# **Political Polarization and Interpersonal Trust**

Evidence from an Online Experiment in Spain<sup>1</sup>

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#### **Abstract**

Inspired by the puzzle of the origins of trust, this paper considers how political divisions condition trust and cooperation among citizens, by presenting results of an on-line survey-experiment in Spain. First, it provides evidence that citizens bias their trust decisions when politically relevant conflicts enter into a strategic interaction between two subjects. This happens when considering those conflicts that have been more divisive in the Spanish political arena: the partisan conflict, the national/regional cleavage and the left-right ideological dimension. Then, comparing subjects across different political identities reveals that people tend to favor in-group over the out-group members. Finally, the paper explores conditions under which trust radius is influenced, showing the potential role of the strength of identity, political sophistication and perceived economic insecurity.

#### **Key Words**

Trust, political polarization, party identification, national identities, survey-experiment

#### Note of the authors

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#### 1. Introduction

In recent years, influential scholars from different academic fields have often emphasized the prodigious virtues of trust in enhancing solidarity and maintaining social order at different levels. In this respect, trust is conceived as one of the fundamental elements within society and a lack of trust in a social aggregate is considered to produce conflicts and threaten social cohesion and exchange among individuals (e.g. Arrow, 1974; Gambetta, 1988). Following this view, trust is an essential ingredient of cooperative relationships; a lubrificant of social interaction, which contributes to solve collective action problems, by reducing transaction costs and allowing the use of informal agreements. In brief, trust can be seen as an informal institution, and daily social interactions depends mostly on such informal constrains (Ostrom and Walker, 2003).

Much research has accumulated suggesting this to be true and often linking trust variation to healthier governance or economic growth (Fukuyama, 1995; Zak and Knack, 2001). When trust is considered at the country level, it seems to further economic prosperity, the performance of governments and the stability of social and political institutions, making democracy work better (Putnam *et al.*, 1993). On the other hand, at the individual level, trust towards other people shows to be associated with health, tolerance for diversities and social connectedness, being the latter extremely important in modern large-scale society where social ties can be weak, and social differentiation is very high (Granovetter, 1985; Coleman, 1990; Helliwell and Putnam, 2004).

However, in spite of these positive externalities, literature exploring the origins of trust is at its early stage and scholars are strongly divided on why people are more trusting in some countries, than others. In brief, although trust constitutes a key-element of social structure, it still remains a puzzle, far from being resolved. A promising explanation, which has recently gained much attention, stresses the importance of social fractionalization, often considered in the form of income inequality or ethnic diversity. The idea is that people and groups tend to trust those who are similar to themselves, and, as a consequence, the more homogeneous a society, the higher the trust expressed by individual citizens (e.g. Rothstein and Uslaner, 2005; Bjørnskov, 2008; Bowles and Gintis, 2011). Building on seminal work (Carlin and Love, 2013), the aim of the present paper is to shed light on other types of fractionalization largely neglected in the debate, by considering the potential role of political divisions in shaping trust boundaries one individual might express. To the extant that democratic political life is structured around competition between political groups, I expect trust to vary along political distance among people. More specifically, what happens to interpersonal trust, when societies are characterized by harsh political conflicts and increasing levels of political polarization? Do political divisions matter when people need to cooperate among each other and take trust decisions during an ongoing social interaction? If so, what individual attributes predict trust levels across diverse groups?

This paper tries to answer these research questions by presenting the results of a study carried out in Spain, and, in doing so, it makes three contributions to the literature on the origins of trust behaviors. First of all, it provides evidence that citizens bias their trust decisions when politically relevant conflicts enter into a strategic interaction between two subjects. This

happens in particular when considering those political conflicts that have been more divisive, in recent years, in the Spanish political arena: the partisan conflict, the national/regional cleavage and the left-right dimension. Then, comparing subjects across different identities reveals that people tend to favor in-group over out-group members, producing trust gaps (Carlin and Love, 2013). This brings the research to its second additional value. Indeed, once the interaction between trust and political identities has been evaluated, I focus on the conditions under which these trust-gaps, namely the difference between trust for member of one's in-group against the out-group, is favored or prevented. In this way, the paper provides evidence on what individual factors contribute to expand or reduce individual's *trust radii*. Here, particular attention is paid on the importance of the strength of identities, political sophistication and the role of uncertainty about personal economic condition in mediating trust across different groups.

Finally, by using an experimental design, which embeds a trust-game into an online survey questionnaire it has been possible to manipulate only the information about the other person's identity, while holding all other intervening factors constant. This has allowed to test our hypotheses in an endogeneity-free environment, while collecting data on a representative sample of the Spanish population. This constitutes one of the few instances in which this strategy has been employed, at least in political science<sup>4</sup>.

The paper proceeds as follows. Section two presents the theoretical framework employed in the study, by considering the concept of trust radius and the potential role of political cleavages. Then, in section three, a brief overview of previous research is presented as well as the main research hypotheses. Section four presents the methodology employed to achieve the research goals, and, section five, includes results of the analysis. Finally, the last section discusses main findings, bringing the paper to the conclusions.

# 2. Theoretical framework: trust radius and the role of political cleavages

In this study, the main purpose is to show the impact that some general aspects of the political conflicts and divisions within a society may have on interpersonal trust among people. However, what do we mean by trust? How can political divisions affect it?

Trust always involves a relationship of dependency between one individual, the 'trustor', which makes herself vulnerable by voluntarily placing resources at the disposal of another party, the 'trustee' (Coleman, 1990). In other words, it might be said that, 'trusting' involves an informal commitment between two parties, in which the act of trust is associated with expectation that the act will pay off in terms of the trustor's goals. If the trustee meets these expectations, the trustor is better off, while if the trustee is not trustworthy, the trustor is worse off. Furthermore, the expected probability that the trustee will return the favor is both result of beliefs about the person involved in the relation, and it is a product of a rational calculations based on previous experience of the return they receive if the trust is fulfilled, relative to the cost the trustor incurs

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if otherwise (Gambetta, 1988; Bacharach and Gambetta, 2001). To sum up, trusting the other may be considered as an individual behavior, which is endogenously determined by the structure of the situation and the political context in which the interaction takes place. In addition, trust cannot be wholly captured neither by a vision which looks at it as a mere rational calculation, nor by an approach that considers it as a feature of personality developed through socialization. Indeed, the extent to which people trust others are both related to their orientations, to the incentives, as well as to the reputation of the partner involved (Torcal and Montero, 2000; Rothstein, 2005; Torcal and Magalhães, 2010).

The notion of interpersonal trust has also been subject of lively discussion in relation to the characteristics of the person to whom the trust is oriented. For this reason, it is common to distinguish theoretically between two different types; each one can be located at the two opposites poles of an ideal continuum (e.g. Uslaner, 2002, Dehley et al., 2011). On the one side is 'particular trust', which constitutes the most basic form of trust resulting from cooperative experiences and repeated interactions within the immediate circle of people, relatives, or fellow members of a certain social group. This type of trust is based on personal and first-hand knowledge of individuals; it involves low level of risk; and it is likely to develop in small-scale communities. On the other side, there is 'general trust', which extends beyond the boundaries of face-to-face interaction and it may incorporates people out of a specific personal setting or group, including strangers, when it is considered in its purest manifestation. Differently from the previous one, this form of trust is thought to be more important in modern complex societies, where people frequently engage in relationship with whom they do not know. To go deeper, the former may reinforce loyalty among homogenous social networks stimulating bonding social capital, with a long-run disadvantage for society. The latter, instead, makes easier peoples' engagement in cross-cutting networks, bridging different social and political groups, with benefit for the whole political system (e.g. Gambetta, 1988; Uslaner, 2002; Putnam, 2000; Dehley et al., 2011).

