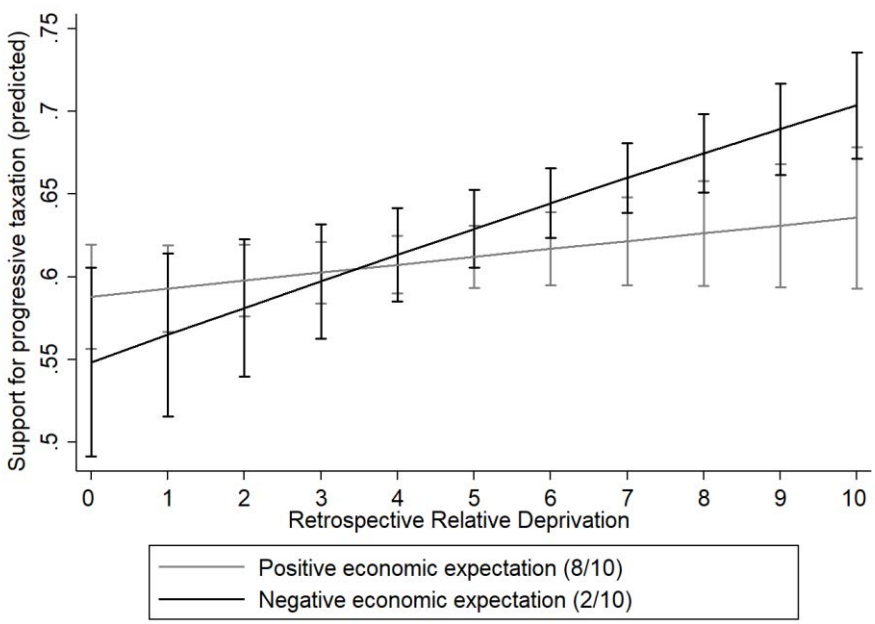



**Figure 3.03.** Predicted probability of support for progressive taxation by retrospective relative deprivation and financial expectations

remain the same in the next year, as well as for ones who believed that their economic situation would slightly improve. However, no effect emerged among respondents who expected the economy to substantially improve in the near future.

Figure 3.03 illustrates the differential effect depending on respondents' financial expectations. Variation in predicted support for progressive taxation was negligible for respondents who expected their situations to improve (i.e. 8 on the scale reflecting financial expectations) but greater for ones who expected that their economic situations would worsen (i.e. 2 on the scale). These findings suggest that the effect did not register among respondents who considered the economic setbacks to be temporary. Similarly, they indicate that the effect might have been more short-lived than described by Margalit (2013). Even if support for progressive taxes increased among respondents who experienced the hardships of the crisis, the effect seems to have disappeared with the mere expectation that personal economic circumstances would improve.

Results also indicated a conditional effect of personal experience with the crisis on attitudes about tax progressivity depending on citizens' ideological stance. As Figures 3.04 illustrates, although no association emerged between retrospective relative deprivation and support for progressive taxation among the 28% of respondents who positioned themselves on the left (i.e. 0–3 on the left–right scale), associations did emerge for ones with stances towards the centre–left, centre and right. Figure 3.05 illustrates predicted support for progressive taxes among respondents who placed themselves on the left or right (i.e., 2 and 8 on the scale, respectively). Those results suggest that variation depending on the impact of the crisis at the household level was nearly non-existent among left-leaning respondents, who tended to support progressive taxation regardless of whether they suffered the consequences of the crisis or not. By contrast, variation was significant for right-leaning respondents; ones who bore the impact of the crisis were more likely to support progressive taxes than ones who did not.

Retrospective relative deprivation's lack of effect on citizens on the left and its only slight effect on citizens at the centre of the ideological spectrum partly explains the relatively low level of the overall association of retrospective relative deprivation and support for progressive taxes. As Margalit (2013) has suggested, the lower effect on left-leaning respondents could stem from their already elevated level of support for progressive taxes. Alternatively, it could derive from the fact that left-leaning citizens tend to believe that personal economic fortunes are due to factors outside individual control, a perspective which they are less likely to rethink amid external

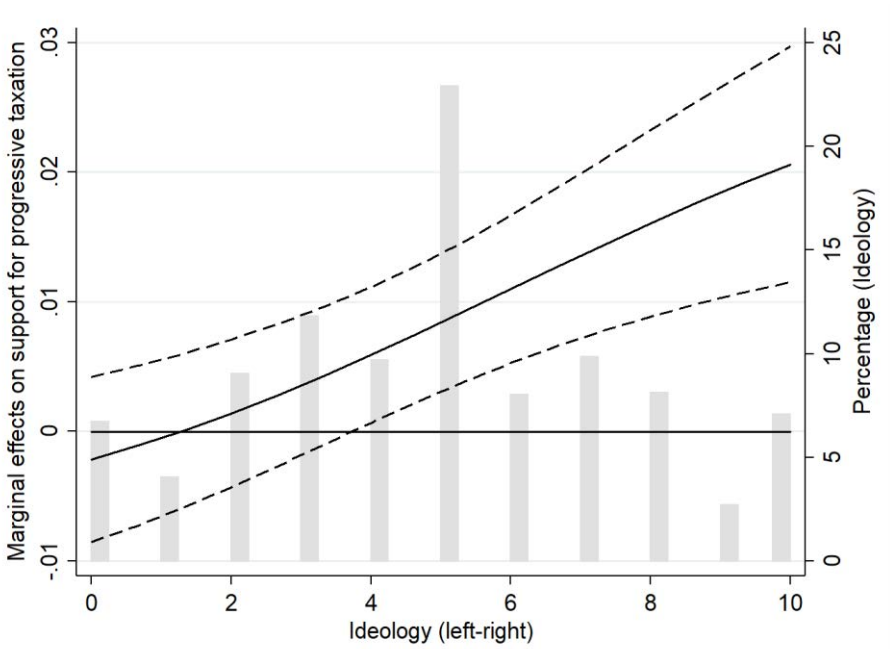



**Figure 3.04.** Average marginal effects of retrospective relative deprivation by ideology

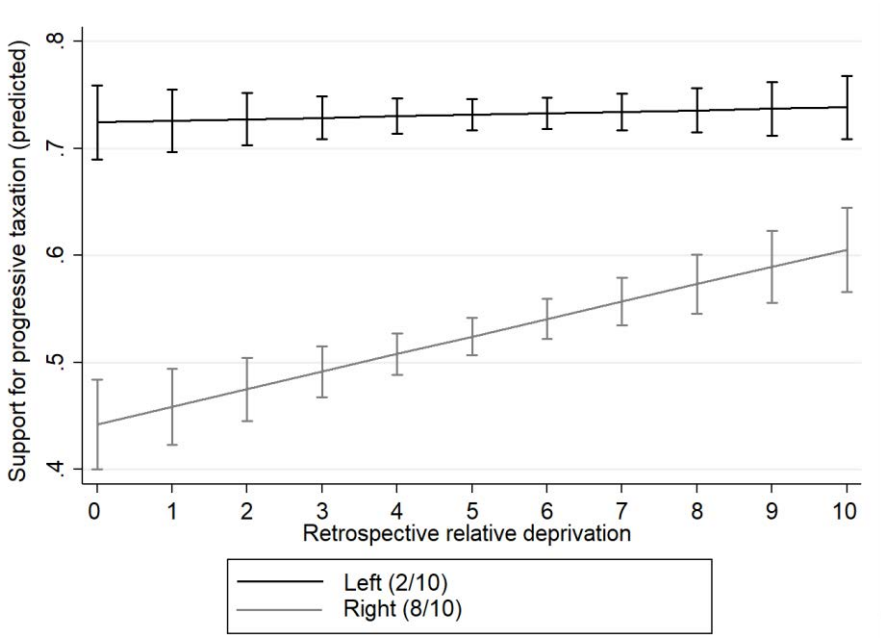



**Figure 3.05.** Predicted probability of support for progressive taxation by retrospective relative deprivation and ideology

economic shocks that can otherwise prompt shifts in attitudes about tax progressivity.

## 3.6 Conclusion

This chapter has addressed the impact of experiencing the consequences of the Great Recession at the household level on support for progressive taxation using an original dataset from a 2015 survey of citizens in nine European countries. Among the major findings, having been affected by the crisis correlated with a greater likelihood of supporting progressive taxation, albeit not uniformly across the sampled population. Such likelihood varied according to citizens' financial expectations and their ideological predispositions. For some groups, no correlation surfaced between personal experiences with the crisis and attitudes about tax progressivity; in fact, having personally suffered worsened economic conditions during the crisis was associated with greater support for progressive taxation only for citizens whose economic prospects had become less optimistic. By contrast, citizens who considered that the economic shock they had experienced was temporary and would soon dissipate did not show greater support for progressive taxes. At the same time, the association also varied according to personal ideological stance. Having suffered during the crisis correlated with a greater probability of support for progressive taxation among citizens on the right of the ideological spectrum and, to a lesser extent, ones at the centre. However, left-leaning citizens showed no variation in their support for progressive taxation in light of their economic experiences during the crisis.

Results from this chapter contribute to literature on preferences for tax progressivity by showing how citizens' preferences for progressive taxes can be influenced by changes in personal economic circumstances. Further research should investigate how these changes affect other aspects of tax progressivity. Incorporating survey questions that allow for capturing citizens' preferred tax rate for people in different income brackets, as Fernández-Albertos and Kuo (2015b) and Ballard-Rosa et al. (2017) have done, would allow us to see how changes in economic circumstances are associated with support for different levels of progressivity or for specific types of progressivity (i.e. high taxes on the rich and moderate on the rest, or very low taxes on the poor and moderate on the middle- and high-income earners).

Additionally, results in this chapter add to literature addressing the effects of personal experiences with financial crises on attitudes towards redistribution by revealing that citizens who thought that their economic circumstances had worsened

during the crisis tended to show greater support for one specific redistributive policy: progressive taxes. The findings also show, however, that the relationship is limited. Left-leaning citizens and citizens with positive economic expectations exhibited no variation in support for progressive taxation in light of their personal experiences during the financial crisis, while conservative citizens and those not optimistic about their future economic situation did. Further research could look in more detail into these heterogeneous effects. For instance, it would be interesting to see why conservative citizens who report having suffered during the crisis seem to have reacted more than their progressive counterparts. Right-leaning citizens tend to have higher system justification motivation, which makes them rationalise negative circumstances and be less reactive to negative economic circumstances and increasing levels inequality (Butz, Kieslich, and Bless 2017; Jost et al. 2017; Jost and Banaji 1994; Napier and Jost 2008; Trump 2017). Experiencing the economic hardship at a household level may hinder the activation of system justification motivation, allowing conservative citizens to update their beliefs and their attitudes towards some redistributive issues.

This analysis has been based on cross-sectional data. Future research could further examine the relationship between personal economic experiences and support for progressivity using other types of data. There are some available panel studies analysing support for certain spending side policies or support for redistribution as a unidimensional issue. However, there is a lack of panel studies addressing support for tax progressivity. This type of study could, on one hand, make stronger causal claims and, on the other, allow for the analysis of the long-term effects of varying personal and household economic circumstances on attitudes towards progressivity.

The analysis presented in this chapter does not allow us to identify the mechanisms that lead from a perception of worsening economic circumstances to an increased support for redistribution via taxes. Relying on previous literature I have suggested that changes in material self-interest, insurance motives, and changes in the perception of the role of factors beyond and under the individuals' control may have caused the change in support for tax progressivity. The following chapters will analyse the role of these different considerations in times of crisis, with an especial interest on the role of fairness considerations.

# Chapter 4

# Preferences for redistribution and fairness considerations in the context of economic shocks: a laboratory experiment

## 4.1 Introduction

In this chapter I analyse the role of fairness considerations on people's preferences for redistribution in a context of economic crisis. As previously reviewed in this thesis, research has shown that changes in these preferences during recessions may be channelled through changes in different motives, including self-interest (Barr, Miller, and Ubeda 2016; Margalit 2013; Owens and Pedulla 2014), insurance motives (Hacker, Rehm, and Schlesinger 2013) or social considerations (Giuliano and Spilimbergo 2013; Margalit 2013).

In this and the following chapter, I focus on understanding how, in a context of economic shock, fairness considerations influence people's support for redistribution towards the losers in the crisis. I claim that people's responses to the crisis can be affected by which fairness considerations become activated. When the causes leading people to suffer the consequences of the crisis are factors beyond individual control (i.e. misfortune), the level of support for redistribution is higher than when they are factors under individual control (i.e. lack of effort). In this chapter I use a lab experiment to analyse how fairness considerations interact with

self-interest and insurance motives. In the following chapter I will use a survey experiment, which will allow me to test the effect of fairness related frames in a more contextually rich context.

In this chapter I conduct an original, economically incentivised laboratory experiment. Lab experiments are highly stylised situations. They facilitate the measurement of revealed rather than expressed preferences. In this case, a lab experiment enables me to artificially generate different sources of income loss and to see how participants decide to redistribute real money among themselves. Similarly, it makes it possible to identify the effect of one specific motive (i.e. fairness considerations) and to measure how this interacts with other motives (i.e. self-interest and insurance motives). To do so, I firstly analyse whether fairness considerations influence support for redistribution in a context in which individuals have no stake in the decision. Then, I analyse their preferences in a situation in which they may be affected by their decision. I investigate whether self-interest and insurance motives cancel out or moderate the effect of fairness considerations.

The chapter builds on previous experimental literature on fairness considerations. Unlike most experimental research on the issue, which deals with the impact of how people obtained their income (i.e. Cappelen, Sørensen, & Tungodden, 2010; Durante et al., 2014; Krawczyk, 2010), I focus on the impact of negative income shocks on preferences. This is a significant difference, since it is well known that individuals evaluate gains and losses differently (Kahneman & Tversky, 1979). Additionally, it enables me to analyse how economic crises can affect people's preferences for redistribution through fairness considerations. In the lab, I generate a situation that resembles an economic crisis. I exogenously create a situation of income loss for some participants. Furthermore, I replicate the way that the impact of the crisis has been unevenly distributed. Thus, I focus on the effects of the crisis as a negative income shock affecting a segment of the population for different specific reasons. I test whether people demand different levels of redistribution depending on what caused the income shock.

My interest lies in estimating the effects of fairness considerations linked to different sources of crisis exposure. I go beyond the traditional differentiation of luck and effort as sources of inequality, which often refer to different elements in each category (Alesina and Giuliano 2011). I examine a broader set of sources that fall in two groups: factors in individual control and others beyond their control. In the first group I analyse effort and past behaviour, and in the second one, luck and socio-economic background.

In the laboratory, the experimental subjects received a fixed initial endowment of funds and were informed that a percentage of them would lose it due to an exogenous negative income shock. The distribution of the shock varied according to different criteria: in the first criterion, it was randomly drawn; in the second one, it was inversely related to the subject's family's socioeconomic status (previously elicited in a pre-experiment questionnaire). In the third criterion, exposure was inversely related to the amount of effort put into a previous in-lab effort-based task, and finally, in the fourth case it was negatively linked to previous contributions to a common good game. In each case, I asked the subjects to set a tax rate to compensate the losers. Following Durante, Putterman and van der Weele (2014) and Konow (2000), I asked participants to set the tax rates under three different conditions: as an unaffected decision maker, as an affected subject but with no information on their own position, and finally, with fully disclosed information on their position on the income scale. In this way, I introduced the combined effects of fairness considerations with insurance motives and with self-interest into the analysis.

The results show that fairness considerations related to what had led to people suffering the income shock led to variations in the support for redistribution. When participants took the decision as an unaffected third party, they tended to choose higher tax rates when the income shock was caused by factors beyond individual control (luck and family background) than when it was caused by factors under individual control (lack of effort and greedy behaviour). Self-interest also mattered when participants took the decision after being informed of whether they had lost their initial income. Losers systematically demanded higher redistribution than keepers. Self-interest, however, did not eliminate the effect of fairness considerations, with both motives interacting. Losers and keepers alike chose higher taxes for losses caused by bad luck and family background than for losses caused by lack of effort. However, when losses were caused by greedy behaviour in the past, self-interest motives cancelled out the impact of fairness considerations among losers, who chose higher taxes to maximise their revenue. On the other hand, under risk conditions, results were mixed. For losses caused by family background and lack of effort, tax choices were consistent with the predictions of fairness considerations but not with those of insurance motives. For losses caused by greed, an interaction similar to the one found with full information was identified. Finally, for losses caused by bad luck, there was neither a clear effect of fairness considerations nor of insurance motives, most probably because participants could not make informed guesses about whether they would be losers or keepers.

The chapter is structured as follows. Firstly, I briefly review the literature on preferences for redistribution, with particular focus on fairness considerations and on how economic recessions can influence redistributive preferences. Secondly, I describe how different fairness considerations can influence people's preferences for redistribution in a context of income shocks, and analyse how they can interact with other motives. Thirdly, I describe the experiment design and the data. Then I analyse the results. I firstly analyse the effects of fairness considerations alone. Then I analyse how fairness considerations interact with self-interest and insurance motives. Finally, I discuss the findings.

## 4.2 Theoretical background

### 4.2.1 Preferences for redistribution

The literature on preferences for redistribution focuses on two main explanations: self-interest and social considerations[25]. Theories based on self-interest assume a) the capacity of individuals to recognise their own best interests based on material grounds and b) that they act according to this self-interest regardless of non-material interests, social preferences and other moral reasons. According to these theories, those at the bottom of the income distribution ladder 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 have attitudes that vary depending on the pre-distribution: they tend to support those redistributive measures that maximise their absolute or relative wealth after redistribution.

Extensive empirical evidence challenges these theories and shows that a large number of people support redistribution that would leave them worse off while others oppose redistribution even if it benefits them. Several theories have arisen to explain this puzzle, without fully challenging the logic of self-interest. For instance, some authors have taken into account people's expected social mobility (Benabou and Ok 2001) or misinformation (Bartels 2008; Kuziemko et al. 2015; Slemrod 2006).

Other authors have highlighted the role of insurance motives. According to these theories, people favour redistribution despite the fact of not currently benefitting

[25] In this chapter I briefly review the literature on redistributive preferences. For a more detailed analysis of the literature see Chapter 2.

from it, as a measure to minimise the economic consequences of a potential future worsening of their personal economic situation (Iversen and Soskice 2001; Moene and Wallerstein 2001; Rehm 2009). Recent research argues that in the context of the economic recession, a higher number of people feel economically insecure. This increased insecurity triggers insurance motives and leads to an increase in the level of support for redistribution due to insurance motives (Hacker, Rehm, and Schlesinger 2013).

A different body of literature has focused on social considerations. It argues that people's preferences include some level of altruism and that people take the wellbeing of others into consideration when evaluating their preferred level of redistribution. The Fehr and Schmidt (1999) inequity aversion model is a prominent example of such theories. It claims that people judge inequality by taking their position and the position of others into account. When they experience advantageous inequality, they feel altruism towards those below a certain benchmark and support redistribution to the people at the bottom. When they experience disadvantageous inequality, they feel envy and support redistribution from the top down.

Other authors have shown that this generosity with others is not unconditional (Fong 2001; Fong, Bowles, and Gintis 2006). For instance, Bowles and Gintis (2000) propose a model in which people a) are willing to redistribute only towards those who cooperate to some extent towards the common good and b) are willing to assume the economic costs of punishing free-riders. Thus, while people may harbour some level of dislike for general inequality, they find some inequalities more acceptable than others. For instance, research has shown that when examining factors that influence fairness considerations related to the causes of inequality, in-group favouritism and ethnic prejudice affect people's tolerance of inequality and their support for redistribution (Alesina and Giuliano 2011).

### 4.2.2 Fairness considerations

Some influential studies have shown that people's attitudes towards welfare and redistribution are influenced by their perceptions of people's responsibilities for their economic situations. This body of literature shows that people have different levels of tolerance towards inequality depending on whether it is caused by factors that people deem fair or unfair (Alesina and La Ferrara 2005; Alesina and Glaeser 2004; Chavanne 2018; Durante, Putterman, and van der Weele 2014; Fong, Bowles, and Gintis 2006; Krawczyk 2010; van Oorschot 2006; Slothuus 2007).

Of course, the obvious question that arises is what exactly fair and unfair inequality is. As we have seen in the theoretical chapter, the existing literature uses a variety of definitions. In cross-sectional literature, most studies refer to luck and effort as the factors that give rise to unfair and fair inequality respectively. In some cases, it has characterised those inequalities resulting from lack of effort and of hard work as fair and all the others as unfair. In other studies, luck and effort are understood more broadly as a variety of factors, either within the control of the individual or beyond their control. For instance, in some cases luck not only includes random events, but also social background, family connections and other social factors. Similarly, effort sometimes encompasses not only the presence or absence of hard work, but also ability or past choices made by the individuals. Therefore, it is often difficult to grasp which are the factors leading to variations in fairness considerations.

In experimental research, the factors that give rise to fair or unfair inequality tend to be clearer. Several studies relying on laboratory experiments have focussed on the role of self- versus exogenous- determination of economic factors. For instance, Krazwick (2010) has shown that participants support higher redistribution when earnings are determined by luck (i.e. a lottery) than when they are determined by skill (i.e. an ability test). Similarly, Cappelen, Sørensen & Tungodden (2010) have demonstrated that participants supported redistribution in dictator games more when earnings were more the outcome of personal traits (effort and ability) than of external factors (luck). Durante, Putterman and van der Weele (2014) have shown that individuals tend to support higher redistribution when inequality is caused by pure luck or by social background than when they arise from effort and skill.

In this thesis I distinguish between sources of people's economic fortunes that are based on factors outside or within their control. What people perceive to be within and beyond individual control is also a contested issue[26]. I define the cut-off between self-determined or exogenously-determined factors by using the idea of choice. I assume that individuals perceive inequalities that arise from individual decisions as fairer than those arising from circumstances. I include two factors that are beyond individual control: luck and social origin. I also include two factors that are within individual control: effort and people's past choices. Following the literature on

[26] See Konow (1996) and Cappelen (2010) for a discussion of positive theories on self- and exogenous-determined factors.

fairness considerations, I expect that participants will support higher redistribution for inequalities caused by factors beyond individual control[27].

### 4.2.3 Crisis and preferences for redistribution

Experiencing an economic recession can influence people's preferences for redistribution through many mechanisms. Some previous works show that the crisis that began in 2008 affected people's preference for redistribution. Empirical analyses show that those who suffered an economic shock at household level during the crisis show increased support for redistribution (Barr et al., 2016; Hacker et al., 2013; Margalit, 2013; Naumann, Buss, & Bähr, 2016; Owens & Pedulla, 2014; and also see chapter 3). This change in preferences might be caused by immediate self-interest, by insurance motives or by social considerations. For instance, people that become unemployed tend to increase their support for redistribution since they are recipients of assistance. Similarly, being unemployed may increase the visibility of risk and of the role of luck in shaping people's fortunes, thus activating insurance motives and fairness considerations respectively. Margalit's (2013) analysis shows that a great deal of the increase in support for redistribution among the unemployed vanished after being re-employed. This seems to indicate that the change in attitudes was motivated by self-interest. However, some of those people who had lost their jobs maintained an increased support for redistribution after being re-employed. Other researchers have also found that the effects of personal economic shocks lasted after the personal economic circumstances recovered (Naumann, Buss, and Bähr 2016). This suggests that the change in attitudes was based on insurance motives or social considerations.

Other researchers provide evidence of the long-term effects of recessions on political beliefs, attitudes and behaviour. These effects are not limited to those who suffered periods of unemployment during the crisis, and can be attributed to insurance motives and social considerations. Giuliano and Spilimbergo (2013) show that people exposed to an economic recession when they were young tend to believe that luck plays a higher role than work in determining one's economic success; those people also show higher levels of support for redistribution, and have a higher tendency to vote for left-wing parties. This analysis is particularly relevant for two reasons. Firstly, it shows that crises affect both preferences for redistribution and people's belief in the role of luck in shaping people's fortunes. Unfortunately, the

[27] More details on the definition of fairness considerations can be found in the theoretical chapter (Chapter 2).

analysis cannot disentangle whether both effects are simultaneous and independent or if there is a causal chain of links (for instance, being exposed to the crisis affects the belief in the role of luck, which in turn affects preferences for redistribution). Secondly, the analysis shows that the effects of going through a recession period are not limited to those who were directly hit by the crisis. The authors show that the effects are general, with only slightly stronger effects noted in those people who suffered more during the recession period. Therefore, as the authors suggest, the increased preferences for redistribution may be caused by insurance motives and fairness considerations.

Thus, according to the literature, a context of crisis might change people's support for redistribution. This change could be based on self-centred or social considerations. For instance, a person could increase her support for redistribution out of immediate self-interest during the period in which she is suffering an economic downturn and is benefitting from redistribution. Similarly, another could support redistribution for insurance motives due to an increased perception of current and future risk, regardless of whether she is benefitting from current redistribution. Yet another person could increase his support for redistribution due to an increased perception of the level of (undesired) overall inequality, that activates altruistic or self-interested considerations, or because he believes that the crisis is hurting people due to factors beyond their responsibility. However, the crisis may also reduce people's support for redistribution. On the one hand, among those who consider that they are not benefitting from it and that are observing increased pressure on the welfare system. On the other, it can generate opposition among those who perceive that those affected by the crisis and needing welfare assistance were affected by factors that they can be held responsible for.

## 4.3 Fairness considerations and redistributive preferences in times of crises

In this and the following chapter, I focus on the role of fairness considerations on preferences for redistribution in a context of economic crises. Experimental literature analysing revealed preferences in economically incentivised experiments has focused on situations in which different factors have determined how participants obtained their income (Cappelen, Sørensen, and Tungodden 2010; Durante, Putterman, and van der Weele 2014; Konow 2000; Krawczyk 2010). However, to my knowledge, no research to date has focused on how fairness considerations specifically apply to income losses. That is, how they affect support for redistribution when different factors determine which participants lose current

revenue. This is a relevant issue, since we know that individuals react differently to gains and losses (Kahneman, Knetsch, and Thaler 1990; Kahneman and Tversky 1979). Similarly, cross-sectional and survey-based experimental research has often analysed fairness considerations in relation to the causes of wealth or poverty. Nevertheless, to my knowledge, no one has yet analysed how fairness considerations apply in the specific context of an economic shock.

I analyse the effect of different factors within and beyond individual control on people's preferences. This is an important contribution because the experimental literature has tended to distinguish between only two factors, most often between luck on the one hand and effort or ability on the other. However, I follow other authors in incorporating different factors in each category –within and beyond the individual control (Cappelen, Sørensen, and Tungodden 2010; Durante, Putterman, and van der Weele 2014). This enables the researcher to test whether the variation holds when we move from the traditional distinction between luck and effort to other factors linked to individual responsibility. Similarly, it allows us to examine whether there are differences between factors in each category. I use (bad) luck and social background as factors beyond individual control. Conversely, I use (lack of) effort and past greedy behaviour as factors under individual control.

The sources of income loss analysed (luck, social background, effort and past greedy behaviour) are linked to sources of exposure to the effects of the crisis. They relate to different narratives used by relevant actors during the crisis to describe who was most affected by the crisis. On one hand, it was said that the crisis most affected those who had been lazy and had not prepared themselves for a competitive labour market. Similarly, it was argued that the crisis hit people who were greedy, speculated and took excessive risks. In these cases, responsibility was attributed to those who received the impact of the crisis. They made some choices that led to their unfavourable situation. On the other hand, it was argued that the consequences of the crisis were randomly distributed and hit some people who had suffered bad luck, for instance in their employment situations. Similarly, it was also claimed that the crisis hit those who were already badly off or in a vulnerable position before the crisis. In these latter cases, being directly hit by the crisis was determined by one's circumstances and beyond individual control. In the lab, I artificially generate these sources of income loss. In the survey experiment, I use contextually rich vignettes to frame participants about what led people to suffer the consequences of the crisis.

Following the literature on fairness considerations, I expect that income losses caused by factors beyond individual control will lead to higher support for redistribution towards losers than losses caused by factors under individual control.

I will also explore to what extent direct self-interest and insurance motives moderate the impact of these considerations. Experiments assessing the impact of different sources of inequality on revealed preferences for redistribution have tended to analyse a participant's decision as a third party unaffected by their decisions or as an involved agent with varying levels of information of their position in the income distribution. There is a paucity of studies that compare preferences under different conditions. Nevertheless, Durante, Putterman and van der Weele (2014) analysed participants' preferences as agents who were unaffected by their tax choices, as affected agents under risk and as affected agents with full information. Their analysis, however, also includes other factors, such as the impact of different tax costs. The analysis of the interaction of fairness considerations, insurance motives and self-interest is not central to their argument.

