QUT School of Economics and Finance

Discussion Paper and Working Paper Series

More Income Equality or Not?

An Empirical Analysis of Individuals' Preferences for Redistribution

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Abstract:

Do people prefer a society with an extensive social welfare system with high taxes, or low taxes but lax redistributive policies? Although economists have for a long time investigated the trade-off mechanism between equity and efficiency, surprisingly little information is available about citizens' preferences over the distribution of income in a society. The aim of this paper is reduce this shortcoming, investigating in an empirical study working with World Values Survey, what shapes individuals' preferences for income equality in Spain. We present evidence that not only traditional economic variables are relevant to be considered, but also factors such as ideology, political interest, fairness perception about others or trust in institutions, are key determinants to understand preferences towards redistribution and equality. Furthermore, we also find that regional conditions affect the citizens' preferences for income equality. Higher income inequality leads to stronger preferences for equality. On the other hand, there is the tendency that higher social expenditures reduce the preferences for income equality.

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I. INTRODUCTION

Economists have for a long time investigated trade-off mechanism between equity and efficiency. The question of what degree of redistribution, if any, would maximize society's well-being is an essential question in economics. However, it surprises that little information about people's preferences over the distribution of income in a society is available. Putterman, Roemer and Silvestre (1998) stress that preferences for equality may prove to be an important area for future research. Fong (2001) stress that the "reason why citizens of democratic countries support or oppose redistribution to strangers remain poorly understood, despite much research on the public sector and welfare states" (p. 225).

Table 1 indicates that major shares of governments' expenditures in European countries are devoted to reduce inequality among individuals. Social expenditure is now one of the main components of public expenditure and a significant proportion of GDP in European countries.

Table 1.- **Public expenditures in some European countries**

	AUSTRIA	GERMANY	BELGIUM	SPAIN	FRANCE	NETHERLANDS	IRLAND	UK	DENMARK
TOTAL SOCIAL PUBLIC EXP./GDP	25,32%	22,46%	22,87%	13,53%	20,57%	17,34%	7,21%	14,99%	34,04%
TOTAL PUBLIC EXP./GDP	66,94%	50,77%	63,06%	47,33%	56,45%	55,82%	34,77%	47,08%	68,20%
TOTAL SOCIAL PUBLIC EXP/ TOTAL PUBLIC EXP	37,82%	44,24%	36,27%	28,59%	36,44%	31,06%	20,74%	31,84%	49,91%

Data for 2000 year, except Ireland (1997), UK (1998) and Denmark (2001)
Source: IMF (2004)

It is highly relevant to identify factors that shape the support for income redistribution in society. It looks reasonable that a lesser "necessity" of equality implies, in general, a smaller preference for redistribution and, therefore, a smaller support towards the

social programs. On the other hand, social groups will support more redistribution if they expect to get benefits out of it in the near future. But there are many possible factors that go beyond traditional economics such as ideology, political interest, fairness perceptions or reciprocity or trust in institutions that seemed to be useful to consider.

In this paper we try to determine individuals' preferences for equality and redistribution, working with micro data from the 4th wave of *World Values Survey* (1999-2001) focusing on Spain (data collected in 2000) and its regions. According the authors knowledge, studies that investigate this type of studies are practically inexistent for Spain. Furthermore, the political structure in Spain is relatively decentralized which makes sub-central governments (mainly, the Autonomous Communities), jointly with the central government, an essential part in the social policy process of solidarity and equality. Social expenditure in Autonomous Communities is almost 2/3 of the total public expenditure, mainly in Health and Education policies. Thus, we will have the chance to investigate in this paper the impact of regional conditions such as social expenditures or the level of income inequality on individuals' preferences towards income equality. The results show that regional conditions have a strong impact on citizens' preferences. A further aim of the paper is to search empirically for factors that have been strongly neglected in previous studies, such as, for example, informal education, perceptions about societies' fairness, trust in institutions. The results indicate that these factors have a strong impact on individuals' income equality preferences.

In Section II, we show some recent studies which anaysed the preferences for redistribution: Next, in Section III we explain the Spanish context and the importance of regional dimension. Section IV presents the data and testable hypothesis. Finally, in Section V we show the main empirical findings, and Section VI finishes with some concluding remarks.

II. SOME RECENT STUDIES

In this context, it is difficult to delimit the accurate notion we want to explain, because it is possible to find some linked concepts. In this respect, several notions such as *equality, solidarity* or *redistribution* have been analyzed in the literature. All of them are related to governmental interventionism. We will present now recent papers which have focused on some of those concepts, and basically on the preferences for equality redistribution.

Arts and Gelissen (2001) speak about notions of solidarity and some principles of distributive justice. In order to measure those aspects, they defined some dependent variables measuring individual preferences in a multi-country analysis. To measure the *solidarity* levels, they use information about the level of government's responsibility in several fields, such as providing jobs, heath care, decent standards of living, decent housing, reduce income differences or give financial help to college in those cases of real needs. Regarding distributive justice principles, they asked individuals about their opinion related to the characteristics that might have a hypothetic "just" society. The individuals value the importance of eliminating inequalities in income among citizens, of guaranteeing some basic

needs for all in terms of food, housing, clothing, education and health and of recognizing people on their merits.

Corneo and Grüner (2000) investigated empirically individuals' attitudes toward political *redistribution*. They use the information included in the International Social Survey Programme (ISSP), Social Inequality II (1992), focusing on U.S. data. To measure such attitudes, they used a question that asks individuals if they agree with the statement that it is governments' responsibility to reduce income differences between people with high and low incomes. Similarly, Alesina et al. (2001) studied the preferences for *redistribution* using the General Social Survey (GSS), which asks individuals about how much they would support increased spending on welfare. The answer allows us to see individuals' perceptions about the ideal spending on welfare relative to current spending. This fact helps to measure individuals' preferences for a welfare state.

Fong (2001) use data from the 1998 Gallup Poll Social Audit Survey, 'Haves and Have-Not Perceptions of Fairness and Opportunity,' related to a random sample of 5001 respondents. Nevertheless, the main sub-sample (2738 individuals) only includes people who are in labor force and respond to all of the questions used in the regression. The author tests various hypotheses about why people support or oppose *redistribution*, but the primary focus is the role of beliefs about self- and exogenous-determination on reported redistributive policy preferences. Intuitively, self-determination can be influenced by a reciprocity principle. Individuals support redistribution because they expect that in the future they could be recipients of solidarity. Alternatively, exogenous-determination is closer to the *equity* principle itself and it has to do with a broad conception of social cohesion. The dependent variable in the model is an index of several questions on redistribution and the

way it should be implemented (e.g., with high taxes, by means of private aid organization etc.).

Corneo and Grüner (2002) try to identify the determinants of individual preferences for income *redistribution* in a society. They test for different hypotheses, which could explain the support for redistribution by taking into account three social perceptions. First, the so-called 'homo oeconomicus effect', inducing an individual to prefer a redistributive program A instead of another one B if and only if the individual's net income is higher under A than under B. The second hypothesis or 'public values effect' goes beyond the private benefit and it induces individuals to support a redistributive program if it is well suited with their vision of the society as a whole. Thirdly, the 'social rivalry effect' takes into account the relative position of the person in society and the prestige of her or his occupation. The authors use data from the International Social Survey Programme, corresponding to 12 countries in Europe, America and Oceania in 1992. They run logit estimates, taking as the latent variable the personal agree or disagree with government's responsibility on income redistribution. The more positive the answer to this question is, the more intense the individual preferences for redistribution are.