At this point, how does trust evolve collectively with individuals whom we do not necessarily know? In order to conceptualize the way in which different factors affect the creation and destruction of generalized trust as opposed to specific or particular trust, this research relies on the concept of *radius of trust* coined by Fukuyama (1995). According to this author, modern societies need to be represented by a number of concentric trust radii that might overlap depending on the social role actors take up. In brief, the radius of trust determines the width of the cooperation circle, from particularized trust towards close friends and parents to generalized trust for people across different social groups (Delhey *et al.*, 2011). Trying to build on this concept, people tend to trust others that are similar to themselves. In this view, individuals within the trust radius of any person are those who belong to the same system of beliefs and for which it is possible to predict their actions, and motivations (e.g. Rokeach *et al.*, 1960, Staub, 1978). Therefore, the greater the dissimilarity, the more distrust individuals will express, as well as the more a society is characterized by deep social divisions, the lesser their trust. For this reason, anything that increase *distance* between citizens in a country can be seen as potentially detrimental to social decisions and trust (Akelrof, 1997). At this point, being trust a strategic

interaction among two individuals in a situation of incomplete information, two compatible perspectives help us to understand how the radius of trust operates in daily life, making cooperation in different situations possible from known people to those one does not know in person. These allow also to explore the causal mechanism put forward in this paper more specifically.

The first one, the social identity theory, maintains that identities shape attitudes and behaviors, leading people to favor 'in-group' members and feel an aversion for the 'out-group' ones (Tajfel, 1978; Brewer, 1981; Messick, 1991). As a result, people develop psychological attachments that in turn shape group differences. What is important to remark here is that these social identifications are not based on any formal membership, but rather self-perceived membership in a particular group. In brief, this theory seems to be particularly suitable to integrate the perspective on the relation between socio-political distance and trust, just presented. The same can be said for the other approach, also named cognitive heuristics, which argues that people use stereotypes in order to reduce the complexity of decisions, and predict the behavior of others involved in the same situation (Tversky and Kahneman, 1974). As a result, heuristic processes help individuals to take rational decisions when information is scarce and external cues are instead present and explicit (Lupia, 1994). Among these heuristics, we can mention some that are essential as the partisan identity (Lupia and McCubbins, 1998, Lau & Redlawsk, 2001).

Consistent with these expectations, people may be willing to cooperate with strangers, but trust differentiation may come out when information about one's counterpart is shared (Carlin and Love 2013). This means that the trust expressed towards shared identities is likely to be the same or higher than the actual cooperation with unknown people; while this will be lower when the identity is different and politically distant. However, not all political divisions affect trust to the same extent. Indeed, as this research wants to argue, this will depend largely on the level of polarization and distance some conflicts might generate within a specific political community. In brief, there might be some cleavages, which have a higher political leverage, and reduce trust towards people outside of group membership more than others. In other words, if creating occasions for trust behavior seems challenging in its own, this appears to be even more demanding in plural societies where different forms of political cleavages may serve both as a signal of identity differentiation as well as a cognitive heuristic, to guide people's trust behavior.

The first one is party identification, that is, the psychological bond between citizens and a political party. In this respect, it has been already shown the importance of partisanship for political behavior, helping individuals to organize the complexities of politics and consolidate their beliefs and electoral choices (Campbell *et al.*, 1960; Jacoby, 1988; Fiorina, 2002; Greene, 2004). However, partisanship might reflect more divisive social identities, upon which the same party systems are built. For this reason, in this paper, it is believed important to compare the potential effects of party identities on trust with those of other socio-structural characteristics, such as the social class divisions and regional cleavages (Lipset & Rokkan 1969). Finally, an important role might also be played by ideologies conceived in terms of left-right orientations.

Again, ideological labels as well as party labels serves social orientation and facilitate political communication and decisions as voting (e.g. Rabinowitz and MacDonald, 1989; Listhaug, MacDonald and Rabonowits, 1994). However, most importantly, ideological schemes are associated to sets of orientations and values, and the left-right orientation may be used by the individual as a reference point to identify groups in the social and political realm (e.g. Fuchs and Klingemann, 1989; Kitschelt and Hellemans 1990, Knuset, 1995, Bartolini 2000).

To sum up, the group nature of these four political divisions might lead people to differentiate the others in in-group and out-group members, and, in doing so, favoring competitions over cooperation among people. Lastly, as suggested by cognitive heuristic, partisan, social class, regional labels and ideologies may constitute informational shortcuts to be employed as signals to predict other people's trustworthiness.

# 3. Previous research and hypotheses

With the aim of studying the relation among social distance and trust, both survey and experimental research have shown how trust break down along divisions and personal attributes like gender (Buchan et al 2008), ethnic heterogeneity (e.g. Fershtman et al., 2005; Stolle et al., 2008), or religious diversity (Cardenas and Carpenter, 2008). Moreover, a wide range of studies has focused on how social inequality affects the assessment of other people's trustworthiness, as well as how trust varies when social distance increases and subjects interact with people from different groups as siblings, friends, people of different nationalities, and so forth (Buchan and Croson, 2004, Cardenas and Carpenter, 2008).

However, as it has been noted above, the potential role of political conflicts has been largely neglected in the debate. The only instance in this direction has looked at the role of partisanship in the United States context, showing how party identities affect social preferences as altruism (Fowler and Kam, 2007) or trust (Carlin and Love, 2013). However, although these studies constitute an initial contribution, they concentrates only on one possible conflict, without comparing it to the relative impact of other sources of divisions that might be relevant for trust. As a result, the present paper is the first attempt to provide an extensive study of the relative impact of different cleavages on trust during an ongoing social interaction in the European context. Moreover, as it will be argued in the following section, experimental data are collected from a representative sample of the Spanish population and not from a common pool of university students, with the resulting possibility of ensuring more variation of individual-level characteristics.

The Spanish case can be theoretically useful for several reasons. First, it has been traditionally characterized by low levels of generalized trust comparing to other European countries (Torcal and Magalhães, 2010). In addition, this is not a new trend. Spain has been always characterized by a low-intense equilibrium of trust that has not changed remarkably through generations; a continuity that seems to be due resistant to major economic or social changes. In fact, neither the process of democratization nor the economic development occurred since the 1980s have had an influence on the stock of trust in this country (Torcal and Montero, 2000; Torcal and

Magalhães, 2010). This makes the purpose of the study especially relevant in the case. Moreover, other aspects make the Spanish case particularly interesting. Indeed, this country has been characterized by stable voters' orientations, which have anchored their electoral decisions to several social and political divisions within Spanish society (Barnes *et al.*, 1986; Linz and Montero, 2001; Gunther *et al.*, 2004). As pointed out by many authors, one result of this process has been the gradual increase of levels of polarization in the political system understood as distance both at the elite and at the mass-level along different dimensions. This tendency has been confirmed by different investigations that have pointed out how this has become more marked in recent years. In fact, citizens and elites have become more strident partisans and the political debate among the two main parties, the *Partido Socialista Obrero Español* (PSOE) and the *Partido Popular* (PP), has increased its conflicting character (Sanchez-Cuenca, 2009; Balaguer and Sanz, 2010).

Additionally, scholars of party system institutionalization in Spain have focused on the socialstructural and organizational bases of support for political parties, highlighting the enduring role of social class in shaping electoral decisions (Chhibber and Torcal, 1997; Torcal, 2010). Spain is also extremely divided in geographical terms. This heterogeneity have given the rise to the development of a multi-level party system, with a strong polarization, between the centre and the periphery (Gunther et al., 2004). Another feature that make the Spanish political system polarized is therefore the territorial division, intensified by the extraordinary process of construction of the Estado de la Autonomías. As it is known, Spain is a multi-cultural, multinational and multi-linguistic society characterized by the same complexity as Switzerland or Belgium (Linz and Montero, 2001). This heterogeneity has produced a strong polarization in people's preferences in relation to state-building and regional/national identities (Martinez and Miley, 2010; Lago and Montero, 2010, Alonso and Gomez, 2011). As a result, a party system has gradually developed on different levels with the presence of strong national parties in a few communities and a wide variety of regional parties (Gunther et al., 2004; Torcal and Mota, forthcoming). Lastly, ideology is still one important driving factors of Spanish voters (Torcal and Medina, 2002; Torcal, 2010). In brief, Spain seems to be a good setting to study whether interpersonal trust break down across these political divisions and, as a result, we expect people to discriminate negatively their trust during a dyadic social interaction when this involves politically relevant information on the other partner's identity. In brief, the first general hypothesis this paper wants to test is:

Hp1: People bias negatively their trust towards others when salient information on partisanship, social class, regional identities or ideologies is shared.

This assumption brings us to the second one, which looks deeper at what happen when people interact with others with same or different identities. In this respect, building on social identity theory and cognitive heuristics we anticipate people, which identify with a certain group, to discriminate their trust according to social and political distance. More specifically, the second hypothesis states that:

Hp2: Trust towards same identities tends to be higher than trust towards different political identities.

