


What Determines the Demand for Redistribution and What Can We Expect from the Nearby Future: Empirical Evidence for Spain

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Objective. In this article, we seek to determine the main explanatory factors of individual preferences for redistribution in Spain. *Methods.* We use data from the World Values Survey capturing economic factors, political preferences, personal beliefs, and sociodemographic characteristics. *Results.* The results, obtained using both OLS and ordered logit regressions, reveal that factors regarding relative household income, personal beliefs, sociodemographic characteristics, and regional differences are the main determinants of the demand for redistribution. *Conclusion.* These results, coupled with long-standing trends that the Spanish society has been experiencing for decades, suggest that there may be an increase in the demand for redistribution in the coming years.

The evolution of income inequality indicators in most developed countries, especially after the outbreak of the global financial crisis in 2008, has placed the analysis of both causes and consequences of increasing inequalities as one of the main research topics in recent times (Krueger, 2012; Jaumotte, Lall, and Papageorgiou, 2013; Dabla-Norris et al., 2015).

Within this context, one would expect that the concern of policymakers for mitigating income inequality as a core economic policy objective should depend on citizens' preferences for distribution. For this reason, it is interesting to analyze how these preferences have been impacted by the shock caused by the prolonged economic crisis that began in 2008 with the bursting of the housing bubble. This shock may have had significant negative effects not only on inequality levels but also on lifelong mobility, that is, that experienced by an individual throughout his or her life. In turn, these effects might be associated with changes in the preferences for redistribution (Benabou and Ok, 2001; Benabou and Tirole, 2006).

Most studies on redistributive preferences have been conducted on advanced industrial economies, such as those of Europe and the United States (Milanovic, 2000; Kenworthy and McCall, 2007; Pontusson and Rueda, 2010; Engelhardt and Wagener, 2014; Niehues, 2014). Results from these research works are a useful reference, but to the extent that Europe is a very heterogeneous area, country-specific studies enabling contextualization are therefore required. In fact, specific historical experiences in different countries may

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lead to various social norms about what is acceptable or not in terms of inequality (Piketty and Saez, 2006; Atkinson, 2008).

Following this line, the aim of this article is twofold. On the one hand, we try to identify which variables actually have significant effects on the demand for redistribution in Spain and, on the other hand, we attempt to anticipate the direction of Spanish redistribution preferences in the coming years.

Spain provides a suitable national context-specific case study for present and future cross-national comparisons due to the seriousness that the impact the Great Recession had in this country. The most harmful consequences include high levels of structural unemployment, precarious forms of employment (manifested by an increase in the rate of involuntary partial employment and by an overwhelming prevalence of temporary contracts), and a general stagnation of wages during economic recovery. In addition to this, inequality measured through Gini index has increased after the last Great Recession and it is higher than European average (Piketty, 2014; Blanchet, Chancel, and Gethin, 2019). Moreover, this feature is shared with the other so-called European peripheral economies, namely Portugal, Italy, and Greece.

Despite the plentiful literature about determinants of social preferences for redistribution, to the best of our knowledge, there is only a previous work dealing with this issue for the Spanish case (Iglesias, Pena, and Sánchez, 2013). In this article, the authors analyze the determinants of preferences for redistribution in Spain both at an aggregate and a regional level for two years, 1995 and 2007, and find the existence of structural changes in those preferences. This notwithstanding, the availability of new data for a particularly tumultuous period—the Spanish economic crisis of 2008–2013—highlights the pressing need to conduct new research, on the one hand, to grasp better what determines the preferences for redistribution and, on the other hand, to ascertain whether the consequences of the crisis are also reflected in people's demand for redistribution.

We contribute to the literature in two ways. First, updating the empirical evidence since our analysis refers to a time horizon including periods of economic growth and recessions, that is, during a pronounced boom-and-bust cycle. Second, identifying structural factors and long-term trends that can be used for forecasting the future evolution of preferences for redistribution and even the electoral support to political parties.

Since voters can influence governments' policies, it is reasonable to assume that these changes might result in a greater demand for redistribution. Nonetheless, individuals have views on this issue that go beyond their household financial situation and the level of both income inequality and mobility within the community they live in. Other factors linked to sociodemographic characteristics, political preferences, personal beliefs regarding fairness, or regional differences may come into play to determine the level of redistribution that a given individual decides to demand from their government (Finseraas, 2009; Engelhardt and Wagener, 2014; Niehues, 2014; Solt et al., 2016).

In order to carry out our analysis, we estimate a model based on Alesina and Giuliano (2011) as a starting point using data from the World Values Survey (WVS), which collects information concerning redistributive preferences, as well as a wide range of traits related to political inclinations, personal beliefs, and sociodemographic characteristics of the respondents.