Ravallion and Loskin (2000) analyzed the so-called "tunnel effect" in Russia, using data from the Russian Longitudinal Monitoring Survey. They found than the individual attitudes towards redistribution depends on future mobility. Alesina and La Ferrara (2005) found that redistribution preferences are negatively correlated with a subjective index of upwards mobility and an objective index of expected future income. They also found that individual perception about the equality of opportunities is an important feature in the determination of preferences for redistribution. Recently, Beckman and Zheng (2007) using data from

6

questionnaire to 1096 respondents at the University of Alabama, analyzed the relationships among several personal characteristics and the preferences towards redistribution. They found that black people are fond of redistribution until income is well above average and whites oppose redistribution even if income is well below average. Additionally, those with incomes below average expect to move up and this prospect of upward mobility reduces support for redistribution.

Summarizing, we have found different aspects linked to preferences for equality and redistribution in the recent literature. Some concepts have been analyzed from a national or multi-country level, but none of them has focused on the regional conditions in a specific country. That is an important contribution of our paper. Additionally, the fact of focusing on a specific country allows us to include a broad range of factors and to cover also the regional level.

III. WHY IS RELEVANT TO FOCUS ON THE REGIONAL DIMENSION IN SPAIN?

Spain is a constitutionally decentralized State in which regional governments (Autonomous Communities or ACs) enjoy extensive autonomy both in public expenditure and fiscal revenues. Nevertheless, there are at least three important differences. The first one in terms of regional development, the second one is derived from the constitutional framework and the third dissimilarity –the central key in this article- concerns citizens' perceptions on income equality.

Beginning with regional disparity in terms of regional GDP per capita, we can observe in graph 1 that 5 ACs (Castille-Leon, Cantabria, Canary Islands, Valencia and Aragon) are very close to the Spanish average (±10 points). At the lower end, there are Extremadura and Andalusia which do not catch up the 75% threshold whereas, on the contrary, Catalonia, Basque Country, Balearic Islands, Navarre and Madrid go beyond the 120% level. The relationship between the bottom (Extremadura) and the top (Navarre and Madrid) is almost 1/2, confirming a relevant economic imbalance among regions in Spain.

Graph 1.- **GDP per capita in ACs (Spain=100, year 2000)**
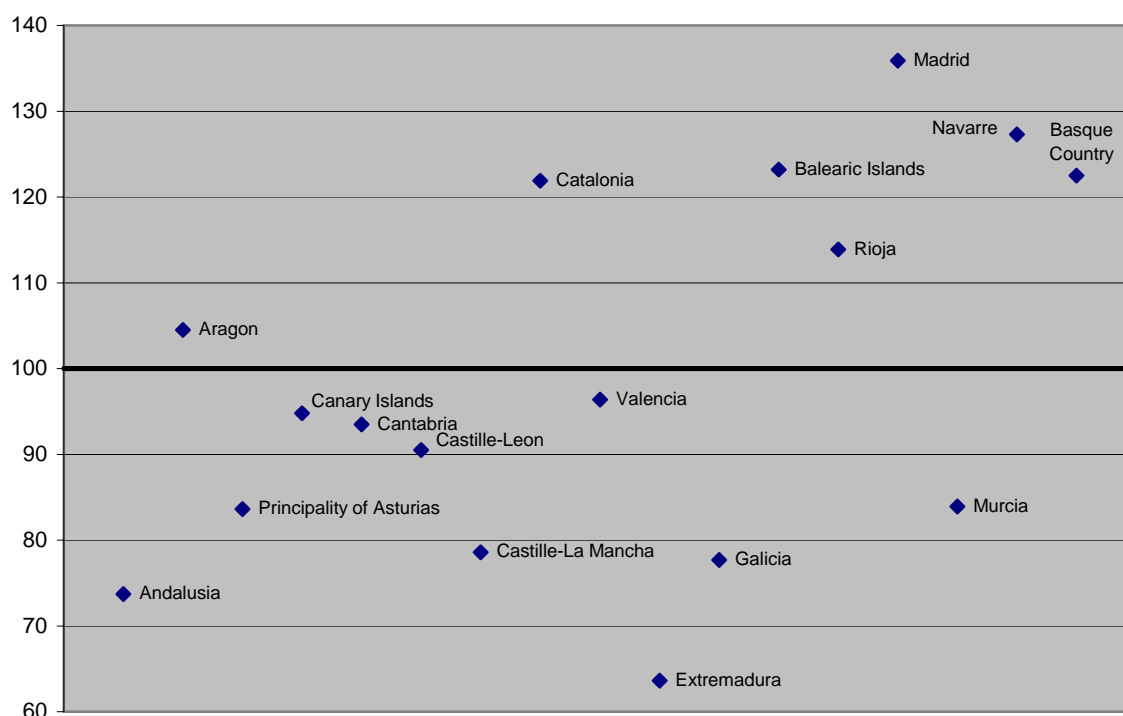
Source: Own elaboration from Spanish National Statistics Institute (INE) data.

Secondly, we can find different degrees of fiscal autonomy as it is recognized in the Spanish Constitution. Two ACs (Basque Country and Navarre) enjoy a special or 'foral' status that implies an almost-complete regime of fiscal powers, including collecting and the full fiscal regulation over a broad set of taxes (except for custom duties, Social Security

receipts and other minor taxes and fiscal figures). Also, these two special ACs are allowed to decide on their own expenditures, except in some outlays which are exclusively assigned to the central government (mainly, Social Security pensions and Defense). On the other hand, the general group of ACs –15 over 17- are much more dependent on the grants from the central government than the 'foral' ones are. Before 2002, these 15 ACs only had direct responsibility on heritage, net wealth, property and lucrative transmissions taxes (wide autonomy but short takings); personal income taxes (very limited autonomy, subject to national regulation) and no autonomy neither at consumption taxes (only a proportional grant from the central government) nor corporate income tax.

Regional diversity is even larger because expenditure powers significantly vary across ACs. While all ACs manage a set of common areas only Basque Country and Navarre and other 5 ACs (Andalucía, Canary Islands, Catalonia, Valencia and Galicia) also have direct responsibility on education and health systems. These two outlays are the most important regional expenditures in quantitative terms (more than 50% of total regional expenditure and more than 80% of social expenditures in year 2000). *Table* 2 shows that ACs with special fiscal regime (and wide expenditure powers) are logically the regions with the highest public expenditure levels (17,5% of GDP), but their social outlays are surpassed by the same ratio in general-regime ACs with wide expenditure powers (11,8% of GDP). This is because 'foral' ACs spend in many areas that the remaining ones do not. Other regions that do not enjoy broad expenditure powers present the lowest ratios in the two indicators referred to GDP. Nevertheless, we can infer that in these 10 ACs the orientation of their (small) budgets is clearly social (69,4% of total expenditure).