In my analysis, I will focus on the impact of fairness considerations and I will assess how they interact with insurance motives and self-interest. My expectation is that they will decrease, but not suppress differences across different treatment conditions. People will show higher support for redistribution if they are affected or think that they will be among those affected by the income loss. However, they will still choose higher taxes for those cases in which being affected by the crisis is a consequence of factors beyond individual control. I will test this by comparing the elicited preferences when the individuals are unaffected decision-makers, affected subjects with risk regarding their position (a condition conceived to activate insurance), or are affected with full information (that aims at activating outright self-interest), as explained below.

## 4.4 Research Design

The research strategy used is based on an economically incentivised laboratory experiment[28]. I estimate the effects of various sources of income loss exposure and

[28] The experiment complied with the ethical requirements of the Universitat Autònoma de Barcelona's ethical committee for experiment with human participants regarding remuneration, information and safety of participants. It also complied with current data management and protection standards. The experiment design and procedures were supervised and approved by the ethical committee (ref: 2869:2015)

their interaction with self-interest and insurance motives. In this section, I focus on the design of the lab experiment.

The trial consisted of an economically incentivised experiment. Participants received an initial endowment of 8 euros and they were told that about a third of them would lose it, while the rest would keep it. They were offered the possibility of compensating the losers by establishing a tax on the keepers. The experiment follows a similar structure to Durante, Putterman and van der Weele's (2014) study. It is a 4x3 structure, with four possible sources of income loss and three information conditions. Participants were asked to pick 12 tax rates, one for each situation. The experiment screens can be found in the Appendix 2C.

The main treatment introduced fairness considerations by varying the source of income loss. The sources of income loss are related to why the subjects were suffering the effects of the crisis. In the lab, however, they were artificially created. Participants were informed that one of four different mechanisms would decide whether they kept or lost their initial endowments: luck (based on a computer-generated lottery), social background (based on participants' parents' professions and education levels), effort (based on participants' performance on a real in-lab effort-based task), and greed (based on their performance on a common good game)[29]. 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 pay-offs. Hence, participants were aware that their decision could affect everyone's final pay-off. Before making their choices, participants were shown examples of the redistributive impact of different tax rates.

Participants had to set the four rates, one for each income loss source, on a single screen. It was made clear to them that there were four sources of income loss and that they had to choose a tax rate for each one. Participants 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 to control for potential order effects.

[29] 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 occupation (social background), their performance on a previously done effort task (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.

In addition, a different treatment introduced the interaction of fairness considerations with self-interest and insurance motives. Participants were asked to make the aforementioned source-related tax rate choices another three times. In one case, they did so as an unaffected third party, hence 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, as they knew they could be potentially affected by the income loss, but they did not know whether they had lost or kept their endowment. However, they could guess if they were more likely to be among the losers or the keepers in all sources of income loss except for luck. Therefore, they made this choice in a situation of risk, but not under a veil of ignorance. Finally, in a third treatment, they made the decision as affected agents with full information. In this case, participants knew that they could be affected by their decision and whether they were losers or keepers for each income source. The three conditions (unaffected, risk and full information) appeared on consecutive screens. I randomized the order of these screens, with the obvious restriction that the full information condition could only appear after the risk condition. Figure 4.01 displays the screen shown to participants as unaffected decision makers. The under risk and with full information screens can be seen in Appendix 2C.

The structure of the experiment can be seen in Figure 4.01. The experiment started with a brief questionnaire containing some basic demographic questions. It included some questions about the participants' parents' education and professions. The participants' answers were used to rank them according to their family's socio-economic status, which was to be used as one of the mechanisms to determine who was going to lose the initial income. When answering the questionnaire, participants did not know that this information would be used for this purpose.

Afterwards, participants were asked to carry out a task requiring effort. They were informed that their performance on the task could influence their final payment. No further details were given. Participants had to complete a "slider task", a real-effort task designed by Gill and Prowse (2011) in which participants complete a repetitive task that requires concentration. A test screen was offered to ensure that all participants understood the task and had the opportunity to practise beforehand. Participants were ranked according to the number of sliders positioned correctly. The ranking was used to determine which participants would lose their initial income when the loss was based on effort.

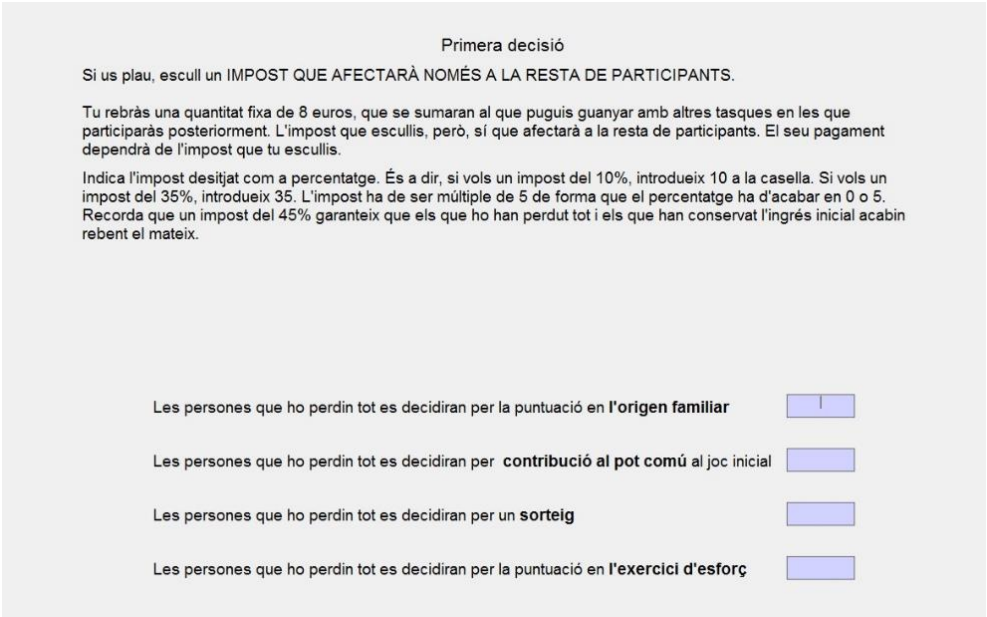



**Figure 4.01.** Decisions screen. Unaffected decision makers

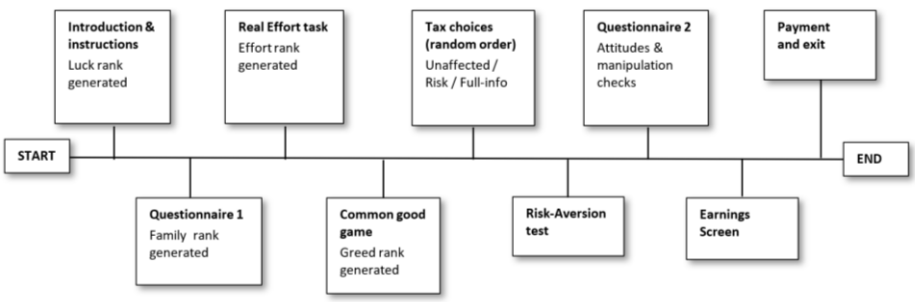



**Figure 4.02.** Experiment structure

Participants were then asked to play a public good game. Each participant was assigned €2.50. They were told that they could contribute to a common pool where the total contribution would be increased by 30% by the experimenters and redistributed equally among all participants. They were offered several examples of various contributions from different participants and their final payoffs. Participants were not told beforehand that their contribution to this game could influence their payoff for the following games. Participants' contributions to the public good were 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 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, at 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 case. Responses were collected on a 5 point Likert 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 they were going to be among the keepers or the losers allows us to assess the impact of the expected position on the preferences expressed.

After the tax choices were made, participants were asked to respond to a questionnaire which included some questions about political attitudes. Then they were asked to play an economically incentivised risk aversion game. Afterwards, participants were informed of their final payment. Then 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 they would be 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 (Fischbacher 2007). There were 243 participants in 11 experimental groups. The experiment was carried out in Catalan. The participants were recruited through the BES Lab experimental subjects' pool. The recruitment process informed the potential participants that the experiment would be in Catalan and that they had to be able to understand written Catalan to participate. The sample was student based and is therefore not a population-representative sample. However, using a student-based sample may be a hard-test for our hypotheses. Belot, Duch, and Miller (2015) compared the behaviour of student and non-student samples in a variety of classic money-incentivised lab games. Their findings show that students have a tendency to behave more like

homo-economicus agents, that is, prioritizing self-interest and the maximisation of their personal pay-off. Thus, if I find that those in our student-based sample reduce their own pay-offs due to fairness considerations, I can hypothesise that the effect would actually be larger in population-representative samples.

## 4.5 Results

In this section I present the results of the study. Firstly, I analyse the tax choices that participants made when they were not affected. In this case only fairness considerations mattered. Secondly, I analyse the tax choices they made when they were potentially affected by their choices and had full information about whether they were losers or winners in each income loss source. In this case, self-interest and fairness considerations might influence their decisions. Finally, I analyse participants' tax choices when they decided under risk. In this condition, the decision might be influenced by fairness considerations and insurance motives. Obviously, participants always took the decision under risk before they took the decision with full information. I present the results of the full information case before the other because it facilitates interpretation.

### 4.5.1. Fairness considerations as unaffected decision makers

In this condition, respondents had no stake in the decision. They knew that their own payoff would not be affected at by their decision but that the tax they chose could affect the final payoff of all other participants. Therefore, respondents' decisions were neither influenced by self-interest nor by self-insurance motives. Their tax choices were based on social considerations such as the level of equality they desired and by fairness considerations related to the source of the income losses. The experiment allowed me to measure the impact of fairness considerations. It asked participants to make different tax choices depending on the source of existing inequality among participants.

Following what I had expected, participants chose varying levels of taxation depending on what led people to lose their initial income. When participants were unaffected by their decision, only 78 participants (32%) chose the same tax rate for all income sources. The rest of the participants (68%) chose a different tax rate for at least one of the income loss conditions.

On average, participants chose higher tax rates for income losses caused by factors beyond individual control. Figure 4.03 shows the average tax rate for causes within

and beyond the individual control. Participants tended to choose higher taxation for both income losses caused by factors beyond people's control (bad luck and family background) than for causes within individual control (lack of effort and greedy behaviour). The average tax rate for exogenously produced income losses was 33%, i.e. almost five percentage points higher than the average tax rate for income losses caused by self-determined factors (28%).

Analysing the four sources separately, it can be seen that the difference lies in the expected direction in all cases (see Figure 4.04). Bad luck and family background generated a very similar tax rate (32% and 33% respectively). Both losses caused by factors under individual control led to lower tax rates. However, a difference between them can be found. Past greedy behaviour led to a 29% tax rate, while participants chose an even lower tax rate for losses caused by lack of effort (27%).

In order to test whether the differences are statistically distinguishable from zero, I conducted within-individual analyses. Firstly, I conducted a series of Wilcoxon matched-pairs signed-ranks test. The results revealed that, when unaffected, participants distinguished between internal and external sources of income loss. When comparing tax choices for each pair of income loss sources, about 45% of participants chose the same tax rates for the two sources. However, when comparing losses caused by factors within and beyond individual control, a significant number of participants (about 40%) tended to choose higher taxes when the income loss was caused by factors within individual control (lack of effort or greedy behaviour). Only about 15% of participants chose higher taxes for unfairly caused income losses (family background or bad luck). These variations are statistically significant under a 99% confidence interval in all cases. In contrast, there are no significant differences between the choices when comparing different sources of each category (e.g., lack of effort vs. greed, or family background vs. bad luck). Tables containing the Wilcoxon matched-pairs signed-ranks test can be found in Appendix 2A (Table A2A.1).

In addition, I conducted a regression analysis with fixed effects at the individual level. Fixed effects control for the correlation between taxes chosen by the same individual. In this way, I control for aspects such as people's aversion to inequality, which do not vary depending on the *source* of inequality. Results confirm that participants chose different tax rates depending on the source of the income loss. The variation was in the expected direction: individuals chose lower taxes when the income loss was caused by lack of effort or by greedy behaviour than when it was caused by bad luck or by family background. Table 4.01 shows the results of the

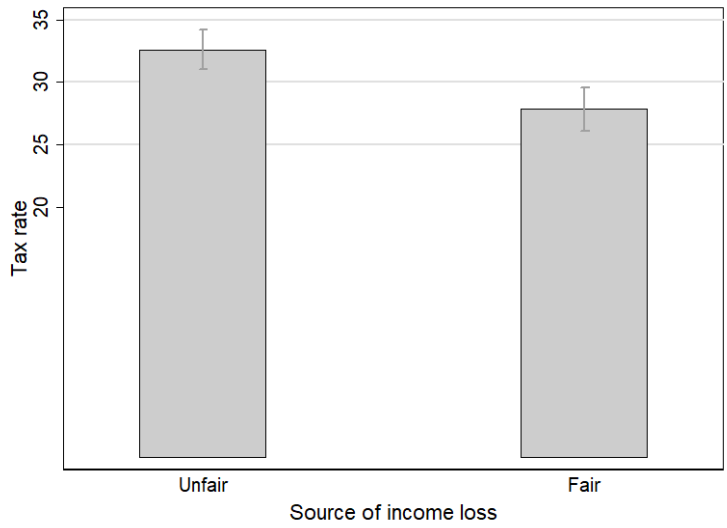



**Figure 4.03.** Average tax rate by factors under or beyond individual control (unaffected decision makers)

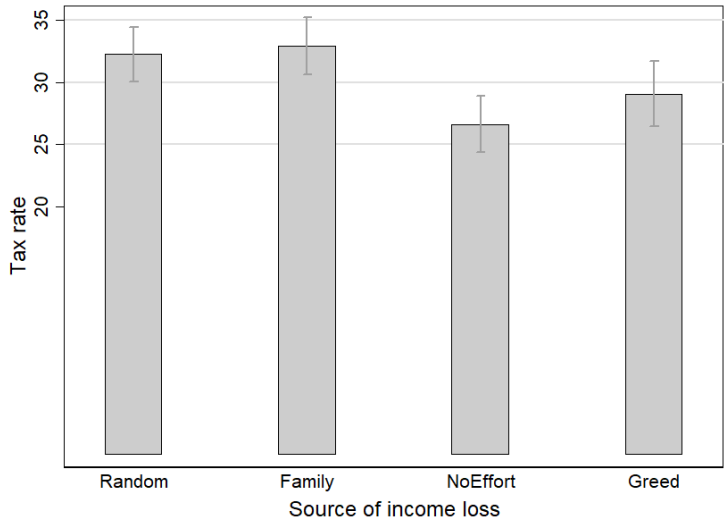



**Figure 4.04.** Average tax rate by source of income loss (unaffected decision makers)

analysis. It includes the same model replicated four times with varying reference categories. It confirms that participants supported higher taxes for income losses arising from factors beyond individual control. Taxes for losses caused by luck or family background are significantly higher than taxes caused by greed or lack of effort.

**Table 4.01.** Tax rate by source of income loss (unaffected decision maker)

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Bad Luck | Ref. | -0.68 | 5.64*** | 3.17** |
| | - | (1.22) | (1.22) | (1.22) |
| Family | 0.68 | Ref. | 6.32*** | 3.85** |
| | (1.22) | - | (1.22) | (1.22) |
| Lack of Effort | -5.64*** | -6.32*** | Ref. | -2.47* |
| | (1.22) | (1.22) | - | (1.22) |
| Greed | -3.17** | -3.85** | 2.47* | Ref. |
| | (1.22) | (1.22) | (1.22) | - |
| Constant | 32.26*** | 32.94*** | 26.63*** | 29.09*** |
| | (0.87) | (0.87) | (0.87) | (0.87) |
| $R^2$ | 0.045 | 0.045 | 0.045 | 0.045 |
| N (obs) | 972 | 972 | 972 | 972 |
| n (individuals) | 243 | 243 | 243 | 243 |
| T (choices) | 4 | º | 4 | 4 |

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

These analyses confirm that, as hypothesised, individuals support different levels of redistribution depending of what caused the income losses. When participants were asked to decide how to compensate income losers as external actors not involved in the situation, their support for redistribution varied depending whether losses were caused by factors for which they could or could not be held accountable. More precisely, they supported higher redistribution to compensate losses emerging from factors beyond individual control. Both exogenous factors (bad luck and family background) led to higher taxes than factors related to individual choices (lack of effort and greedy behaviour). This variation occurred in a situation in which participants were neither affected by the income-shock nor by the redistribution. They had no stake at all in the decision. Therefore, the variation can only be attributed to fairness considerations, since neither self-interest nor insurance motives influenced the decision.

### 4.5.2.Fairness considerations and self-interest

In another condition, participants chose a tax rate for every income loss source after being informed of whether they themselves had kept or lost their initial income in each source. Hence, they knew the actual effects of the redistribution scheme on their individual benefits. In these circumstances, both fairness considerations and self-interest could influence their preferences. The analysis of the participants' choices reveal that both motives mattered. Furthermore, it reveals that an interaction between them can be found. As I will show, in general, fairness motives influenced

tax choices. Both losers and keepers tended to prefer higher taxes for losses arising from factors beyond individual control. However, fairness considerations appear not to matter in some specific cases. Most notably, when income losses were determined by greedy behaviour, losers seem not to be influenced by fairness considerations and chose higher taxes to increase their own payoff.

With full information, participants chose different tax-rates for different income loss sources. Over 80% of them varied their preferred tax rate depending on the source of the income loss. These variations led to differences in the average tax rates for the different sources of income loss. Figure 4.05 shows the average tax rate for each income loss source. Following our expectations, participants chose higher tax rates for income losses caused by factors beyond individual control than for income losses caused by lack of effort. However, against expectations derived from the fairness hypothesis, the average tax rate for losses caused by greedy behaviour was not lower than for luck or family background. A series of Wilcoxon matched-pairs signed-ranks tests[30] shows that the differences between taxes chosen due to lack of effort are statistically different from the taxes chosen for bad luck and family background. Other differences are not statistically significant.

To interpret the tax choices of participants with full information, the combined effect of insurance motives and self-interest needs to be analysed. I conducted regression analyses with fixed effects at the individual level. Column 1 in Table 4.02 shows the model without interactions. Column 2 shows the model with the interaction effects of source of income loss and whether the participant was among the keepers or the losers.

[30] Wilcoxon matched-pairs signed-ranks tests can be found in Table A2A.1 in the Appendix 2A.

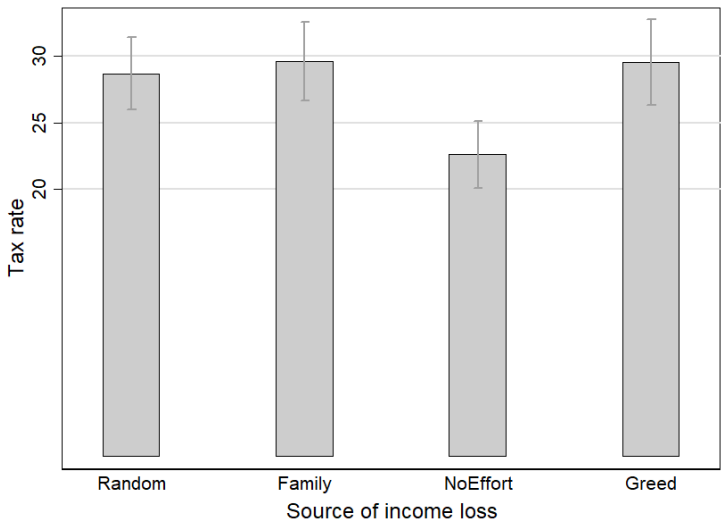



**Figure 4.05.** Average tax rate by source of income loss with full information

**Table 4.02.** Preferred tax rate with full information

| | (1) | (2) |
|---|---|---|
| Income loss source (ref. luck) | | |
| Family | 0.93 | 1.39 |
| | (1.49) | (1.99) |
| Effort | -6.05*** | -6.19** |
| | (1.49) | (1.99) |
| Greed | 0.84 | -2.50 |
| | (1.49) | (1.99) |
| Loser | 25.23*** | 23.19*** |
| | (1.24) | (2.51) |
| Family*Loser | | -1.24 |
| | | (3.54) |
| Effort*Loser | | 0.36 |
| | | (3.54) |
| Greed*Loser | | 8.94* |
| | | (3.55) |
| Constant | 19.22*** | 19.98*** |
| | (1.15) | (1.41) |
| $R^2$ | 0.379 | 0.387 |
| N (obs) | 972 | 972 |
| n (individulas) | 243 | 243 |
| T (sources) | 4 | 4 |

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

Self-interest had a large effect on participants' tax preferences. On average, those who were informed that they had lost their initial endowment chose tax rates about 25 percentage points higher than those who were informed that they kept their initial income. This shows that participants followed their self-interest. Keepers increased their final payoff by choosing low taxes on keepers and therefore little redistribution towards losers. Conversely, losers increased their final payoff by imposing high taxes on keepers, which implied high levels of redistribution towards losers.

After accounting for self-interest, fairness considerations still influenced participants' decisions. A first sign that fairness considerations mattered is that participants tended to choose different taxes depending on what caused the income losses. If participants were only utility maximisers, they would choose 0 or 100% tax rates depending on whether they were keepers or losers. If they were influenced only by inequity aversion, they would choose the same tax for all income loss sources. However, participants tended to choose taxes other than 0 or 100%. Only about 20% of choices were set at 0% or 100% tax rate.

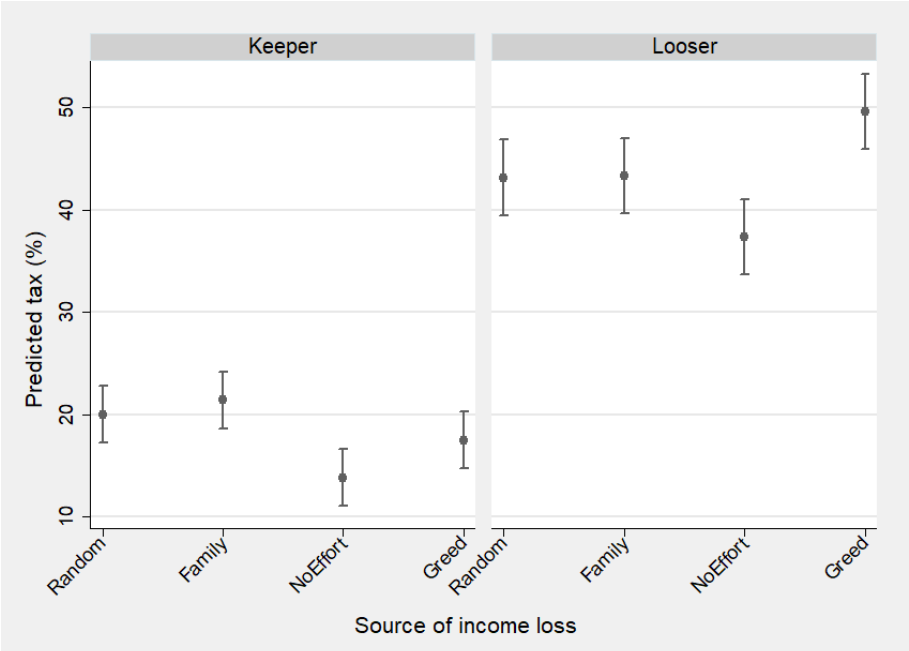



**Figure 4.06.** Preferred tax rate with full info among keepers and losers

Similarly, only 19% of participants choose the same tax rates for all sources of the income loss. Consequently, the average tax rate for the different income losses source varied, both among keepers and among losers. Figure 4.04 illustrates the average tax choices among losers and keepers for each source of income loss.

Fairness considerations affected keepers' preferences consistently. As can be seen in the left hand panel of Figure 4.06, keepers tended to choose lower taxes for income losses caused by factors under their control than for those caused by factors for which participants could be held accountable. The preferred tax rate for losses arising from lack of effort was 14%. That is over six percentage points lower than the tax chosen for losses arising from bad luck. For losses caused by past greedy behaviour, their preferred tax rate was 2.5% lower than those caused by bad luck. These variations reveal that participants who knew they had kept their income were less willing to sacrifice part of their payoff to compensate those who had lost their income due to their own behaviour. Thus, keepers showed lower aversion to advantageous inequalities arising from factors within individual control.

Conversely, losers' tax choices did not consistently vary as expected. We can see that income losses caused by bad luck or by family background led to very similar tax rates (about 43%). When the income loss was produced by lack of effort, losers chose a tax rate about six percentage points lower. The variation indicates that losers show higher tolerance to disadvantageous inequality arising from their own lack of effort. This is consistent with the prediction of fairness hypothesis. However, and against our expectations, losers chose a higher tax (almost 50% more) for losses caused by past greedy behaviour than for sources beyond individual control. According to the expectations under the fairness hypothesis, losers should have chosen a lower tax rate for this loss, since it was caused by factors within individual control.

Therefore, the effect of fairness considerations when losses were caused by greed was conditional on whether participants were losers of keepers. As expected, keepers reduced the tax level for losses caused by greed in relation to the tax chosen for losses arising from factors beyond individual control. In contrast, and against the predictions of the fairness considerations hypothesis, losers chose relatively higher taxes for losses caused by greed.

The preference for higher taxes for greed-caused income losses among losers can be explained by self-interested considerations and by the deactivation of fairness considerations. By choosing high taxes, losers increased their payoff to suit their own interests. This comes as no surprise. Those who lost when losses were caused

by greedy behaviour were participants who did not contribute or brought a very low contribution to the common good game[31]. Therefore, they had already shown a tendency to behave as self-interested utility maximisers. When offered the possibility of imposing a tax on keepers to compensate themselves, self-interested individuals are more likely to choose high taxes.

In order to test whether the contribution to the common good was a mediator of the relationship between the effect of losing or keeping the income, I run a regression model including the combined effect of both variables. As seen in Table 4.03, both variables influenced participants' tax choices when analysed separately. However, when both factors are considered together, the effect of losing one's income kills the effect of participants' contribution to the common good. Therefore, self-interest based on whether one has kept or lost one's income had an independent effect on participants' preferences for redistribution in incomes arising from their former contribution to the common good game.

Additionally, this tendency may have also been reinforced by a different mechanism. Those who lost their initial income for having behaved as self-interested individuals are likely to find it acceptable to act by following one's own interests. Therefore, even if they consider that factors beyond individual control deserve more redistribution, they are likely to find it especially wrong to be penalised for acting in their own interests. This mechanism reinforces the effect of self-interest in increasing the losers' demand for redistribution to compensate losses caused by self-interested behaviour in the past.

This analysis shows that when participants chose the tax rate when they already knew whether they were losers or keepers in each income loss source, both fairness considerations and self-interest mattered. Self-interest led participants to choose higher taxes when they knew they were losers and lower taxes when they knew they were keepers to increase their own payoffs. Similarly, fairness considerations also influenced the decisions of participants who tended to support higher taxes for losses caused by factors beyond individual control. Interestingly, both motives interacted. When losses were caused by past greedy behaviour, participants who lost their money did not chose lower taxes than for losses caused by factors beyond individual control.

[31] Losers in the greed source had contributed on average €0.17 to the common good. Keepers, on the other hand had contributed €1.06 on average. Contributions to the common good by losers and keepers are illustrated in Table A2A.2 in the Appendix 2A.

**Table 4.03.** Preferred tax rate for losses caused by greed with full information

| | (1) | (2) | (3) |
|---|---|---|---|
| Loser | 29.25*** | | 33.10*** |
| | (2.78) | | (3.63) |
| Contribution to common good | | -9.53*** | 3.68 |
| | | (1.98) | (2.24) |
| Constant | 18.55*** | 35.92*** | 14.63*** |
| | (1.70) | (2.05) | (2.93) |
| $R^2$ | 0.315 | 0.088 | 0.322 |
| N | 243 | 243 | 243 |

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

### 4.5.4.Fairness considerations and insurance motives

Participants' decisions were somewhat different when they were taken under risk. In this scenario, participants' decisions were open to the influence of fairness considerations and insurance motives. In this sub-section I analyse the impact of these considerations and whether insurance motives eliminate the effect of fairness motives. Results reveal an interaction between both motives. Only fairness considerations seem to have influenced preferences for losses caused by social background and lack of effort. Conversely, insurance motives seem to have influenced taxes chosen for losses caused by greedy behaviour, cancelling out the effect of fairness considerations among losers. Finally, mixed results are found for losses caused by bad luck, an outcome about which the participants could not make an informed guess.