This article is organized as follows. In Section 2, we review the recent literature on the subject. Section 3 deals with the data source and the variables of our model, as well as the justification for their inclusion and their main descriptive statistics. Section 4 presents both the empirical model that we use to explain the behavior of redistributive preferences and the econometric methods employed to estimate it. Section 5 includes the corresponding

results and the discussion of the estimates and their implications. Finally, Section 6 summarizes the conclusions of our research.

Literature Review

Meltzer and Richard (1981) argue in their seminal work that decisions to maximize well-being ultimately depend on what they call the “median voter.” Thus, when it comes to electing a government, voters with incomes below the median will choose candidates who promise higher taxes and more redistribution, whereas voters with incomes above the median will do the opposite. As a result of this behavior, when the mean income increases relative to the median, which implies higher income dispersion—or, in other words, higher inequality—taxes are expected to raise and vice versa.

Since then, a comprehensive body of research has been carried out in order to enhance the theoretical understanding and provide empirical evidence on this issue. Other determinants, such as the prospects of upward mobility (Benabou and Ok, 2001; Benabou and Tirole, 2006), which may cause certain individuals below the median to refrain from supporting an expansion of redistributive policies because they have strong expectations of an income increase, have also been regarded as relevant explanatory variables of the preferences for redistribution. Also, it has been suggested that, at the same time, these prospects can be influenced by the individual and familiar history of social mobility (Piketty, 1995; Giuliano and Spilimbergo, 2008).

Individuals’ risk aversion may lead them to prefer more or less redistribution for the same level of income and mobility, as redistributive policies represent a sort of insurance. Thus, for a given level of mobility, risk-averse individuals will prefer a higher level of redistribution, as the potential net losses caused to them by these policies in the present may be compensated in the future in case they experience downward mobility (Alesina and La Ferrara, 2005; Ferrer-i-Carbonell and Ramos, 2010).

Factors concerning personal beliefs about the role of luck or effort (Fong, 2001; Alesina and Angeletos, 2005), or simply the subjective political ideology of individuals—left versus right—have also proved to have a significant impact on redistribution preferences (Alesina and La Ferrara, 2005).

Finally, sociodemographic characteristics, such as gender, age, religion, education level, ethnicity, and marital status are usually used as control variables when conducting research on this issue (Alesina and Giuliano, 2011; Guillaud, 2013). Further research has been carried out on the effect that certain widespread perceptions of people regarding certain issues—such as immigration, or beliefs about intergenerational mobility—have on redistributive preferences (Alesina, Miano, and Stantcheva, 2018a; Alesina, Stantcheva, and Teso, 2018b).

Within the most recent economic literature related to the factors that could influence the demand for redistribution at the national level, there are several studies for the United States (Alesina and Angeletos, 2005; Alesina and La Ferrara, 2005; Alesina and Giuliano, 2011), Italy (Gaeta, 2012), and Turkey (Karayel, 2015; 2016), as well as numerous cross-national studies (Neher, 2012; Guillaud, 2013; Olivera, 2015).

Concerning the Spanish case, to our best knowledge, there is only a similar previous work (Iglesias, Pena, and Sánchez, 2013). In this article, the authors analyze the determinants of preferences for redistribution in Spain both at an aggregate and a regional level for two years, 1995 and 2007, and find the existence of structural changes in those preferences. Notwithstanding, the existence of new data available for a particularly tumultuous

period, the Spanish economic crisis 2008–2013, highlights the pressing need to conduct new research suggesting new approaches that can allow us, on the one hand, to grasp better what determines the preferences for redistribution and, on the other hand, to ascertain whether the consequences of the crisis were also reflected in the demand for redistribution of the population.

Data Source and Definition of Variables

In this section, we present the variables selected to study what determines the demand for redistributive policies in Spain and the main data source for those variables.

The data source for our analysis is the WVS, henceforth. The WVS, which started in 1981, consists of nationally representative surveys on human beliefs and values conducted in almost 100 countries using a common questionnaire. The data are structured into six waves (1981–1984, 1990–1994, 1995–1998, 1999–2004, 2005–2009, and 2010–2014), which are independent cross-section samples. Spain started to take part in the survey in the second wave.

The model used as the starting point is the one formulated by Alesina and Giuliano (2011). Nevertheless, we have introduced some minor changes due to the lack of some data and our interest to investigate further on certain matters that were addressed in a different way by those authors.

Thus, as a first proxy of the redistributive preferences (*demfor*), we will use the question on income equality posed as follows: “Now I’d like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left (‘Incomes should be made more equal’); 10 means you agree completely with the statement on the right (‘We need larger income differences as incentives for individual effort’; and if your views fall somewhere in between, you can choose any number in between.” In order to facilitate the interpretation of the results, we inverted the scale so that the higher the response given by the interviewee, the stronger their preference for redistribution, and vice versa.