Table 2.- Differences in fiscal autonomy and social expenditure

	Fiscal Autonomy (a)	Wide expenditure powers (b)	Total social public expenditure / GDP (%)	Total public expenditure / GDP (%)	Total social public expenditure / Total public expenditure (%)
1. Basque Country	SR	Yes	9,3	12,8	72,7
2. Navarre	SR	Yes	11,2	22,1	50,7
Partial average (1-2)			**10,3**	**17,5**	**61,7**
3. Andalusia	GR	Yes	12,8	20,1	63,7
4. Canary Islands	GR	Yes	12,3	15,9	77,4
5. Catalonia	GR	Yes	8,9	13,7	65,0
6. Valencia	GR	Yes	10,3	12,8	80,5
7. Galicia	GR	Yes	13,2	19,5	67,7
Partial average (3-7)			**11,8**	**16,2**	**74,1**
Partial average (1-7)			**11,1**	**16,7**	**68,2**
8. Aragon	GR	No	5,0	10,4	48,1
9. Principality of Asturias	GR	No	6,9	12,0	57,5
10. Cantabria	GR	No	6,3	10,3	61,2
11. Castille-Leon	GR	No	6,7	12,3	54,5
12. Castille-La Mancha	GR	No	6,4	14,9	43,0
13. Extremadura	GR	No	9,3	19,0	48,9
14. Balearic Islands	GR	No	4,0	6,2	64,5
15. Rioja	GR	No	6,1	9,7	62,9
16. Madrid	GR	No	4,2	5,8	72,4
17. Murcia	GR	No	6,7	10,1	66,3
Partial average (8-17)			**5,5**	**8,0**	**69,4**
GLOBAL AVERAGE (1-17)	---	---	**8,6**	**13,1**	**65,6**

(a) GR=General regime (short fiscal autonomy); SR=Special regime (broad fiscal autonomy).

(b) No=It only consists of common expenditure powers. Yes=It also includes education and health

Data for 2000 year.

Source: Own elaboration, from Spanish National Statistics Institute (INE) data and ACs' budgets.

Finally, the 'regional dimension' in Spain is quite relevant because of different citizens' perceptions on income inequality and regional economic development. Based on data from the Spanish Centre for Sociological Research surveys (CIS, 2002) we can see in Figure 2 that we are not able to observe that there is no significant correlation between 'real' economic prosperity (GDP *per capita*) and 'perceived' economic development. The explicit

question in the survey[1] asks the following statement: '*Do you think that at present there are many, quite a few or very few differences in prosperity and wealth between different ACs*?' If we put together the 'many' and 'quite a few' answers, we obtain a proxy for the subjective perception on regional prosperity with an average level of 79%.

Figure 2.- Relationship between 'real' and 'perceived' prosperity in Spanish regions
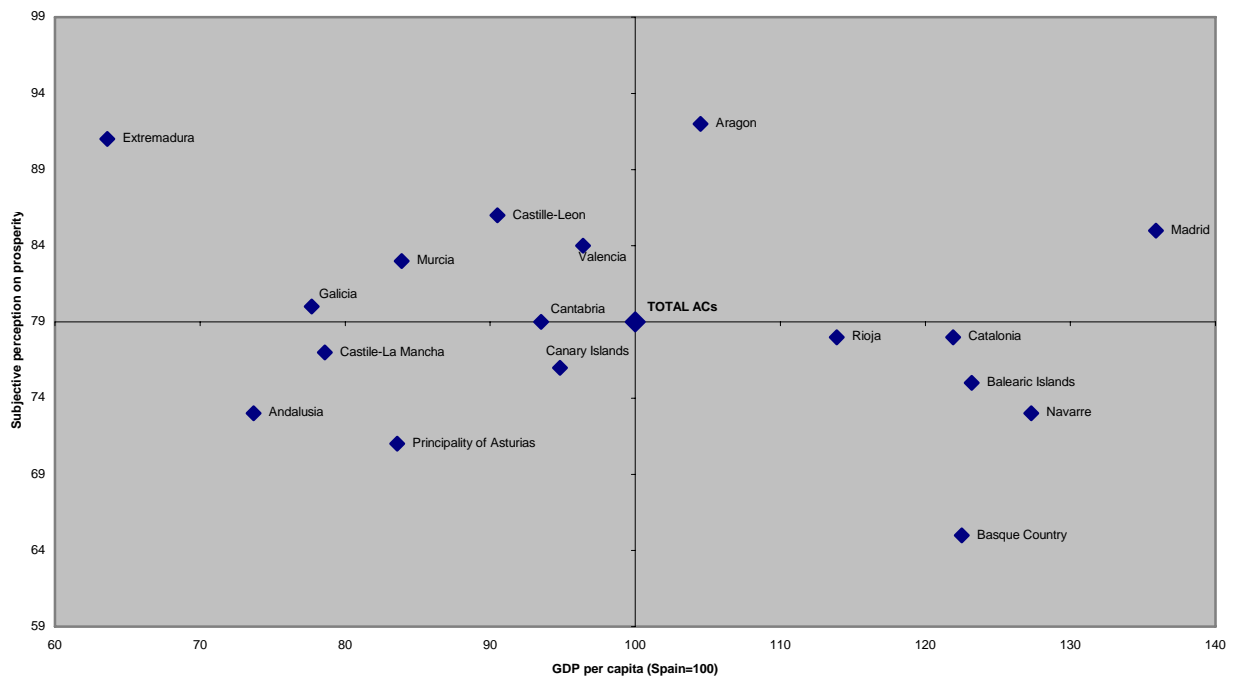
Source: Own elaboration, Spanish National Statistics Institute (INE) data and CIS (2002).

The least developed region (Extremadura) is also the one with the highest level on 'perceived' income inequality (at the same level than Aragon). However, the richest region (Madrid) is not reciprocally the one with the lowest level on 'perceived' income inequality. 'Perceived' income inequality tends to be lower in 5 of the 7 wealthy ACs (Rioja, Catalonia, Balearic Islands, Navarre and Basque Country) but they are in the same relative levels than other 4 ACs located under the average level of GDP *per capita*. Finally, we could say that there are considerable differences in terms of inequality perception (27 points between the

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[1] Over a sample of 10.476 individuals, proportionally shared among ACs according to population.

11

heist and the lowest level) but there is no a significant relationship between 'real' and 'perceived' prosperity.

IV.- DATA AND TESTABLE HYPOTHESIS

In this section we focus in the empirical part on preferences towards *income equality* and indirectly towards redistribution. The data used in the empirical part is taken from 4th wave of the World Values Survey[2] (WVS). The WVS is a worldwide investigation of socio-cultural and political change, based on representative national samples. Although data from these surveys are made publicly available, economists have just started to work with the WVS. We are going to take advantage of this source in order to analyze individuals' preferences for equality and redistribution in Spain. The representative sample was collected in 2000 and the following question. In the survey people were asked about the level of income equality they would wish, using a scale from 1 to 10 (1= Income should be made more equal, 10= We need larger income differences as incentives for individual effort). To measure individuals' preferences for income *equality*, the ten-point scale has been recoded in reverse order (10=1; 1=10). The model to measure individuals' preferences for income equality is specified as follows:

$$EP_i = \beta_0 + \beta_1 \cdot SOCIODEM_i + \beta_2 \cdot EDUC_i + \beta_3 \cdot ECONSIT_i + \beta_4 \cdot EMPLOY_i$$
$$+ \beta_5 \cdot IDSC_i + \beta_6 \cdot LOC_i + \varepsilon_i$$

EP_i indicates individual's *i* preferences for equality. The independent variables considered are shown in *Table 3*. As can be seen, a broad set of variables is included in the estimations.