The subsequent set of hypotheses looks at the individual variables, which might account to explain trust gaps among different identities. Trust is most beneficial when connect distant groups; therefore, understanding which factors may reinforce or hinder trust beyond the political boundaries of a certain group might be very interesting. The first factor, which might account in this respect, is the strength of identity. Indeed, if discrimination based on partisanship, social class, regional origins and ideologies acts as a social identity, then, people with strong identities should magnify differences between his group and the others (Fowler and Kam, 2007; Carlin and Love 2013). In brief:

Hp3: The stronger is the attachment of the single person for a certain group, the lower the trust toward people from a different one.

A second factor, which might interact with group-based trust discrimination, is political sophistication. Indeed, the more a person is informed about politics the more she will use political heuristics to process information (Meffert *et. al.*, 2006, Taber and Lodge, 2006). More specifically, people with higher level of political knowledge will be more likely to use this cues as stereotypes convening important information on the other's person trustworthiness. Therefore:

Hp4: The higher the level of political sophistication the lower the trust toward a different group.

Although there is already some knowledge of the role of both strength of identity (Fowler and Kam, 2007) and political knowledge in mediating social preferences when partisan information is introduced (Carlin and Love 2013), here we will evaluate their role across other types of information politically sensitive.

Finally, the last factor we wants to look at is role of uncertainty and feeling of insecurity related to the economic situation in predicting trust towards others. Building on social identity theory, group identification may be motivated by self-enhancement and uncertainty reduction (e.g. Hogg, 2000, 2007). Indeed, being part of a group means to acquire a system of beliefs and an orientation in one's own life, reducing risk in decisions. However when self-uncertainty is increasing in time of ongoing economic crisis, the motivation to feel close to the group may be strengthened. Therefore, pessimistic economic outlook may be translated into a greater distance between people from different groups. For this reason:

Hp5: The higher the level of perceived uncertainty concerning the economic situation the lower the trust toward a different group.

# 4. Research design and data

When studying trust, at least in the political science field, researchers use by default survey data which most of times rely on single questions tapping beliefs about other people's trustworthiness<sup>5</sup>. In this respect, it is worth mentioning that many critiques have been raised towards this survey instrument. First, some authors have pointed out that trust questions are too generic; the answers would not reveal either the reference group or the stakes respondents have in mind when making such an assessment. Moreover, as it has been said, these questions tap only expressed preferences, without considering any actual relation among individuals (e.g. Miller and Mitamura, 2003).

An alternative for measuring trust is provided by advocates of the rational perspective on trust and is based on the use of the experimental method and monetary rewards (e.g. Ostrom and Walker, 2003). These procedures have the advantage of providing behavioral measures and of being clearer about the type of situation, the stakes and the reference group, usually anonymous subjects. More specifically, subjects are asked to participate to a specific trust-game in order to investigate the emergence of cooperative behavior and factors, which account for its variation at the micro-level. In short, trust is conceived as the amount of money exchanged among the participating subjects and their pay-offs. Furthermore, a trust-game can be set up in different ways as one-shot, as repeated game or by varying the amount of information provided to the players about each other. Thus, situations where trust is more or less generalized can be created. However, the main shortcoming of this approach is that experiments often rely on unrepresentative pool of subjects or self-selected students, with resulting problems of external validity and generalization of results. Hence, it is possible to conclude that experimental research has been more suitable to catch the behavioral aspects of trust relationships and the importance of information, but its results are limited to the observed subjects.

In order to test our hypotheses, we use data collected on an on-line sample of the Spanish population, by means of an original survey experiment; a modified version of some techniques being used in other studies (e.g. Fehr *et al.*, 2003; Carlin and Love, 2013)<sup>6</sup>. Combining experiments with surveys for the study of trust is the suitable research strategy because, first, it enables the researcher to obtain a behavioral measure of trust during an ongoing social interaction. In addition, survey experiments allow to identify the causal effect of different political divisions by manipulating the selected variable of interest, while controlling any potential intervening factor. Finally, subjects are asked to fill in a questionnaire, which gives much individual-level information to be used in further analysis. Therefore, the aim of our research has not been to praise the superiority of a technique over the other, but to benefit from relative strengths of both approaches.

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<sup>&</sup>lt;sup>5</sup> Question related to trust includes instances as the following: «Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?». Soon included in the American General Social Survey (GSS), across more than forty years, trust questions have gradually migrated to the German Socio-Economic Panel (SOEP), the World and the European Values Study (WVS; EVS) and the European Social Survey (ESS), with some minor adaptations especially regarding the scale used.

<sup>6</sup> The survey-experiment has been designed by Ryan E. Carlin (University of Mississippi, US), Greg J. Love (Georgia State University, US),

The survey-experiment has been designed by Ryan E. Carlin (University of Mississippi, US), Greg J. Love (Georgia State University, US) Mariano Torcal (Universitat Pompeu Fabra, Spain), and Sergio Martini (Universitat Pompeu Fabra, Spain).

The survey-experiment was conducted online in three rounds (February-March 2012 and November-December 2012, May-June 2013) by using an online public opinion firm and completed by a sample of the Spanish population between 18 and 65 years old and representative in relation to some important socio-demographic features<sup>7</sup>. The sample consisted of citizens with Internet access, which in Spain is over 70% in that age range<sup>8</sup>. A smaller range could have been used, covering a segment of people for which the Internet penetration rate is higher, but with the risk of reducing individual variation on some important individual-level characteristics. This is the primary reason for the design of a sample of participant within those age limits. The three waves are composed by 1275, 1700 and 881 subjects, respectively. Moreover, 881 respondents took part to all of them, building up the final panel dataset. Therefore, the use of the final dataset needs to take into account the problem of attrition and the potential bias resulting from the drop of individuals among the surveys. This has been addressed by weighting subjects such that the distribution of basic variables conforms to the Spanish population.

The research has proceeded as follows. In the first step, the experiment, subjects were recruited to play a specific version of the one-shot trust-game (Berg *et al.*, 1995). A trust game is nothing but a sequence of moves between two actors where both are fully informed about its structure and payoffs. Briefly, the trust-game is usually played by two randomly assigned anonymous players, who do not know each other before participating to the game, nor they exchange any information during the whole duration of the experiment. Player 1, who has the right to move first, is given an endowment (being this money or not) and told she can share some, none, or all of it with Player 2, who is also given the same endowment. Then, Player 1 is told that any sum shared will be tripled before giving it to Player 2, and that Player 2 will be given the same options – to return some, none, or all of it to Player 1.

To sum up, trust is elicited as the amount Player 1 sends to Player 2<sup>9</sup>. In this respect, it is worth noting that, since Player 2 has no incentive to return any amount, the unique dominant strategy for Player 1 is to keep the sum of money she receives at the beginning, passing none to the other player. Nevertheless, as many studies have showed, trust is widespread and it is reciprocated by players giving amounts above the equilibrium (Johnson and Mislin, 2011) <sup>10</sup>. A brief scheme of the dataset composition by players and rounds is sketched in table 1. Here, it is worth noting that, since this study focuses on trust, we consider only information for Player 1s (around 500 cases).

[table 1 about here]

 $<sup>^{7}</sup>$  For more information about the sample, please refer to the website: www.netquest.com  $\,^{\circ}$ 

<sup>&</sup>lt;sup>8</sup> Source: European Social Survey, round 5. Internet users are defined in this survey as respondents that have accessed to the Internet either at home or at work and they have used it at least once in the past 12 months. More information can be found at: www.europeansocialsurvey.org <sup>9</sup> On the other hand, the amount of money returned by Player 2s measures reciprocity, or trustworthiness. Since this paper focuses on trust, it will not go deep into reciprocity.

will not go deep into reciprocity.

One As far as external validity is concerned, our study align with others in the field. More specifically, calculations derived by an extensive meta-analysis of 162 trust-games on students and non-students sample shows that, in Europe, the proportion of the endowment sent by Player 1s ranges between 0.22 and 0.78 with a mean of 0.53 and a standard deviation of 0.12 (Johnson and Mislin, 2011). In our case, in the anonymous game Player 1s sent on average a proportion equal to 0.52 in the first survey, and 0.64 in the third one, within a standard deviation of that mean. Hence, it is possible to conclude that this research reveals levels of trust comparable to others studies in the field, confirming the reliability of its results.