As described in the experiment design section, participants were asked to choose a tax rate to compensate income losses under risk. Their decision could determine the final payoff for all participants, including themselves. They did not know whether they would be among losers or keepers in each income loss source scenario. However, they did not take the decision under a veil of ignorance, when only fairness considerations would have mattered. Participants could guess whether they were losers or winners. Hence, insurance motives influenced their decisions. As I will show, in some sources of income loss, participants could guess their outcome with more certainty then in others. This influenced the varying effect of insurance motives depending on the source of income loss.

Under a risk scenario, participants also chose different tax-rates for different income loss sources. Only 17% of participants chose the same tax rate for all income loss sources. Figure 4.07 shows the average tax rates for the different sources of income

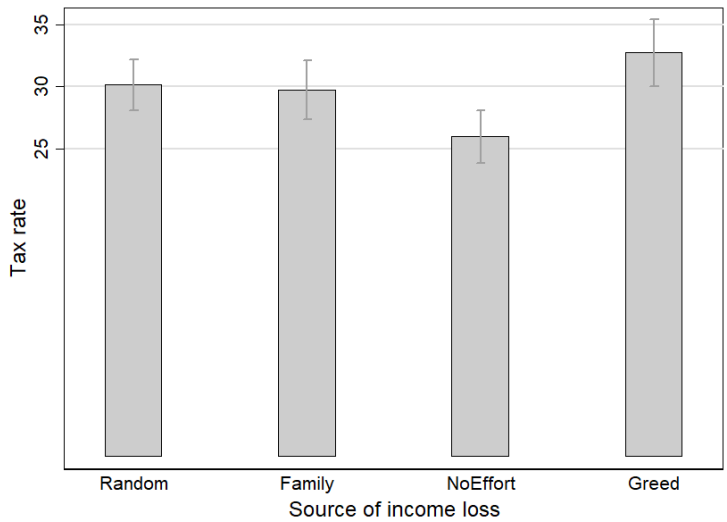



**Figure 4.07.** Average tax rate by source of income loss under risk

loss. On average, participants were less willing to redistribute when income losses were caused by lack of effort. They chose higher taxes for losses caused by bad luck and family background. Finally, against the expectations under the fairness considerations hypothesis, participants chose the highest tax-rates to compensate for losses emerging from greedy behaviour. This pattern is similar to the pattern found in the tax choices participants made with full information. A series of Wilcoxon matched-pairs signed-ranks tests[32] shows that the differences between tax rates chosen for lack of effort are statistically different from the rest of taxes. Conversely, the differences between the rest of the pairs (family-luck, family-greed, and luck-greed) were not statistically significant.

To interpret the tax choices under risk, however, insurance motives must be taken into account. In the experiment, after choosing their preferred tax rates under risk, participants were asked whether they thought that they would be among the keepers or among the losers in each income loss source. They could also specify whether they had any expectations at all[33]. Table 4.04 shows the response distribution for each income loss source. As seen, the distribution of expectations varied significantly depending on the source of income loss. When losses were determined by a lottery, most participants (65%) tended not to have any particular expectation. Furthermore, those who expressed an expectation said they were not very sure about their

[32] Wilcoxon matched-pairs signed-ranks tests can be found in Tables A2A.1 in the Appendix 2A.
[33] See experiment design section for more details.

outcome. Only 3% of participants had a strong expectation that they would lose or keep their endowment. Therefore, for income losses determined by a lottery, participants were less likely to have expectations about their outcomes.

When losses were caused by any of the other sources, participants tended to think they would keep or lose their endowment. This was specially the case for sources under individual control. Over 80% of participants expected to lose or keep their endowment in factors within individual control. Interestingly, in the greed condition a majority of participants (57%) thought they would lose their income. Furthermore, almost 30% of participants were sure about their loss, showing a higher intensity of the loss expectation compared to other sources.

The variation in the proportion of participants that expected to lose or keep their endowment and the variation in the intensity of such expectations contribute to explain the variation in average tax choice and the differential effects of insurance motives in different income loss sources. For instance, as I will show, the higher loss expectation for income losses arising from greedy behaviour combined with insurance motives explains the higher average tax rate for this source of income loss.

In order to test the combined effects of source of income loss and participants' economic expectations, I conducted a regression analysis with individual-level fixed effects. For the analysis, I recoded the variable, putting the expectations in three categories: 'no expectation', 'expects to lose' and 'expects to keep'. I set 'no expectation' as the reference category. Table 4.05 shows the results of the regression analysis. Column 1 shows the aggregated results. Column 2 shows the results including the interaction of insurance motives and income loss source.

**Table 4.04.** Expected outcome by source on income loss under risk condition

| | **Luck** | **Family** | **No Effort** | **Greed** | **Total** |
|---|---|---|---|---|---|
| **Sure loss** | 2.5 | 5.4 | 7.8 | 29.2 | 11 |
| **Probable loss** | 18.5 | 33.7 | 28.8 | 26.8 | 27 |
| **No expectation** | 64.6 | 26.3 | 19.3 | 19.3 | 32 |
| **Probable keeping** | 14.0 | 28.4 | 36.2 | 17.7 | 24 |
| **Sure keeping** | 0.4 | 6.2 | 7.8 | 7.0 | 5 |
| **Total (%)** | 100 | 100 | 100 | 100 | 100 |

**Table 4.05.** Preferred tax rate under risk

| | (1) | (2) |
|---|---|---|
| Income loss source (ref. luck) | | |
| Family | 0.20 | 0.18 |
| | (1.54) | (2.51) |
| Effort | -3.25* | -4.55 |
| | (1.58) | (2.88) |
| Greed | 2.71+ | -5.06+ |
| | (1.58) | (2.85) |
| Expectation (ref. no expectation) | | |
| Expects loss | 0.77 | 1.26 |
| | (1.52) | (2.88) |
| Expects keeping | -3.61* | -12.57*** |
| | (1.64) | (3.34) |
| Family*ExpectsLoss | | -6.03 |
| | | (3.98) |
| Family*ExpectsKeeping | | 11.84** |
| | | (4.47) |
| Luck*ExpectsLoss | | -4.72 |
| | | (4.38) |
| Luck*ExpectsKeeping | | 12.72** |
| | | (4.64) |
| Greed*ExpectsLoss | | 11.26** |
| | | (4.23) |
| Greed*ExpectsKeeping | | 9.01+ |
| | | (4.76) |
| Constant | 30.50*** | 31.69*** |
| | (1.13) | (1.30) |
| $R^2$ | 0.042 | 0.110 |
| N | 972 | 972 |
| n (individulas) | 243 | 243 |
| T (sources) | 4 | 4 |

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

Looking at the effect of insurance motives on the aggregate level, it seems that insurance motives led keepers to support lower taxation. Expecting to be among the keepers lowered the preferred tax rate by over 3.5 percentage points relative to those who had no expectation and by 4 points relative to those who expected to keep their endowment. This choice minimised their burden if they were to keep their endowment. Conversely, those who expected to lose chose higher tax rates. This choice increased the compensation they would receive if they were to lose their endowment. However, this effect was not homogeneous in all income loss sources.

Insurance motives had varying effects on different income loss sources. Figure 4.08 illustrates the variation in tax preferences between keepers and losers in each income

loss source. The left-hand panel shows the losers' predicted tax choices for each income loss source using the interaction model. The right-hand panel shows the keepers' predicted tax choices. Comparing both panels, it can be seen that insurance motives only significantly influenced tax choices to compensate for income losses arising from bad luck or from greed. In these cases, as expected, insurance motives reduced support for redistribution among keepers and increased it among losers. In both cases the size of the effect is notable. The preferred tax rate of those who expected to be among the losers was over ten percentage points higher than the preferred tax rates of those who expected to be keepers. This pattern is similar to the pattern found for losses caused by greed when participants took the decision with full information.

However, and against our expectations, insurance motives did not significantly affect the tax choices for losses caused by family background and lack of effort. In these cases, the variation was in the opposite direction: keepers chose higher taxes than losers. However, the variation was noticeably lower (about 5 percentage points) and not statistically significantly different from zero.

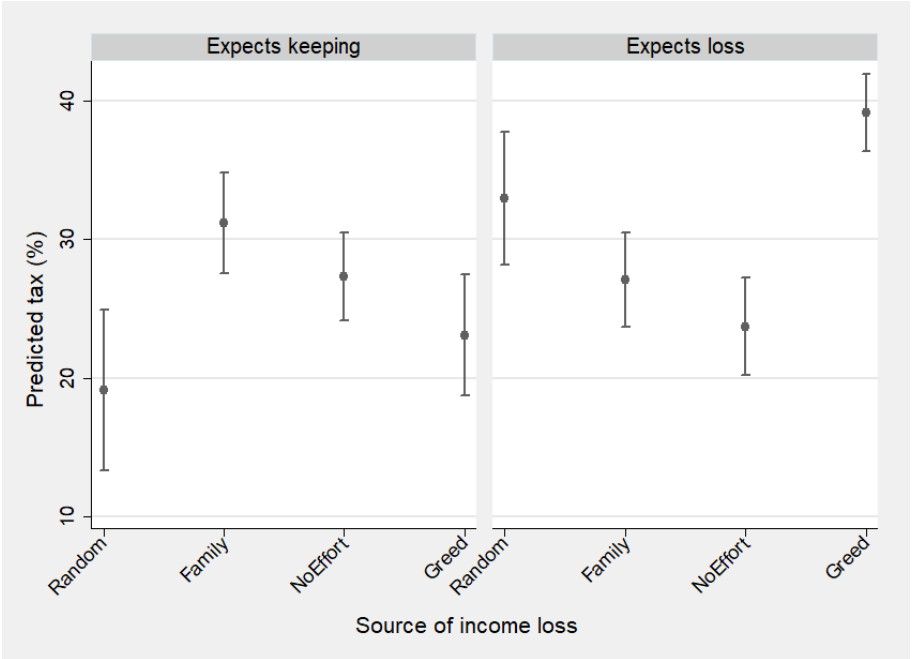



**Figure 4.08.** Tax choices by income loss source and expectation of losing or keeping the initial endowment

This varying effect of insurance motives can be partially explained by the different level of expectations in the different sources of income loss. As shown (Table 4.04), the percentage of participants who were sure about whether they would lose or keep their endowment was much higher in income losses caused by previous greedy behaviour. The low intensity of the expectations in losses caused by family background and lack of effort may explain the lack of effect of fairness consideration in such cases. The statistically significant effect of insurance motives on losses caused by luck needs to be taken with some caution, since very few participants had any expectations about it. Additionally, they had no rational basis for their expectations. Therefore, the variation, while significant, is driven by a few rare cases.

Fairness considerations also made quite a significant impact when participant took the decision under risk. Income losses arising from family and greed resulted in a similar level of support for redistribution among losers and keepers. In both cases the difference between the tax choices, despite the difference not being statistically significant, goes in the expected direction of the fairness considerations hypothesis: participants, regardless of whether they were losers or keepers, showed lower support for redistribution for losses caused by lack of effort (a factor under individual control) than for losses caused by family background (a factor beyond individual control).

Conversely, when the loss was caused by greedy behaviour, the effect of fairness considerations was interacted with insurance motives. Those who expected to keep their endowment chose lower tax rates than for losses caused by family background. This is compatible with the effect of fairness considerations: choosing lower taxes for exogenously caused income losses. Instead, those who expected to lose chose much higher taxes for losses caused by greed than for other sources of income loss. This significantly higher tax rate is at odds with the predicted effects of fairness considerations.

This tendency to choose very high tax rates can be explained by the association between participants' tendency to act as self-interested individuals and their probability of being (and expecting to be) among the losers. It follows the logic described for decisions with full information. Those who did not contribute or contributed very little in the common good game were notably more likely to think they would lose their endowment than those who made higher contributions. Figure 4.09 illustrates this association. At the same time, those who thought they would lose out

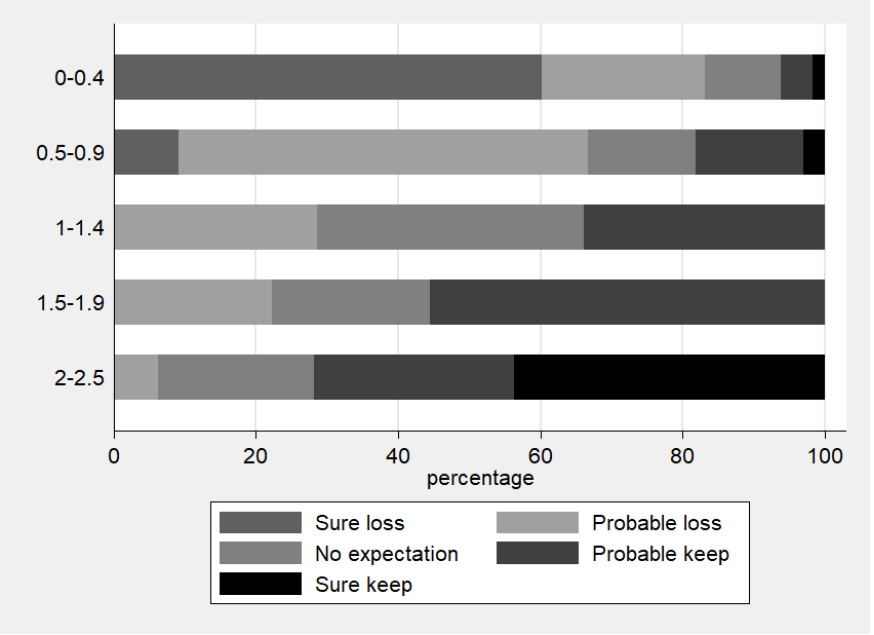



**Figure 4.09.** Expected loss in greed by contribution in the common good game

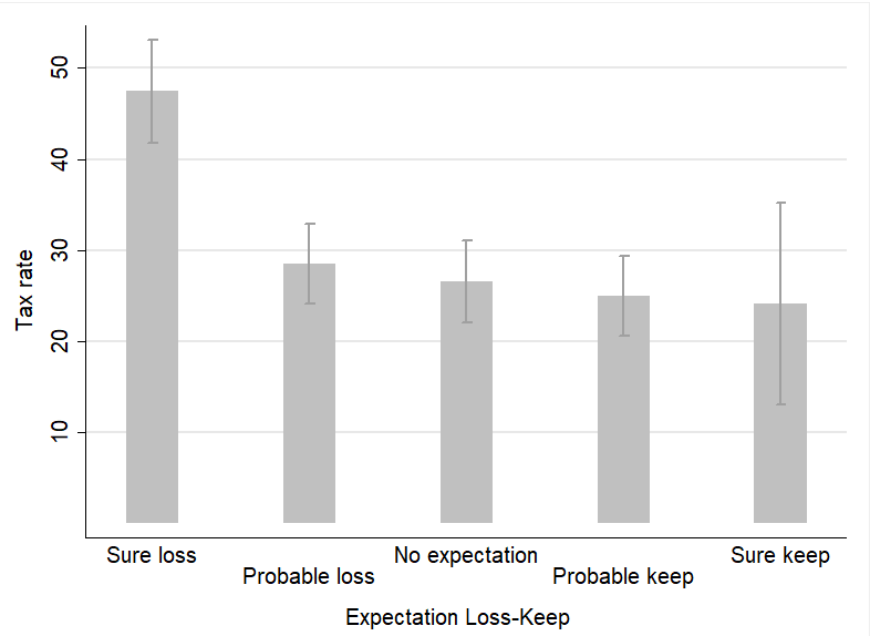



**Figure 4.10.** Preferred tax rate by expectation of losing or keeping initial endowment in losses caused by greed

were also more likely to demand high tax rates. Figure 4.10 shows how the preferences for very high taxes were concentrated among those who were convinced they would lose their endowment.

Hence, participants who perceived they would lose their endowment had already shown in the common good game their tendency to act as free-riders and prioritise their own interests. Under risk, they expected to be among losers. Consequently, they tended to choose higher tax rates to compensate losers, which would increase their final payoff. This is consistent with their previous behaviour. Additionally, as noted in the section analysing the choices made with full information, it can also be influenced by a complete deactivation of fairness considerations. Participants who tend to behave as self-interested agents are likely to find it wrong that someone gets penalised for following their own interests.

I checked whether greedy behaviour, instead of insurance motives, could explain this behaviour. I ran a regression analysis and included both contribution to the common good and expected outcome as independent variables that predicted the preferred tax rate. The results can be seen in Table 4.06. Separately, both contribution to the common good game and expected outcomes correlated in the expected direction with the tax rate. However, when including both factors in the model, only expected outcomes remained significant. Insurance motives had a significant and independent effect on preferred tax rate.

**Table 4.06.** Preferred tax rate for losses caused by greed with full information by perceived outcome and contribution in common good

| | (1) | (2) | (3) |
|---|---|---|---|
| Perceived outcome (ref: sure loss) | | | |
| Probable loss | -18.93*** | | -19.54*** |
| | (3.29) | | (3.47) |
| No Expectation | -20.87*** | | -22.00*** |
| | (3.61) | | (4.12) |
| Probable keeping | -22.46*** | | -23.88*** |
| | (3.71) | | (4.47) |
| Sure keeping | -23.35*** | | -25.78*** |
| | (5.18) | | (6.73) |
| Contribution to common good | | -6.47*** | 1.25 |
| | | (1.70) | (2.20) |
| Constant | 47.46*** | 37.11*** | 47.43*** |
| | (2.28) | (1.75) | (2.28) |
| $R^2$ | 0.202 | 0.057 | 0.203 |
| N | 243 | 243 | 243 |

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

The high average tax rate for losses caused by greedy behaviour illustrated in Table 4.05 can be explained by the behaviour of participants who thought that they would lose their initial endowment, especially if we consider that the numbers of participants that thought that they would be among losers in losses caused by greed is much higher than in other losses (see Table 4.04 above). The results for income losses caused by bad luck need to be taken with some caution. Most participants tended to have no expectation about whether they would lose or keep their initial endowment. Therefore, the variation represented in Figure 4.06 represents only 35% of participants. Those who expected to lose or keep their endowments did not have any rational basis for their expectations. However, the results show that for these cases, insurance motives mattered and suppressed the effects of fairness considerations.

The analysis of participants' decision under risk shows that fairness considerations and insurance motives had mixed effects. For income losses caused by family background or lack of effort, participants were influenced by fairness considerations but not by insurance motives. On the other hand, when losses were caused by participants' previous contribution to the common good game, participants' choices were highly influenced by fairness considerations. In this case, those who thought they would lose their endowment chose very low tax rates. This choice is also compatible with fairness considerations. However, those who expected to lose their income chose comparatively very high taxes. This choice is compatible with the effect of insurance motives but at odds with the effect of fairness considerations. For losses caused by a lottery, participants' choices also seem to be driven by insurance motives rather than by fairness considerations. These choices, however, need to be analysed with some caution, as participants tended not to have any solid expectations for this specific source of income loss.

## 4.6 Conclusion

In this chapter I have analysed how fairness considerations influence people's preferences for redistribution in the context of an income shock. I have used an economically incentivised laboratory experiment which has allowed me to measure participants' revealed preferences. Additionally, it has allowed me to artificially generate different sources of income loss, with individuals having different levels of control over their economic situations. I have shown that individuals support higher redistribution to compensate income losses arising from factors beyond individual control. Specifically, I have shown that individuals tend to support higher taxes to address losses arising from bad luck or family background than to compensate for

losses caused by factors arising from people's choices, especially those caused by lack of effort.

Participants' decisions were influenced by fairness considerations. This was especially evident when they took the decision as a third party that was unaffected by the initial endowment, the income shock, or by their choices in the redistribution phase. Interestingly, the results also show that luck and social background, the two factors beyond individual control, generate very similar levels of support for redistribution. However, there is a significant variation in the willingness to compensate losses arising from factors under individual control. While both lack of effort and greedy behaviour generated lower redistribution than factors under individual control, losses caused by lack of effort led to significantly lower redistribution than losses caused by greedy behaviour.

When the decision was taken with full information or under risk, fairness considerations interacted with self-interest and insurance motives respectively. When participants took the decision with full information, their decisions were also influenced by self-interest. Participants who kept their endowment systematically chose lower taxes to reduce their burden. Those who lost chose higher taxes to increase their compensation. At the same time, fairness consideration also mattered. Participants tended to choose higher taxes for losses caused by factors beyond individual control. However, the pattern was not followed in losses caused by greed. For losses caused by greed, losers chose higher taxes than for any other source of income loss. Hence, they chose higher taxes for a loss caused by factors for which the individuals could be held responsible. This behaviour can be attributed to the fact that losers were participants that tended to prioritise their own interests over social considerations in the first place. They were losers in that condition precisely because they had not contributed to the common good game.

When participants took the decision under risk, the effect of insurance motives and fairness considerations were mixed. For income losses caused by family background and lack of effort, participants' choices were not influenced by their expectations of being losers or keepers. On the contrary, their tax choices for these sources of income loss were consistent with fairness considerations: both losers and keepers supported lower taxes for losses caused by lack of effort. For losses caused by greed, participants' choices followed the same pattern as for the full-information condition. Those who expected to lose their incomes were those who made lower contributions to the common good game. They chose higher tax rates to compensate for their losses and ignored fairness considerations. This choice is consistent with their

insurance motives and their previous prioritization of their own interests in the common good game. For losses caused by luck, most participants had no expectations. Therefore, the interaction of insurance motives was necessarily relative. In general, the differential effect of fairness considerations may have been influenced by the variation in the intensity of participants' expectations in the different sources of income loss.

The findings of this experiment demonstrate that, in a context of income shocks, fairness considerations affect people's preferences for redistribution. Importantly, they show that fairness considerations matter when they are linked to what caused certain individuals to suffer an income shock. I have shown that, in the lab, participants tend to support higher redistribution for losses caused by factors beyond individual control. Specifically, I have shown that participants chose higher taxes for losses caused by disadvantageous social backgrounds than for losses caused by lack of effort or greedy behaviour. All these factors are linked to interpretations of who and why was most hit by the crisis.

I have extended the analysis of fairness considerations beyond the traditional distinction between luck and effort. I have shown that different factors beyond individual control (bad luck and social background) generated very similar support for redistribution. Conversely, different factors beyond individual control (lack of effort and greedy behaviour) resulted in different levels of support for redistribution. This suggests that individuals evaluate some behaviours more harshly than others. In this case, participants were less willing to compensate losers for factors under individual control. However, they were reluctant to compensate losses caused by lack of effort in comparison to losses caused by past greedy behaviour. Further research could analyse the differences in perceived acceptability of different factors under individual control and how they differ in the levels of support they raise for redistribution.

The highly stylised design of the experiment comes with some advantages and disadvantages. The economically incentivised lab experiments allow the analysis of participants' preferences revealed through their behaviour. In this case, it enabled me to measure to what extent participants were willing to assume the costs of redistribution and to clearly identify the effects of each treatment. Participants showed that they were willing to sacrifice part of their income in order to support other participants who had suffered an income shock. Crucially, they showed that they were more prone to support such costs when the income shocks were caused by factors beyond individual control.

Additionally, the situation created in the lab experiment allowed me to show how fairness considerations interact with other motives such as self-interest and insurance motives. This is an important aspect, since it offered a hard test for the fairness hypothesis. I have shown that fairness consideration can influence individual considerations even when self-interest or insurance motives are primed by the experimental design. Furthermore, the use of a student-based sample is also a hard test for the fairness hypothesis. Previous research has shown that student samples in the lab tend to behave more like utility maximisers than population representative samples (Belot, Duch, and Miller 2015). Finding an effect of fairness considerations among students suggests that the effect will also be present among more varied samples.

Nevertheless, participants in this type of lab experiments take their decisions in a very specific context and are responding to artificially generated interactions. Although the experiment was designed to reproduce key elements of the crisis, specifically the fact that the effects of the shock were unevenly distributed, participants expressed their redistributive preferences for a situation that is notably different to real-life situations. This reduces the external validity of the findings. In the following chapter, I will show how fairness considerations influence people's preferences by using a more contextually rich experiment and more varied samples. By means of a survey experiment I will analyse people's expressed support for redistribution for losses caused by different factors explicitly linked to the crisis. I will show that different frames that link the cause of being affected by the crisis to factors under individual control were able to reduce support for redistribution.

# Chapter 5

# Crisis frames, fairness considerations and preferences for redistribution: a survey experiment

## 5.1 Introduction

This chapter develops the analysis carried out in the previous chapter. In it I continue analysing how fairness considerations can affect people's support for redistribution in a context of a negative economic shock. In this case, I focus on how different frames related to fairness considerations were able to influence public support for redistribution in the context of the Great Recession.

In the previous chapter, I demonstrated that fairness considerations could influence redistributive preferences in a context of income shock. In the lab, I created a situation that resembled the context of an economic crisis. Income losses were artificially generated and were assigned to some experimental subjects based on different factors within and beyond individual control. Participants were informed of the causes of the income losses and could choose different tax rates to compensate for each type of loss. The results provided evidence that in that specific and highly controlled environment, fairness considerations relative to those income losses were relevant. Although the stylised design and the artificial situation might have increased the internal validity, they might also have decreased the external validity. In this chapter I test whether the lab results travel beyond the lab.

To test the results obtained in the lab, I rely on a survey experiment that uses a more contextually rich treatment based on the actual economic crisis. I test how frames related to the distribution of the negative income shock across the population influenced people's preferences in the context of the Great Recession. The frames reproduce the debate around what led some people –and not others– to suffer the negative consequences of the crisis. Different interpretations of the crisis and its effect might have contributed in shaping public support for redistribution. I use three different samples, all of them more diverse than the student-based sample used in the lab experiment. Following the literature on fairness considerations, I expect that people's support for redistribution towards the losers of the crisis could be affected by their perception of what lead some people to experience the negative effects of the crisis. Understanding the causes that led some individuals to be especially hard hit by the crisis is not straightforward. However, we know that framing practices can influence people's understanding of complex issues and attribute causes to certain phenomena, including what led certain people to be in a situation of need (Chong and Druckman 2007). In this chapter I use a survey experiment to test how different frames attributing different causes of being hit by the crisis influenced people's support for redistribution. The main aim of the experiment is to test whether specific frames, related to different sources of income loss, lead people to support more or less redistribution to compensate those who were more severely hit by the crisis.

I designed an online vignette experiment in which participants were randomly assigned to a treatment or control group. The treatments were based on a short text that described some groups as those most affected by the crisis. Additionally, the text pointed to different reasons for such groups experiencing the negative shock. The text made explicit reference to the economic crisis. The reasons given for people being affected by the crisis were the same sources of income loss generated in the lab experiment. Two of them placed the source of being affected beyond individual control: one referred to bad luck and the other to social background, arguing that the crisis had hit those that were worse off to start with more severely. The other two treatments presented reasons that were within individual control: lack of effort or past greedy behaviour.

In order to explore the scope conditions and how much the findings can be generalised, the experiment was run using three different samples: two non-representative Spanish samples and one Swiss population-representative sample. In this way, I tested the effects of framing fairness considerations in a context of severe economic crisis and in a context of mild economic crisis.

Results show that framing people about the role of factors beyond individual control, such as social background or bad luck in order for them to determine whether individuals suffered the effects of the crisis had a minimal impact on people's support for redistribution. In all samples, exposure to these arguments increased support for redistribution very little. The effect was relatively weak, and not statistically significant at conventional levels.

Conversely, the frames that referred to the role of factors under individual control had stronger and negative effects on support for redistribution to compensate losers. In all samples, participants exposed to the lack of effort or the greed frame expressed lower levels of support for redistribution than those exposed to frames linking the economic shock to circumstances beyond individual control. The greedy behaviour frame triggered a remarkably low level of support for redistribution in all samples. The effect was statistically significant in two of the three samples. However, frames that linked the crisis impact to lack of effort did not have a clear effect with respect to the control group. It only significantly reduced support for redistribution vis à vis the control conditions in one of the three samples.