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[2] It was first carried out in 1981-83, and subsequently in 1990-91, 1995-96 and 1999-2001.

First of all, almost all the studies have considered a bundle of *socio-demographic and economic* variables, which have an important influence on this issue. Some usual factors included in this kind of studies are AGE and GENDER. Arts and Gelissen (2001) show that as that a higher age is correlated with stronger preferences for equality and equity, but on the other hand older people are less in favor of a public provision of preferential goods and services. Regarding gender, Arts and Gelissen (2001) found that women are more inclined to support a high level of solidarity and public provision of basic needs. However, Alesina et al. (2001) did not obtain significant differences between men and women's redistribution preferences. On the other hand, Fong (2001) found that men had lower preferences for redistribution. Similar, Corneo and Grüner (2002) identified female and old people as the most likely to promote income redistribution.

Table 3.- **Independent Variables**

INDEPENDENT VARIABLE	KIND OF VARIABLE	CATHEGORIES/SOURCE
Socio-Demographic Factors (SOCDEM)		
AGE	Dummy	<30 (r.g); 30-39; 40-49; 50-59; 60-69; >70
GENDER	Dummy	MALE (r.g.) FEMALE
MARITAL STATUS	Dummy	MARRIED; OTHER (r.g.)
Formal and Informal Education (EDUC)		
EDUCATION	Dummy	MIDDLE EDUCATION; UPPER EDUCATION; OTHER (r.g.)
IMPORTANCE OF POLITICS	Scaled	1 = *not at all important* to 4 = *very important*
Economic Situation (ECONSIT)		
FINANCIAL SATISFACTION	Scaled	1 = *dissatisfied* to 10 = *satisfied*
ECONOMIC CLASS	Dummy	UPPER CLASS; UPPER MIDDLE CLASS; LOWER MIDDLE CLASS; WORKING/LOWEST CLASS (r.g.)
Occupational status (EMPLOY)		
EMPLOYMENT STATUS	Dummy	SELFEMPLOYED; UNEMPLOYED; OTHER (r.g.)
Ideology and Social Capital (IDSC)		
RIGHT POLITICAL ORIENTATION	Scaled	1 = *left* to 10 = *right*
OTHERS TAKE ADVANTAGE	Dummy	WOULD TAKE ADVANTAGE; WOULD TRY TO BE FAIR (r.g.)

TRUST IN THE PARLIAMENT	Scaled	1 = *not at all* to 4= *a great deal*
TRUST IN THE GOVERNMENT	Scaled	1 = *not at all* to 4= *a great deal*
RELIGION DENOMINATION	Dummy	RELIGION DENOMINATION; NO RELIGION DENOMINATION (r.g.)
Location variables (LOC)		
SIZE OF TOWN	Dummy	UNDER 2,000 (r.g.); 2,000-5,000; 5,000-10,000; 10,000- 20,000; 20,000-50,000; 50,000-100,000; 100,000-500,000; 500,000 and MORE
SPANISH REGION	Dummy	17 SPANISH AUTONOMOUS REGIONS: MADRID (r.g.)
INCOME INEQUALITY	Continuous	Regional GINI Index for 2000 year *Source*: Ayala-Cañón et al. (2005)
SOCIAL EXPENDITURES	Continuous	Social expenditures/total regional public expenditures *Source*: BADESPE (2006)

MARITAL STATUS is another aspect that has been considered. Alesina et al. (2001) found that married people have less preference to increase welfare spending. Fong (2001) obtains similar conclusions, showing that married people are all significantly less supportive of redistribution than their counterparts. However, Corneo and Grüner (2002) found that marital status has not a statistically significant effect in the regressions.

The formal EDUCATION of individuals is important in this context. However, the literature also presents mixed results. Fong (2001) shows that individuals with a college education or more were less supportive towards redistribution. Arts and Gelissen (2001) observed that there was a negative correlation between the educational level and the preference for solidarity, equality or equity, but positive in the case of the public provision of basic needs. Alesina et al. (2001) found a positive relationship between the support to increase the welfare state and the level of education. However, that positive relationship was non-monotonic, because high school dropouts demand more welfare spending that high school graduates, but people with graduate degrees have higher preferences for welfare

spending than high school dropouts. In that case, the relationship between preferences for equality and educational level would not be strictly increasing.

It can also be supposed that informal education matters. However, it surprises that variable has not been investigated in detail. It is possible that well-informed citizens, have ceteris paribus a higher preferences for equality, because they are better aware of the income inequality problems. Thus, it is not only interesting to investigate formal education but also informal education. One possibility to measure informal education is to find a proxy for individuals' political interest. Thus, we include the IMPORTANCE OF POLITICS[3] in the estimations.

Individual's income level may also be a key variable. Therefore, we have considered the individual's ECONOMIC CLASS. In general, literature confirms a negative relationship between income and preferences for redistribution (Alesina et al. 2001; Arts and Gelissen 2001; Corneo and Grüner 2002; Alesina and La Ferrara 2005). The majority of studies show that low-income people are very prone towards redistribution. Fong (2001) showed that individuals whose familiar income is very high are significantly less supportive of redistribution than those with low incomes. Corneo and Grüner (2000) found strong support that value differentials across income classes have an impact on attitudes toward political redistribution. Corneo and Grüner (2002) include a dummy variable equal one for those individuals that think their income goes up when inequality is reduced, and zero otherwise. The coefficient of this variable is positive and significantly different from zero, showing that the support to redistributive programs grows if the expected net income is positive. However, it has been found that a significant proportion of high-income people vote a lower

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[3] Question: 'How important is politics in your life?'

level of inequality, even though this reduces their final income (Clark, 1998). This feature is clearly linked to the individual altruism or risk aversion level.

Individuals' preference for equality may also dependent on the financial satisfaction and not only per se on the level of income. To consider this, we include the variable FINANCIAL SATISFACTION[4]. This variable is often linked to a successful upward mobility. So, as several studies pointed out (Ravallion and Loskin, 2000; Alesina and La Ferrara, 2005; Beckman and Zheng, 2007)

Another variable is the individual's OCCUPATIONAL STATUS. For example, it can be expected that unemployed people have stronger preferences for redistribution, solidarity and some justice distributive principles[5] (Arts and Gelissen, 2001; Alesina and La Ferrara, 2005).

Ideology and social capital are important too (IDSC). This brings us to a further factor that is connected to politics[6]. The party individuals votes for and their ideology are important aspects too. It is a well-known fact that left party voters show higher preferences for redistribution and government initiatives. Thus, we use the degree of RIGHT

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[4] Including both factors (economic situation and financial satisfaction) does not oppose collinearity problem as *r* is far below critical values.