However, considering that this question may not perfectly capture the Spanish redistribution preferences and also in order to check the robustness of the results obtained, we decided to introduce a second dependent variable: government responsibility (*govt_resp*). The question in this regard is posed in the WVS as follows: “Now I’d like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left (‘Government should take more responsibility to ensure that everyone is provided for’); 10 means you agree completely with the statement on the right (‘People should take more responsibility to provide for themselves’); and if your views fall somewhere in between, you can choose any number in between.” Once again, we have inverted the scale of responses to facilitate the interpretation of the estimates presented in the next section.

It is worth mentioning that, although the correlation between the two dependent variables is positive, it is only 35.80 percent, so one is not merely a substitute for the other, but rather it provides somewhat different information on a similar issue. For more information on the correlation between the variables in the model, see Table A1.

Based on what has been pointed out in the previous section, we divided the explanatory variables into three groups: household income level, political ideology and personal beliefs, and sociodemographic characteristics.

Regarding the family income level, the WVS does not ask anything to its Spanish interviewees. However, there are two questions that can serve to approximate the material

living conditions of each household. On the one hand, the respondent is asked to place their household in an income distribution divided into ten deciles (“On this card there is an income scale on which 1 indicates the lowest income group and 10 the highest income group in your country. We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in”). This question allows us to evaluate the perception of the household with regard to its income in relation to the rest of the population (*inc_decile*). On the other hand, a second question about satisfaction with the financial situation of the household (“How satisfied are you with the financial situation of your household?” where 1 indicates complete dissatisfaction and 10 complete satisfaction) allows us to assess to what extent the interviewee considers that the needs of the household are reasonably well covered (*fin_satisf*). This pair of variables could be considered as an approximation of household income in relative and absolute terms, respectively.

As for sociodemographic characteristics of the interviewee, we included age (*age*); gender (*female*); employment status (*emplstatus*), which can take eight different values (full-time, part-time, self-employed, retired, housewife, student, unemployed, or other); marital status (*marstatus*), which can take six different values (married, living together as married, divorced, separated, widowed, or single); and the number of children (*num_child*).

As for the educational level of the interviewee (*educ*), the WVS offers eight possible answers (no formal education; incomplete primary school; complete primary school; complete secondary school: technical/vocational type; incomplete secondary school: university-preparatory type; complete secondary school: university-preparatory type; some university-level education, without degree; university-level education, with degree). The inclusion of this variable as a set of dummies allows determining whether there is a relationship between educational level and redistributive preferences and, if so, whether this relationship is non-linear. Unfortunately, we do not have data on the parents’ educational level that could improve our analysis, since the question has never been incorporated in the questionnaire carried out in Spain.

Finally, regarding the ethnicity of the respondents, we decided to exclude the variable from the model given that more than 98 percent of them were white. Also, we opted to exclude the variable concerning the size of the town where the interviewees lived since it was asked intermittently, which makes data unavailable for half of WVS waves.

With regard to the individual beliefs of the respondents, we incorporated three explanatory variables. First, we included the self-positioning in a political scale of 1–10 (“In political matters, people talk of ‘the left’ and ‘the right’. How would you place your views on this scale, generally speaking?”), so the higher the response on that scale, the more to the right the person place himself (*ideology*). Nonetheless, we cannot ignore that this measure is inherently flawed and may conceal more complex implications regarding the real support for democratic institutions or preference for more authoritarian regimes (Adler, 2018).

Second, we included a variable that can capture the degree of income mobility that respondents consider that exists in the community in which they live (*hardwork*). The underlying question is phrased as follows: “Now I’d like you to tell me your views on various issues. How would you place your views on this scale? 1 means you agree completely with the statement on the left (‘In the long run, hard work usually brings a better life’); 10 means you agree completely with the statement on the right (‘Hard work doesn’t generally bring success—it’s more a matter of luck and connections’); and if your views fall somewhere in between, you can choose any number in between.” Thus, people with prospects of upward mobility, that is, those who subscribe to the claim that hard work brings success,

TABLE 1
Main Descriptive Statistics

Variable	Obs.	Mean	SD	Min	Max
<i>demfor</i>	3,527	5.5461	2.6492	1	10
<i>govt_resp</i>	3,490	6.5894	2.4089	1	10
<i>age</i>	3,600	45.9603	18.3535	18	99
<i>fin_satisf</i>	3,575	5.6915	1.9686	1	10
<i>num_child</i>	3,590	1.5646	1.5224	0	8
<i>inc_decile</i>	3,058	4.3221	1.7314	1	10
<i>hardwork</i>	3,508	6.6844	2.4189	1	10
<i>ideology</i>	2,942	4.7277	1.9404	1	10
<i>educ</i>	3,549	3.5480	2.2998	1	8
<i>religiosity</i>	3,502	5.7761	3.0702	1	10
<i>female</i>	3,600	0.5097	0.5000	0	1
<i>emplstatus</i>	3,596	3.5709	2.1490	1	8
<i>marstatus</i>	3,593	2.7401	2.2163	1	6
<i>region</i>	3,600	8.1000	4.7358	1	17
<i>year</i>	3,600	2004.2840	6.8090	1995	2011

should be less prone to demand more redistribution. Again, we reversed the response scale to help to interpret the results presented in the next section.