In our case, instead of real money, both players began each game with an amount of virtual money equal to 5 points. Each point gives an equal chance to the player to win final prizes<sup>11</sup>. Moreover, given the tripling aspect of the game, the maximum number of points any subject could obtain was 20 per game; the minimum was 0. Furthermore, each participant played a series of games. In the first one, all of them received no information on the other player, enabling to establish baseline trust. In the following games, we manipulated information on the other subject's identity. In brief, participants received treatments as they were informed about the partisan identity of the other player (PP, PSOE) the social class (being this, high, middle or low social class); the regional origin (Basque, Catalan, Madrilenian, Andalusian); and, finally, the political ideology (Left, Centre, Right). (an example of the experimental protocol used in the research is included in Appendix I).

At this point, it is important to emphasize that partisanship, social class, regional identities and ideologies are the only information provided during the entire course of the experiment. Moreover, these treatments have been provided to participants following a random order. This has allowed us to investigate to what extent players biased their trust decision, by following group differentiation and whether partisanship, social class, regional identities and ideologies are conveying additional cues when making such decision. Lastly, this has also given the opportunity to measure trust gaps as the difference between what a subject sent to a fellow identity and to a rival one and infer confidently that the relationship between different political identities on the on hand, and, trust on the other, was causal.

To conclude, in the second step of the research, as said above, participants were administered a survey which included questions on political attitudes and behaviors, as well as standard socio-demographic controls<sup>12</sup>.

# 5. Results

The first part of this section will present broad evidence that partisanship, regional identities and ideologies affects trust among people in Spain. After having identified which conflict actually matters for people decisions, the second part explores the conditions under which trust gaps are predicted, reinforcing or preventing cooperation among different political groups in Spain. As we will shown, although this consists only of a preliminary investigation that include cross-sectional analysis on respondents of round 1 and 3, some interesting conclusions can be drawn.

#### 5.1 The effect of political cleavages on trust

What effects do partisanship, social class, regional identities and ideologies have on interpersonal trust levels of our Spanish respondents? To answer this question, it is necessary to

<sup>&</sup>lt;sup>11</sup> The procedure has been managed by the opinion poll firm, NetQuest, which employ its own system of incentives and rewards for its panelists. This system is not based on money but on virtual 'NetQuest points', which can be accumulated by the panelist for his participation in the surveys and used to obtain prizes from online shops in partnership with the company. This system has been ideal to realize the survey-experiment online.

experiment online.

12 Survey questions and response sets have been taken verbatim from different national and international surveys as the General Social Survey (GSS), the European Social Survey (ESS) or the Centro de Investigaciones Sociológicas (CIS).

observe whether the four treatments, namely the information provided to each of our players about the other, has an effect on the number of points sent. In other words, using anonymous trust as baseline for comparison, when the number of points sent by Player 1s in the games involving partisanship, social class, regional identities and ideologies is higher than those they sent in the anonymous interaction, the effect of the information is positive. When the difference is not significant or the amount sent is about the same, there is no effect. Instead, if our first hypothesis is correct and the effect of our treatments is negative vis-à-vis anonymous interpersonal trust, the number of points sent is lower.

#### [figure 1 about here]

First of all, we compare the effect of partisanship and social class. With this purpose, figure 1 displays the average values of games in round 1. As can be seen, the mean level of trust towards anonymous people (2.6; N=436) is higher than trust when information on the other people's party identity is introduced (2.1; N=443). In general terms, this means that, during a strategic interaction, people trust less others when information on political identities arises and that surprisingly they trust more a stranger than someone who identify with one of the main parties in Spain (PP or PSOE). This difference is fairly high (equal to 0.5 or 23% points less), and a paired t-test reveals that it is highly significant (p<0.001). On the other hand, the same effect is not found for information about the social class status of the other player. Indeed, as reported in the same graph, the mean level of interpersonal trust after the social class treatment is almost as high as our baseline (2.7; N=204), and this small difference is not significant. To go further by showing results of games in round 3, it is possible to compare the effect of partisanship in relation to regional identities and ideologies. With this purpose, figure 2 shows the average values of games in this round, which includes the general effect of partisanship and the effect of regional/national identities, namely people were told they were playing against a Basque, a Catalan, a Madrilenian or an Andalusian; and the effect of ideological identities as left, centre an right positions.

#### [figure 2 about here]

Before proceeding with results, first, it is worth mentioning that in the third survey, the level of the anonymous trust is fairly higher than in the previous one (3.3; N=432). In this direction, it is important to underline that some specific analyses have not found any possible randomization biases due to trust predispositions between round 1 and 3<sup>13</sup>. Then, turning our attention to the effects of our treatments, it is possible to highlight that information on regional identities affect trust levels negatively. However, the effect is relatively lower than it is for partisan identities, indeed, the difference between anonymous trust and trust towards regional identities is lower (equal to 0.4 or 12% points less). Lastly, when considering ideological identities based on left-

<sup>&</sup>lt;sup>13</sup> More specifically, a comparison of means of anonymous trust in round 1 distinguishing respondents in term of participation to round 3 has revealed no significant differences. Moreover, it is reasonable to think that, in panel studies, trust decisions are likely to be endogenous due to experience. So, in our case, Player 1s' trust level in the second might be dependent on whether their trust was reciprocated in the previous one (whether she had a good or bad trust experience). Nevertheless, even in this case it has not been found any relation between the amount of points Player 1s gained in the survey 1, and their trust behavior in survey 3.

right orientations, the effect is, in proportion, the same as partisanship (0.8 or 24% tickets less; N=432), decreasing trust among participants (paired t-test; p<0.001).

To summarize, not all conflicts have the same effect on interpersonal trust, but only those for which, recently, the level of polarization has been much higher, namely the partisan and the ideological conflict which still plays an important role in orienting people's preferences (e.g. Torcal and Medina, 2002; Balaguer and Sanz, 2010, Torcal, 2010). Conversely, social class seems to have no effect on cooperative behavior in Spain. This result seems to be in line with the fact that, although social class has had a resurgence in last few years, its impact has been lower in structuring political competitions, comparing to other factors (Chhibber and Torcal, 1997; Caínzos, 2001; Torcal, 2010). Lastly, the regional/national conflict also influence trust and in turn cooperation among Spanish citizens, confirming to be a deep source of division within the Spanish political arena (e.g. Gunther et al., 2004; Keating and Wilson, 2009; Torcal and Mota, forthcoming).

# 5.2 Trust relationships among in-group and out-group members

After having established which cleavage actually have a general impact on interpersonal trust, it is important to have a deeper look at dynamics among different identities. In brief, what happens when comparing trust across those political identities that matter for trust relationship? From figure 3, which displays clearly trust broken down by people who identify themselves with PP or PSOE it can be seen clearly that trust among same identities tend to be higher that trust between different ones. This difference is higher for PP identifiers (2.6; N=63) than for people who identifies with PSOE (1.9; N=76) and both of them are strongly significant (paired t-test; p<0,001). In brief, PP identifiers tend to favor their fellows against their counterpart more than what PSOE identifiers actually do.

#### [figure 3 about here]

Now, if we consider how trust differentiate along the left-right ideological spectrum by looking at figure 4, we notice that the pattern is similar, although with some specification. Indeed, trust discrimination between in-group and out-group members is confirmed in particular when considering opposing identities, namely left and right categories. In this respect, left-wings shows a higher gap (1.3, N=205, p<0.001) than right-wings (0.9, N=112, p<0.001). Then, as far as the 'Centre' position is concerned this seems to act clearly as a 'genuine moderate orientation'14, at least in our case in relation to trust behaviors. In this respect, those who identify with the 'Centre' position relate with in-group members as they do with anonymous participants while they distrust left and right-wings similarly. Moreover, although the difference is not significant, it is important to notice that right-wings do not bias negatively their trust towards people from the Centre, so they do not perceive them being member of an out-group.

[figure 4 about here]

<sup>&</sup>lt;sup>14</sup> See on this discussion for instance Knutset (1998).