[5] In a more elaborated way, Corneo and Grüner (2002) included three variables that link the social prestige of different occupations with the social standing or economic class. As expected, the model shows that this effect is negative, confirming that social status is an additional incentive for redistribution.

[6] At country/state/city level, political institutions matter. For example, the electoral system can conditioned the size of welfare state. In some cases, it have been observed a positive relationship between the proportionality of the electoral system and the amount of government transfers (Alesina et al, 2001).

POLITICAL ORIENTATION[7] as a proxy for ideology. Moreover, we have included citizens' TRUST IN GOVERNMENT and TRUST IN PARLIAMENT as independent factors. This variable is strongly connected to individuals' ideology and their impact may dependent on the current situation or in other words the current political regime.

In Spain, José Maria Aznar, member of the right wing Popular Party PP, was reelected president in March 2000. His party Popular Party (PP) obtained an absolute majority of seats in both the Congress of Deputies and the Senate as a result of the March 2000 elections. Traditionally, right wing parties program are less inclined to support redistribution programs. Taking into account that the survey was conducted in November 2000, it can be argued that trust also proxies citizens' acceptance with current political programs. Thus, we would expect negative correlation between preferences towards' income equality and trust in the government and the parliament.

Additionally, we control for individuals' RELIGION DENOMINATION. In our data, around 83 percent of the population has a religion denomination. In general, we expect that people, who believe in God or are member of a church or religious organization, have stronger preferences for solidarity and equality. However, having a religion per see is not an indicator for religiosity or church involvement. Furthermore, being a minority (17 percent of the population) may lead to higher preferences towards equality in general and thus also to higher preferences to reduce income inequality.

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[7] Question: 'In political matters, people talk of "the left" and "the right." How would you place your views on this scale, generally speaking? Scale from 1 to 10'.

Linked to the previous issue, we have considered an additional factor that is related to reciprocity or fairness. The individuals' preferences for redistribution depend on the perception about the society. If they feel that the society in general (and thus also the ones who receive support) takes advantage and does not try to be fair, their willingness to improve income equality decreases. For example, if individuals believe that the poor are taking advantage of the system, they will be against redistribution policies[8] (Alesina et al. 2000; Alesina and La Ferrara, 2005). Therefore, we have included a proxy that measures individuals' lack of trust towards society (TAKE ADVANTAGE)[9].

We also include spatial variables. The intensity of welfare programs and the level of inequality in a specific place an individual lives can explain individual's preferences towards redistribution and equality. On the one hand, we have considered the SIZE OF TOWN, Including several dummy variables. Alesina et al. (2001) finds a positive relationship between the size of town and the support to increase welfare. As we can see in the *Table 4,* Spanish local governments in big cities spend strong the efforts to improve social problems are the most intensive due to the high level of income inequality levels.

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[8] Alesina et al. (2001) showed that people who believed that blacks were lazy, are less motivated to favour redistribution policies. Corneo and Grüner (2002) used a dummy variable that equals one for individuals who think that hard work is at least fairly important for getting ahead in life, and zero otherwise. The coefficient of this variable is negative and highly significant, meaning that people who think that income is very elastic with respect to individual effort are less likely to support income redistribution programs.

[9] Question: 'Do you think most people would try to take advantage of you if they got a chance, or would they to be fair?'

Table 4.- Social public expenditures in Spanish municipalities

POPULATION	TOTAL SOCIAL EXPENDITURES (in €)	NUMBER OF MUNICIPALITIES	TOTAL POPULATION	SOCIAL EXPENDITURES PER CAPITA (in €)
LESS THAN 5.000	2,775,990,000	6,926	6,114,592	453.99
5-10.000	1,498,044,000	517	3,532,517	424.07
10-20.000	2,045,032,000	337	4,704,465	434.70
20-50.000	2,566,208,000	205	6,070,295	422.75
50-100.000	1,831,641,000	66	4,458,891	410.78
100-500.000	3,926,919,000	51	9,791,066	401.07
500.000 AND MORE	3,637,073,000	6	7,166,068	507.54

Data for 2002 year
Source: own elaboration from INE (2005) and MEH (2005)

The survey also provides information in which Spanish region and individual lives. Thus, we control for regional differences building dummies for all 17 SPANISH REGIONS (Autonomous Communities). The character or political orientation of the government is an issue that can have influence on individual's valuations[10] (Esping-Andersen 1994; 1999). So, on the one side, in 1999, some regions had a right political orientation government. That was the case of Aragón, Asturias, Baleares, Castilla-León, Cantabria, Comunidad Valenciana, Galicia, Madrid, Murcia and La Rioja. In those cases, one expects to find lower values of EP.

We are also going to include not only dummy variables but also factors that measure the regional conditions. We can expect that regional equality levels matter too. If the

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[10] Arts and Gelissen (2001) consider six groups of countries, depending on their welfare state regimen[10]. They observe that individuals who live in conservative and social-democratic governments had higher preferences for solidarity.

INCOME INEQUALITY[11] in the region is high, it can be expected that people demand additional redistribution policies for improving equality issues and have therefore higher preferences towards income equality. Thus, we are going to include the regional GINI coefficient in the estimations. Finally, the level of SOCIAL EXPENDITURES in relation to the total regional public expenditures may also affect the equality preferences. A higher level of social expenditures should reduce the inequality feelings and thus reduce the preferences for more income equality.

V. EMPIRICAL RESULTS

The ordered probit models are relevant in such an analysis insofar as they help analyze the ranking information of the scaled dependent variable. However, as in the ordered probit estimation, the equation has a nonlinear form, only the sign of the coefficient can be directly interpreted and not its size. Calculating the marginal effects is therefore a method to find the quantitative effect a variable has on individuals' preferences towards income equality. The marginal effect indicates the change in the share of citizens (or the probability of) belonging to a specific level, when the independent variable increases by one unit. Only the marginal effects for the highest preference towards equality are presented. To check the robustness of the results, in weighted least squares models are presented using preferences towards income equality as a cardinal variable. Furthermore, it should be noticed that answers as "don't know" and missing values have been eliminated in all estimations. Weighted estimations have been considered to correct the sample and thus to get a reflection of the national distribution. For the least squares estimations we also

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[11] Ayala-Cañón et al. (2005) calculated regional Gini indexes considering the household net income obtained from the Encuesta Continua de Presupuestos Familiares (www.ine.es).

estimate *beta* or *standardized* regression coefficients. This allows to compare the magnitude and thus helps to see the relative importance of the used variables.

Table 5 presents regressions using the variables TRUST IN THE GOVERNMENT (estimations 1, 4) and TRUST IN THE PARLIAMENT (2, 3) separately in the estimations due to a high correlation among both variables (r=0.64) and as mentioned differentiating between ordered probit (estimations 1 and 2) and least squares estimations (3 and 4). In a next step we include in *Table 6* the variables ideology (RIGHT POLITICAL ORIENTATION) in the estimation 5 and 7 and the perception about others selfish behavior (OTHERS TAKEADVANTAGE) in estimations 6 and 8. We had to include the variables sequentially in the estimations, due to the relatively higher number of missing values.