The results, therefore, show that the public's reaction to the crisis was open to the framing influence. They show that in the aftermath of the Great Recession, elites interested in eroding public support for redistribution could influence public opinion by portraying the losers in the crisis as responsible for their own situation. More specifically, frames portraying the crisis as affecting greedy people who spe-culated and took self-interested risky decisions were able to reduce popular support for redistribution significantly. But the reverse does not seem to be true. The frames linking the effects of the crisis to factors beyond individual control seem to have had an extremely limited capacity for increasing support for redistribution.

## 5.2 Fairness frames in times of crisis

In this chapter I analyse the influence of different frames that link fairness considerations to the effects of the economic crisis. To date no research has analysed how mobilising fairness considerations in the times of crisis can contribute to shaping public attitudes towards redistribution.

Deservingness literature has shown that framing people about other people's responsibility over their economic situation significantly affects the level of support for redistribution towards those who are in an adverse economic situation (Fong and Luttmer 2011; Petersen et al. 2010; Slothuus 2007). Interestingly Petersen,

Slothuus, Stubager and Togeby (2010) have shown that framing people about individual control over their economic situation can activate the deservingness heuristic, which can lead people to support policies that are at odds with their values. For instance, progressive people that tend to support redistributive policies are more likely to support welfare retrenchment policies if they are presented a story about benefit claimants that could work instead of being on benefits but choose not to.

Importantly, Slothuus (2007) demonstrates that deservingness perceptions mediate the effect of fairness frames on support for welfare policies. Framing people about the causes that led people to be in a situation of need simultaneously influences their perception of deservingness and their support for redistributive policies. The authors show that the change in the deservingness perception accounts for a significant part of the change in support for welfare policies. Changing people's perception of people's responsibility for their economic situation leads to changes in support for redistribution.

On the other hand, research has shown that people's support for the Welfare State in the times of Great Recession was influenced by frames presented by the elites. Using a framing vignette experiment, Marx & Schumacher (2016) cogently showed that elites' frames on the prospects of the crisis and on how it affected the level of inequality and public deficit significantly influenced people's support for Welfare State retrenchment. Framing people about the negative economic prospects and on how the crisis increased inequality levels reduced support for Welfare State retrenchment. However, framing people about the effects of the crisis on the public deficit did not significantly affect support for retrenchment.

Hence, empirical research has shown that framing people about individual control of the causes that led the disadvantaged to an unfavourable economic situation can influence people's support for welfare policies. Similarly, research has shown that frames on the crisis and its effects on inequality also affect people's support for the welfare state. However, to my knowledge, no research has analysed how these two elements work together. We do not know how frames that link suffering the effects of the crisis to factors within and beyond individual control influence public preferences for redistribution.

I tested the effect of different elite frames present in the public debate during and in the aftermath of the Great Recession. They referred to four causes of suffering an economic shock that mirrored those of the lab experiment presented in the previous chapter: two factors beyond individual control (bad luck, social background) and two factors within individual control (lack of effort and past greedy behaviour). In

the lab, the treatments had to be highly stylised and needed to be created artificially, whereas in the survey experiment I could use contextually rich frames, based on the actual debate surrounding the crisis. Hence, due to the difference in the nature of the two experiments, there are some differences between the lab and the survey treatments. Nevertheless, both lab and survey experiments tap into the same basic ideas.

The bad luck treatment was very similar in both experiments. The cause leading some people to experience an economic shock was purely random. In the lab, it was created through a lottery. In the survey it was attributed to bad luck in one's employment or financial situation[34]. The social background treatment varied slightly. In the survey, the frame attributed being especially hard hit by the crisis to the fact of already being in a vulnerable position before the crisis. In the lab, since participants were students, it was connected to family background, which determined their socio-economic position. In both the luck and the background conditions, the cause of suffering the effects of the crisis were described as relating to circumstances beyond individual control.

The lack of effort treatment also differed slightly between the two experiments. In the survey, the lack of effort was connected to a frame present in many elite discourses. It claimed that those who suffered the crisis were people who during the years of economic growth opted for easy, profitable jobs and did not make the effort to increase their education and training. This made them less employable after the shock. Instead, in the lab, the effort treatment was generated through an in-lab real effort task.

Finally, the greed treatment also varied. While in the lab it was linked to the participants' contribution to a public good game, in the survey this condition was defined as having speculated during the years of economic growth. It connects with the idea present in the public debate that during the years of economic growth some people followed their own interests and took risks regardless of the social consequences of their behaviour. Their behaviour contributed to the outbreak of the crisis, which reduced the general well-being.

In the survey experiment, these two sources of income loss were explicitly framed as related to individual choices: taking the decision not to invest in one's skills or taking self-interested risky greedy investment decisions. They were therefore

[34] The different treatments are described in the next section. The wording for the different treatments can be found in Table 5.01.

depicted as the outcomes of individual decisions, and therefore under individual control.

## 5.3 Expectations

Following the literature on fairness considerations, I expect that participants exposed to frames representing those most affected by the crisis as being responsible for their situations will show lower support for redistribution. Similarly, I expect that those exposed to frames linking crisis impact to factors beyond individual control will show higher support for redistribution.

I will test the impact of the different frames. Firstly, I will compare the level of support for redistribution among participants treated with a specific frame to the level of support among participants assigned to the control group. I will also analyse the difference between participants treated with different frames. This will allow me to test the cumulative effect of participants being exposed to opposite frames.

My specific hypotheses are:

H1a Participants exposed to the bad luck frame will show higher support for redistribution than participants in the control group.

H1b Participants exposed to the social background frame will show higher support for redistribution than those in the control group.

H2a Participants exposed to the lack of effort frame will show lower support for redistribution than those in the control group.

H2b Participants exposed to the greedy behaviour frame will show lower support for redistribution than those in the control group.

Therefore, we can also build expectations on the differences across treatments:

H3a Participants who received the bad luck frame will show higher support for redistribution than participants who received the lack of effort or greed frame.

H3b Participants who received the social background frame will show higher support for redistribution than participants who received the lack of effort or greed frame.

H3c Participants who received the lack of effort frame will show lower support for redistribution than those who received the bad luck or the social background frame.

H3d Participants who received the greed frame will show lower support for redistribution than participants who received the luck or social background frame

## 5.4 Research design

The experiment analyses the how framing practices mobilising fairness considerations could influence people's preferences for redistribution in times of crisis. I use a vignette-based survey experiment. The experiment measures whether discourses pointing to different sources of economic hardship due to the crisis generated varying levels of support for redistribution. It was carried out in Spain and Switzerland using three different samples[35].

Participants were randomly assigned to different treatment and control groups. Each treatment group was shown a different text. The text claimed that the crisis hit different people particularly hard and that these people were in economic difficulties.. Four different causes were described as leading people to be especially hard hit by the crisis: bad luck, social background, lack of effort, and past greedy behaviour.

The wording of the different treatments is shown in Table 5.01. The text was exactly the same in the two Spanish samples. It was slightly different in the Swiss experiment. In order to make the treatment credible in the Swiss context, where the crisis had not been as severe as in Spain, a further a sentence was added between the headline and the text. The added sentence said, '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.' The full text for the Swiss vignettes can be seen in Table A1 in the Appendix 3.

As well as the aforementioned four treatment groups, the Spanish samples had a control group. The control group was not shown any text at all. Additionally, in the Swiss experiment a further placebo condition was added. This additional group was shown a text priming the crisis effects. The text was the same as for the treatment groups, but it simply stated that the crisis affected many people. It did not identify any group as especially hard hit. Adding this group enables me to disentangle the

[35] See data section for more details on the different samples.

**Table 5.01.** Survey experiment vignettes text for the Spanish samples

| Treatment | Wording |
|---|---|
| **Luck** | **The crisis hits those who have had bad luck**<br>Among the most severely affected by the crisis were those who were unlucky in their work or personal situation. Today many of these people go through very difficult economic situations. |
| **Social background** | **The crisis hits the poorest**<br>Among the most severely affected by the crisis were those who during the years of economic growth were already in a bad financial situation. Today many of these people go through very difficult economic situations. |
| **Effort** | **The crisis hits those who quit their studies**<br>Among the most severely affected by the crisis were those who during the years of economic growth, rather than further education decided to leave school to go easy jobs that were very lucrative. Today many of these people go through very difficult economic situations. |
| **Greed** | **The crisis hits those who tried to make easy money**<br>Among the most severely affected by the crisis were those 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 go through very difficult economic situations. |
| **Priming Group*** | **The crisis hits some people**<br>Some people were the most severely hit by the crisis. Today many of these people go through very difficult economic situations. |

*Text from the vignettes in the Spanish samples. The priming group only appears in the Swiss Sample. It appears in this table for illustrative reasons without the Swiss-specific sentence.

effect of the specific frames from the more general priming effect of reading a text about the crisis.

Immediately after reading the vignette, participants were asked whether they were willing to pay more taxes in order to support people who were in economic difficulties. Each participant's response to this question was used as the dependent variable. The exact wording of the question was as follows: 'Currently, some people want to improve social benefits for people who are in economic difficulties. To do so, it would be necessary to raise taxes paid by the taxpayers. To what extent would you personally be willing to pay more tax to improve these benefits?' Participants had to position themselves on a 0 to 10 scale ranging from 'I am not willing at all' to 'I am very willing to'. The response was expressed using a slide bar.

The question was used as dependent variable and measures support for redistribution as a broad category. It includes a reference to people who are in economic difficulties, which connects with the wording used in the frames when describing the individuals affected by the crisis. However, it is not a question about supporting the poor, nor does it make any specific reference to any features of the

potential recipients of redistribution. Similarly, the question does not contain any references to how the burdens for support for people in difficult financial situations should be distributed. Nevertheless, it includes a trade-off, with the reference on whether participants are willing to pay more tax to support the policy. As in the lab, although to a lesser extent, by supporting redistribution respondents expressed that they were willing to accept some cost.

The basic structure of the experiment[36] was as follows: First, participants where asked a few socio-demographic questions, including their gender, age and education level. Then they were shown the vignette and asked the question about whether they were willing to pay more tax to offer better social benefits to those going through difficult economic circumstances. Afterwards, they were asked some questions about their political attitudes. Finally, they were debriefed. In the Spanish Qualtrics sample and in the Swiss sample, the experiment was run alongside another experiment. In the Spanish Qualtrics sample, the other experiment surveyed the effects of the crisis on participants' national identity. In the Swiss sample, the other experiment surveyed the opportunities for mobilisation and protest in the context of the crisis. In both cases, the experiment analysed in this chapter was administered before the other one. Consequently, I do not expect that the presence of the other experiments had any impact on participants' response to these treatments.

## 5.5 Data

The experiment was replicated using three different 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 only this experiment. The survey was run between the 4th and the 9th of March 2016. We collected 2,328 responses. Respondents could skip some questions including the one used as dependent variable. 2,020 participants responded the question used in the analysis. The sample had a clear gender bias (66 per cent of respondents identified as men). Similarly, the sample over-represents highly-educated and left-leaning citizens. Tables 5.02 to 5.04 show the basic demographic characteristics of the different samples.

[36] The experiment complied with the ethical requirements of the Universitat Autònoma de Barcelona's ethical committee regarding remuneration, information and safety of participants. Similarly, it complied with the data management and protection standards. The experiment design and procedures were supervised and approved by the ethical committee (ref: 3274:2015).

The second sample was recruited through Qualtrics, who partnered with Toluna for the recruitment. The survey was conducted between the 14th and the 17th of June 2016. The experiment was placed within a larger survey with a sample of over 2,500 participants. The sample was selected from the providers' panel, and had sex, age and education quotas designed to mirror the distribution of these characteristics in the general population.

In the context of the survey, respondents were randomly assigned to different combinations of experiments. Among the 2,500 participants in the survey, 868 were took this particular experiment, of which 820 responded to the question used as dependent variable. It is important to highlight that the sample that responded this experiment was not population-representative either. This experiment was introduced once the recruitment for the whole survey had already started and overrepresents difficult to reach individuals. In this sample, and in contrast to the snowball sample, women were slightly overrepresented. As it can be seen in Table 5.02, there was a 54 per cent of women in the sample. Also, there was an over-representation of people whose higher level of education was vocational training. This experiment was run in combination with another experiment on the effects of the crisis in citizens' national identity.

**Table 5.02.** 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 5.03.** 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 |
| **Higher** | 73.76 | 44.12 | 23.56 |
| **Total** | 100 | 100 | 100 |

**Table 5.04.** Ideology 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 |

The Swiss sample was recruited using the Qualtrics recruitment services in Switzerland. The survey was conducted between the 24h$^{th}$ of August and the 21$^{st}$ of September 2016. In this case, the sample was representative of the swiss population. It included sex, age and education quotas. It was responded by 1,040 participants. In this case, participants were not allowed to skip the question used as dependent variable. The survey could be responded in French or German. 267 participants responded the French version and 773 responded the German one.

## 5.6 Results

Firstly, I analyse the level of support for redistribution in the different samples. Then I test whether there are overall significant differences in support for redistribution across treatments in the different samples. Then I analyse the effect of each frame with respect to the control group. Finally, I analyse the difference in the level of support between participants exposed to opposing frames.

There is a notable difference in the average support for redistribution across the different samples, as shown in Table 5.05. On average, respondents in the snowball sample are more pro-redistribution, while those from the Qualtrics sample show less intense redistributive preferences. Moreover, the Swiss are less favourable to redistribution than the Spanish respondents.

These differences can be attributed to different factors. Firstly, the difference between the two Spanish samples can be explained by the overrepresentation of left-leaning respondents in the Spanish snowball sample. It is an uncontroversial fact that left-leaning people tend to support higher levels of redistribution. In the three samples, left-leaning people show higher support for redistribution (see Table A3.1 in the appendix). Actually, ideological self-placement is the factor with the highest influence on support for redistribution.

Second, the difference between the Spanish and Swiss samples can be attributed to the existing difference in support for redistribution in both countries[37]. However, the interest in this chapter is not the level of support for redistribution per se. My interest is the influence of frames that activate crisis-related fairness considerations on participants' support for redistribution. Hence, I will analyse the effects of the treatments and not overall support for redistribution.

[37] For instance, in chapter 3 we have already seen that support for progressive taxation is lower in Switzerland than in Spain.

**Table 5.05.** Average support for redistribution by treatment and sample

| | Spain Snowball | | Spain Qualtrics | | Switzerland | |
|---|---|---|---|---|---|---|
| | **Mean** | **St. dev.** | **Mean** | **St. dev.** | **Mean** | **St. dev.** |
| **Luck** | 7.14 | 2.37 | 4.77 | 2.50 | 3.71 | 2.80 |
| **Social Background** | 7.12 | 2.33 | 4.82 | 2.60 | 4.01 | 2.85 |
| **Lack of Effort** | 6.69 | 2.44 | 4.53 | 2.74 | 3.51 | 2.58 |
| **Greed** | 6.42 | 2.57 | 4.09 | 2.90 | 2.85 | 2.30 |
| **Control** | 7.05 | 2.59 | 4.46 | 3.02 | 3.55 | 2.61 |
| **Priming** | | | | | 3.52 | 2.55 |
| **Average** | 6.87 | 2.47 | 4.51 | 2.82 | 3.51 | 2.30 |

Before analysing the variation across treatments, it is worth noting that the differences between the control and the treatment groups cannot be attributed to a crisis priming effect. Participants allocated to the control group did not read a text about the crisis. Rather, participants assigned to any of the treatment groups read a text which stated that the crisis affected some people. Reading this text could have led to variations in the level of support for redistribution, even if the frames themselves did not have any effect. To rule out this possibility, a priming control group was introduced in the Swiss sample. The text that this group received was the same as the rest of the groups, but it did not identify any group as particularly hard hit by the crisis (see Table 5.01 for wording). Participants assigned to the priming group expressed a very similar average support for redistribution to the pure control group. An independent samples t-test shows that support for redistribution among participants in the priming group ($3.55 \pm 0.20$) was not significantly different to support for redistribution among participants allocated to the pure control group ($3.52 \pm 0.18$), $t(376) = 0.12$, $p = 0.904$.

The results show that there were significant differences in the level of support for redistribution across treatment groups. I conducted an ANOVA test to check whether the differences were statistically significantly different from zero. The results reveal that the differences are statistically significant at a 99% significance level in the Spanish snowball sample ($F(4,2.015) = 7.28$, $p = 0.000$) and in the Swiss sample ($F(4,832) = 4.60$, $p = 0.001$)[38] . In the Spanish Qualtrics sample, on the other hand, the difference is not statistically significant ($F(4, 815) = 1.56$, $p = 0.184$).

Figure 5.01 illustrates the differences in the three samples. A similar pattern can be found in the three of them. Participants who read texts stating that the crisis affected people for causes beyond their control (luck and social background) showed the

[38] The t-test for the Swiss sample include only the control and treatment groups. Including the priming group in the analysis still shows significant results ($F(5,1034) = 3.72$, $p = 0.002$).

highest level of support for redistribution. Participants who read the text that attributed the cause of suffering the effects of the crisis to lack of effort tended to show a somewhat lower level of support for redistribution. Finally, participants who were informed that the crisis especially affected people who had speculative behaviour chose the lowest level of support for redistribution.

I now move onto the analysis of the effects of each frame separately. Specifically, I test whether being exposed to each treatment increases or decreases support for redistribution (hypotheses H1a to H2b). I compare support for redistribution in each treatment to the level of support among participants that were allocated to the control group. To do so, I rely on a regression analysis in which the dependent variable is regressed on the treatment conditions, using the control group as the reference category. Table 5.06 shows the results. Figure 5.02 illustrates the average marginal effect of being exposed to each treatment as compared to not being exposed to any treatment.

Framing participants about the role of factors beyond individual control slightly increased support for redistribution. However, the effect was rather limited and not statistically significant at conventional levels. Participants exposed to the luck frame increased their support for redistribution in all samples. The increase was small, between 0.1 and 0.31 points. Similarly, participants exposed to the social background frame showed higher support for redistribution in all samples. The differences were small, especially in the Spanish samples (0.07 and 0.36 points respectively). They were slightly greater in the Swiss sample (0.46 points). The difference was not statistically insignificant in any sample. Hence, we cannot confirm hypotheses H1a nor H1b. Framing respondents about the role of factors beyond individual control in determining the impact of the crisis does not lead to a significant increase in support for redistribution.

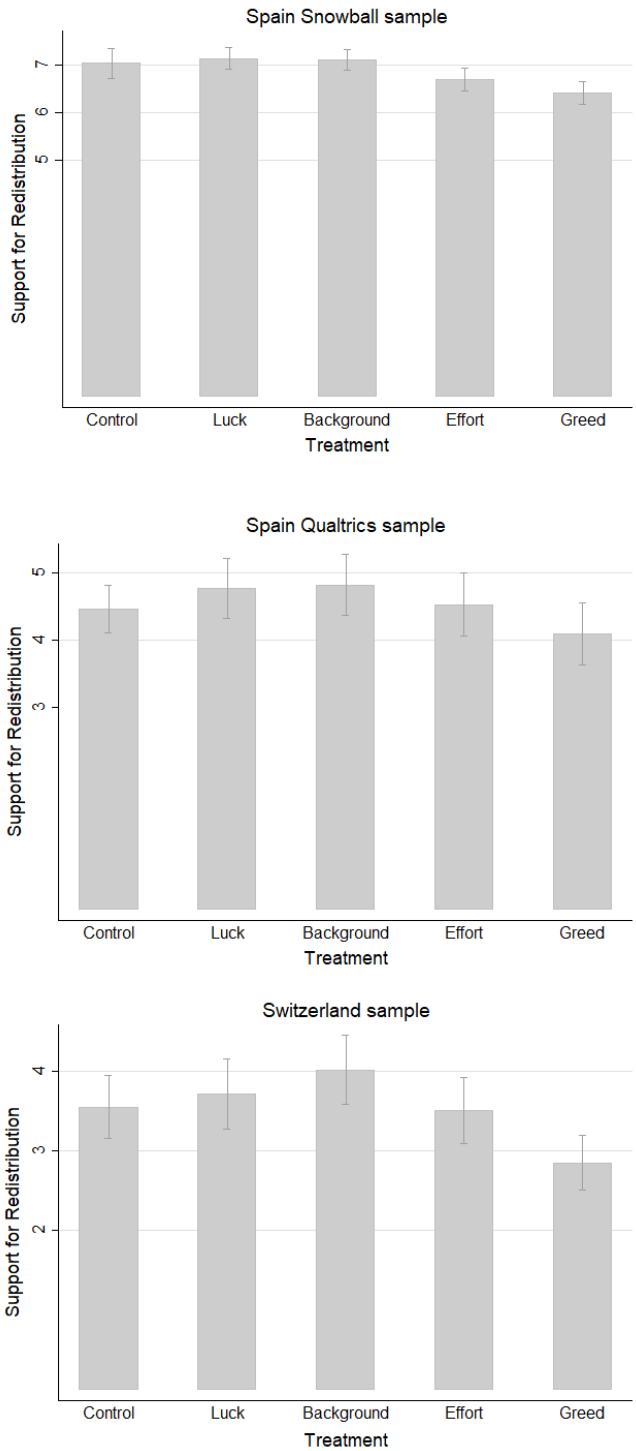



**Figure 5.01.** Average support for redistribution by treatment and sample

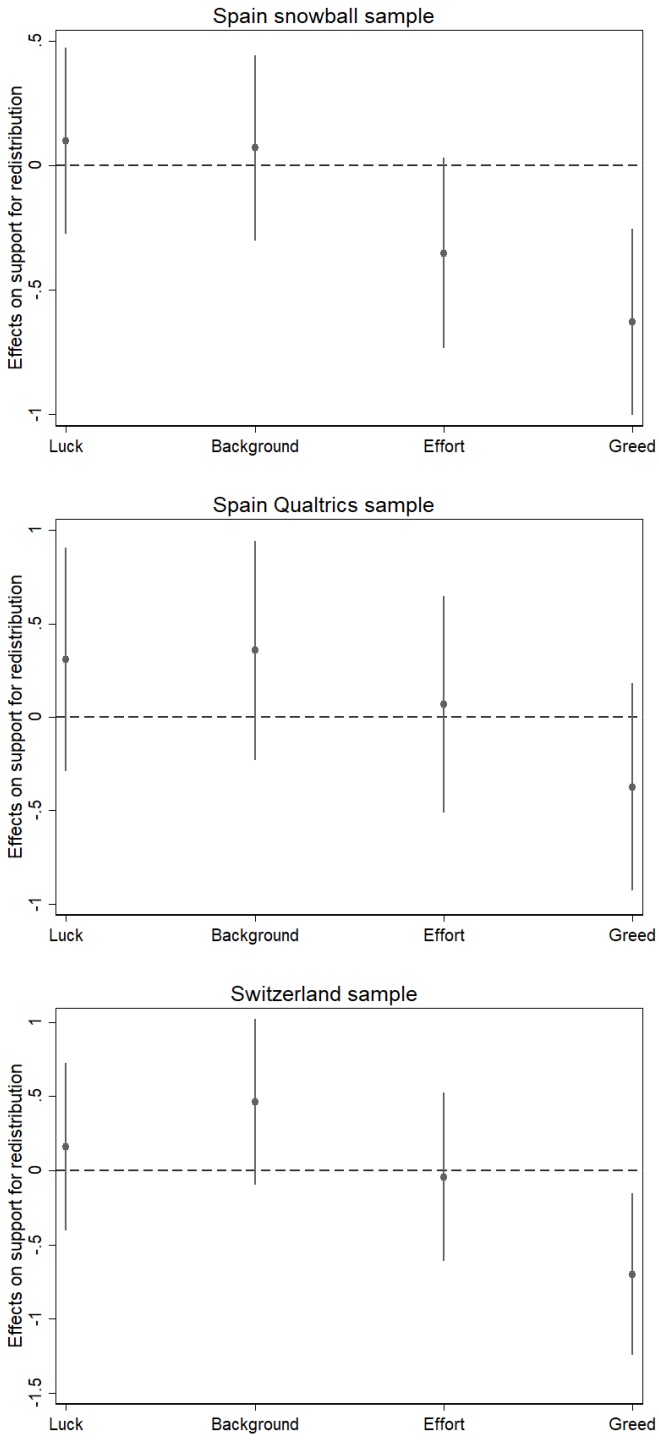



**Figure 5.02.** Treatments' marginal effect relative to control group by sample

**Table 5.06:** Framing effects relative to the control group

| | Spain Snowball | Spain Qualtrics | Switzer-land |
|---|---|---|---|
| **Treatment (ref: control group)** | | | |
| **Luck** | 0.10 | 0.31 | 0.16 |
| | (0.19) | (0.31) | (0.29) |
| **Background** | 0.07 | 0.36 | 0.46 |
| | (0.19) | (0.30) | (0.28) |
| **Effort** | -0.35$^{+}$ | 0.07 | -0.04 |
| | (0.20) | (0.30) | (0.29) |
| **Greed** | -0.63$^{**}$ | -0.37 | -0.70$^{*}$ |
| | (0.19) | (0.28) | (0.28) |
| **Priming** | | | -0.03 |
| | | | (0.27) |
| **Constant** | 7.05$^{***}$ | 4.46$^{***}$ | 3.55$^{***}$ |
| | (0.15) | (0.17) | (0.20) |
| **$R^2$** | 0.014 | 0.008 | 0.018 |
| **N** | 2020 | 820 | 1040 |

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

Exposing participants to frames about the role of factors under individual control had mixed effects. Participants exposed to the lack of effort frame showed a negligible difference in their support for redistribution compared to the control group in the Spain Qualtrics and the Switzerland samples (under 0.1 points of difference in both cases). However, in the Spanish snowball sample, these participants reduced their support by 0.35 points, a reduction which was significant at the 90% confidence level. Hence, hypothesis H2a cannot be accepted when using the standard 95% confidence level.

In contrast, participants exposed to the greed frame notably reduced their level of support in all samples. The reduction was of over 0.6 points in the Spain snowball and in the Swiss samples. These reductions were statistically significant at the 99% and 95% confidence level respectively. The difference was lower (-0.37 points) and not statistically significant at conventional levels in the Spain Qualtrics sample. Hypotheses H2b cannot be rejected in the Spain snowball and the Swiss samples. In the Spain Qualtrics sample the results go in the expected direction but are not significant at conventional levels.

Framing people about the role of factors under individual control in determining the impact of the crisis may reduce their support for redistribution. However, different frames have different effects: frames about the role of lack of effort do not significantly decrease support for redistribution. Conversely, frames about the role of past greedy behaviour does seem to reduce support for redistribution.

**Table 5.07.** Cumulative effects exposure to opposite frames

| | Spain Snowball | | | |
|---|---|---|---|---|
| | **Contrast** | **Std. Err.** | **t** | **P>t** |
| **Background vs Luck** | -0.028 | 0.162 | -0.170 | 1.000 |
| **Effort vs Luck** | -0.452 | 0.169 | -2.680 | **0.057** |
| **Greed vs Luck** | -0.728 | 0.163 | -4.460 | **0.000** |
| **Effort vs Background** | -0.424 | 0.168 | -2.520 | **0.086** |
| **Greed vs Background** | -0.700 | 0.163 | -4.310 | **0.000** |
| **Greed vs Effort** | -0.276 | 0.169 | -1.640 | 0.475 |
| | **Spain Qualtrics** | | | |
| | **Contrast** | **Std. Err.** | **t** | **P>t** |
| **Background vs Luck** | 0.05 | 0.35 | 0.14 | 1.000 |
| **Effort vs Luck** | -0.24 | 0.35 | -0.69 | 0.959 |
| **Greed vs Luck** | -0.68 | 0.34 | -2.01 | 0.261 |
| **Effort vs Background** | -0.29 | 0.35 | -0.84 | 0.917 |
| **Greed vs Background** | -0.73 | 0.33 | -2.19 | 0.183 |
| **Greed vs Effort** | -0.44 | 0.33 | -1.33 | 0.671 |
| | **Switzerland** | | | |
| | **Contrast** | **Std. Err.** | **t** | **P>t** |
| **Background vs Luck** | 0.30 | 0.29 | 1.04 | 0.836 |
| **Effort vs Luck** | -0.20 | 0.30 | -0.68 | 0.961 |
| **Greed vs Luck** | -0.86 | 0.29 | -3.00 | **0.023** |
| **Effort vs Background** | -0.50 | 0.29 | -1.72 | 0.421 |
| **Greed vs Background** | -1.16 | 0.28 | -4.12 | **0** |
| **Greed vs Effort** | -0.66 | 0.29 | -2.28 | 0.152 |

It is also interesting to analyse the cumulative effect of exposing different participants to opposite frames. I conducted an ANOVA analysis followed by a Tukey post-hoc test. The results can be seen in Table 5.07. As predicted by hypothesis H3d, participants exposed to the greed frame show significantly lower support for redistribution than those exposed to the frames linking the effects of the crisis to factors beyond individual control. The difference is significant in the Spain Qualtrics and in the Switzerland samples. In the Spain Qualtrics sample, the difference is not statistically significant, although it does go in the expected direction.