The last variable on personal beliefs refers to religious beliefs (*religiosity*), which is worded in such a way that the greater the importance that the respondent declares that God has in his or her life, the greater the value this variable takes (“How important is God in your life? Please use this scale to indicate. 10 means ‘very important’ and 1 means ‘not at all important’). Unlike previous studies, we preferred not to include a variable concerning the religious denomination of the respondents, since more than 97 percent of those who claim to have one declared themselves Catholics.

Finally, we considered the inclusion of dummies that capture the effects of idiosyncratic regional differences (*region*), which differentiate the 17 autonomous communities into which the Spanish state is divided, and structural changes over time (*year*), which are not already collected by any of the above-mentioned variables.

The choice of the variables included in the model has conditioned the number of waves from which we can use data. Although Spain has participated in five waves of the World Values Survey (1990, 1995, 2000, 2007, and 2011), we can only use the observations for 1995, 2007, and 2011, since solely these waves include all the questions we utilize as dependent and independent variables.

Table 1 shows the main descriptive statistics of the variables included in our model.

Empirical Model and Methodology

Considering the variables presented in the previous section, our basic specification for explaining the redistributive preferences in Spain is the following:

$$\begin{aligned}
 demfor_{it} \text{ (or, } gov_{t_resp_{it}}) &= \beta_0 + \beta_1 t + \beta_2 age_{it} + \beta_3 age_sq_{it} + \beta_4 fin_satis_{it} + \\
 &+ \beta_5 num_children_{it} + \beta_6 inc_decile_{it} + \beta_7 hardwork_{it} + \beta_8 ideology_{it} + \beta_9 religiosity_{it} \\
 &+ \beta_{10} gender_{it} + \beta_{11} educ_{it} + \beta_{12} emplstatus_{it} + \beta_{13} marstatus_{it} + e_{it}
 \end{aligned}
 \tag{1}$$

The inclusion of the variable *age* in both levels and their respective squares allows determining whether the relationship between these variables and the demand for redistribution (if any) is nonlinear. Nonetheless, variables referring to educational attainment, employment status, marital status, region, and year are incorporated as dummies since they cannot be included otherwise.

The first regressions were estimated by OLS. But considering that both dependent variables are ordinal, it can be argued that the most suitable estimation method for this type of data is the ordered logit model, a special case of the logistic regression model (Wooldridge, 2010). For this reason, we also estimated an ordered logit model to check the robustness of the OLS results.

Item nonresponses to certain questions, such as self-placement in the income distribution (*inc_decile*) or political self-assessment (*ideology*), cause that of the approximately 3,600 observations available in the sample (Table 1), only around two thirds of these can be used for regression analysis purposes.

Results and Discussion

The estimates of the four models are shown in Table 2 (see Table A2 for the results of the fixed effects).

Models 1 and 2, in which the dependent variable is a clear measure of preferences for redistribution, reveal several important points about what determines the demand for redistribution in Spain.

First, the variables related to income and personal beliefs are especially significant in explaining preferences for redistribution, unlike the sociodemographic variables, which have no explanatory power in most cases.

Regarding the personal income variables, only the self-positioning in the income distribution (*inc_decile*) has a relevant statistical significance. Thus, each upward leap in the decile in which the respondents perceive themselves reduces their preference for redistribution around 0.10–0.15 on a 1–10 scale, depending on the estimation method used. On the other hand, the financial situation of the household (*fin_satisf*) itself is not significant to explain the behavior of the demand for redistribution of individuals. This is not because both variables provide identical information, since they have a correlation around 30 percent.

With reference to the sociodemographic variables included, only three of them are relevant for explaining the behavior of our first dependent variable: the educational level of the respondents, their gender and their autonomous community of residence.

The educational level (*educ*) shows high levels of significance and a clear nonlinear relationship with redistributive preferences. The estimated coefficients of the dummy variables indicate that the preference for redistribution decreases as a higher educational level is attained, but following an irregular path, where respondents with a complete educational level (secondary or tertiary) tend to prefer lower levels of redistribution than those with unfinished secondary or tertiary education.