As can be seen in *Tables 5 and 6*, most results are robust regarding the estimation methods. The weighted least squares estimations using preferences towards income equality as a cardinal variable offer qualitatively quite similar results as the weighted ordered probit model. Socio-demographic variables do not have a very strong statistically significant influence on preferences for equality. Only some groups of AGE, such as individuals AGE 30-39 and 70+ appear to have stronger preferences towards income equality compared to the reference group (AGE BELOW 30). Furthermore, we cannot observe gender differences. MARITAL STATUS is sometimes statistically significant, in the sense that married people show lower preferences for income equality.

Table 5.- Preferences for equality and redistribution in Spain (I)

DEPENDENT VARIABLE: PREFERENCES TOWARDS INCOME EQUALITY (INCOMES MORE EQUAL)	weighted ordered probit			weighted ordered probit			weighted least squares			weighted least squares		
	Coeff.	z-Stat.	Marg. Effects	Coeff.	z-Stat.	Marg. Effects	Coeff.	t-Stat.	Beta	Coeff.	t-Stat.	Beta
INDEPENDENT V.	1			2			3			4		
Socio-Demographic Factors (SOCDEM)												
AGE												
AGE 30-39	0.194 **	1.95	0.046	0.180 *	1.79	0.042	0.506 *	1.92	0.069	0.551 **	2.10	0.075
AGE 40-49	0.053	0.47	0.012	0.052	0.46	0.012	0.117	0.40	0.015	0.128	0.43	0.016
AGE 50-59	0.083	0.70	0.019	0.053	0.45	0.012	0.185	0.59	0.023	0.265	0.85	0.032
AGE60-69	0.088	0.70	0.020	0.089	0.70	0.020	0.222	0.68	0.027	0.230	0.71	0.028
AGE 70+	0.206 *	1.61	0.050	0.246 *	1.89	0.059	0.620 *	1.85	0.069	0.525	1.59	0.059
GENDER												
FEMALE	-0.014	-0.21	-0.003	-0.008	-0.13	-0.002	-0.005	-0.03	-0.001	-0.022	-0.13	-0.004
MARITAL STATUS												
MARRIED	-0.101	-1.37	-0.022	-0.102	-1.37	-0.022	-0.331 *	-1.71	-0.058	-0.325 *	-1.71	-0.057
Formal and Informal Education (EDUC)												
EDUCATION												
MIDDLE EDUCATION	-0.127	-1.54	-0.027	-0.151 *	-1.82	-0.032	-0.379 *	-1.75	-0.061	-0.328	-1.53	-0.052
UPPER EDUCATION	-0.269 **	-2.48	-0.054	-0.249 **	-2.28	-0.050	-0.663 **	-2.33	-0.086	-0.728 ***	-2.58	-0.093
IMPORTANCE OF POLITICS	0.154 ***	3.96	0.034	0.172 ***	4.32	0.038	0.436 ***	4.35	0.138	0.392 ***	3.99	0.124
Economic Situation (ECONSIT)												
FINANCIAL SATISFACTION	-0.047 ***	-2.58	-0.010	-0.046 **	-2.48	-0.010	-0.114 **	-2.49	-0.080	-0.115 **	-2.56	-0.081
ECONOMIC CLASS												
UPPER CLASS	-0.564	-1.52	-0.090	-0.629 *	-1.66	-0.095	-1.460	-1.40	-0.040	-1.289	-1.25	-0.035
UPPER MIDDLE CLASS	-0.207 **	-2.04	-0.043	-0.210 **	-2.03	-0.043	-0.575 **	-2.14	-0.078	-0.559 **	-2.12	-0.075
LOWER MIDDLE CLASS	-0.188 **	-2.42	-0.040	-0.195 **	-2.49	-0.041	-0.472 **	-2.36	-0.079	-0.457 **	-2.29	-0.076
Occupational status (EMPLOY)												
EMPLOYMENT STATUS												
SELFEMPLOYED	-0.126	-0.95	-0.026	-0.099	-0.74	-0.021	-0.205	-0.58	-0.018	-0.295	-0.84	-0.025
UNEMPLOYED	-0.052	-0.40	-0.011	-0.061	-0.48	-0.013	-0.143	-0.43	-0.014	-0.126	-0.38	-0.012
Ideology and Social Capital (IDSC)												

TRUST IN THE PARLIAMENT				-0.114 **	-2.56	-0.025	-0.274 **	-2.37	-0.076			
TRUST IN THE GOVERNMENT	-0.099 **	-2.26	-0.022							-0.252 **	-2.23	-0.073
RELIGION DENOMINATION	-0.283 ***	-2.90	-0.070	-0.293 ***	-3.02	-0.071	-0.620 **	-2.56	-0.080	-0.589 **	-2.42	-0.075
Location variables (LOC)												
SIZE OF TOWN												
2,000 - 5,000	-0.284 *	-1.68	-0.055	-0.272	-1.58	-0.052	-0.652	-1.48	-0.063	-0.689 *	-1.60	-0.066
5 - 10,000	-0.624 ***	-3.84	-0.104	-0.636 ***	-3.87	-0.103	-1.555 ***	-3.75	-0.163	-1.529 ***	-3.74	-0.161
10 - 20,000	-0.365 **	-2.50	-0.069	-0.389 ***	-2.58	-0.071	-0.922 **	-2.33	-0.099	-0.864 **	-2.25	-0.093
20 - 50,000	-0.267 *	-1.68	-0.053	-0.281 *	-1.74	-0.055	-0.579	-1.40	-0.067	-0.558	-1.37	-0.064
50 - 100,000	-0.297 *	-1.86	-0.058	-0.310 *	-1.91	-0.059	-0.690 *	-1.67	-0.078	-0.692 *	-1.70	-0.077
100 - 500,000	-0.075	-0.52	-0.016	-0.069	-0.47	-0.015	-0.020	-0.05	-0.003	-0.039	-0.11	-0.006
500,000 and more	-0.336 **	-2.14	-0.066	-0.361 **	-2.24	-0.069	-0.791 **	-1.97	-0.106	-0.737 *	-1.87	-0.098
SPANISH REGION												
Andalucia	-0.150	-1.31	-0.032	-0.181	-1.55	-0.037	-0.416	-1.40	-0.055	-0.345	-1.19	-0.046
Aragon	-0.366	-1.46	-0.067	-0.372	-1.45	-0.066	-0.766	-1.26	-0.047	-0.772	-1.29	-0.047
Asturias	-0.813 ***	-4.15	-0.115	-0.827 ***	-4.15	-0.113	-1.997 ***	-3.88	-0.123	-1.970 ***	-3.86	-0.119
Baleares	-0.463 **	-1.69	-0.079	-0.466 **	-1.65	-0.078	-1.323 **	-1.81	-0.067	-1.310 **	-1.84	-0.067
Cataluña	-0.741 ***	-6.05	-0.124	-0.711 ***	-5.80	-0.118	-1.908 ***	-6.18	-0.249	-1.992 ***	-6.46	-0.258
Canarias	-0.755 ***	-4.25	-0.111	-0.692 ***	-3.75	-0.103	-1.707 ***	-3.46	-0.108	-1.876 ***	-3.95	-0.121
Cantabria	-0.154	-0.43	-0.031	-0.234	-0.65	-0.045	-0.405	-0.44	-0.016	-0.156	-0.17	-0.006
Castilla-Leon	-0.440 ***	-2.90	-0.078	-0.456 ***	-2.95	-0.079	-1.139 ***	-2.88	-0.099	-1.108 ***	-2.83	-0.095
Castilla-La Mancha	-0.747 ***	-4.37	-0.110	-0.746 ***	-4.25	-0.108	-1.808 ***	-3.98	-0.127	-1.821 ***	-4.09	-0.126
Extremadura	-0.075	-0.31	-0.016	-0.200	-0.78	-0.039	-0.507	-0.72	-0.026	-0.199	-0.30	-0.011
Galicia	-0.708 ***	-4.40	-0.110	-0.682 ***	-4.15	-0.105	-1.645 ***	-4.07	-0.143	-1.709 ***	-4.30	-0.150
Rioja	-1.265 ***	-2.78	-0.132	-1.288 ***	-2.79	-0.130	-3.124 ***	-2.92	-0.095	-3.091 ***	-2.91	-0.092
Murcia	-0.284 **	-1.95	-0.054	-0.255 *	-1.66	-0.049	-0.541	-1.25	-0.031	-0.644	-1.57	-0.036
Navarra	-0.177	-0.50	-0.036	-0.231	-0.63	-0.044	-0.548	-0.58	-0.023	-0.419	-0.46	-0.017
Pais Vasco	-0.810 ***	-4.10	-0.118	-0.847 ***	-4.19	-0.118	-2.078 ***	-4.28	-0.168	-1.994 ***	-4.16	-0.160
Pais Valenciano	-0.951 ***	-6.93	-0.135	-0.990 ***	-7.03	-0.136	-2.513 ***	-7.15	-0.264	-2.426 ***	-7.01	-0.253
(Pseudo) R2	0.036			0.036			0.150			0.149		
Number of observations	1072			1098			1072			1098		
Prob > chi2 / Prob > F	0.000			0.000			0.000			0.000		