The lack of effort treatment consistently generates lower support for redistribution than the luck and the social background treatments in all samples. However, the difference is only statistically significant in the Spain snowball sample and using a 10% confidence interval. Consequently, hypotheses H3a and H3b cannot be accepted, since the luck and the social background frames only generate statistically higher support for redistribution than the two factors under individual control in the Spanish sample and under a 10% confidence level.

## 5.7 Conclusion

In this chapter I have shown how people's attitudes towards redistribution can be influenced by fairness considerations in times of economic crises. In the previous chapter, I used a lab experiment to show that preferences for redistribution in a context of an artificially created income shock were influenced by the actual causes of the income loss. Here, I have demonstrated that redistributive preferences in times of crisis are not only influenced by material circumstances. They can also be influenced by frames that mobilise crisis-specific fairness considerations.

I have shown the effects of crisis-related frames using a contextually rich vignette experiment in which participants were informed about what leads some people to suffer the negative consequences of the crisis at a personal level. As in the lab, I included factors within and beyond individual control (bad luck, social background, lack of effort and past greedy behaviour).

Consistently with the lab findings, results show that fairness considerations influence people's preferences. In this case, individuals framed about the role of factors beyond the individual control on shaping people's experience of the crisis systematically showed higher support for redistribution than those framed about the role of factors under the individual control.

Results also reveal that not all fairness-related frames were equally able to influence people's preferences. The experiment design allowed a comparison of the independent effect of the different frames. In all samples, the greedy behaviour frame had more of an effect on people's preferences for redistribution than any other frame. It systematically reduced support for redistribution. Interestingly, both frames highlighting the role of circumstances beyond individual control had a comparatively more moderate effect. This is an important finding. It suggests that elites aiming at eroding popular support for redistribution were more likely to influence public opinion through crisis-related frames than elites aiming to increase support for redistribution. They could do so by describing the crisis as having the most negative effects on people who speculated during the years of economic growth.

Interestingly, while the two frames that highlight factors beyond individual control tend to generate similar support for redistribution, there is a notable difference in the effects of the two frames highlighting the two factors under individual control. Again, this is consistent with the lab findings. However, as we have already seen, in the survey experiment the greed frame had a greater and more consistent effect than

the lack of effort frame. This contrasts with the results from the lab experiment. In the lab, participants showed lower support for redistribution for losses caused by lack of effort than for past greedy behaviour.

This difference suggests that not only the cause leading to the negative shock being experienced matters. Other features of the frame can also be important. In the survey experiment, the two frames linked to factors beyond individual control refer to different groups as the most affected. One group was formed by people who did not want to make an effort to continue their studies. The other group was formed by people who decided to speculate in sectors such as real estate. The frames pointed to different causes (lack of effort and past speculative behaviour). However, people exposed to these frames could infer that the first group was mainly formed by people from a relatively lower socioeconomic status, while the second was formed by people from a relatively higher status. This may also have influenced the impact of the different frames. For instance, participants could have attributed greater responsibility for their own situation to people who speculated than to people who did not study. Further research could look at how different frames pointing to the same cause for an income shock may lead to differing levels of support for redistribution. Similarly, it could analyse how the same cause (i.e. lack of effort) is applied differently when attributed to different social groups.

The experiment was replicated using three different samples. The general pattern was similar in all samples: higher support for redistribution was found among participants exposed to frames that highlighted the role of factors beyond individual control than among those exposed to factors under individual control. Additionally, participants exposed to the greedy behaviour frames expressed lower support for redistribution in all cases. However, some differences between the samples were found. In particular, the effect of the frames for lack of effort was notably higher in the Spain snowball sample, while the effect of social background was higher in the Swiss sample. Further research could explore the causes of these variations. Related to this, further analysis could be carried out on the heterogeneous effects of deservingness-related framing practices along sociodemographic and ideological characteristics such as gender and left-right self-placement, which are known to influence people's support for redistribution.

# Chapter 6

# Conclusion

In this thesis, I have analysed how citizens' preferences for redistribution can be affected by the context of an economic crisis. This is a relevant topic because such crises periodically occur in capitalist societies. In recent years, the Great Recession implied a massive economic shock for millions of people around the globe. In that context, redistributive issues occupied a central position in the public debate on how to address the situation. However, citizens' responses to the crisis differed from what many theories predicted, and there were not overwhelming shifts in public opinion. Nevertheless, this does not imply that the crisis did not influence citizens' preferences for redistribution in different ways. This work explores some of the ways in which a crisis context can affect citizens' redistributive preferences. While the focus of this thesis is on the Great Recession and its consequences, the findings can be generalised to other contexts of economic crises.

I have defined two specific research questions First, I have surveyed how changes in personal economic circumstances during the economic crisis affected people's demand for progressive taxation. Second, I have analysed how crisis-specific fairness perceptions of the distribution of the effects of the crisis can influence people's support for redistribution towards crisis losers. The results show that, in times of economic shock, both changes in individuals' material circumstances and their evaluations of the fairness of the effects of the crisis can affect people's support for redistribution.

## 6.1 Changes in personal economic circumstances and support for progressive taxation in times of crisis

I have analysed how the role of changes in personal material circumstances in the context of an economic crisis can affect the public's redistributive preferences. More specifically, I have studied how European citizens' experiences with the Great Recession influenced their support for one specific redistributive policy: progressive taxation.

The focus on progressive taxation is an important aspect of my research. As I have argued in the theoretical section (Chapter 3), the literature tends to refer to very different things when analysing preferences for redistribution. I have argued that redistributive preferences are multidimensional. Research has shown that citizens can have different preferences towards various redistributive policies. Similarly, research has also shown that the influence of various factors can vary across different redistributive policies. Consequently, I have claimed that it is important to not only study public support for redistribution as a broad category, but to also analyse citizens' preferences for specific redistributive policies, such as tax progressivity, targeted assistance programmes for the poor, or contribution-based benefits. In this context, studies on preferences for redistribution via taxation are important because preferences for the revenue side of redistribution have been traditionally underexplored, especially in comparison to preferences for redistribution as a whole or preferences for the spending side of redistribution.

My analysis reveals that those individuals who declared that their economic situation worsened during the crisis tended to show higher support for progressive taxation. However, the overall level of association was moderate. Interestingly, this was partly due to the heterogeneous effects of worsening economic circumstances on individuals' preferences. Among those whose situation worsened, only citizens on the right of the political spectrum and those who were not optimistic about their economic prospects showed increased levels of support for tax progressivity. In contrast, left-leaning citizens and those who considered that the setback they suffered was only temporary did not show higher support for redistribution.

This chapter contributes to the scarce but growing literature on preferences for tax progressivity. It shows how such preferences can be influenced by changes in personal economic circumstances in times of crisis. The research is focussed on one aspect of tax progressivity: support for progressive taxation; that is, whether citizens prefer progressive taxation more than other forms of taxation (i.e. proportional or regressive). Further research could investigate the effect of changing personal

economic circumstances on other aspects of tax progressivity, such as the desired level and the structure of progressivity (i.e. support for either raising taxes on the very rich or for reducing taxes on the poor and middle class).

## 6.2 Fairness considerations and support for redistribution in times of crisis

In chapters 4 and 5, I have analysed the impact of citizens' interpretations of the crisis on their preferences for redistribution. In this case, the analysis has focussed on the effects of fairness considerations in times of crisis on preferences for redistribution towards crisis losers.

I have discussed fairness considerations –a key concept in my thesis– in the theoretical section (Chapter 2). I have shown that fairness considerations are a specific type of social consideration that refer to a procedural evaluation of inequalities. Fairness considerations are based on citizens' judgment that some inequalities are fairer than others, depending on their origins. This judgment leads citizens to support a higher level of redistribution to address inequalities that are deemed to be the result of unfair factors. I have also shown that the literature on fairness often does not make a clear distinction between fair and unfair inequalities. It frequently conceptualises fair inequalities as those arising from differences in effort and unfair inequalities as those caused by luck.

In this thesis, the distinction between inequalities perceived as fair and those perceived as unfair is based on the notion of individual control. According to this conceptualisation, citizens perceive as fairer those inequalities that arise from factors under individual control than those caused by factors beyond their control. Having this clear conceptualisation has allowed me to extend the traditional distinction between inequalities caused by luck and effort to other sources of inequality. In my analysis, and unlike most of the literature, I have used four different sources of inequality: two factors beyond individual control (luck and social background) and two factors under individual control (lack of effort and past greedy behaviour). This distinction has enabled me to test not only the difference between fair and unfair factors, but also the difference between various fair factors and between various unfair factors.

The research strategy combines two different types of experiment: an economically incentivised laboratory experiment (chapter 4); and a vignette-based survey experiment administered online (chapter 5). First, I have analysed whether fairness

considerations, which have been found to affect citizens' support for redistribution when applied to income gains or to specific situations of need, apply when citizens evaluate situations of income shock. I have relied on an original economically incentivised laboratory experiment. After participants received an initial endowment, I created an artificial income shock that affected some of the participants. Next, I asked participants to decide which level of redistribution they supported depending on what caused the income shock. This specific design has enabled me to use a within-individuals analysis to measure how participants' redistribution towards income losers changes depending on what caused the shock. Furthermore, it has allowed me to assess not only how fairness considerations affected participants' decisions as an unaffected third party, but also how fairness considerations interacted with other motives, namely self-interest and insurance motives.

Results show that fairness considerations do influence individuals' support for redistribution in contexts of income shock. Participants supported higher redistribution for losses caused by factors beyond individual control (luck or social background) than for losses caused by factors under individual control (lack of effort and past greedy behaviour). Interestingly, the two factors beyond individual control raised very similar support for redistribution. In contrast, a noticeable difference can be found in support for redistribution between the two factors under individual control. Although in both cases the redistribution was lower than for factors beyond the individual control, lack of effort led to considerably lower support for redistribution than past greedy behaviour.

Results from this experiment also show that fairness considerations continue to influence individuals' support for redistribution when self-interest or insurance motives are primed. Under these circumstances, individuals tended to choose higher tax rates for losses caused by factors beyond individual control, even if that implied sacrificing their self-interest. It is worth noting, though, that both motives interacted. For example, a reduced number of participants who had already shown a tendency to prioritise their own interest in a public good game were not influenced by fairness considerations and did not choose high redistribution to compensate losses caused by greedy behaviour. This indicates that there is a proportion of the population for which fairness considerations can become completely cancelled if they clash with self-interest.

The lab experiment shows that fairness considerations referred to a context of income loss can influence individuals' support for redistribution. However, although the lab context maximises internal validity, it is a notably artificial setting. To test

how this type of fairness considerations was able to influence people's redistributive preferences in a real case, I designed a vignette-based survey experiment, which is analysed in chapter 5.

The survey experiment reduces the artificiality of the lab experiment in some important aspects. First, while participants in the lab experiment assessed an artificially generated income shock, those in the survey experiment were asked about their support for redistribution towards the losers of the crisis that had recently affected their countries. The treatments made explicit references to the Great Recession and its distributive consequences. Second, participants in the lab experiment made their decisions in relation to a shock for which they had neutral and complete information of its causes and effects. However, we know that in real-life situations citizens' interpretations of relevant political events are influenced by the discursive practices of relevant political actors. The survey experiment incorporates these discursive practices and tests the role of framing effects. More specifically, the survey experiment investigates how citizens' preferences can be influenced by political actors' framing practices, which mobilised crisis-specific fairness considerations in the aftermath of the Great Recession.

The survey experiment was replicated in Spain and Switzerland. Thus, I analyse the framing effects in one of the countries severely hit by the crisis (Spain) and those in a country where the crisis caused only a moderate recession (Switzerland). Although there were some differences in the experiment's results in the two countries, the general pattern and main findings were similar in both.

In the survey experiment, I randomly exposed participants to different texts indicating that a specific social group had been the most affected by the crisis due to a specific cause. There were four treatment groups. The four causes of being affected by the crisis were the same as in the lab: two factors beyond individual control (bad luck and social background) and two factors under individual control (lack of effort and past greedy behaviour). All the texts replicated descriptions of the crisis' consequences that were available in the public debate in the aftermath of the crisis.

Results show that frames mobilising crisis-specific fairness considerations were able to influence citizens' redistributive preferences in the aftermath of the Great Recession. However, there were noticeable differences in the effects of various frames. The frames that attributed the cause of being affected by the crisis to bad luck or to social background had minor and not statistically significant effects in rising support for redistribution. On the contrary, frames attributing the causes of

being affected by the crisis to factors beyond individual control had mixed effects. The lack of effort frame reduced support, but the reduction was not statistically significant. In contrast, the past greedy behaviour frame caused a sizable and statistically significant reduction in participants' support for redistribution.

The survey experiment reveals that political actors could influence public support for redistribution using crisis-specific frames that activated fairness preferences. Additionally, some frames were more effective than others in shaping citizens' preferences. The frames that highlighted the role of factors beyond individual control had a comparatively lower effect than the frames that highlighted the role of individual choices, especially past greedy behaviour. These findings suggest that the use of fairness frames related to the effects of the crisis was more beneficial for political actors who were interested in eroding support for redistribution than to groups aiming to increase such support.

Combining the lab and survey experiments contributes to the literature on fairness considerations. The combination shows that fairness considerations apply in the context of income loss and that they can be mobilised through framing practices. Whereas the literature shows how fairness preferences applied in other contexts, such as income gains or specific situations of need, this thesis shows how they operate in times of economic crisis.

Additionally, the experiments show that not all factors in the same category have the same effect. Depending on which specific factors are offered as the cause of income loss (i.e. comparing lack of effort and past greedy behaviour), the size of the effect can notably change. In the lab experiment, lack of effort produced lower levels of support for redistribution than past greedy behaviour, while in the survey experiment past greedy behaviour generated the lowest level of support. This difference suggests that not only does the cause of the shock matter, but other aspects of the frame may also be relevant. For example, in the survey experiment, past greedy behaviour was linked to speculative behaviour, while lack of effort was linked to abandoning education or training and opting for easy jobs. Participants might have inferred that such behaviour involved people from different socio-economic groups. This inference might have affected participants' attribution of responsibility to and their solidarity toward those affected by the income loss. Further research could explore in more detail when specific factors within the same category can be more effective in mobilising fairness considerations.

Similarly, my research has shown that citizens tend not to differentiate between shocks caused by brute luck or social background when deciding their level of

support for redistribution toward people affected by an economic shock. Future research may investigate whether individuals distinguish between brute luck and social-background factors in determining their fellow citizens' economic circumstances, or if they only consider social background as a form of brute luck. If individuals differentiate between brute luck and social background, it could be useful to analyse whether and under which circumstances citizens' support varies for redistribution to compensate for losses caused by these factors. Additionally, further research may investigate whether other factors beyond individual control (i.e. gender or ethnic discrimination, being adversely affected by corrupt practices, etc.) are able to raise different levels of support for redistribution.

## 6.3 General conclusion

Overall, this thesis has shown that the contexts of economic crises can influence citizens' preferences for redistribution. On the one hand, I have shown that personal experiences with the crisis can influence such preferences. I have demonstrated that the perception of how one's personal economic circumstances have changed during the crisis is associated with support for a specific redistributive preference: progressive taxation. The association, however, is moderate and not likely to generate important aggregate shifts in public support for progressive taxation.

On the other hand, I have also shown that individuals' interpretations of the crisis and its effects can influence public support for redistribution. I have proven that fairness considerations apply to situations of income loss in the context of economic shocks. Additionally, I have shown that framing what determined how some citizens suffered the negative impact of the crisis can activate fairness considerations and influence public support for redistribution towards crisis losers. Interestingly, I have also shown that in the aftermath of the Great Recession, it was easier to erode support for redistribution using fairness-activating frames than to increase it.

As a general conclusion, this thesis helps to understand how the effects of recessions and economic crises on citizens' redistributive preferences are contingent and malleable. We should not expect recessions to have automatic and homogeneous effects on citizens' preferences for redistribution. However, this does not mean that crises do not affect redistributive preferences. We need to account for the political economy of recessions and their distributive consequences. First, responses to an economic shock at a personal level can be conditional on individual values. And financial expectations. Additionally, the impact of crises on people's redistributive preferences can be affected not only by the characteristics of the crises themselves,

but also by the narratives available in the public debate. These narratives can affect individuals' interpretations of crises and their consequences and influence public support for redistribution

# Appendixes

# Appendix 1

**Table A1.1.** Variables information

| Variable | Observations | Mean | Standard dev. | Min | Max |
|---|---|---|---|---|---|
| **Support for progressivity** | 17,323 | 0.62 | 0.49 | 0 | 1 |
| **Financial expectation** | 17,073 | 5.00 | 2.39 | 0 | 10 |
| **Retrospective relative deprivation** | 17,864 | 5.48 | 2.71 | 0 | 10 |
| **Household income (by household size)** | 15,630 | 3.04 | 1.77 | 0 | 10 |
| **Ideology** | 15,593 | 4.91 | 2.65 | 0 | 10 |
| **Gender (female)** | 18,368 | 0.53 | 0.50 | 0 | 1 |
| **Age** | 18,368 | 44.46 | 14.89 | 18 | 95 |
| **Education level** | 18,368 | 2.08 | 0.74 | 1 | 3 |
| **Political Knowledge** | 18,368 | 2.22 | 1.22 | 0 | 4 |
| **Immigrant origin** | 18,368 | 0.03 | 0.17 | 0 | 1 |
| **Benefit recipient** | 17,471 | 0.30 | 0.46 | 0 | 1 |
| **Unemployed** | 18,368 | 0.12 | 0.32 | 0 | 1 |
| **Union member** | 18,368 | 0.21 | 0.41 | 0 | 1 |
| **Religiosity** | 17,985 | 3.83 | 3.20 | 0 | 10 |

**Table A1.2.** Question wording and coding

| Variable | Wording |
|---|---|
| **Tax progressivity** | Please think of two people, where one is earning twice as much as the other. Which of the three following statements comes closest to how you think they should be taxed? *Both should pay the same amount of money in tax; Both should pay the same share of earnings in tax; Higher earner should pay a larger share of earnings in tax* (Recoded) |
| **Retrospective relative deprivation** | On a scale from 0 to 10 where 0 means 'Much worse' and 10 means 'Much better' would you say that the economic situation of your household now is better or worse to how it was 5 years ago? (Recoded inverting the order of responses: high values mean respondents perceive their current situation as worse than 5 years earlier) |
| **Financial expectation** | On a scale from 0 to 10 where 0 means 'Much worse' and 10 means 'Much better' do you expect the financial situation of your household in the near future to be better or worse than it is now? |
| **Household income** | What is your household's MONTHLY income, after tax and compulsory deductions, from all sources? If you don't know the exact figure, please give your best estimate. (Recoded adjusting for household size) |
| **Ideology** | People sometimes talk about the Left and the Right in politics. Where would you place yourself on the following scale where 0 means 'Left' and 10 means 'Right'? |
| **Political Knowledge** | Can you tell who the person in this picture is? *José Manuel Durão Barroso, former President of the European Commission; Thorbjørn Jagland, Secretary General of the Council of Europe; Donald Tusk, President of the European Council; Jean Claude Juncker, current President of the European Commission*<br>What does public deficit mean? *The lack of public service provision; The money the government owes to its creditors; The money the government fails to collect due to tax fraud; The difference between government receipts and government spending*<br>Who sets the interest rates applicable in [country]? *The government of [country]; The International Monetary Fund; The European Central Bank; The Central Bank of [country]*<br>As a percentage, what do you think is the current unemployment rate in [country]? (Please type a whole number in the box below, excluding any symbols) |
| **Age** | What is your age? |
| **Gender** | Are you male or female? |
| **Education** | What is the highest level of education that you have completed? If your qualification is not listed please select the level that most closely resembles your highest classification. Country specific responses. (Recoded) |
| **Unemployed** | Which of these descriptions BEST applies to what you have been doing for the last 7 days? |
| **Immigrant** | Are you a citizen of this country? |
| **Union member** | Please look carefully at the following list of organisations. For each of them, please tell which, if any, you belong to and which, if any, you are currently doing unpaid work for? |
| **Religiosity** | Regardless of whether you belong to a particular religion, how religious would you say you are on a scale from 0 to 10 where 0 means Not at all religious and 10 means Extremely religious? |

**Table A1.3.** Respondents by country

| Country | Observations |
|---|---|
| **France** | 2,027 |
| **Germany** | 2,108 |
| **Greece** | 2,048 |
| **Italy** | 2,040 |
| **Poland** | 2,024 |
| **Spain** | 2,035 |
| **Sweden** | 2,018 |
| **Switzerland** | 2,046 |
| **UK** | 2,022 |
| **Total** | 18,368 |

**Table A1.4.** Ordered logit and logit model with errors clustered by region

| | (1)<br>Ologit | (2)<br>Logit Clustered by Region |
|---|---|---|
| Retrospec rel. depriv. | 0.05*** | 0.04** |
| | (0.01) | (0.01) |
| Financial expectation | -0.02+ | -0.02 |
| | (0.01) | (0.01) |
| Ideology | -0.15*** | -0.15*** |
| | (0.01) | (0.01) |
| Household income | -0.02 | -0.02 |
| | (0.02) | (0.02) |
| Female | -0.04 | -0.05 |
| | (0.05) | (0.05) |
| Age | 0.02 | 0.02 |
| | (0.01) | (0.01) |
| Age squared | 0.00 | 0.00 |
| | (0.00) | (0.00) |
| Education (ref. less than secondary) | | |
| Secondary | -0.12+ | -0.17* |
| | (0.07) | (0.07) |
| University | -0.20** | -0.24** |
| | (0.07) | (0.08) |
| Political knowledge | 0.15*** | 0.13*** |
| | (0.03) | (0.02) |
| Immigrant | -0.10 | -0.11 |
| | (0.17) | (0.13) |
| Benefit recipient | -0.02 | -0.00 |
| | (0.06) | (0.06) |
| Unemployed | 0.06 | 0.07 |
| | (0.09) | (0.09) |
| Union member | -0.19** | -0.14* |
| | (0.06) | (0.07) |
| Religiosity | 0.03*** | 0.04*** |
| | (0.01) | (0.01) |
| Country fixed effects | Yes | Yes |
| _cons | | 0.55+ |
| | | (0.30) |
| Cut1 Constant | -3.29*** | |
| | (0.31) | |
| Cut2 Constant | -0.45 | |
| | (0.30) | |
| Pseudo $R^2$ | 0.064 | 0.075 |
| N | 12299 | 12299 |

Robust standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Model 1 reproduces the analysis using an ordered logit model with the non-recoded dependent variable. Model 2 reproduces the analysis using a logit model with errors clustered by region.

**Table A1.5.** Regression models predicting respondents' retrospective relative deprivation and financial expectations

| | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| | Financial expectations | | Retros. rel. deprivation | |
| Ideology | -0.00 | 0.01 | -0.02 | -0.02+ |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| Close to party in government | | 0.61*** | | -0.49*** |
| | | (0.06) | | (0.06) |
| Household income | 0.20*** | 0.18*** | -0.41*** | -0.39*** |
| | (0.02) | (0.02) | (0.02) | (0.02) |
| Female | 0.02 | 0.01 | 0.07 | 0.08 |
| | (0.05) | (0.05) | (0.05) | (0.05) |
| Age | -0.06*** | -0.06*** | 0.10*** | 0.10*** |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| Age squared | 0.00* | 0.00* | -0.00*** | -0.00*** |
| | (0.00) | (0.00) | (0.00) | (0.00) |
| Education (Ref. Less than second.) | | | | |
| Secondary | 0.09 | 0.09 | 0.01 | 0.00 |
| | (0.07) | (0.07) | (0.07) | (0.07) |
| University | 0.03 | 0.05 | 0.03 | 0.01 |
| | (0.07) | (0.07) | (0.08) | (0.08) |
| Political Knowledge | 0.03 | 0.03 | 0.03 | 0.03 |
| | (0.02) | (0.02) | (0.03) | (0.03) |
| Immigrant | 0.46** | 0.49** | -0.33 | -0.35 |
| | (0.15) | (0.15) | (0.21) | (0.22) |
| Benefit recipient | 0.08 | 0.05 | 0.20** | 0.22*** |
| | (0.06) | (0.06) | (0.07) | (0.07) |
| Unemployed | -0.24* | -0.24* | 0.81*** | 0.81*** |
| | (0.10) | (0.10) | (0.08) | (0.08) |
| Union member | 0.01 | 0.01 | -0.12+ | -0.12+ |
| | (0.06) | (0.06) | (0.06) | (0.06) |
| Religiosity | 0.05*** | 0.04*** | -0.04*** | -0.04*** |
| | (0.01) | (0.01) | (0.01) | (0.01) |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Constant | 5.77*** | 5.69*** | 4.14*** | 4.21*** |
| | (0.24) | (0.24) | (0.26) | (0.26) |
| $R^2$ | 0.164 | 0.177 | 0.290 | 0.296 |
| N | 12663 | 12663 | 13082 | 13082 |

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

Models 1 and 2 predict respondents' financial expectations. Models 3 and 4 predict respondents' retrospective relative deprivation.

"Close to party in government" is a dichotomous variable. It measures whether respondents feel close to a party in government at the time of the survey. It includes feeling close to any party in a coalition government.