To conclude our overview on the role of political cleavage on trust behaviors in Spain, we consider regional/national identities displayed by figure 5. Again, participants seem to discriminate their trust following an in-group/out-group logic. Moreover, As it could be expected, Catalan and Basque on the one hand, and Madrilenian and Andalucians on the other, show similar preferences concerning regional group to cooperate with. This is not particularly surprising since, the former ones represents the main cultural minorities in the country, while the others express better the Spanish identity as a national unity.

# [figure 5 about here]

To sum up, our second hypothesis seems to be confirmed as well. In other words, people in a polarized society tend to bias their trust along main political conflicts. Moreover, trust seems to be higher among in-group members and extremely low for out-group ones. At this point, how large are these effects? In this direction, table 2 shows the average effect of each considered treatment by means of trust gaps they produced in our experimental setting, namely the difference between trust for member of one's in-group against the out-group. As can be seen, partisans confirm to be the high sources of bias across groups. Our participant sends on average 2.2 tickets more to co-partisans than to rival ones. This gap is even higher to the one reported by Carlin and Love (2013) in their research in the US context, which was already very remarkable. Moreover, partisanship is far more divisive than ideology although the last one constitute the label *par excellence* to describe political reality and its complexity, and it is used by parties themselves to communicate their positions on several policy issues. Finally, although territorial identity is an important element to describe the political underpinnings of trust in Spain, its magnitude is lower.

Overall, the gaps found in our research for the Spanish context are among the largest in the literature and that have been found for other types of divisions as socio-economic inequalities (Cardenas *et al.*, 2009), or ethnicity (Fershtman and Gneezy, 2001).

[table 2 about here]

#### 5.3 Trust gaps: a multivariate analysis

As it has been noted in the theoretical part of this paper, trust is most beneficial to society when it spans across groups and promotes cooperation among different people. In other words, the wider the trust radius, the better for society as a whole. However, when political divisions deepen, this type of trust is much more difficult to develop. Trust breaks down across different groups and, as demonstrated in the previous section, cooperation among partisans, regional and ideological groups seems to be difficult in Spain, revealing highly polarized identities which affect trust decisions. Now, after having tested the effects of different treatments and distinguished among different types of trust whose radius is politically conditioned, the central goal of this part is to focus on the factors that might reinforce or hinder the 'political boundaries' of trust. More specifically, what individual attributes predict different trust gaps in Spain?

To answer this question and test the remaining hypotheses, I run sets of tobit regressions<sup>15</sup> explaining the three different trust gaps identified in the previous step of our analysis. In this respect, Table 3 shows results of these estimations. As can been, sets of covariates related to our hypotheses have been included: the strength of identities; the level of political sophistication of respondents; the feeling of insecurity about the economic situation experienced by the subject at the time the survey was administered. Moreover, main socio-demographic controls, which might have an effect on the level of trust expressed, cover gender, age, education, the level of income and type of identities (party identity expressed by the respondent, regional origins and ideological self-placement; for a clearer description of operationalization of variables, see Appendix II).

#### [table 3 about here]

To begin with the partisan trust gap, it should be noted that almost all factors of interest seem to behave in line with our expectations. In this respect, people with a stronger identity tend to trust others less. Indeed, strong identifiers send around 1.7 points more to co-partisans than rival partisans compared to weak identifiers. Moreover, this estimation is highly precise and significant. Similar conclusions can be drawn for political knowledge and economic uncertainty. In other words, sophisticated people tend to use partisan stereotypes to inform their trust decisions sharing 0.7 points more as far as their knowledge about politics increase. Additionally, people with a pessimistic economic outlook are also those that express a higher level of partisan trust gap. This confirm our expectation that feeling of insecurity and uncertainty in relation to the future of the economic situation might increase distance among people with resulting problem for trust and cooperation (Hogg, 2000, 2007). In this respect, the trust gap increase by 0.5. Lastly, as far as controls are concerned partisan trust gaps seems to vary positively with age and (secondary) education (differently from what reported by previous research, see Carlin and Love, 2013), while results for PP identifiers do not confirm our findings in the first step. In fact, when controlling for other intervenient factors PP identifiers are not associated with higher partisan trust gaps.

If we look at the other models, including the *regional/national* and the *ideological trust gaps*, the picture varies in some details. When looking at political knowledge and economic uncertainty, findings do not confirm a relation to trust gaps, at least when regional/national and ideological information on the other partner is shared. Neither of the regression coefficients in this respect reach levels of significance, suggesting that this two types of gaps are not driven by politically awareness or perceived insecurity.

On the other hand, an exclusive territorial identity, being this oriented only to the *Comunidad Autonoma* (CCAA) one belong to or to Spain as a national unity, favor trust gaps among regional identities. This means that, compared to a person that feel her identity as inclusive, saying both Catalan and Spanish, another one who feel exclusively Catalan send 1.2 tickets more to his fellows than an person from any of the three different CCAAs being considered

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<sup>&</sup>lt;sup>15</sup> In trust games, observations are bounded by an upper limit and a lower limit (in our case, 5 and 0, respectively). This situations are suited for Tobit models (e.g. Cox, 2004; Carlin and Love, 2013)

(Basque country, Madrid, Andalusia). Identities are also important also when considering ideologies. People reporting extreme ideologies tend to favor their fellows over the others (0.7 tickets more). This estimation although being less precise, reaches levels of statistical significance. Lastly, it might be interesting to notice that people from Andalusia are associated to a higher trust gap as well as left-wings people, whose estimate is remarkable, both in magnitude and precision.

Generally speaking, these findings contribute to confirm existing evidence on the strength of partisan identities in shaping trust and it improves our knowledge by extending these conclusions to other groups, which are politically relevant (Fowler and Kam, 2007; Carlin and Love, 2013). The same cannot be said for political sophistication, which predict only levels of trust gaps due to partisanship and not when it involves either regional or ideological identities. This means that political knowledge is more likely to act on party cues and less on more broad regional stereotypes. Although this might have been expected for regional identities, the irrelevance of political knowledge for ideological trust gaps is more surprising and opens a question on 'what' knowledge might be relevant during information processing of these types of political cues. Finally, although the result holds true only for partisanship, we have uncovered the role of economic identity in deepening divisions within a political community. This is a very new finding offered by this study, which merit further investigation.

# 6. Concluding remarks

Modern democratic life is structured around political competition among different groups and by joining groups people acquire a system of beliefs and an orientation in daily life, reducing risk decisions and enabling citizens' participation in the public sphere. However, when political distance among people increase and political conflicts polarize, society may divide in blocs, undermining two key-resources for social cohesion, that is, trust and cooperation. Building on previous research (Carlin and Love 2013), this paper has tried to contribute taking into account a wide spectrum of political divisions and showing how trust behaviors may break down along these lines. This has been done by employing Spain as a case study, although its findings might extend to similar multi-cultural and multi-national contexts, where social fabric is characterized by political conflicts and diversity. In this way, it has been possible to develop literature on the radius of trust, studying when the this is politically conditioned (e.g. Dehley, 2011).

Moreover, by using an experimental design, we have obtained a behavioral measure of trust. namely how people take decisions when interacting with others different from themselves in a given situation, when stakes are involved, and when information gradually changes. Most importantly, the survey-experiment has allowed to manipulate our variables of interest, that is information about people's identity. In this way, we have compared trust among same and different identities, and, in doing so, we have revealed the size of group-based trust discriminations by partisan, regional and ideological identities. Here, the research has highlighted the primary role of partisanship, although the other two seem to produce differences

that are remarkable when compared with other studies (Fershtman and Gneezy, 2001; Cardenas *et al.*, 2009; Carlin and Love, 2013).

Finally, combining the trust-game with a survey questionnaire it has been possible to investigate the conditions under which the three different trust gaps identified are reinforced or inhibited. In this respect, above all, results point to the strength of the identity in facilitating the use of party, regional and ideological cues when judging other's people trustworthiness. Evidence is instead mixed for political sophistication and perceived economic uncertainty. While these latter factors are significantly important for partisan gaps situating our study within the ongoing economic crisis, their role is not confirmed when regional and ideological stereotypes are taken into account.