When it comes to gender, females are significantly more opposed to inequality and more supportive of redistribution, a fact that is already well documented in the previous economic literature (Croson and Gneezy, 2009).

As far as the region of residence is concerned, according to our results we can say that this is a relevant factor since in none of the models the regional dummies are jointly non-significant. Compared to our reference region—which, merely because of an alphabetical order question, is Andalusia—the coastal regions of Principality of Asturias, Balearic

TABLE 2
Estimates for Linear and Ordered Logit Regression (with and Without Fixed Effects)

	demfor (Model 1)		govt_resp (Model 2)	
	OLS	OLOGIT	OLS	OLOGIT
age	-0.0257 (0.0200)	-0.0184 (0.0145)	-0.0415 (0.0185)**	-0.0335 (0.0145)**
age_sq	0.0003 (0.0002)	0.0002 (0.0001)	0.0003 (0.0002)*	0.0003 (0.0001)*
fin_satisf	-0.0289 (0.0288)	-0.0306 (0.0217)	-0.0572 (0.0266)**	-0.0420 (0.0214)*
num_child	0.0046 (0.0473)	-0.0035 (0.0346)	0.0618 (0.0438)	0.0430 (0.0351)
inc_decile	-0.1250 (0.0367)***	-0.0862 (0.0268)**	-0.1743 (0.0339)***	-0.1518 (0.0269)***
hardwork	0.0789 (0.0217)***	0.0594 (0.0167)***	0.1655 (0.0201)***	0.1687 (0.0173)***
ideology	-0.1882 (0.0282)***	-0.1550 (0.0214)***	-0.1330 (0.0262)***	-0.1158 (0.0214)***
religiosity	-0.0895 (0.0194)***	-0.0642 (0.0143)***	-0.0549 (0.0179)***	-0.0409 (0.0145)***
Gender				
Female	0.3135 (0.1167)***	0.2278 (0.0842)***	0.0418 (0.1079)	0.0145 (0.0839)
educ	Jointly significant	Jointly significant	Jointly nonsignificant	Jointly nonsignificant
marstatus	Jointly nonsignificant	Jointly nonsignificant	Jointly nonsignificant	Jointly nonsignificant
region	Jointly nonsignificant	Jointly nonsignificant	Jointly nonsignificant	Jointly nonsignificant
year	Jointly significant	Jointly significant	Jointly significant	Jointly significant
Obs.	2,403	2,403	2,395	2,395
Adj. R ²	0.1262	0.0363	0.0949	0.0307

NOTE: ***, **, * indicate rejection of the null hypothesis at the 1, 5, and 10 percent significance levels, respectively.

Islands, Canary Islands, Cantabria, Catalonia, Valencian Community, and Galicia are likely to demand less redistribution due to unobserved cultural determinants.

Similarly, the joint significance of the wave dummy variables reveals the existence of outstanding differences in redistributive preferences between 1995 and 2011 that cannot be accounted for the rest of the explanatory variables included in the model. In other words, our results suggest that there were structural changes in the demand for redistribution in that period toward a stronger preference for this kind of policies.

The remaining sociodemographic variables, either presented in levels or as sets of dummies, are not significant to explain the redistributive preferences of population.

In contrast, all three variables that capture personal beliefs are highly significant. The stated ideology (*ideology*) of the people surveyed seems to be one of the main drivers of redistributive demand. As a result, the fact that a person self-positions one step further to the right reduces his/her preference for redistribution around 0.19 points on a scale of 1–10, depending on the estimation method used. The recent evolution of ideological self-positioning (Centro de Investigaciones Sociológicas, 2019a), particularly its shift to the left from 2012 onward, suggests an increase, at least in the short term, in the demand for redistributive policies in Spain. Notwithstanding, we must bear in mind that the evolution of this indicator is linked to both structural and cyclical issues that can make it veer in the other direction in a relatively short time.

In addition, the importance of religion in everyday life (*religiosity*) appears to have a negative effect on the demand for redistribution, reducing it by an average of 0.09 points. It should be noted that this variable, although slightly correlated with ideological self-positioning, captures information not contained in the other one. But it should be also pointed out that the process of secularization experienced by the Spanish population over the last few decades, which implies a decreasing proportion of believers or people who regularly attend to nonsocial religious services (Pérez-Agote, 2012), again hints at a progressive increase in the redistributive demand in Spain.

Finally, the belief that individual success is essentially driven by hard work (*hardwork*) has a positive and very significant effect on the first explained variable. These findings are at odds with, on the one hand, the logic of methodological individualism that would indicate that those who believe to a greater extent in the fairness of the distributive system will be less likely to demand a higher level of income redistribution, and, on the other hand, most recent empirical studies that link these two variables (Alesina and Giuliano, 2011; Gaeta, 2012; Iglesias, Pena, and Sánchez, 2013). However, there is a precedent in the literature in which these atypical results emerge after an analysis similar to ours (Karayel, 2016).