**Table A1.6.** Logistic regression models predicting support for progressive taxation controlling by closeness to party in government

| | (1) | (2) | (3) |
|---|---|---|---|
| Retrospec rel. depriv. | 0.04*** | 0.09*** | -0.01 |
| | (0.01) | (0.02) | (0.02) |
| Financial expectation | -0.02 | 0.03 | -0.02 |
| | (0.01) | (0.02) | (0.01) |
| Ideology | -0.15*** | -0.16*** | -0.21*** |
| | (0.01) | (0.01) | (0.02) |
| Retro. rel. dep. * Financial expectation | | -0.01* | |
| | | (0.00) | |
| Retro. rel. dep. * Ideology | | | 0.01** |
| | | | (0.00) |
| Close to party in government | -0.09 | -0.09 | -0.09 |
| | (0.06) | (0.06) | (0.06) |
| Household income | -0.02 | -0.02 | -0.02 |
| | (0.02) | (0.02) | (0.02) |
| Female | -0.05 | -0.05 | -0.05 |
| | (0.06) | (0.06) | (0.06) |
| Age | 0.02 | 0.01 | 0.02 |
| | (0.01) | (0.01) | (0.01) |
| Age squared | 0.00 | 0.00 | 0.00 |
| | (0.00) | (0.00) | (0.00) |
| Education (ref. less than secondary) | | | |
| Secondary | -0.17* | -0.16* | -0.17* |
| | (0.07) | (0.07) | (0.07) |
| University | -0.24*** | -0.24** | -0.24*** |
| | (0.07) | (0.07) | (0.07) |
| Political Knowledge | 0.13*** | 0.13*** | 0.13*** |
| | (0.03) | (0.03) | (0.03) |
| Immigrant | -0.12 | -0.13 | -0.13 |
| | (0.19) | (0.19) | (0.19) |
| Benefit recipient | 0.00 | -0.00 | 0.00 |
| | (0.06) | (0.06) | (0.06) |
| Unemployed | 0.07 | 0.07 | 0.08 |
| | (0.09) | (0.09) | (0.09) |
| Union member | -0.14* | -0.14* | -0.14* |
| | (0.06) | (0.06) | (0.06) |
| Religiosity | 0.04*** | 0.04*** | 0.04*** |
| | (0.01) | (0.01) | (0.01) |
| Country fixed effects | Yes | Yes | Yes |
| Constant | 0.20 | -0.10 | 0.49+ |
| | (0.29) | (0.30) | (0.29) |
| Pseudo $R^2$ | 0.075 | 0.075 | 0.076 |
| N | 12299 | 12299 | 12299 |

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

**Table A1.7.** Logistic regression predicting support for progressive taxation by country

| | Fra | Ger | Gre | Ita | Pol | Spa | Swe | Swi | UK |
|---|---|---|---|---|---|---|---|---|---|
| Retrospective relative deprivation | 0.10** | 0.10** | 0.07 | 0.07+ | 0.04 | 0.01 | 0.03 | -0.04 | -0.02 |
| | (0.04) | (0.04) | (0.05) | (0.04) | (0.03) | (0.03) | (0.03) | (0.06) | (0.03) |
| Financial expectation | 0.05 | 0.02 | 0.03 | -0.05 | -0.06+ | 0.00 | 0.01 | -0.02 | -0.13** |
| | (0.04) | (0.04) | (0.04) | (0.04) | (0.03) | (0.03) | (0.03) | (0.06) | (0.04) |
| Ideology | -0.10*** | -0.16*** | -0.11** | -0.12*** | -0.05+ | -0.18*** | -0.31*** | -0.10* | -0.28*** |
| | (0.02) | (0.03) | (0.04) | (0.03) | (0.03) | (0.03) | (0.03) | (0.04) | (0.03) |
| Household income | -0.09* | -0.04 | 0.04 | 0.02 | -0.10* | 0.12** | -0.05 | -0.02 | 0.01 |
| | (0.04) | (0.04) | (0.08) | (0.06) | (0.05) | (0.04) | (0.04) | (0.07) | (0.04) |
| Female | -0.09 | -0.23+ | 0.18 | -0.06 | 0.30* | -0.05 | -0.01 | -0.27 | -0.14 |
| | (0.13) | (0.14) | (0.22) | (0.15) | (0.15) | (0.13) | (0.13) | (0.23) | (0.15) |
| Age | -0.04 | 0.04 | 0.06 | -0.03 | 0.04 | 0.01 | -0.05+ | 0.09* | -0.00 |
| | (0.03) | (0.03) | (0.05) | (0.03) | (0.03) | (0.03) | (0.03) | (0.04) | (0.03) |
| Age squared | 0.00+ | -0.00 | -0.00 | 0.00+ | -0.00 | 0.00 | 0.00** | -0.00 | 0.00 |
| | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |
| Education (ref. less than secondary) | | | | | | | | | |
| Secondary | -0.19 | -0.35+ | -0.43 | -0.16 | -0.44* | -0.02 | 0.30+ | 0.19 | -0.36+ |
| | (0.16) | (0.20) | (0.31) | (0.18) | (0.20) | (0.17) | (0.17) | (0.25) | (0.19) |
| University | -0.18 | -0.23 | -0.80* | -0.38+ | -0.41+ | -0.36* | 0.13 | -0.11 | -0.15 |
| | (0.17) | (0.22) | (0.35) | (0.22) | (0.23) | (0.16) | (0.17) | (0.27) | (0.20) |
| Political knowledge | 0.09 | 0.28*** | 0.18+ | 0.14* | 0.09 | 0.12* | 0.14* | 0.02 | 0.05 |
| | (0.05) | (0.07) | (0.10) | (0.07) | (0.08) | (0.06) | (0.07) | (0.10) | (0.07) |
| Immigrant | 0.63 | 0.06 | -0.19 | 1.02 | 0.00 | -0.54 | -0.27 | -0.18 | -0.20 |
| | (0.61) | (0.36) | (0.65) | (1.12) | (.) | (0.35) | (0.53) | (0.29) | (0.61) |
| Benefit recipient | 0.03 | -0.24 | 0.24 | -0.36+ | -0.12 | 0.08 | 0.03 | 0.13 | 0.06 |
| | (0.15) | (0.16) | (0.22) | (0.20) | (0.17) | (0.15) | (0.14) | (0.22) | (0.19) |
| Unemployed | -0.05 | -0.42 | 0.40+ | 0.12 | -0.01 | 0.32+ | -0.32 | -0.71+ | 0.44 |
| | (0.25) | (0.36) | (0.23) | (0.22) | (0.25) | (0.19) | (0.34) | (0.41) | (0.40) |
| Union member | -0.35* | 0.18 | -0.12 | -0.44** | -0.40* | -0.14 | -0.06 | -0.04 | -0.03 |
| | (0.17) | (0.19) | (0.28) | (0.16) | (0.18) | (0.17) | (0.14) | (0.22) | (0.18) |
| Religiosity | -0.05* | 0.03 | 0.05 | 0.05* | 0.07** | 0.01 | 0.04+ | 0.09** | 0.01 |
| | (0.02) | (0.02) | (0.03) | (0.03) | (0.03) | (0.02) | (0.02) | (0.03) | (0.02) |
| Constant | 0.99 | -1.22+ | -1.13 | 1.23 | -0.75 | 0.69 | 1.47+ | -1.76+ | 2.54** |
| | (0.79) | (0.73) | (1.00) | (0.78) | (0.76) | (0.78) | (0.76) | (1.06) | (0.92) |
| Pseudo $R^2$ | 0.051 | 0.068 | 0.050 | 0.086 | 0.064 | 0.052 | 0.137 | 0.076 | 0.094 |
| N | 1323 | 1414 | 1479 | 1355 | 1272 | 1524 | 1399 | 1301 | 1231 |

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

**Table A1.8.** Retrospective relative deprivation effects on attitudes toward other redistributive issues

| | (1) Tax prog. Logit | (2) Tax and spend OLS | (4) Gove. Respons. OLS |
|---|---|---|---|
| Retrospective relative deprivation | 0.04*** | -0.06*** | 0.11*** |
| | (0.01) | (0.02) | (0.02) |
| Financial expectation | -0.02 | -0.00 | -0.07*** |
| | (0.01) | (0.02) | (0.02) |
| Ideology | -0.15*** | -0.28*** | -0.21*** |
| | (0.01) | (0.01) | (0.02) |
| Household income | -0.02 | -0.11*** | -0.16*** |
| | (0.02) | (0.02) | (0.02) |
| Female | -0.05 | -0.17** | -0.04 |
| | (0.06) | (0.07) | (0.08) |
| Age | 0.02 | 0.01 | 0.00 |
| | (0.01) | (0.01) | (0.01) |
| Age squared | 0.00 | -0.00 | -0.00 |
| | (0.00) | (0.00) | (0.00) |
| Education (ref. less than secondary) | | | |
| Secondary | -0.17* | 0.15+ | -0.15 |
| | (0.07) | (0.09) | (0.10) |
| University | -0.24** | 0.29** | -0.20* |
| | (0.07) | (0.09) | (0.10) |
| Political knowledge | 0.13*** | 0.03 | -0.17*** |
| | (0.03) | (0.03) | (0.04) |
| Immigrant | -0.11 | -0.12 | 0.39 |
| | (0.19) | (0.19) | (0.28) |
| Benefit recipient | -0.00 | 0.67*** | 0.22* |
| | (0.06) | (0.08) | (0.09) |
| Unemployed | 0.07 | 0.08 | 0.43*** |
| | (0.09) | (0.11) | (0.13) |
| Union member | -0.14* | 0.70*** | 0.39*** |
| | (0.06) | (0.08) | (0.09) |
| Religiosity | 0.04*** | 0.04*** | 0.08*** |
| | (0.01) | (0.01) | (0.01) |
| Country fixed effects | Yes | Yes | Yes |
| Constant | 0.55+ | 5.12*** | 6.31*** |
| | (0.31) | (0.43) | (0.46) |
| Pseudo R2 | 0.075 | | |
| R2 | | 0.153 | 0.181 |
| N | 12299 | 12270 | 12429 |

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

Model 1 measures support for tax progressivity as a recoded dichotomous variable.

Model 2 measures support for increasing taxation and social benefits and services. Respondents were asked to position themselves in a scale from 0 to 10 in which 0 meant "Government should decrease taxes a lot and spend much less on social benefits and services" and 10 meant "Government should increase taxes a lot and spend much more on social benefits and services."

Model 3 measures support for government responsibility in ensuring everyone is provided for. Respondents were asked to position themselves in a scale from 0 to 10 in which 0 meant "People should take more responsibility to provide for themselves" and 10 meant "The government should take more responsibility to ensure that everyone is provided for."

# Appendix 2

## Appendix 2A

**Table A2A.1.** Wilcoxon matched-pairs signed-ranks tests **Table A2A.1.** Wilcoxon matched-pairs signed-ranks tests

| Unaffected: family - luck | | | | Risk: family - luck | | | | Full-info: family - luck | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| sign | obs | sum ranks | expected | sign | obs | sum ranks | expected | sign | obs | sum ranks | expected |
| positive | 53 | 10287.5 | 9675 | positive | 64 | 11170 | 11987.5 | positive | 66 | 11746.5 | 11132.5 |
| negative | 47 | 9062.5 | 9675 | negative | 73 | 12805 | 11987.5 | negative | 56 | 10518.5 | 11132.5 |
| zero | 143 | 10296 | 10296 | zero | 106 | 5671 | 5671 | zero | 121 | 7381 | 7381 |
| z = 0.626; Prob > z = 0.5311 | | | | z = -0.779; Prob > z = 0.436 | | | | z = 0.598; Prob > z = 0.5496 | | | |
| **Unaffected: effort - luck** | | | | **Risk: effort - luck** | | | | **Full-info: effort - luck** | | | |
| sign | obs | ranks | expected | sign | obs | sum ranks | expected | sign | obs | sum ranks | expected |
| positive | 30 | 5437 | 11659 | positive | 56 | 9095.5 | 12952.5 | positive | 43 | 7613 | 11880 |
| negative | 101 | 17881 | 11659 | negative | 101 | 16809.5 | 12952.5 | negative | 92 | 16147 | 11880 |
| zero | 112 | 6328 | 6328 | zero | 86 | 3741 | 3741 | zero | 108 | 5886 | 5886 |
| z = -5.977; Prob > z = 0 | | | | z = -3.601; Prob > z = 0.0003 | | | | z = -4.076; Prob > z = 0 | | | |
| **Unaffected: greed - luck** | | | | **Risk: greed - luck** | | | | **Full-info: greed - luck** | | | |
| sign | obs | sum ranks | expected | sign | obs | sum ranks | expected | sign | obs | sum ranks | expected |
| positive | 48 | 8274.5 | 12040.5 | positive | 85 | 14173 | 13243 | positive | 58 | 10567.5 | 11825.5 |
| negative | 90 | 15806.5 | 12040.5 | negative | 79 | 12313 | 13243 | negative | 76 | 13083.5 | 11825.5 |
| zero | 105 | 5565 | 5565 | zero | 79 | 3160 | 3160 | zero | 109 | 5995 | 5995 |
| z = -3.585; Prob > z = 0.0003 | | | | z = -0.864; Prob > z = 0.3877 | | | | z = -1.203; Prob > z = 0.2289 | | | |
| **Unaffected: effort - family** | | | | **Risk: effort - family** | | | | **Full-info: effort - family** | | | |
| sign | obs | sum ranks | expected | sign | obs | sum ranks | expected | sign | obs | sum ranks | expected |
| positive | 35 | 5932.5 | 12298 | positive | 52 | 9112.5 | 13038 | positive | 39 | 7081 | 11934 |
| negative | 108 | 18663.5 | 12298 | negative | 107 | 16963.5 | 13038 | negative | 97 | 16787 | 11934 |
| zero | 100 | 5050 | 5050 | zero | 84 | 3570 | 3570 | zero | 107 | 5778 | 5778 |
| z = -6.022; Prob > z = 0 | | | | z = -3.658; Prob > z = 0.0003 | | | | z = -4.63; Prob > z = 0 | | | |
| **Unaffected: greed - family** | | | | **Risk: greed - family** | | | | **Full-info: greed - family** | | | |
| sign | obs | sum ranks | expected | sign | obs | sum ranks | expected | sign | obs | sum ranks | expected |
| positive | 45 | 7823.5 | 11987.5 | positive | 90 | 14785 | 13282.5 | positive | 60 | 10872.5 | 12196.5 |
| negative | 92 | 16151.5 | 11987.5 | negative | 75 | 11780 | 13282.5 | negative | 81 | 13520.5 | 12196.5 |
| zero | 106 | 5671 | 5671 | zero | 78 | 3081 | 3081 | zero | 102 | 5253 | 5253 |
| z = -3.968; Prob > z = 0.0001 | | | | z = -1.3948; Prob > z = 0.1632 | | | | z = -1.255; Prob > z = 0.2093 | | | |
| **Unaffected: greed - effort** | | | | **Risk: greed - effort** | | | | **Full-info: greed - effort** | | | |
| sign | obs | sum ranks | expected | sign | obs | sum ranks | expected | sign | obs | sum ranks | expected |
| positive | 67 | 12457.5 | 11488 | positive | 101 | 17195.5 | 12820.5 | positive | 71 | 13479 | 11880 |
| negative | 61 | 10518.5 | 11488 | negative | 53 | 8445.5 | 12820.5 | negative | 64 | 10281 | 11880 |
| zero | 115 | 6670 | 6670 | zero | 89 | 4005 | 4005 | zero | 108 | 5886 | 5886 |
| z = 0.936; Prob > z = 0.3494 | | | | z = 4.094; Prob > z = 0 | | | | z = 1.528; Prob > z = 0.1266 | | | |

**Table A2A.2.** Loser by contribution to common good game

| | 0 to 0.4 € | 0.5 to 0.9 € | 1 to 1.4 € | 1.5 to 1.9 € | 2 to 2.5 € | Total |
|---|---|---|---|---|---|---|
| | 69 | 96 | 168 | 27 | 96 | 456 |
| **Keeper** | 15.1 | 21 | 36.8 | 5.9 | 21 | 100 |
| | 20.4 | 99 | 100 | 100 | 100 | 62.55 |
| | 270 | 3 | 0 | 0 | 0 | 273 |
| **Looser** | 98.9 | 1.1 | 0 | 0 | 0 | 100 |
| | 79.65 | 3 | 0 | 0 | 0 | 37.45 |
| | 339 | 99 | 168 | 27 | 96 | 729 |
| **Total** | 46.5 | 13.58 | 23.05 | 3.7 | 13.17 | 100 |
| | 100 | 100 | 100 | 100 | 100 | 100 |

## Appendix 2B

### Robustness checks

I have conducted robustness checks to test whether order effects influenced respondents tax choices. As described in the experiment design section, I randomised the order in which participants took the decisions. Some differences in the preferred tax choices can be found depending on the order of the condition treatment. Figure A2B1 illustrates the difference in tax rates depending on the condition order. Specifically, when the decisions as unaffected were taken after having taken them under risk, participants tended to choose higher taxes for all sources. However, effects of different sources of income-loss remained consistent. Losses caused by factors beyond the individuals' control raised significantly lower taxation. As it can be seen in Figure A2B1, there is a similar pattern in all cases. There is a loss of statistical significance in comparison to the model including all condition orders. It can be attributable to the lower N, as the population has been divided in three groups.

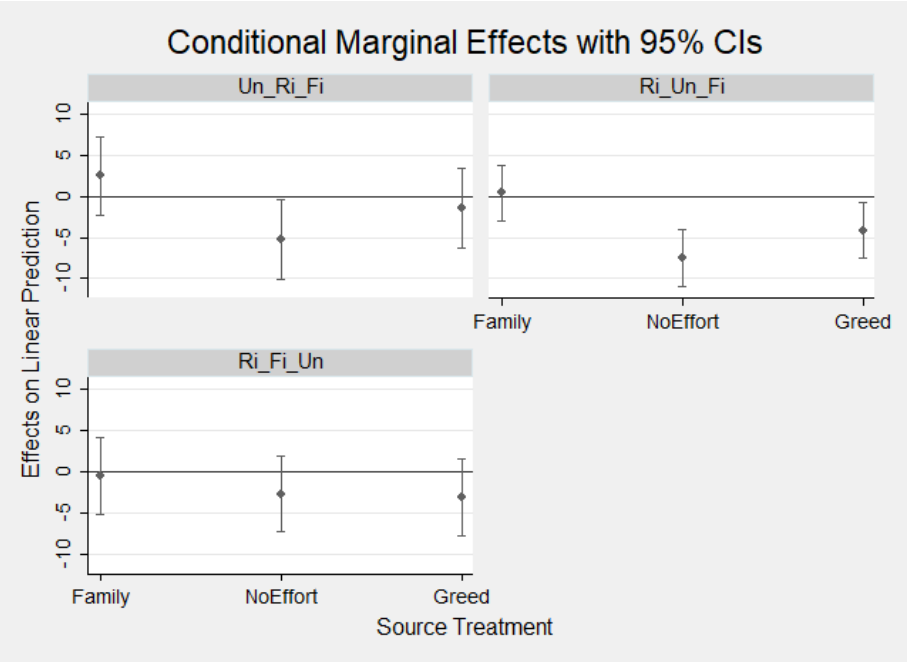



**Figure A2B.1** Source conditional marginal effect by decision condition order, with 95% confidence interval.

Similarly, some variations can be found on the tax choices depending on the order in which the income-loss sources appeared in the choice screen. The general pattern

of higher tax choices for losses caused by external factors can be found in all cases. Figure A2B2 illustrate the marginal effect of the source of income losses under the different in-screen order of the income-loss conditions. As in the case of the order of the decisions, the marginal effect of unfairly caused income losses is systematically negative. Again, we lose significance probably due to the lower size of the population in each group. In the case of income-losses caused by greed the difference is not significant but still in the expected direction.

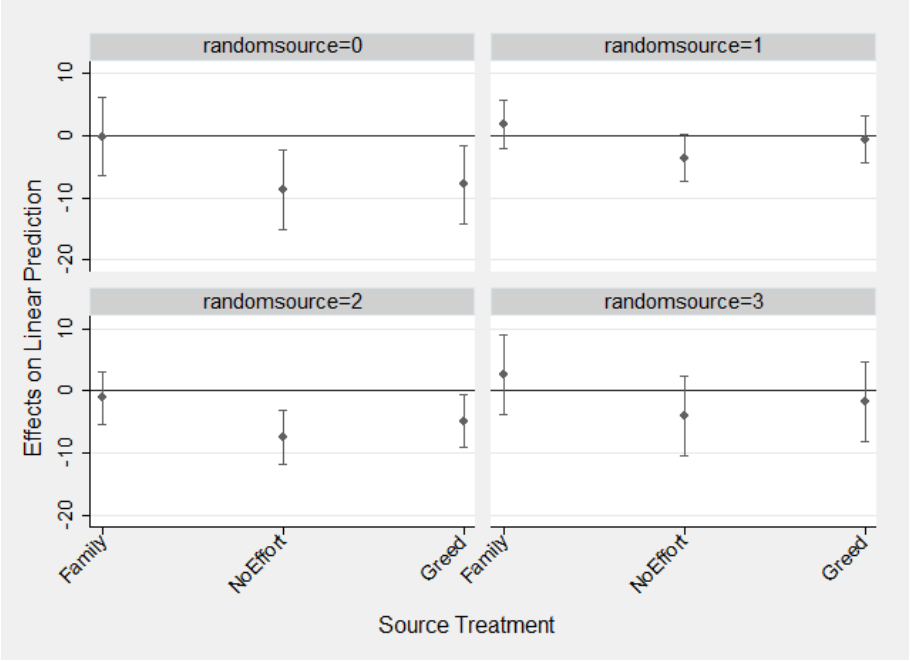



**Figure A2B2.** Source conditional marginal effect by in-screen source order, with 95% confidence interval.

## Appendix 2C



Estàs participant en un experiment que forma part del projecte de recerca europeu Livewhat. Se centra en com els individus prenem decisions en diferents circumstàncies.

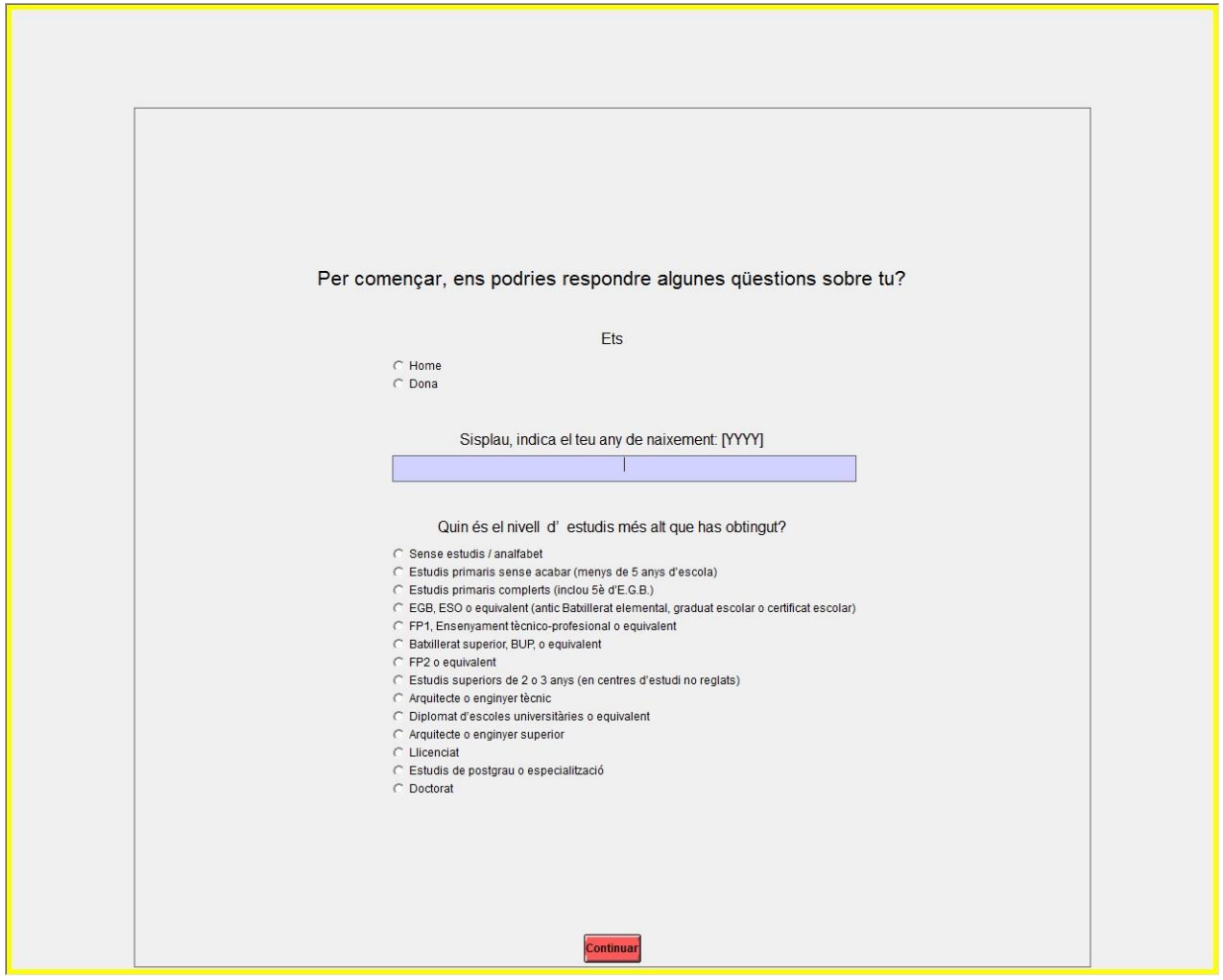
Hi haurà una remuneració econòmica per la participació. Cada participant rebrà un quantitat variable que oscil·larà entre un mínim de 5 euros i un màxim de 23,75 euros.

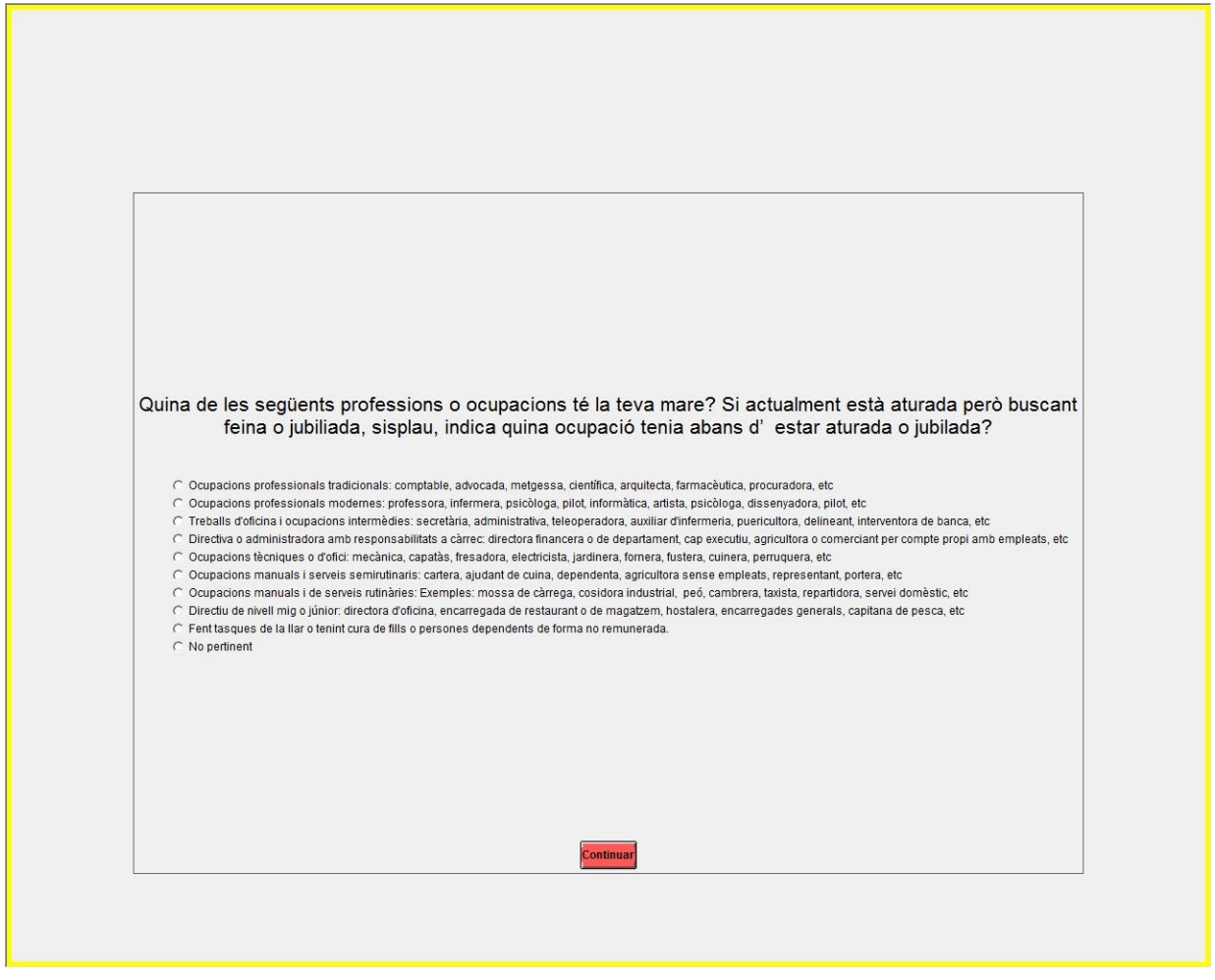
Hi haurà un seguit de tasques que inclouran respondre qüestionaris, un exercici d'esforç i un seguit de decisions que demanarem que prengueu.