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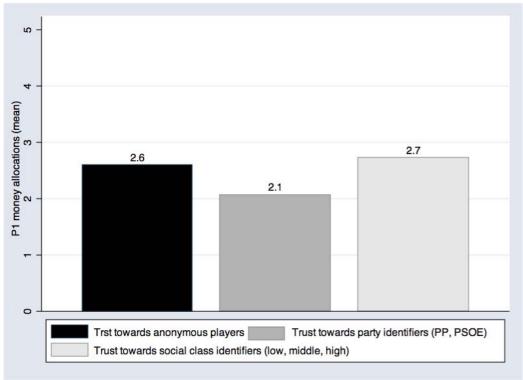
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Table 1. Sample composition and participation in the survey

Role	Round 1	Round 2	Round 3		Panel dataset		
Koie		Round 2	Round 5	Round 1	Round 2	Round 3	
Player 1	634	843	432	443	432	432	
Player 2	641	857	449	438	449	441	
Total	1275	1700	881		881		

Figure 1: Baseline anonymous trust and effect of partisanship and social class in Spain 2012.



Games round 1. Weighted data from the three round panel dataset.

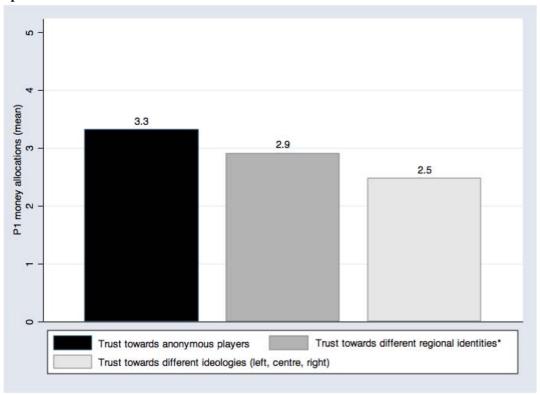


Figure 2: Baseline anonymous trust and effect of regional/national identities and ideology in Spain 2013.

Games round 3. Weighted data from the three round panel dataset.

 $<sup>*\</sup> Regional\ identities:\ Basque,\ Catalan,\ Madrilenian,\ Andalucian.$ 

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Figure 3: Trust towards anonymous, PP and PSOE identifiers by partisan identities in Spain 2012.

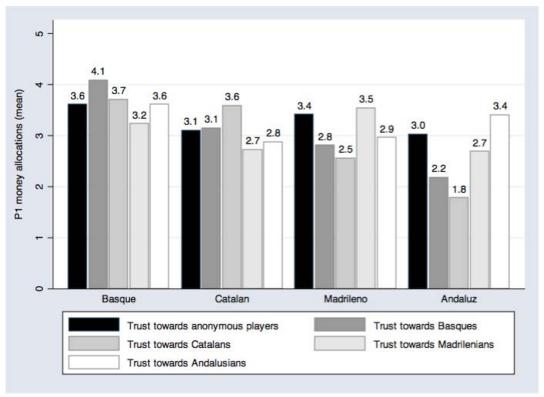
Games round 1 Weighted data from the three round panel dataset.

P1 money allocations (mean) 3.5 3.4 3.4 3.1 3.0 3.0 3.0 2.6 2,3 2.2 2.0 1.2 Left Centre Right Trust towards anonymous players Trust towards left-wings Trust towards people who identifies with Centre Trust towards right-wings

Figure 4: Trust towards anonymous, left, centre and right wing players by ideology in Spain 2013

Games round 3. Weighted data from the three round panel dataset.

Figure 5: Trust towards anonymous Basques, Catalans, Madrilenians and Andalusians by regional identities in Spain 2013



Games round 3. Weighted data from the three round panel dataset.

Table 2: Trust differentiation by experimental treatments

		Mean (SE)
Partisan treatment	same identity – rival identity	2.17**** (0.16)
Ideological treatment	same identity – rival identity	1.10**** (0.08)
Regional treatment	same identity – rival identity	0.82**** (0.08)

<sup>\*</sup> p<0,10; \*\*p<0,05; \*\*\*p<0,01; \*\*\*\*p<0,001

Table 3. Different trust gaps in Spain, 2012-2013 (tobit model)

	Partisan trust gap		Regional trust gap		Ideological trust gap	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
Party attachment (ref: weak identity)						
Strong party identity	1.70****	0.43				
Type of territorial identity (ref: inclusive identity both CCAA and Spanish)						
Exclusive identity (either CCAA or Spanish)			1.15***	0.36		
Type of ideological identity (ref: moderate)						
Extreme ideologies					0.70*	0.40
Political sophistication	0.71***	0.29	-0.04	0.21	0.07	0.14
Economic uncertainty	0.51**	0.22	0.05	0.22	0.09	0.14
Gender (ref: female)						
Male	0.36	0.53	-0.14	0.38	-0.12	0.24
Age	0,04*	0.02	-0.01	0.02	0.02**	0.01
Education (ref: tertiary education)						
Primary education	-1.04	1.03	0.01	1,04	-0.44	0.50
Secondary education	0.77*	0.44	0.13	0.34	-0.06	0.24
Income (ref: high income)						
Low income	-0.47	0.64	0.13	0.54	0.38	0.36
Middle Income	-0.31	0.65	-0.53	0.53	-0.11	0.35
Domicile						
City (more than 100000 inhabitants)	0.31	0.52	-0.53	0.45	0.12	0.24
Party identity (ref: PSOE identifier)						
PP identifier	0.12	0.48				
Regional origin						
Basque			-0.75	0.90		
Catalan			-0.54	0.48		
Andalusian			0.91*	0.52		
Ideology(ref: Centre)						
Left-wing					1.29****	0.30
Right-wing					0.15	0.38
Constant	-7.56****	1.97	0.21	0.98	-1.52**	0.71
Sigma	2.18****	0.27	2.19****	0.22	1.9****	0.11
N	137		261		384	

p-values: \* <0,10; \*\* <0,05; \*\*\* <0,01;\*\*\*\*p<0,001; Games round 1 and 3.

# Appendix I: experimental protocol round 1<sup>16</sup>

#### **General instructions**

Estamos interesados en estudiar cómo la gente forma e interpreta sus preferencias sociales. Con el fin de responder a esta pregunta, le pedimos que participe en una breve encuesta online. En concreto, le pedimos que juegue siete juegos sociales y responda a una serie de preguntas a continuación.

Esta encuesta tiene una duración aproximada de 25 minutos. Alrededor de unas 1000 personas de toda España participarán en el estudio.

Para comenzar vas a participar en un breve juego en el que jugarás con otras personas que te asignaremos de forma aleatoria. Nunca llegarás a interactuar personalmente con ellas. Además, nunca sabrás la identidad de las otras personas y estas personas nunca sabrán la tuya. Las personas con las que serás asociado/a viven en España.

#### Game instrument for subjects in the role of Player 1

# Jugador 1. INSTRUCCIONES

En este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 2". Tú eres el Jugador/a 1.

El Jugador/a 2, al igual que tú, ha recibido 5 puntos NetQuest por participar en el estudio.

El juego consiste en lo siguiente:

- 1. Tienes la posibilidad de dar hasta 5 puntos NetQuest al Jugador/a 2.
- 2. Cualquiera que sea la cantidad de puntos que des al Jugador/a 2, nosotros multiplicaremos esta cantidad por 3 y la cantidad triplicada se le entregará al Jugador/a 2.
- 3. Debes decidir el número de puntos que quieres dar al jugador/a 2, en caso de que quieras darle alguno.
- 4. El/la Jugador/a 2 tiene la opción de devolverte una parte de la cantidad triplicada, aunque él/ella no está obligado/a a hacerlo.
- 5. El/la Jugador/a 2 se quedará con los puntos que le des (en caso de que decidas darle alguno), más los puntos que nosotros le dimos al comienzo del juego, menos los puntos que él/ella decida darte (en caso de que el/la jugador/a 2 decida darte alguno).
- 6. Te quedarás con los puntos que decidas conservar más los puntos que el/la jugador/a 2 decida darte (en caso de que él o ella decida darte alguno).
- 7. A continuación, el juego se termina.

#### Pantalla siguiente

Para aclarar cómo funciona este juego, considera los siguientes ejemplos

<sup>&</sup>lt;sup>16</sup> This is only a draft and shorter version of the experimental protocol, encompassing instructions only for Player 1. For reasons o clarity, the questionnaire has not been included. The same can be said for survey 2, below. Finally, it should be remarked that, although games are listed by following a precise order, people played them following a random process (with the exception of the anonymous game).