After having verified the possible reasons that could explain an unexpected sign in a regression, for example, reverse measure, common trend, functional form approximation, dynamic confusion, and other wrong interpretations (Kennedy, 2008), we can assert that none of them seems to be present in our case. Therefore, we can safely say that, from the econometric point of view, the negative coefficient obtained is correct, but that, as Karayel (2016) points out, it is “atypical.” Accordingly, it would be of interest to explore in future research whether this circumstance also takes place in other countries, and to attempt to find an explanation for this phenomenon.

Furthermore, models 3 and 4, where the explanatory variable is not a direct answer to a question about income equality, but a more general one regarding government’s responsibility to provide for everyone, offer similar results: household income, personal beliefs, and some sociodemographic traits are the main determinants of the Spanish redistributive preferences.

Among the main differences we find the nonsignificance of educational level and gender, and the significance of age to explain the preferences on government’s responsibility to

provide suitable living standards to all its citizens. In relation to the effect of age, we find that its relationship with redistributive preferences is nonlinear so that it decreases with age up to a point where this relationship becomes positive. The turning point is around 60–61 years of age, that is, the average retirement age in Spain. As a result, it is possible to state that the demand for redistribution decreases with age during working life but increases with age during the years of retirement. If this relationship does not change in the foreseeable future and given the population projections made by the Instituto Nacional de Estadística (2018), a progressive increase in the demand for redistributive policies would be expected in the forthcoming years.

Also, the lower the support for redistribution, the higher the income decile in which the respondent self-places and the greater the degree of satisfaction with the financial situation of the household. In this case, it is apparent that the importance of family income is greater in determining government's responsibility for the living conditions of population, since both variables are significant and the estimated coefficients are slightly higher in absolute value than in models 1 and 2. In any case, the estimates of the four models reveal the relative weakness of the absolute incomes to explain the demand for redistribution and underline the importance of relative income with regard to the support or rejection for this type of policies.

The importance of these variables, especially relative income, is another indication of a foreseeable increase in demand for redistribution in the forthcoming years due to the fact that, since the beginning of this century, the percentage of respondents who place their household in the first five deciles of income distribution rose from 72.76 to 76.13 percent, which increased the average of this variable from 4.70 to 4.48.

As regard personal belief variables, they keep very high levels of significance and the same signs as the coefficients of models 1 and 2. Nevertheless, the estimated values indicate a slightly lesser relevance of ideology (understood as left vs. right) and religiosity, and a greater importance of the belief in hard work as a source of success to explain individuals' preferences for redistribution.

Finally, although the regional fixed effects are jointly significant, the autonomous communities with a demand for redistribution that is higher or lower than the benchmark (reference community) demand do not match those of models 1 and 2. In this case, the regions that demand more redistribution due to cultural factors are the two Castillas, Extremadura, Madrid and the Basque Country, whereas only Murcia has a lower preference for redistribution than the reference community. In addition, the significance of the dummy variables supports the results for models 1 and 2 that indicated a shift toward a stronger preference for redistribution since the first wave of the WVS.

Although the results for models 3 and 4 somewhat reinforce most of the conclusions drawn previously for the first two models (the importance of family income, personal beliefs, and region of residence), they call into question one of the most relevant findings resulting from the first two estimates: the importance of educational attainment and age, and their nonlinear relationship with the demand for redistribution.

Conclusions

In this article, we seek to provide some insight into the determinants of redistributive preferences in Spain by framing it in the abundant literature on this issue that has been developing in recent times.

Our results reveal that individuals' household income and their perceived relative position within its distribution, educational level, gender, age, personal beliefs, and region of residence are the main determinants of redistributive preferences. The findings also seem to indicate that there may have been a structural shift in favor of more redistribution once the effect of the other explanatory variables is accounted for.

Given the lack of impact of other sociodemographic variables, for example, the number of children, marital status, and employment status, our estimates suggest that long-term trends such as the aging of population (Instituto Nacional de Estadística, 2018) or the progressive secularization of Spanish society (Centro de Investigaciones Sociológicas, 2020) could contribute to increasing the demand for redistributive policies in the coming years. This would only be offset by the improvement in the average educational level of the Spanish population (OECD, 2014; 2017; 2019), which has a nonlinear effect in the opposite direction. However, the effect of these long-standing trends could be countered by a shift to the right in the average ideological self-assessment and also by a widespread rise in household income, particularly in relative terms with relation to the rest of the population.