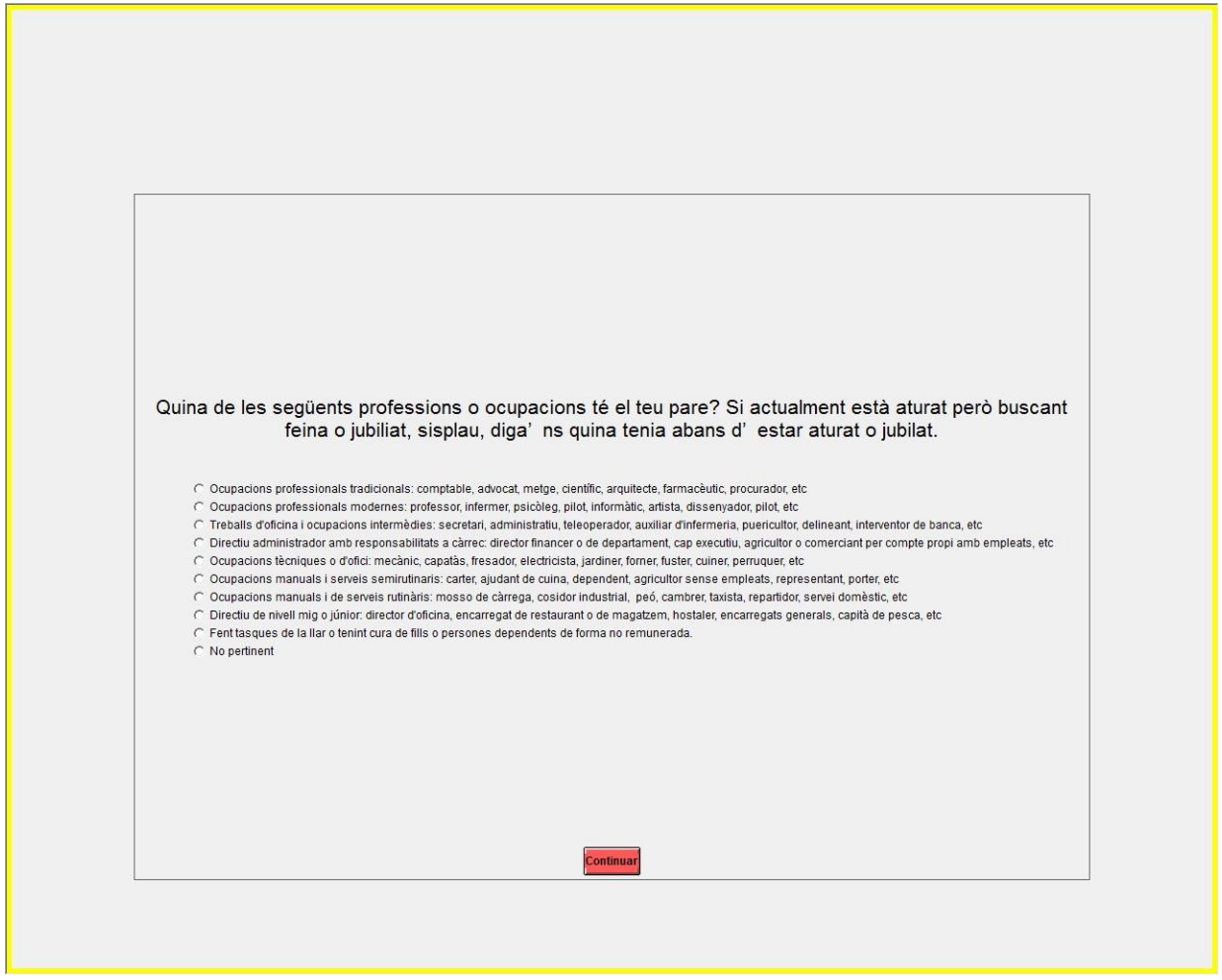
Les respostes són anònimes. Cadascú ha estat assignat a un ordinador i no quedarà cap registre d'aquesta assignació. En cap cas, doncs, podrem identificar les respostes que doneu amb la vostra identitat.

Anirem explicant cada tasca abans de realitzar-la.

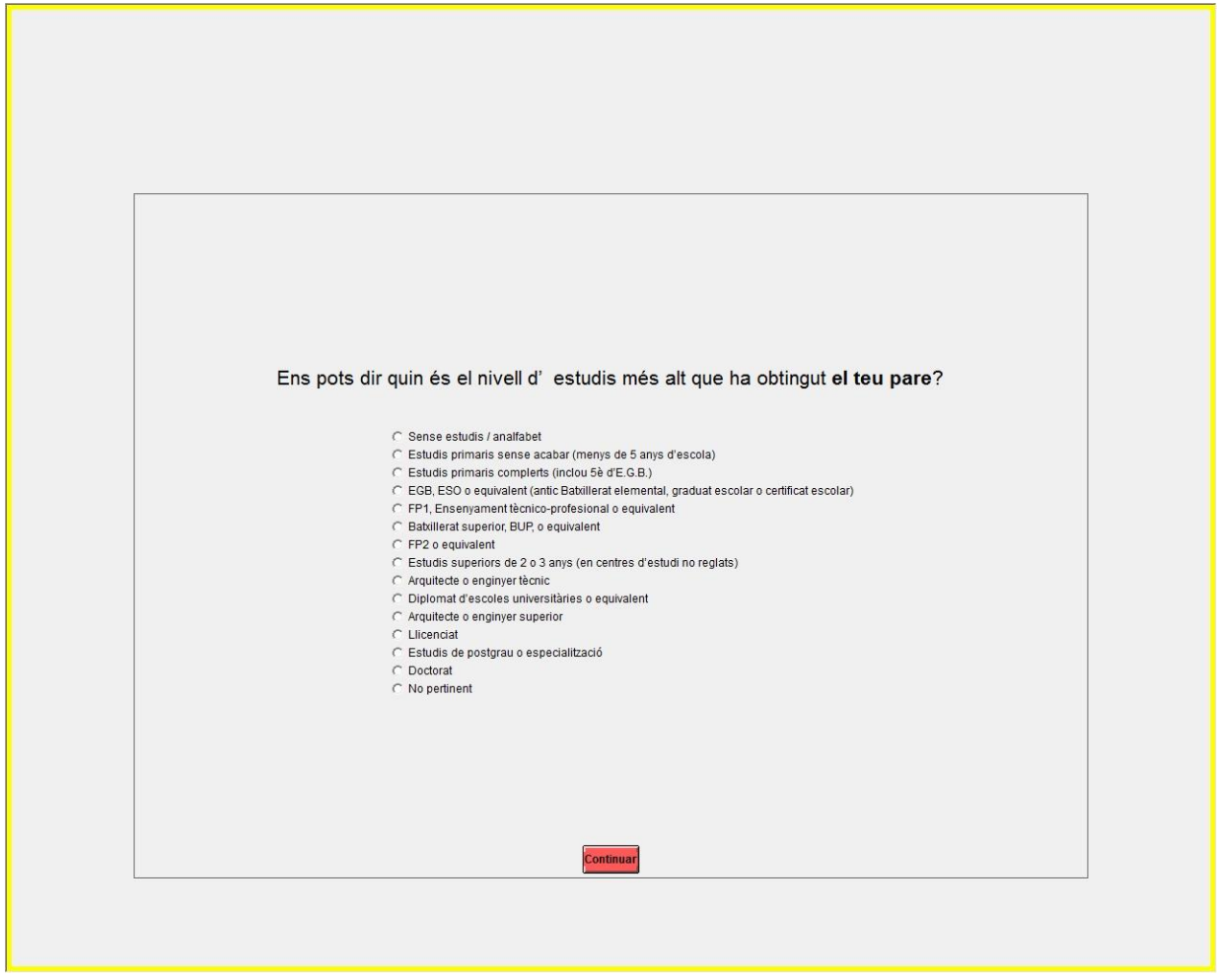
Continuar


Per començar, ens podries respondre algunes qüestions sobre tu?
Ets
Home
Dona
Sisplau, indica el teu any de naixement: [YYYY]
Quin és el nivell d' estudis més alt que has obtingut?
Sense estudis / analfabet
Estudis primaris sense acabar (menys de 5 anys d'escola)
Estudis primaris complerts (inclou 5è d'E.G.B.)
EGB, ESO o equivalent (antic Batxillerat elemental, graduat escolar o certificat escolar)
FP1, Ensenyament tècnico-profesional o equivalent
Batxillerat superior, BUP, o equivalent
FP2 o equivalent
Estudis superiors de 2 o 3 anys (en centres d'estudi no reglats)
Arquitecte o enginyer tècnic
Diplomat d'escoles universitàries o equivalent
Arquitecte o enginyer superior
Llicenciat
Estudis de postgrau o especialització
Doctorat
Continuar


Quina de les següents professions o ocupacions té la teva mare? Si actualment està aturada però buscant feina o jubiliada, sisplau, indica quina ocupació tenia abans d' estar aturada o jubilada?
Ocupacions professionals tradicionals: comptable, advocada, metgessa, científica, arquitecta, farmacèutica, procuradora, etc
Ocupacions professionals modernes: professora, infermera, psicòloga, pilot, informàtica, artista, psicòloga, dissenyadora, pilot, etc
Treballs d'oficina i ocupacions intermèdies: secretària, administrativa, teleoperadora, auxiliar d'infermeria, puericultora, delineant, interventora de banca, etc
Directiva o administradora amb responsabilitats a càrrec: directora financera o de departament, cap executiu, agricultora o comerciant per compte propi amb empleats, etc
Ocupacions tècniques o d'ofici: mecànica, capatàs, fresadora, electricista, jardinera, fornera, fustera, cuinera, perruquera, etc
Ocupacions manuals i serveis semirutinaris: cartera, ajudant de cuina, dependenta, agricultora sense empleats, representant, portera, etc
Ocupacions manuals i de serveis rutinàries: Exemples: mossa de càrrega, cosidora industrial, peó, cambrera, taxista, repartidora, servei domèstic, etc
Directiu de nivell mig o júnior: directora d'oficina, encarregada de restaurant o de magatzem, hostalera, encarregades generals, capitana de pesca, etc
Fent tasques de la llar o tenint cura de fills o persones dependents de forma no remunerada.
No pertinent
Continuar


Quina de les següents professions o ocupacions té el teu pare? Si actualment està aturat però buscant feina o jubiliat, sisplau, diga' ns quina tenia abans d' estar aturat o jubilat.
Ocupacions professionals tradicionals: comptable, advocat, metge, científic, arquitecte, farmacèutic, procurador, etc
Ocupacions professionals modernes: professor, infermer, psicòleg, pilot, informàtic, artista, dissenyador, pilot, etc
Treballs d'oficina i ocupacions intermèdies: secretari, administratiu, teleoperador, auxiliar d'infermeria, puericultor, delineant, interventor de banca, etc
Directiu administrador amb responsabilitats a càrrec: director financer o de departament, cap executiu, agricultor o comerciant per compte propi amb empleats, etc
Ocupacions tècniques o d'ofici: mecànic, capatàs, fresador, electricista, jardiner, forner, fuster, cuiner, perruquer, etc
Ocupacions manuals i serveis semirutinaris: carter, ajudant de cuina, dependent, agricultor sense empleats, representant, porter, etc
Ocupacions manuals i de serveis rutinàris: mosso de càrrega, cosidor industrial, peó, cambrer, taxista, repartidor, servei domèstic, etc
Directiu de nivell mig o júnior: director d'oficina, encarregat de restaurant o de magatzem, hostaler, encarregats generals, capità de pesca, etc
Fent tasques de la llar o tenint cura de fills o persones dependents de forma no remunerada.
No pertinent
Continuar


Ens pots dir quin és el nivell d' estudis més alt que ha obtingut **la teva mare**?
Sense estudis / analfabeta
Estudis primaris sense acabar (menys de 5 anys d'escola)
Estudis primaris complerts (inclou 5è d'E.G.B.)
EGB, ESO o equivalent (antic Batxillerat elemental, graduat escolar o certificat escolar)
FP1, Ensenyament tècnico-profesional o equivalent
Batxillerat superior, BUP, o equivalent
FP2 o equivalent
Estudis superiors de 2 o 3 anys (en centres d'estudi no reglats)
Arquitecta o enginyera tècnica
Diplomada d'escoles universitàries o equivalent
Arquitecta o enginyera superior
Llicenciada
Estudis de postgrau o especialització
Doctorat
No pertinent
Continuar


Ens pots dir quin és el nivell d' estudis més alt que ha obtingut **el teu pare**?
Sense estudis / analfabet
Estudis primaris sense acabar (menys de 5 anys d'escola)
Estudis primaris complerts (inclou 5è d'E.G.B.)
EGB, ESO o equivalent (antic Batxillerat elemental, graduat escolar o certificat escolar)
FP1, Ensenyament tècnico-profesional o equivalent
Batxillerat superior, BUP, o equivalent
FP2 o equivalent
Estudis superiors de 2 o 3 anys (en centres d'estudi no reglats)
Arquitecte o enginyer tècnic
Diplomat d'escoles universitàries o equivalent
Arquitecte o enginyer superior
Llicenciat
Estudis de postgrau o especialització
Doctorat
No pertinent
Continuar

A continuació us demanem que completeu un exercici.

La vostra remuneració pot dependre de la puntuació que obtingueu en aquest test. Aquells que s'esforcin més i treguin una puntuació més alta, tindràn més probabilitats d'obtenir una millor remuneració final. Pel contrari, aquells que menys s'hi esforcin i menys puntuació treguin, tindran més probabilitats d'obtenir una pitjor remuneració final.

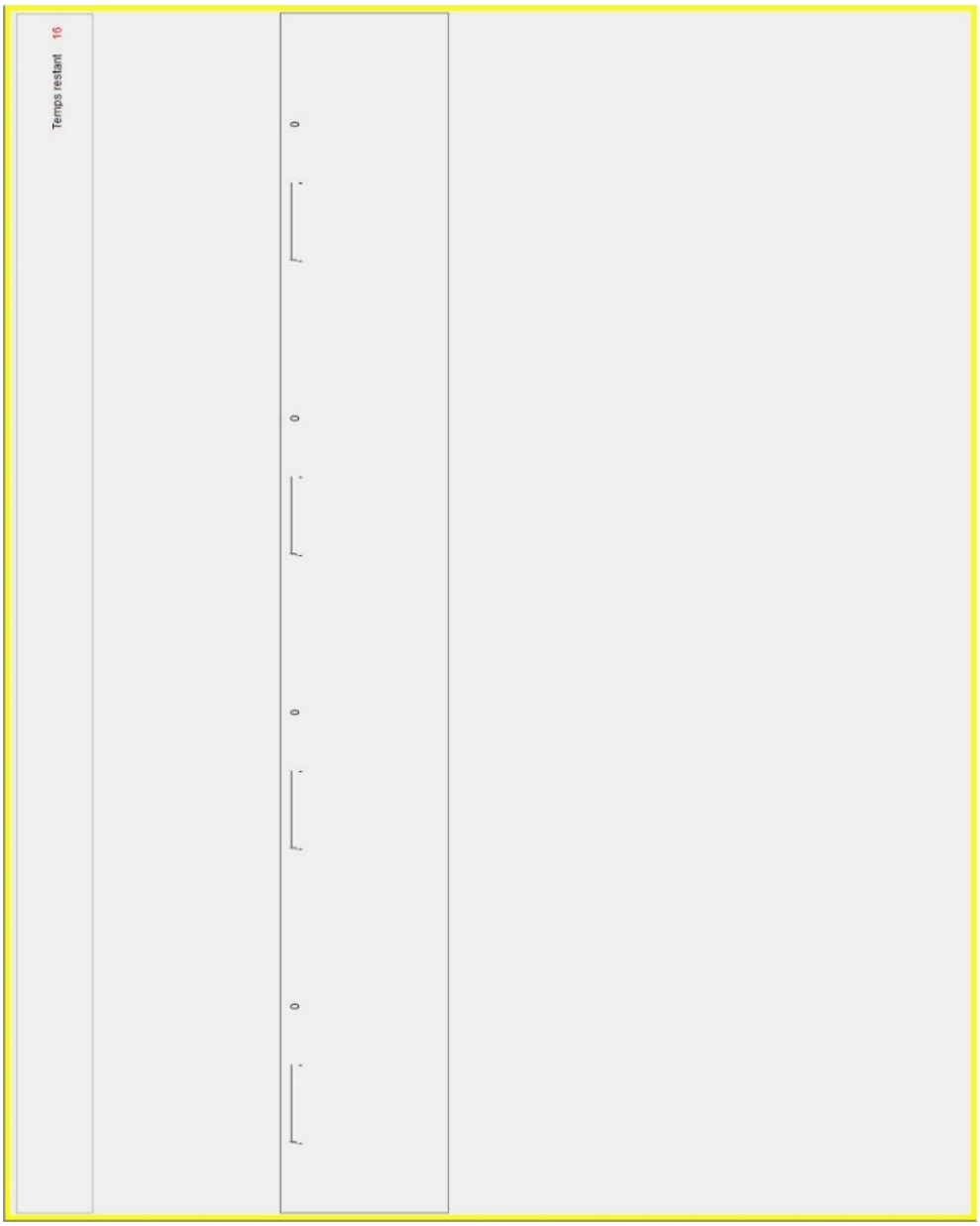
L'exercici consisteix en col·locar el major número possible de slidebars al 50%. És a dir, col·locar el cursor al mig de les barres que veuràs a continuació, coincidint amb el valor 50 que veureu a la dreta de cada barra.

Hi ha un total de 48 barres a completar amb un temps màxim de dos minuts.

A continuació us oferim un exemple de com estaran les barres a l'inici, d'una barra correctament situada al 50% i una barra col·locada per error al 54%.

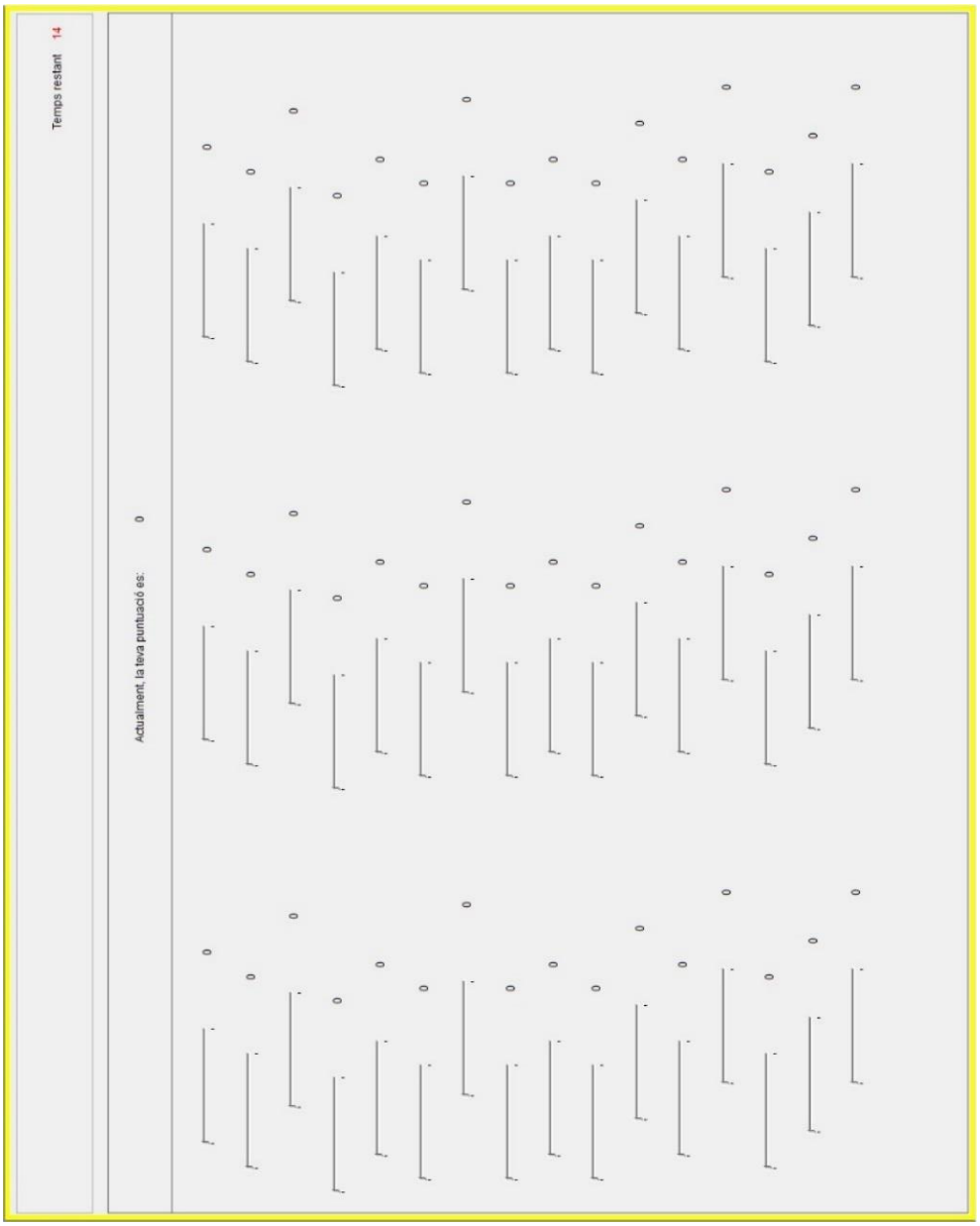

Quan passis a la pàgina següent tindràs una prova amb quatre barres i un temps màxim de dos minuts.

Continuar


Temps restant 16
0
0
0
0

Has colocat correctament 0 de les 4 barres.
Continuar

Ara comencem l'exercici.
Tindràs 48 barres i un màxim de dos minuts per col·locar-les correctament. A partir del moment en que pitgis el botó per continuar, començarà a contar el temps enrere.
Et recordem que en la prova anterior has colocat correctament 0 de les 4 barres.
Continuar


Temps restant 14
Actualment, la teva puntuació és: 0

Ara et demanem que participis en un altre exercici.

Us hem assignat 2,5 euros a cada participant. Cada participant pot decidir quedar-se aquests euros per ell o aportar-los tots o una part a un pot comú, nosaltres ho complementarem amb un 30% addicional, Així, per cada euro que aporteu, nosaltres n'afegirem 30 cèntims addicionals. Posteriorment, aquest pot comú serà repartit de forma igualitària entre tots els participants, independentment del que hagi aportat cadascú. Cada participant, per tant, es quedarà amb els diners que no hagi aportat més la seva part proporcional del pot comú.

Aquí pots veure tres exemples de com funciona el pot comú:

- En aquest cas cap participant decideix posar diners al pot. Per tant, tothom es queda amb els 2,5 euros inicials.

- En aquest cas un 25% dels participants decideix posar tots els seus diners al pot, un altre 25% decideix posar-hi 2 euros, un altre 25% decideix posar-hi 1 euro i un altre 25% decideix no posar-hi res. Es repartiran allò que hi ha al pot augmentat en un 30%. D'aquesta forma, qui hagi aportat tots els seus diners al final es quedarà amb 1,8 euros, qui hi hagi aportat 2,3 euros es quedarà amb 2 euros, qui hi hagi aportat un euro es quedarà amb 3,3 euros i qui no hi hagi aportat res es quedarà amb 4,3 euros.

- En aquest cas, tots els participants decideixen posar tots els diners al pot. Per tant, cadascú rep 3,25 euros.

A la següent pantalla podràs veure tres taules il·lustrant els casos.

Continuar

EXEMPLES DEL FUNCIONAMENT DEL POT COMÚ

| | Aportació individual al pot | Participant es queda | Aportació total al pot | Pot augmentat 30% | Participants rep del pot | Total final per participant |
|---|---|---|---|---|---|---|
| Participant 1 | 0 | 2,5 | 0 | 0 | 0,0 | 2,5 |
| Participant 2 | 0 | 2,5 | | | 0,0 | 2,5 |
| Participant 3 | 0 | 2,5 | | | 0,0 | 2,5 |
| Participant 4 | 0 | 2,5 | | | 0,0 | 2,5 |

| | Aportació individual al pot | Participant es queda | Aportació total al pot | Pot augmentat 30% | Participants rep del pot | Total final per participant |
|---|---|---|---|---|---|---|
| Participant 1 | 0 | 2,5 | 5,5 | 7,15 | 1,8 | 4,3 |
| Participant 2 | 1 | 1,5 | | | 1,8 | 3,3 |
| Participant 3 | 2 | 0,5 | | | 1,8 | 2,3 |
| Participant 4 | 2,5 | 0 | | | 1,8 | 1,8 |

| | Aportació individual al pot | Participant es queda | Aportació total al pot | Pot augmentat 30% | Participants rep del pot | Total final per participant |
|---|---|---|---|---|---|---|
| Participant 1 | 2,5 | 0 | 10 | 13 | 3,3 | 3,3 |
| Participant 2 | 2,5 | 0 | | | 3,3 | 3,3 |
| Participant 3 | 2,5 | 0 | | | 3,3 | 3,3 |
| Participant 4 | 2,5 | 0 | | | 3,3 | 3,3 |

Continuar

Sisplau, indica quina quantitat dels 2.5 euros que has rebut vols aportar al pot comú
Continuar

Instruccions per l' experiment

En aquest experiment et corresponen, d'entrada, 8 euros. Tanmateix, hi ha un risc que els perdis. Al voltant d'un terç dels participants (33,3%), entre els que potser et trobes, perdran aquests 8 euros i es quedaràn sense.

Abans que això passi, però, heu de decidir quina part dels vostres diners distinareu a compensar els que ho perdeu o ho perdin tot. La compensació es farà a través d'un impost que s'aplicarà a tots aquells participants que no perdin aquests 8 euros. D'aquesta forma, si tu no ets dels que perden els 8 euros, l'impost et traurà uns diners que es repartiran entre els que ho han perdut tot. En canvi, si ho perdessis tot, rebries uns diners provinents de l'impost pagat pels participants que no han perdut els 8 euros inicials. La quantia de l'impost que decidiu determinarà amb quants diners es quedaràn els que no han perdut els 8 euros i quants diners rebràn els que sí que els han perdut.

Perquè et facis una idea, si poseu un impost del 45% cada participant aportarà gairebé la meitat dels seus recursos inicials al fons comú i tothom rebrà una la mateixa remuneració de 4,4 euros. Si l'impost és del 10% es compensarà una petita part de les pèrdues i els que ho havien perdut tot rebran només 1euro i els que no ho havien perdut tot es quedaran amb 7,2 euros. Més endavant et mostrarem una taula amb l'impacte de diferents nivells d'impost.

Per determinar qui ho perdrà tot, s'empraran diversos criteris de selecció que us expliquem a continuació.

Continuar

Qui perdrà els seus diners?

Com hem dit, aproximadament un terç de vosaltres (1 de cada 3) perdreu els 8 euros que teniu ara mateix. La selecció de qui seran els que els perdran es farà mitjançant el següents procediments:

**ORIGEN FAMILIAR**:
Assignarem les pèrdues en funció de l'origen familiar del participant. D'acord amb les vostres respostes sobre l'ocupació i nivell d'estudis dels vostre pares al qüestionari inicial s'assignaran les pèrdues al terç de vosaltres que provingui d'un origen familiar més baix.

**CONTRIBUCIÓ AL POT COMÚ** :
Les pèrdues dependran del comportament més o menys generós que hagueu tingut en el joc realitzat anteriorment, és a dir, en la decisió sobre quina part dels 2,5 euros compartíeu per generar un pot comú. Aquells que hagin contribuït menys al pot comú seraàn els que ho perdran tot.

**SORTEIG**:
Un sorteig realitzat per un ordinador triarà qui ho perd tot i qui no. Tots els participants tindran la mateixa probabilitat de perdre-ho tot o de quedar-se com està. L'atzar, doncs, determinarà quina posició ocupa cada participant.

**TEST D'ESFORÇ**:
La probabilitat de predre-ho tot dependrà de la puntuació que hagi obtingut cada participant en el test que heu realitzat a l'inici de l'experiment. El test mesura l'eforç realitzat per cada participant en el test inicial. El terç dels participants que s'hagin esforçat menys són els que ho perdran tot. Els altres dos terços no perdran el que tenen.

Continuar

La tasca: Escollir un impost

Ara podeu posar un impost que permeti generar un fons per tal de compensar els que ho perdran tot. El que es recapti a través de l'impost es repartirà entre tots els participants que hagin perdut el seu ingrés incial. Descomptant-ne un 10% pel cost d'administració. D'aquesta manera, el pagament final que rebi cada participant dependrà del pagament inicial, de l'impost escollit i de si ho ha perdut tot o no.

Tots heu d'escollir quin impost penseu que cal aplicar. Al final de l'experiment, escollirem a l'atzar un dels impostos proposats i l'aplicarem. Això determinarà en darrera instància el que rebreu. Com que tots els impostos proposats tenen la mateixa probabilitat de ser escollits, és molt important que pensis bé quin impost proposes.