Supón que decides dar al otro jugador/a:	Entonces el jugador/a 2 recibirá:	Supón que el otro jugador/a te devuelve:	Entonces conseguirás: (5 - # entregado + # recibido)	Y el otro jugador/a conseguirá: (5 + # recibido - # devuelto)
0 puntos	0 puntos	0 puntos	5 - 0 + 0 = 5 puntos	5 + 0 = 5 <b>puntos</b>
1 puntos	3 puntos	2 puntos	5 - 1 + 2 = 6 <b>puntos</b>	5 + 3 - 2 = 6 puntos
3 puntos	9 puntos	0 puntos	5 - 3 + 0 = 2 puntos	5 + 9 - 0 = <b>14 puntos</b>
3 puntos	9 puntos	9 puntos	5 - 3 + 9 = 11 puntos	5 + 9 - 9 = 5 puntos
5 puntos	15 puntos	7 puntos	5 - 5 + 7 = 7 puntos	5 + 15 - 7 = 13 puntos

# Pantalla siguiente

[Preguntas para comprobar que se ha entendido el juego]

P0.0 ¿Has entendido cómo se juega el juego?

- Sí
- No

# Pantalla siguiente

Permítenos unas preguntas para comprobarlo.

P0.1 Supón que das 5 puntos NetQuest al otro jugador/a, ¿cuántos puntos obtendrá el otro jugador/a?

- 5+0=5
- 15+0=15
- 15+5=20

# Pantalla siguiente

P0.2 Supón que ahora el otro jugador/a te devuelve 15 puntos NetQuest, ¿cuántos puntos tendrás al final del juego?

- 5
- 15
- 13

# Pantalla siguiente

#### Juego 1. INSTRUCCIONES

Una vez que ha entendido el juego, cuando esté listo para tomar una decisión con respecto al primer Jugador/a 2 que, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). Ahora seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 2 y pase al siguiente juego.

- 0
- 1

- 2
- 3
- 4
- 5

# Pantalla siguiente

#### Juego 2. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 3". Usted es el/la jugador/a 1.

El Jugador/a 3 también ha recibido 5 puntos NetQuest por participar en este estudio. Le recordamos, de nuevo, que usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, sin embargo, hemos optado por darle la siguiente información acerca del Jugador/a 3:

El Jugador/a 3 se identifica políticamente con el **PSOE.** 

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 3 y pase al siguiente juego.

- (
- 1
- 2
- 3
- 4
- 5

# Pantalla siguiente

#### Juego 3. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 4". Usted es el/la Jugador/a 1.

El Jugador/a 4, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. De nuevo, usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, sin embargo, hemos optado por darle la siguiente información acerca del Jugador/a 4:

El Jugador/a 4 se identifica políticamente con el PP.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 4 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 1

• 5

# Pantalla siguiente

# Juego 4. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 5". Usted es el/la Jugador/a 1.

El Jugador/a 5, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, en cambio, hemos optado por darle la siguiente información acerca del Jugador/a 5:

# El Jugador/a 5 es de tu misma clase social

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 5 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 4
- 5

#### Pantalla siguiente

# Juego 4. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 5". Usted es el/la Jugador/a 1.

El Jugador/a 6, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, en cambio, hemos optado por darle la siguiente información acerca del Jugador/a 6:

El Jugador/a 6 es **de clase social alta/media/baja** (randomly assigned in relation to the social class of the palyer)

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 6 y pase al siguiente juego.

- (
- 1
- 2
- 3
- 4
- 5

# **Experimental protocol round 3**

#### **General instructions**

Estamos interesados en estudiar la opinión de gente como tú en temas relacionados con nuestro sistema político y nuestra sociedad. Con tal fin, te pedimos que participes de nuevo en una breve encuesta online. Algunas de las preguntas ya te fueron formuladas con anterioridad. No te preocupes al respecto. No hace falta que recuerdes que respondiste. Otras preguntas son, en cambio nuevas, pero creemos interesantes.

Esta encuesta tiene una duración aproximada de 25 minutos. Alrededor de unas 1000 personas de toda España participarán en el estudio.

Para comenzar vas a participar en un breve juego en el que jugarás con otras personas que te asignaremos de forma aleatoria. Nunca llegarás a interactuar personalmente con ellas. Además, nunca sabrás la identidad de las otras personas y estas personas nunca sabrán la tuya. Las personas con las que serás asociado/a viven en España.

#### Game instrument for subjects in the role of Player 1

#### Jugador 1. INSTRUCCIONES

En este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 2". Tú eres el Jugador/a 1.

El Jugador/a 2, al igual que tú, ha recibido 5 puntos NetQuest por participar en el estudio.

El juego consiste en lo siguiente:

- 1. Tienes la posibilidad de dar hasta 5 puntos NetQuest al Jugador/a 2.
- 2. Cualquiera que sea la cantidad de puntos que des al Jugador/a 2, nosotros multiplicaremos esta cantidad por 3 y la cantidad triplicada se le entregará al Jugador/a 2.
- 3. Debes decidir el número de puntos que quieres dar al jugador/a 2, en caso de que quieras darle alguno.
- 4. El/la Jugador/a 2 tiene la opción de devolverte una parte de la cantidad triplicada, aunque él/ella no está obligado/a a hacerlo.
- 5. El/la Jugador/a 2 se quedará con los puntos que le des (en caso de que decidas darle alguno), más los puntos que nosotros le dimos al comienzo del juego, menos los puntos que él/ella decida darte (en caso de que el/la jugador/a 2 decida darte alguno).
- 6. Te quedarás con los puntos que decidas conservar más los puntos que el/la jugador/a 2 decida darte (en caso de que él o ella decida darte alguno).
- 7. A continuación, el juego se termina.

# Pantalla siguiente

Para aclarar cómo funciona este juego, considera los siguientes ejemplos

Supón que decides dar al otro jugador/a:	Entonces el jugador/a 2 recibirá:	Supón que el otro jugador/a te devuelve:	Entonces conseguirás: (5 - # entregado + # recibido)	Y el otro jugador/a conseguirá: (5 + # recibido - # devuelto)
0 puntos	0 puntos	0 puntos	5 - 0 + 0 = 5 puntos	5 + 0 = 5 puntos
1 puntos	3 puntos	2 puntos	5 - 1 + 2 = 6 <b>puntos</b>	5 + 3 - 2 = 6 puntos
3 puntos	9 puntos	0 puntos	5 - 3 + 0 = 2 puntos	5 + 9 - 0 = <b>14 puntos</b>
3 puntos	9 puntos	9 puntos	5 - 3 + 9 = 11 puntos	5 + 9 - 9 = 5 puntos
5 puntos	15 puntos	7 puntos	5 - 5 + 7 = 7 puntos	5 + 15 - 7 = 13 puntos

# Pantalla siguiente

[Preguntas para comprobar que se ha entendido el juego]

P0.0 ¿Has entendido cómo se juega el juego?

- Sí
- No

# Pantalla siguiente

Permítenos unas preguntas para comprobarlo.

P0.1 Supón que das 5 puntos NetQuest al otro jugador/a, ¿cuántos puntos obtendrá el otro jugador/a?

- 5+0=5
- 15+0=15
- 15+5=20

# Pantalla siguiente

P0.2 Supón que ahora el otro jugador/a te devuelve 15 puntos NetQuest, ¿cuántos puntos tendrás al final del juego?

- 5
- 15
- 13

# Pantalla siguiente

#### Juego 1. INSTRUCCIONES

Una vez que ha entendido el juego, cuando esté listo para tomar una decisión con respecto al primer Jugador/a 2 que, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). Ahora seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 2 y pase al siguiente juego.