*,**,*** Significantly different from zero at the 0.10, 0.05, 0.01 significance level

Table 6.- Preferences for equality and redistribution in Spain (II)

DEPENDENT VARIABLE: PREFERENCES TOWARDS INCOME EQUALITY (INCOMES MORE EQUAL)	weighted ordered probit			weighted ordered probit			weighted least squares			weighted least squares		
	Coeff.	z-Stat.	Marg. Effects	Coeff.	z-Stat.	Marg. Effects	Coeff.	t-Stat.	Beta	Coeff.	t-Stat.	Beta
INDEPENDENT V.	5			6			7			8		
Socio-Demographic Factors (SOCDEM)												
AGE												
AGE 30-39	0.164	1.49	0.036	0.165	1.53	0.039	0.480 *	1.71	0.066	0.489 *	1.74	0.067
AGE 40-49	0.023	0.18	0.005	0.036	0.29	0.008	0.074	0.23	0.010	0.071	0.23	0.009
AGE 50-59	-0.005	-0.04	-0.001	0.018	0.14	0.004	0.033	0.10	0.004	0.102	0.30	0.012
AGE60-69	0.077	0.54	0.016	0.058	0.42	0.013	0.194	0.55	0.024	0.159	0.45	0.019
AGE 70+	0.220	1.54	0.050	0.195	1.37	0.047	0.523	1.46	0.059	0.523	1.42	0.056
GENDER												
FEMALE	0.020	0.28	0.004	0.024	0.34	0.005	0.035	0.20	0.006	0.073	0.41	0.013
MARITAL STATUS												
MARRIED	-0.116	-1.41	-0.024	-0.136 *	-1.65	-0.031	-0.371 *	-1.79	-0.066	-0.411 **	-1.95	-0.071
Formal and Informal Education (EDUC)												
EDUCATION												
MIDDLE EDUCATION	-0.186 **	-2.06	-0.037	-0.168 *	-1.87	-0.036	-0.453 **	-1.98	-0.074	-0.421 *	-1.80	-0.067
UPPER EDUCATION	-0.210 *	-1.74	-0.040	-0.247 **	-2.14	-0.050	-0.525 *	-1.73	-0.071	-0.669 **	-2.24	-0.086
IMPORTANCE OF POLITICS	0.151 ***	3.46	0.031	0.144 ***	3.36	0.032	0.373 ***	3.48	0.119	0.360 ***	3.32	0.113
Economic Situation (ECONSIT)												
FINANCIAL SATISFACTION	-0.045 **	-2.11	-0.009	-0.041 **	-2.07	-0.009	-0.106 **	-2.08	-0.075	-0.098 **	-2.00	-0.069
ECONOMIC CLASS												
UPPER CLASS	-0.406	-1.09	-0.066	-0.747	-1.46	-0.108	-0.758	-0.79	-0.022	-1.780	-1.27	-0.044
UPPER MIDDLE CLASS	-0.182	-1.53	-0.035	-0.223 **	-2.08	-0.046	-0.466	-1.56	-0.063	-0.598 **	-2.15	-0.080
LOWER MIDDLE CLASS	-0.195 **	-2.30	-0.039	-0.239 ***	-2.90	-0.051	-0.467 **	-2.20	-0.079	-0.593 ***	-2.81	-0.098
Occupational status (EMPLOY)												
EMPLOYMENT STATUS												
SELFEMPLOYED	-0.161	-1.15	-0.031	-0.091	-0.64	-0.020	-0.355	-1.00	-0.031	-0.186	-0.50	-0.016
UNEMPLOYED	-0.041	-0.27	-0.008	-0.085	-0.64	-0.018	-0.101	-0.26	-0.010	-0.186	-0.55	-0.019
Ideology and Social Capital (IDSC)												
RIGHT POLITICAL ORIENTATION	-0.085 ***	-3.33	-0.018				-0.206 ***	-3.40	-0.133			