Continuar

Per ajudar-vos a prendre la decisió, a continuació us presentem diversos exemples de diferents nivells d'impost. Mostrarem l'impacte de diferents nivells d'impostos. Es poden veure els pagaments abans i després d'impost que rebria cada participant amb diferents nivells impositius.

| | Abans de l'impost | | Després de l'impost | |
|---|---|---|---|---|
| Impost | Conserva ingrés inicial | Perd Ingrés inicial | Conserva ingrés inicial | Perd Ingrés inicial |
| 0% | 8 | 0 | 8 | 0,0 |
| 10% | 8 | 0 | 7,2 | 1,0 |
| 20% | 8 | 0 | 6,4 | 1,9 |
| 30% | 8 | 0 | 2,9 | 5,6 |
| 40% | 8 | 0 | 3,9 | 4,8 |
| 45% | 8 | 0 | 4,4 | 4,4 |

Continuar

Primera decisió

Si us plau, escull un IMPOST QUE AFECTARÀ NOMÉS A LA RESTA DE PARTICIPANTS.

Tu rebràs una quantitat fixa de 8 euros, que se sumaran al que puguis guanyar amb altres tasques en les que participaràs posteriorment. L'impost que escullis, però, sí que afectarà a la resta de participants. El seu pagament dependrà de l'impost que tu escullis.

Indica l'impost desitjat com a percentatge. És a dir, si vols un impost del 10%, introdueix 10 a la casella. Si vols un impost del 35%, introdueix 35. L'impost ha de ser múltiple de 5 de forma que el percentatge ha d'acabar en 0 o 5. Recorda que un impost del 45% garanteix que els que ho han perdut tot i els que han conservat l'ingrés inicial acabin rebent el mateix.

Les persones que ho perdin tot es decidiran per la puntuació en **l'origen familiar**

Les persones que ho perdin tot es decidiran per **contribució al pot comú** al joc inicial

Les persones que ho perdin tot es decidiran per un **sorteig**

Les persones que ho perdin tot es decidiran per la puntuació en **l'exercici d'esforç**

Continuar

Segona decisió

Si us plau, escull un IMPOST QUE TAMBÉ T'AFECTARÀ A TU.

El teu pagament i el de la resta de participants dependrà de l'assignació incial, de l'impost escollit i del fet que ho hagueu perdut tot o no.

Indica l'impost desitjat com a percentatge. És a dir, si vols un impost del 10%, introdueix 10 a la casella. Si vols un impost del 35%, introdueix 35. L'impost ha de ser múltiple de 5 de forma que el percentatge ha d'acabar en 0 o 5. Recorda que un impost del 45% garanteix que els que ho han perdut tot i els que han conservat l'ingrés inicial acabin rebent el mateix.

Les persones que ho perdin tot es decidiran per la puntuació en **l'origen familiar**

Les persones que ho perdin tot es decidiran per **contribució al pot comú** al joc inicial

Les persones que ho perdin tot es decidiran per un **sorteig**

Les persones que ho perdin tot es decidiran per la puntuació en **l'exercici d'esforç**

Continuar

En la passada elecció no sabies si conservaries o perdries els diners en cada cas, depenent de l'origen de les pèrdues. De totes formes, potser tenies una intuïció quin seria el el resultat.

Ens pots dir si creies que conservaries o perdries els diners en cada cas? I amb quina seguretat ho creies?

**L'origen familiar**

En aquest cas, pensaves que...
- Estava segur que ho perdria tot
- Creia probable que ho perdés tot
- No tenia cap idea sobre si ho perdria tot o no
- Creia poc probable que ho perdés tot
- Estava segur que no ho perdria tot

**Contribució al pot comú** al joc inicial

En aquest cas, pensaves que...
- Estava segur que ho perdria tot
- Creia probable que ho perdés tot
- No tenia cap idea sobre si ho perdria tot o no
- Creia poc probable que ho perdés tot
- Estava segur que no ho perdria tot

**Sorteig**

En aquest cas, pensaves que...
- Estava segur que ho perdria tot
- Creia probable que ho perdés tot
- No tenia cap idea sobre si ho perdria tot o no
- Creia poc probable que ho perdés tot
- Estava segur que no ho perdria tot

**L'exercici d'esforç**

En aquest cas, pensaves que...
- Estava segur que ho perdria tot
- Creia probable que ho perdés tot
- No tenia cap idea sobre si ho perdria tot o no
- Creia poc probable que ho perdés tot
- Estava segur que no ho perdria tot

Continuar

Tercera decisió

Si us plau, escull de nou un IMPOST QUE TAMBÉ T'AFECTARÀ A TU. Aquest cop, però t'informem de si estàs entre els que han conservat els 8 euros inicials o entre els que els han perdut en cada cas.

Les persones que ho han perdut tot s'han decidit per un **sorteig**. En aquest cas tu et trobes entre els que han **conservat** els 8 euros.

Les persones que ho han perdut tot s'han decidit per la puntuació en **l'exercici d'esforç**. En aquest cas tu et trobes entre els que han **conservat** els 8 euros.

Les persones que ho han perdut tot s'han decidit per un **origen familiar** . En aquest cas tu et trobes entre els que han **conservat** els 8 euros.

Les persones que ho han perdut tot s'han decidit per la **la contribució al pot comú**. En aquest cas tu et trobes entre els que han **perdut** els 8 euros.

Indica l'impost desitjat com a percentatge. És a dir, si vols un impost del 10%, introdueix 10 a la casella. Si vols un impost del 35%, introdueix 35. L'impost ha de ser múltiple de 5 de forma que el percentatge ha d'acabar en 0 o 5. Recorda que un impost del 45% garanteix que els que ho han perdut tot i els que han conservat l'ingrés inicial acabin rebent el mateix.

Les persones que ho perdin tot es decidiran per la puntuació en **l'origen familiar**

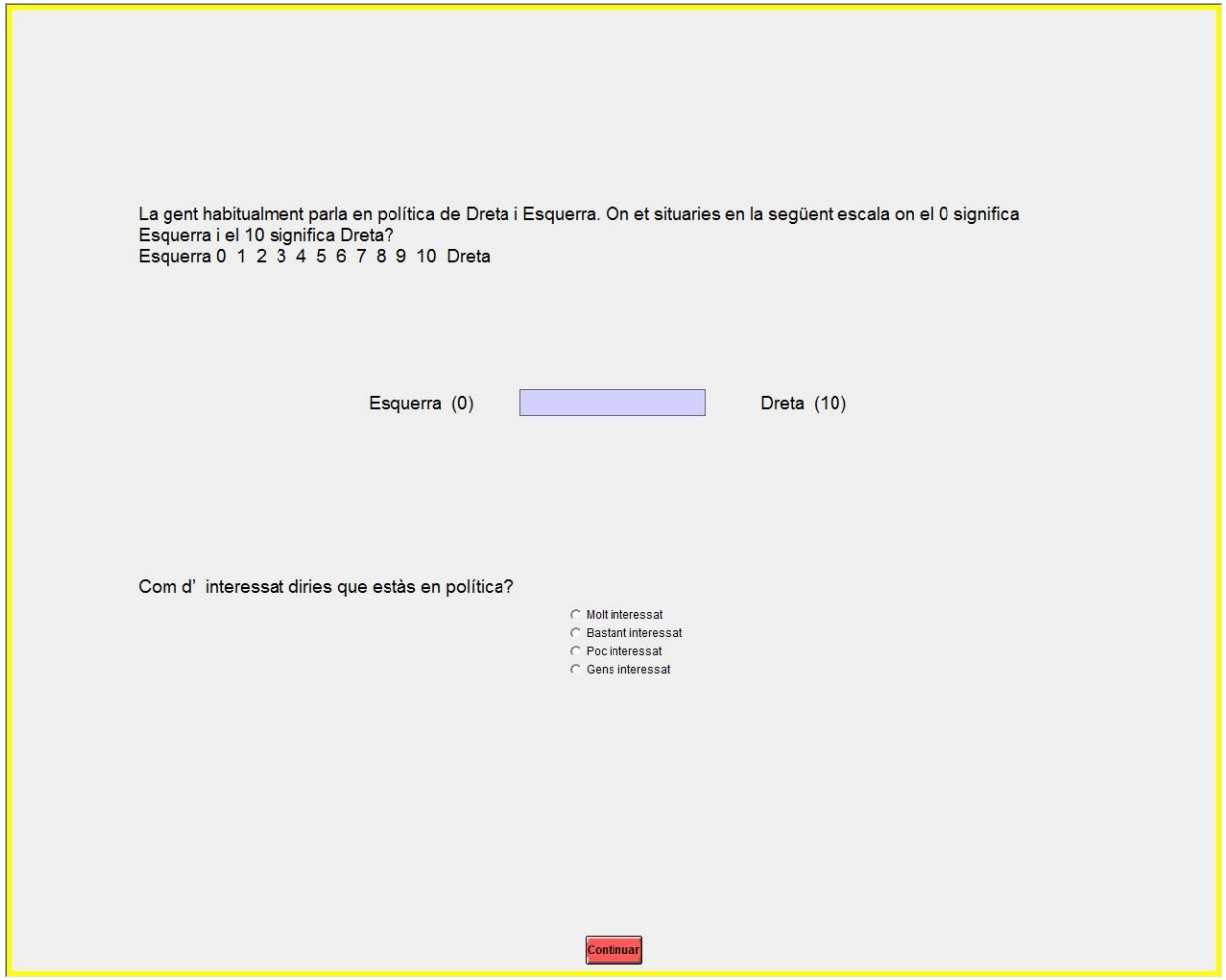
Les persones que ho perdin tot es decidiran per **contribució al pot comú** al joc inicial

Les persones que ho perdin tot es decidiran per un **sorteig**

Les persones que ho perdin tot es decidiran per la puntuació en **l'exercici d'esforç**

Continuar

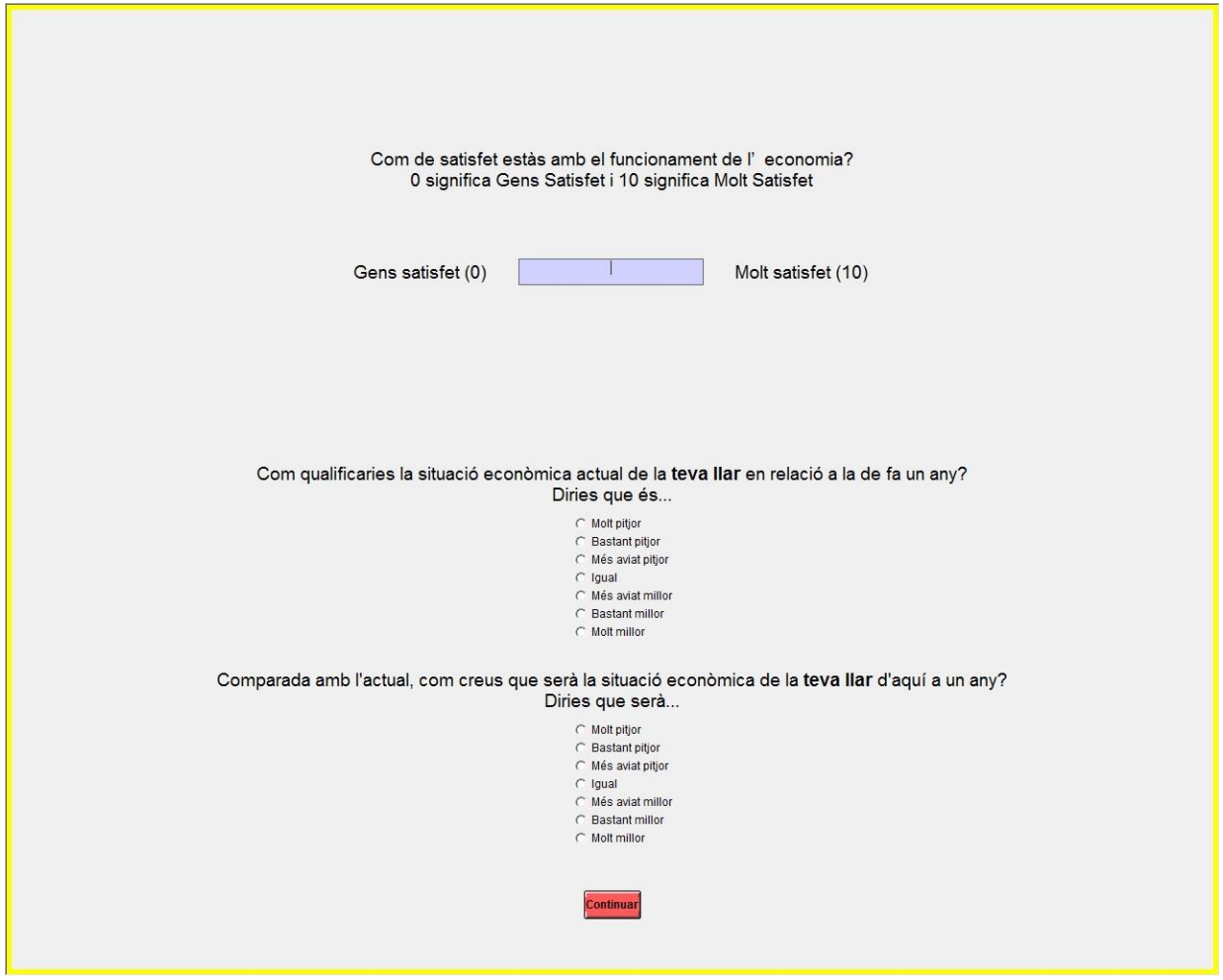

Moltes gràcies. Hem acabat amb les decisions entorn als impostos que apliquem als participants que no han patit pèrdues.
Ara, et demanem que responguis unes preguntes sobre tu.
Continuar

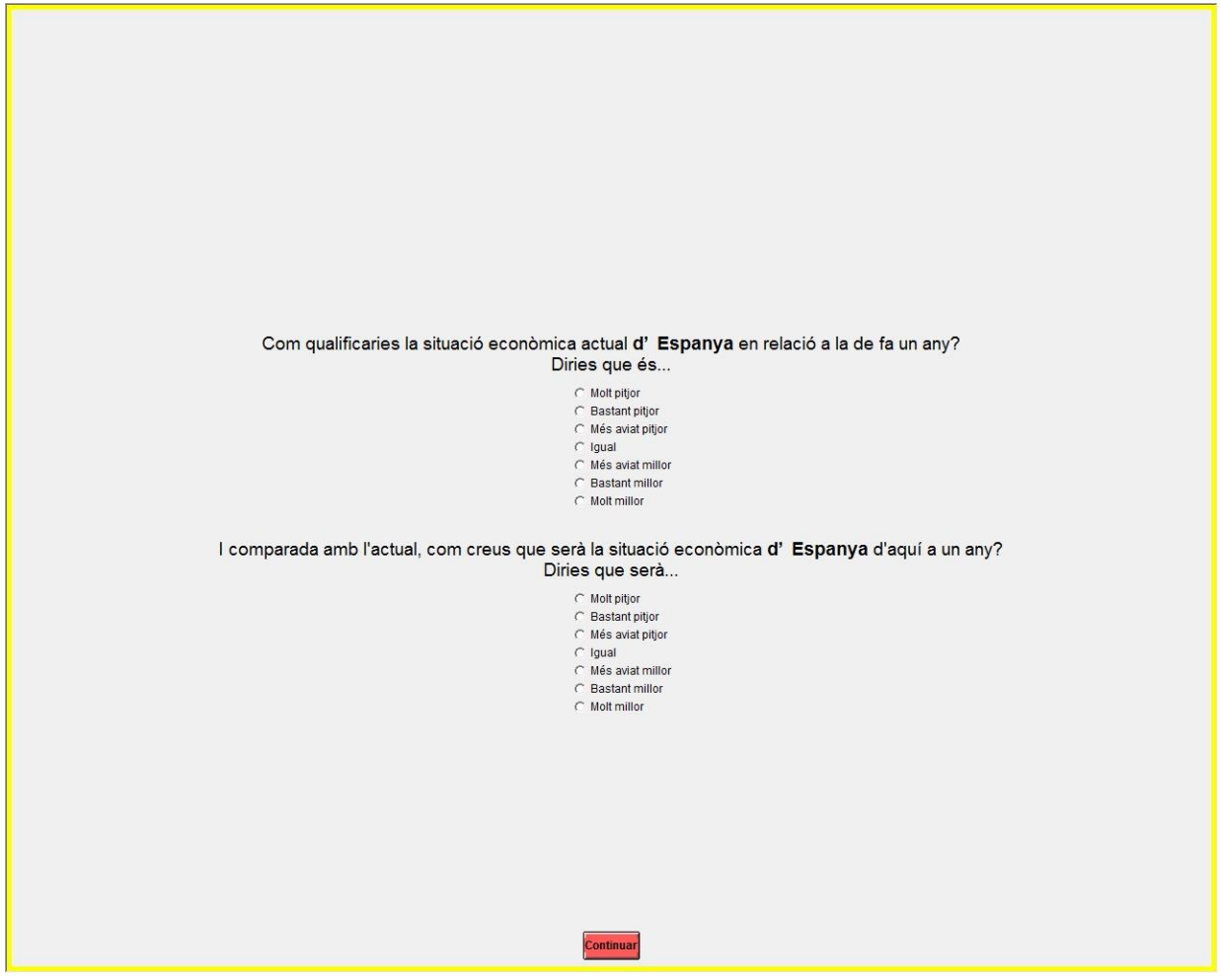

La gent habitualment parla en política de Dreta i Esquerra. On et situaries en la següent escala on el 0 significa Esquerra i el 10 significa Dreta?
Esquerra 0 1 2 3 4 5 6 7 8 9 10 Dreta
Esquerra (0)
Dreta (10)
Com d' interessat diries que estàs en política?
Molt interessat
Bastant interessat
Poc interessat
Gens interessat
Continuar

On situaries les teves opinions en aquesta escala? 0 significa que estàs completament d' acord amb l' afirmació de l' esquerra i 10 que estàs completament d' acord amb l' afirmació de la dreta. Si les teves posicions estan en algun punt intermedi pots assenyalar qualsevol número entremig.

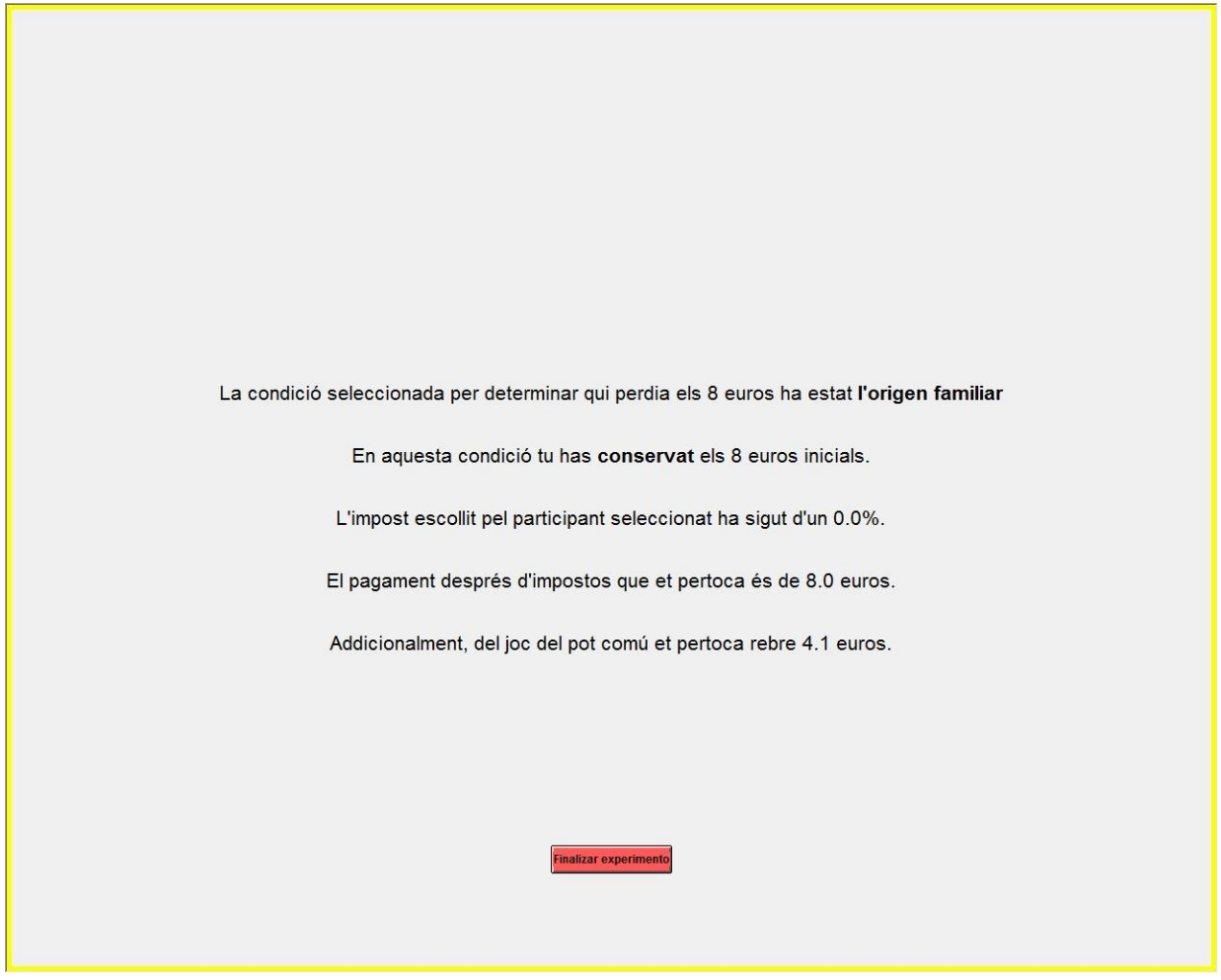
| | | |
|---|---|---|
| Els salaris haurien de ser iguals per tothom (0). | | Hi hauria d'haver diferències molt grans entre els salaris de la gent (10). |
| El govern hauria d' assumir totes les responsabilitats per assegurar-se que tothom té el que necessita (0). | | La gent hauria de ser totalment responsable d' ella mateixa (10). |
| La gent que està a l' atur hauria de tenir dret a rebutjar qualsevol lloc de treball que no vulgui (0). | | La gent que està a l' atur hauria d' acceptar qualsevol lloc de treball disponible o perdre el subsidi d' atur (10). |
| La competència és dolenta. Treu el pitjor de la gent (0). | | La competència és bona. Estimula la gent a treballar fort i a desenvolupar noves idees (10). |
| El govern hauria d'incrementar molt els impostos i gastar molt més en serveis socials (0). | | El govern no hauria de cobrar impostos per pagar serveis socials (10). |
| El treball i l' esforç no sempre duen a una vida millor. Depèn més de la sort i les connexions que un tingui (0). | | A la llarga, el treball i l' esforç acostuma a conduir a una vida millor (10). |

Continuar


Com de satisfet estàs amb el funcionament de l' economia?
0 significa Gens Satisfet i 10 significa Molt Satisfet
Gens satisfet (0)
Molt satisfet (10)
Com qualificaries la situació econòmica actual de la **teva llar** en relació a la de fa un any?
Diries que és...
Molt pitjor
Bastant pitjor
Més aviat pitjor
Igual
Més aviat millor
Bastant millor
Molt millor
Comparada amb l'actual, com creus que serà la situació econòmica de la **teva llar** d'aquí a un any?
Diries que serà...
Molt pitjor
Bastant pitjor
Més aviat pitjor
Igual
Més aviat millor
Bastant millor
Molt millor
Continuar


Com qualificaries la situació econòmica actual d' Espanya en relació a la de fa un any?
Diries que és...
Molt pitjor
Bastant pitjor
Més aviat pitjor
Igual
Més aviat millor
Bastant millor
Molt millor
I comparada amb l'actual, com creus que serà la situació econòmica d' Espanya d'aquí a un any?
Diries que serà...
Molt pitjor
Bastant pitjor
Més aviat pitjor
Igual
Més aviat millor
Bastant millor
Molt millor
Continuar


La inversió arriscada
A continuació et demanem que prenguis una última decisió amb la que pots guanyar entre 0 i 12.5 euros addicionals.
En aquest cas, es farà un sorteig i només dos dels participants rebreu el pagament corresponent a aquesta decisió.
La decisió s'emmarca en la prova anomenada "la inversió arriscada". Hi ha un 50% de probabilitat que la inversió en un producte sigui exitosa. Si és exitosa, l' inversor rep 2,5 vegades allò que ha invertit. Si no és exitosa, l'inversor perd la quantitat invertida.
L' ordenador decideix aleatòriament si la inversió és exitosa o no amb un 50% de probabilitat per cada opció.
Tens una dotació inicial de 5 euros. Quina part d' aquests 5 euros vols invertir?
Vull invertir (Euros):
Continuar


La condició seleccionada per determinar qui perdia els 8 euros ha estat **l'origen familiar**
En aquesta condició tu has **conservat** els 8 euros inicials.
L'impost escollit pel participant seleccionat ha sigut d'un 0.0%.
El pagament després d'impostos que et pertoca és de 8.0 euros.
Addicionalment, del joc del pot comú et pertoca rebre 4.1 euros.
Finalizar experimento

# Appendix 3

**Table A3.1.** Regression analysis of framing effects with sociodemographic controls

| | (1) Spain Snowball | (2) Spain Qualtrics | (3) Switzerland |
|---|---|---|---|
| Treatment (ref: control) | | | |
| Luck | 0.08 | 0.15 | 0.27 |
| | (0.18) | (0.31) | (0.30) |
| Background | -0.04 | 0.31 | 0.30 |
| | (0.18) | (0.31) | (0.29) |
| Effort | -0.53** | -0.03 | -0.10 |
| | (0.19) | (0.30) | (0.29) |
| Greed | -0.62*** | -0.33 | -0.80** |
| | (0.18) | (0.29) | (0.28) |
| Ideology | -0.62*** | -0.08* | -0.38*** |
| | (0.04) | (0.04) | (0.04) |
| Gender (female) | -0.42*** | -0.73*** | -0.99*** |
| | (0.11) | (0.21) | (0.19) |
| Education (ref: Primary) | | | |
| Secondary | 0.85** | 1.27* | 0.28 |
| | (0.33) | (0.57) | (0.44) |
| University | 1.49*** | 1.63** | 0.25 |
| | (0.31) | (0.55) | (0.45) |
| Age | -0.02 | 0.05 | |
| | (0.02) | (0.07) | |
| Age squared | -0.00 | -0.00 | |
| | (0.00) | (0.00) | |
| Age (ref: 18-35) | | | |
| 36-49 | | | 0.05 |
| | | | (0.24) |
| 50-65 | | | 0.01 |
| | | | (0.25) |
| +65 | | | 0.24 |
| | | | (0.29) |
| Constant | 8.71*** | 2.83+ | 5.94*** |
| | (0.55) | (1.45) | (0.54) |
| $R^2$ | 0.192 | 0.042 | 0.147 |
| N | 1721 | 763 | 758 |

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

**Table A3.2.** Survey experiment vignettes text for the Spanish samples

| Treatment | Wording |
|---|---|
| **Luck** | **The crisis hits those who have had bad luck**<br>Although to a lesser extent than in other countries, the economic crisis that has affected Europe in recent years also had an impact on Switzerland.<br>Among the most severely affected by the crisis were those who were unlucky in their work or personal situation. Today many of these people go through very difficult economic situations. |
| **Social background** | **The crisis hits the poorest**<br>Although to a lesser extent than in other countries, the economic crisis that has affected Europe in recent years also had an impact on Switzerland.<br>Among the most severely affected by the crisis were those who during the years of economic growth were already in a bad financial situation. Today many of these people go through very difficult economic situations. |
| **Effort** | **The crisis hits those who quit their studies**<br>Although to a lesser extent than in other countries, the economic crisis that has affected Europe in recent years also had an impact on Switzerland.<br>Among the most severely affected by the crisis were those who during the years of economic growth, rather than further education decided to leave school to go easy jobs that were very lucrative. Today many of these people go through very difficult economic situations. |
| **Greed** | **The crisis hits those who tried to make easy money**<br>Although to a lesser extent than in other countries, the economic crisis that has affected Europe in recent years also had an impact on Switzerland.<br>Among the most severely affected by the crisis were those 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 go through very difficult economic situations. |
| **Priming Group** | **The crisis hits some people**<br>Although to a lesser extent than in other countries, the economic crisis that has affected Europe in recent years also had an impact on Switzerland.<br>Some people were the most severely hit by the crisis. Today many of these people go through very difficult economic situations. |

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