Nevertheless, as revealed by the latest wave of the WVS, the austerity and the labor reforms during the 2008–2013 period seem to have played a part in displacing many households' self-positioning toward lower tranches of income distribution—because they might be seen as a threat to the role played by the State in satisfying certain aspirations of the dwindling middle class (health services, university education, pensions)—and, therefore, this can also contribute to an overall increase in the demand for redistributive policies, leaving the decline in size and political influence of middle-class and purely ideological factors as the only significant forces capable of curbing the rise in preference for such policies.

However, so that a stronger demand for redistributive policies results in a more egalitarian distribution of income, it is vital for this issue to become one of the most crucial topics when it comes to voting—which is not the case nowadays (Centro de Investigaciones Sociológicas, 2019b)—and thus pro-redistribution voters can oblige elected politicians to take these measures. This is becoming increasingly difficult with an ever-decreasing and impoverished middle class as contrasted with a small group of increasingly wealthy households that are able to influence policymakers in their benefit, which ultimately helps to undermine the foundations of our democratic system. In this scenario, all the long-term demographic, social, and cultural trends that favor an increase in redistribution would not lead to the effective implementation of these policies.

Considering that subjective ideology seems to play an extraordinarily important role in the future development of redistributive policies, more research is needed to establish what specific issues determine an individual's self-positioning at a particular point on the left–right scale.

On the other hand, we also emphasize the need to investigate in depth other possible determinants of redistributive preferences such as social and cultural capital, which have been relatively unexplored in the recent literature. Moreover, we also argue that it is essential to further explore the possible causes of the atypical results obtained on the relationship between redistributive preferences and beliefs about the role of luck and hard work in a person's economic position.

Appendix

TABLE A1
Correlations Between Variables Included in the Model

	demf orred	govt _resp	age	fin_s atistf	num_ child	inc_d ecile	hard work	ideo logy	educ	religi osity	fem ale	empl status	mats tatus	reg ion
govt_ resp	0.3580	1.0000												
age	0.0433	0.0115	1.0000											
fin_s atistf	-0.0986	-0.1097	-0.0642	1.0000										
num_ child	0.0148	0.0324	0.5518	-0.1295	1.0000									
inc_d ecile	-0.1412	-0.1428	-0.1908	0.3969	-0.1984	1.0000								
hard work	0.0501	0.1526	0.0460	0.0452	0.0323	0.0414	1.0000							
ideol ogy	-0.1653	-0.1322	0.1048	0.0731	0.0896	0.0943	0.0420	1.0000						
educ	-0.1379	-0.0606	-0.3511	0.2227	-0.3164	0.4316	0.0527	-0.0338	1.0000					
religi osity	-0.0848	-0.0845	0.2523	0.0027	0.2590	-0.1003	-0.0225	0.3271	-0.2084	1.0000				
female empl	0.0373	0.0094	0.0264	-0.0200	0.0653	-0.0336	-0.0043	0.0249	-0.0431	0.1746	1.0000			
empl status	0.0627	0.0520	0.1161	-0.1673	0.0828	-0.2786	-0.0024	0.0031	-0.2111	0.1109	0.1721	1.0000		
marst atus	0.0218	-0.0118	-0.3314	0.0113	-0.4858	0.0319	-0.0555	-0.0428	0.1894	-0.0852	-0.0002	0.0885	1.0000	
region year	-0.0163	0.0391	0.0241	0.0819	-0.0145	0.1708	0.0332	0.0265	0.1096	-0.1520	0.0253	-0.1029	-0.0304	1.0000
	0.0656	0.0309	0.0629	0.0033	-0.0815	0.1087	0.0447	-0.0223	0.0515	-0.2319	0.0383	-0.0507	0.0250	0.0402

TABLE A2
 Estimations of Fixed Effects by Employment Status, Marital Status, Region, and Wave