- 0
- 1

- 2
- 3
- 1
- 5

# Pantalla siguiente

#### Juego 2. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 3". Usted es el/la jugador/a 1.

El Jugador/a 3 también ha recibido 5 puntos NetQuest por participar en este estudio. Le recordamos, de nuevo, que usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, sin embargo, hemos optado por darle la siguiente información acerca del Jugador/a 3:

# El Jugador/a 3 es Catalán.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 3 y pase al siguiente juego.

- (
- 1
- 2
- 3
- 4
- 5

# Pantalla siguiente

#### Juego 3. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 4". Usted es el/la Jugador/a 1.

El Jugador/a 4, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. De nuevo, usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, sin embargo, hemos optado por darle la siguiente información acerca del Jugador/a 4:

#### El Jugador/a 4 es Vasco.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 4 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 4

• 5

# Pantalla siguiente

#### Juego 4. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 5". Usted es el/la Jugador/a 1.

El Jugador/a 5, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, en cambio, hemos optado por darle la siguiente información acerca del Jugador/a 5:

# El Jugador/a 5 es Madrileño.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 5 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 4
- 5

#### Pantalla siguiente

# Juego 5. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 6". Usted es el/la Jugador/a 1.

El Jugador/a 6, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, le recordamos, que Usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, sin embargo, hemos optado por darle la siguiente información acerca del Jugador/a 6:

#### El jugador/a 6 es Andaluz.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 6 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 4
- 5

#### Pantalla siguiente

# Juego 6. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 7". Usted es el/la Jugador/a 1.

El Jugador/a 7, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, le recordamos, que Usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, en cambio, hemos optado por darle la siguiente información acerca del Jugador/a 7:

El jugador/a 7 se identifica ideológicamente con la **Izquierda.** 

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 7 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 4
- 5

#### Pantalla siguiente

#### Juego 7. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 8". Usted es el/la Jugador/a 1.

El Jugador/a 8, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, le recordamos, que Usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, sin embargo, hemos optado por darle la siguiente información acerca del Jugador/a 8:

El jugador/a 8 se identifica ideológicamente con la Derecha.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 8 y pase al siguiente juego.

- 0
- 1
- 2
- 3
- 4
- 5

# Pantalla siguiente

Juego 8. INSTRUCCIONES

Este juego se juega de la misma manera que el primer juego. Como en el juego anterior, en este juego, hay dos jugadores: "Jugador/a 1" y "Jugador/a 9". Usted es el/la Jugador/a 1.

El Jugador/a 9, como usted, ha recibido 5 puntos NetQuest por participar en este estudio. Otra vez más, le recordamos, que Usted no sabrá quién es esta persona ni durante ni después de la encuesta (ni la otra persona sabrá quién es usted). En este juego, en cambio, hemos optado por darle la siguiente información acerca del Jugador/a 9:

El jugador/a 9 se identifica ideológicamente con el Centro.

Cuando esté listo para tomar una decisión, seleccione, por favor, la cantidad de puntos NetQuest que usted quiere dar al Jugador/a 9 y pase al siguiente juego.

- (
- 1
- 2
- (
- 4
- 5

# 8. Appendix II: variables used in the model(s) and operationalization

Variable	Question	Scaling	Coding
Age Education	Age of respondent What is the highest level of education you have completed?	Number of years (open) (1) Estudios primarios sin completar; (2) Certificado de Estudios Primarios; (3) Hasta 5º de EGB; (4) Educación Primaria (LOGSE), Grado Elemental en Música y Danza; (5) F.P. de Iniciación; (6) Bachillerato Elemental; (7) EGB; (8) ESO; (9) F.P. Oficialía; (10) F.P. de 1er Grado; (11) Bachillerato Superior, BUP; (12) PREU, COU; (13) Bachillerato (LOGSE); (14) C.F. de Grado Medio (Técnico Medio), C.F. de Grado Medio en Artes Plásticas y Diseño, Grado Medio en Música y Danza; (15) F.P. Maestría; (16) F.P. de 2º Grado; (17) C.F. de Grado Superior (Técnico Superior), C.F. de Grado Superior en Escuelas de Arte; (18) Peritaje, Enfermería, Magisterio, Asistente Social; (19) Diplomado, Ingeniero o Arquitecto Técnico, 3 años de licenciatura, Grado (Bolonia), Título Superior en Diseño; (20) Licenciado, Ingeniero Superior, Arquitecto, Máster (Bolonia), Título Superior en Música, Danza o Arte Dramático; (21) Doctorado	Numeric Recoded into three categories: (1) 'primary' (0, 1, 2, 3, 4, 5); (2) 'secondary' (6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17); (3) 'tertiary' (18, 19, 20, 21)
Gender	Sex of the respondent		Recoded into:: (1) 'female'; (0) 'male'
Income	Deciles defined by 'Instituto Nacional de Estadística' (INE)	(1) 180€o menos / 780€o menos / 9.350 €o menos; (2) Entre más de 180€y 270€/ Entre más de 780€y 1180€/ Entre más de 9.350 €y 14.160€, (3) Entre más de 270€y 290€/ Entre más de 1180€y 1.290€/ Entre más de 14.160€y 15.420€, (4) Entre más de 290€y 380€/ Entre más de 1.280€y 1.680€/ Entre más de 15.420€y 20.100€, (5) Entre más de 380€y 400€/ Entre más de 1.680€y 1.780€/ Entre más de 20.100€y 21.360€, (6) Entre más de 400€y 500€/ Entre más de 1.780€y 2.180€/ Entre más de 21.360€y 26.200€, (7) Entre más de 500€y 560€/ Entre más de 2.180€y 2.450€/ Entre más de 26.200€y 29.400€, (8) Entre más de 560€y 640€/ Entre más de 2.450€y 2.810€/ Entre más de 29.400€y 33.710€, (9) Entre más de 640€y 860€/ Entre más de 2.810€y 3.770€/ Entre más de 33.710€y 45.290€, (10) Más de 860€/ Más de 3.770€/ Más de 45.290€	Recoded into: (1) 'low income' (1, 2, 3); (2) 'middle income' (4, 5, 6, 7); (3) 'high income' (8, 9, 10)
Party identification	Two questions: a) Is there any particular political party you might feel closer to than all other parties? b) Which one?	a) yes/no b) (choice among a list of party labels)	Recoded into two: (1) 'PP' (0) 'other' (1) 'PSOE' (0) 'other'
Strength of party identity  Political knowledge	Closeness to a party  3 Fact-based questions about political figures or institutions	How close do you feel to this party? (1) very close; (2) quite close; (3) not close; (4) or, not at all close  Could you please tell us who has the highest number of members in the Congress?: (1) the Socialist party (PSOE); (2) the Popular Party (PP); (3) Others; (4) I don't know;	Recoded into: (1) 'very or quite close' (1, 2) (0) 'note close or not at all close' (3, 4) Political knowledge scale created by summing correct answers
Regional origin	Regional origin/residence	Could you please tell us who is currently the Minister of Justice?: (1) Esperanza Aguirre; (2) Alberto Ruiz-Gallardón; (3) María Dolores de Cospedal (4) No lo sé Could you please tell us what institution has the right to decide about law's constitutionality? (1) the King; (2) the Prime Minister; (3) the Constitutional Court (4) the Council of Ministers; (5) I don't know Comunidad Autónoma: (1) Andalucía; (2) Aragón; (3) Asturias (Principado de); (4) Balears (Illes); (5) Canarias; (6) Cantabria; (7) Castilla y León; (8) Castilla-La Mancha; (9) Cataluña; (10) Comunidad Valenciana (11) Extremadura; (12) Galicia; (13) Madrid (Comunidad de); (14) Murcia (Región de); (15) Navarra (Comunidad Foral de); (16) País Vasco; (17) Rioja (La); (18) Ceuta; (19) Melilla	Recoded into: (1) 'Catalan' (0) 'other'; (1) 'Basque' (0) 'other' (1) 'Madrilenian' (0) 'other'
Strength of regional identity	Which one of the following sentences express better your feelings	(1) I feel only Spanish; (2) More Spanish than from my CCAA; (3) as Spanish as from my CCAA; (4) More from my CCAA than Spanish; (5) Only from my CCAA	(1) 'Andalusian' (0) 'other' Recoded into: (1) 'only from my CCAA/Spain (1, 2, 4, 5)
Ideological identity/strength	In politics people sometimes talk of "left" and "right". Where would you place yourself on this scale, where 1 means left and 10 means right?	Scale from 1 (Left) to 10 (Right)	(0) 'As Spanish as from my CCAA' (3,) Two variables: (1) 'Left' (1, 2, 3, 4); (2) 'Centre' (5, 6); (3) 'Right' (1) 'Extreme ideologies' (1, 10); (0) 'Moderate' (2, 3, 4, 5, 6, 7, 8, 9)
Insecurity and perception of economic situation	How worried are you forlowering the level of life quality?	(1) Very worried; (2) Fairly worried; (3) Not very worried; (4) Not at all worried;	(1) 'Worried' (1,2) (0) 'Not worried' (3,4)