Fixed-Effects	demfor (OLS)	demfor (OLOGIT)	govt_resp (OLS)	govt_resp (OLOGIT)
<i>educ</i>				
Incomplete primary school	-0.5705 (0.1855)***	-0.4175 (0.1353)***	-0.2777 (0.1717)	-0.1738 (0.1349)
Complete primary school	-0.5111 (0.4852)	-0.3001 (0.3593)	-0.8144 (0.4477)*	-0.5964 (0.3816)
Complete secondary school: technical/vocational type	-1.3582 (0.2443)***	-0.9666 (0.1770)***	-0.4724 (0.2265)**	-0.3359 (0.1777)*
Incomplete secondary school: university-preparatory type	-0.9605 (0.2570)***	-0.7315 (0.1879)***	-0.3168 (0.2377)	-0.2280 (0.1872)
Complete secondary school: university-preparatory type	-1.1303 (0.2607)***	-0.7811 (0.1911)***	-0.2587 (0.2411)	-0.1711 (0.1915)
Some university-level education, without degree	-0.9329 (0.2709)***	-0.6867 (0.1954)***	-0.2848 (0.2492)	-0.1724 (0.1922)
University-level education, with degree	-1.5165 (0.2568)***	-1.0883 (0.1870)***	-0.4319 (0.2368)*	-0.3043 (0.1859)
<i>empistatus</i>				
Part-time	-0.1321 (0.2488)	-0.1296 (0.1805)	0.3865 (0.2301)*	0.2247 (0.1822)
Self-employed	0.0942 (0.2157)	0.0796 (0.1551)	-0.0042 (0.1983)	-0.0189 (0.1528)
Retired	0.0433 (0.2050)	0.0192 (0.1482)	0.0934 (0.1903)	0.0641 (0.1493)
Housewife	-0.0495 (0.1915)	-0.0027 (0.1365)	0.1207 (0.1775)	0.0893 (0.1388)
Students	-0.5364 (0.2673)**	-0.4233 (0.1943)**	-0.3170 (0.2481)	-0.3094 (0.1941)
Unemployed	0.0787 (0.1823)	0.0740 (0.1314)	0.1988 (0.1680)	0.1690 (0.1325)
Other	-1.6163 (1.0105)	-1.0510 (0.6840)	-0.8570 (0.9321)	-0.8975 (0.7080)

Continued

TABLE A2
(Continued)

Fixed- Effects	demfor (OLS)	demfor (OLOGIT)	govt_resp (OLS)	govt_resp (OLOGIT)
<i>marstatus</i>				
Living together	0.2864 (0.2314)	0.2385 (0.1709)	-0.3634 (0.2140)*	-0.2900 (0.1698)*
Divorced	0.1672 (0.3361)	0.1885 (0.2471)	0.0218 (0.3101)	0.0631 (0.2463)
Separated	0.2804 (0.3220)	0.2149 (0.2264)	0.4463 (0.2971)	0.3559 (0.2198)
Widowed	-0.3218 (0.2393)	-0.2135 (0.1694)	-0.3806 (0.2216)*	-0.2487 (0.1714)
Single	0.2593 (0.1725)	0.2137 (0.1246)*	-0.0561 (0.1591)	-0.0604 (0.1238)
<i>region</i>				
Aragón	-0.0684 (0.3706)	0.0033 (0.2561)	0.4317 (0.3419)	0.2661 (0.2512)
Asturias	-0.6845 (0.3182)**	-0.5455 (0.2411)**	0.4809 (0.2919)	0.3230 (0.2317)
Baleares	-1.3015 (0.3471)***	-1.0298 (0.2567)***	0.2276 (0.3202)	0.1770 (0.2632)
Canarias	-0.4249 (0.2530)*	-0.2924 (0.1785)	-0.0251 (0.2328)	-0.0085 (0.1839)
Cantabria	-0.7490 (0.3719)**	-0.5328 (0.2650)**	0.1881 (0.3458)	0.1975 (0.2863)
Castilla-La Mancha	0.2212 (0.2581)	0.2284 (0.1902)	0.8344 (0.2381)***	0.6825 (0.1981)***
Castilla y León	0.0406 (0.2658)	0.0254 (0.1821)	0.6506 (0.2493)***	0.3873 (0.1861)**
Cataluña	-1.2536 (0.1915)***	-0.9806 (0.1393)***	-0.0798 (0.1762)	-0.1731 (0.1372)
C. Valenciana	-1.4401 (0.1949)***	-1.1171 (0.1436)***	-0.1720 (0.1800)	-0.1956 (0.1403)
Extremadura	0.1348 (0.3648)	0.0854 (0.2676)	1.2187 (0.3366)***	0.8561 (0.2612)***
Galicia	-0.7673 (0.2316)***	-0.5507 (0.1630)***	0.1235 (0.2140)	0.0366 (0.1622)
Madrid	0.1077 (0.1875)	0.0828 (0.1377)	0.6925 (0.1736)***	0.5501 (0.1381)***
Murcia	-0.3822 (0.3075)	-0.2375 (0.2085)	-0.5196 (0.2852)*	-0.4234 (0.2200)*
Navarra	0.4548 (0.4252)	0.3083 (0.2982)	-0.3626 (0.3922)	-0.3291 (0.2824)
País Vasco	0.2362 (0.2580)	0.1775 (0.1824)	1.1222 (0.2374)***	0.8916 (0.1824)***
Rioja	0.8539 (0.6982)	0.5531 (0.4801)	0.8558 (0.6440)	0.4884 (0.4880)
<i>year</i>				
2007	0.0146 (0.1444)	0.0580 (0.1060)	0.1516 (0.1338)	0.0877 (0.1056)
2011	0.5537 (0.1493)***	0.4382 (0.1097)***	0.2252 (0.1384)	0.1650 (0.1091)

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