	Model 1			Model 2			Model 3			Model 4		
OTHERS TAKE ADVANTAGE				-0.261 ***	-3.58	-0.059				-0.646 ***	-3.45	-0.112
TRUST IN THE PARLIAMENT	-0.091 *	-1.86	-0.019	-0.135 ***	-2.85	-0.030	-0.216 *	-1.75	-0.062	-0.326 ***	-2.66	-0.090
RELIGION DENOMINATION	-0.231 **	-2.20	-0.052	-0.336 ***	-3.20	-0.085	-0.438 *	-1.71	-0.059	-0.740 ***	-2.84	-0.094
Location variables (LOC)												
SIZE OF TOWN												
2,000 - 5,000	-0.179	-0.99	-0.034	-0.258	-1.37	-0.051	-0.411	-0.90	-0.040	-0.615	-1.30	-0.059
5 - 10,000	-0.593 ***	-3.29	-0.092	-0.689 ***	-3.67	-0.112	-1.410 ***	-3.14	-0.150	-1.655 ***	-3.55	-0.170
10 - 20,000	-0.364 **	-2.23	-0.064	-0.453	-2.64	-0.082	-0.852 **	-2.04	-0.096	-1.074 **	-2.41	-0.106
20 - 50,000	-0.192	-1.08	-0.036	-0.366 **	-2.02	-0.070	-0.364	-0.83	-0.042	-0.761 *	-1.67	-0.086
50 - 100,000	-0.241	-1.35	-0.045	-0.383 **	-2.18	-0.073	-0.452	-1.01	-0.050	-0.843 *	-1.90	-0.097
100 - 500,000	0.015	0.09	0.003	-0.129	-0.78	-0.028	0.159	0.40	0.023	-0.151	-0.37	-0.022
500,000 and more	-0.263	-1.49	-0.050	-0.402 **	-2.21	-0.078	-0.532	-1.24	-0.074	-0.877 **	-1.96	-0.118
SPANISH REGION												
Andalucia	-0.237 *	-1.89	-0.045	-0.082	-0.65	-0.018	-0.482	-1.57	-0.061	-0.169	-0.52	-0.022
Aragon	-0.192	-0.67	-0.036	-0.321	-1.24	-0.061	-0.310	-0.48	-0.020	-0.684	-1.12	-0.042
Asturias	-0.843 ***	-4.11	-0.107	-0.823 ***	-3.88	-0.117	-1.955 ***	-3.78	-0.130	-1.987 ***	-3.60	-0.126
Baleares	-0.634 **	-2.05	-0.090	-0.424	-1.49	-0.075	-1.651 **	-2.12	-0.088	-1.224 *	-1.65	-0.066
Cataluña	-0.871 ***	-6.54	-0.128	-0.723 ***	-5.69	-0.125	-2.145 ***	-6.74	-0.286	-1.954 ***	-6.10	-0.261
Canarias	-0.717 ***	-3.67	-0.099	-0.696 ***	-3.43	-0.106	-1.693 ***	-3.31	-0.114	-1.716 ***	-3.13	-0.111
Cantabria	-0.390	-0.95	-0.064	-0.476	-1.18	-0.081	-0.718	-0.66	-0.027	-1.092	-1.10	-0.042
Castilla-Leon	-0.398 **	-2.47	-0.067	-0.464 ***	-2.88	-0.083	-0.897 **	-2.25	-0.083	-1.153 ***	-2.79	-0.101
Castilla-La Mancha	-0.702 ***	-3.57	-0.098	-0.928 ***	-4.82	-0.125	-1.585 ***	-3.19	-0.116	-2.312 ***	-4.64	-0.157
Extremadura	-0.436	-1.26	-0.070	-0.344	-1.20	-0.064	-1.195	-1.34	-0.055	-0.986	-1.27	-0.048
Galicia	-0.672 ***	-3.87	-0.098	-0.712 ***	-4.22	-0.111	-1.536 ***	-3.72	-0.141	-1.740 ***	-4.14	-0.151
Rioja	-1.632 ***	-2.89	-0.126	-1.263 ***	-2.65	-0.134	-3.625 ***	-2.91	-0.108	-3.078 ***	-2.73	-0.098
Murcia	-0.339 *	-1.75	-0.058	-0.322 *	-1.85	-0.060	-0.648	-1.23	-0.034	-0.681	-1.40	-0.035
Navarra	-0.358	-0.80	-0.060	-0.285	-0.69	-0.055	-0.793	-0.73	-0.030	-0.656	-0.61	-0.027
Pais Vasco	-0.784 ***	-3.48	-0.105	-0.900 ***	-4.17	-0.125	-1.871 ***	-3.50	-0.140	-2.226 ***	-4.33	-0.175
Pais Valenciano	-0.992 ***	-6.54	-0.129	-1.052 ***	-6.51	-0.141	-2.360 ***	-6.49	-0.266	-2.642 ***	-6.59	-0.252
(Pseudo) R2	0.044			0.043			0.179			0.174		
Number of observations	889			946			889			946		
Prob > chi2 / Prob > F	0.000			0.000			0.000			0.000		

*,**,*** Significantly different from zero at the 0.10, 0.05, 0.01 significance level.

We observe a negative relationship between formal EDUCATION and EP. In general, people with the highest education (UPPER EDUCATION) also show the lowest preferences to improve income equality. The marginal effects indicate that being in this group rather than in the reference group (lowest level of education) reduces the probability of stating that income should be made more equal by around 5 percentage points. On the other hand, informal education or individuals' political interest measured with the variable IMPORTANCE OF POLITICS is positively correlated and statistically significant with preferences towards income equality. An increase in the importance of politics scale by one unit raises the probability of report that income should be made more equal by more than 3 percentage points. The results remain robust after including ideology and societies' fairness perceptions in *Table 6*. The beta coefficient in the least squares estimations indicates a relatively strong impact of political interest on preferences towards income equality compared to other variables.

Additionally, the economic situation matter too. The results indicate that a higher level of FINANCIAL SATISFACTION leads to a lower preference for income equality. This result remains robust after controlling for individuals' perception about their ECONOMIC CLASS status. The marginal effects indicate that an increase in the financial satisfaction by one scale reduces the share of people stating that income should be made more equal by around 1 percentage point. The economic class variables indicate that the lowest class has the highest preferences towards equality. However, the effect is non-linear as the coefficient for the highest economic class is in most of the cases not statistically significant. Finally, statistically significant differences among the EMPLOYMENT STATUS were not observable.

Table 6 indicates that ideology has an impact on our dependent variable. Individual's RIGHT POLITICAL ORIENTATION is negatively correlated with EP with a marginal effect of 1.8 percentage points. The beta coefficient reported in estimation 7 also shows a strong relative impact of ideology on EP. It looks as if people with right political orientation are more in favor of preserving the economic results linked to the personal effort rather than improving the income equality situation. Furthermore, a higher TRUST IN THE PARLIAMENT and the GOVERNMENT leads to a lower EP with marginal effects around 2 percentage points. The result is consistent with the ideology, taking into account the right wing government and the strong representation of the right wing in the parliament in November 2000. Furthermore, it can be argued that people with a lower trust in these institutions have a higher demand to improve the (social) situation in Spain. Interestingly, people without a religion denomination have the strongest preferences to improve income inequality, perhaps due to the fact that they are a minority in Spain. Having a religion is not connected to the level of religiosity or church involvement. However, we also investigate whether church attendance[12] or religiosity[13] have an impact on preferences towards equality. The results indicate that church attendance is positively correlated with EP and religiosity negatively, but in both cases far away of being statistically significant for all conducted estimations presented in *Table 5* and *6.*

Finally we take a look at spatial variables. Looking at the SIZE OF TOWN, we observe that the reference group (size below 5.000) has the strongest preferences for income

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[12] Question: Apart from weddings, funerals and christenings, about how often do you attend religious services these days? 8=More than once a week, 1= Never, practically never.

[13] Independently of whether you go to church or not, would you say you are 3=A religious person, 2=Not a religious person, 3=A convinced atheist.

equality. A strong familiarity among the citizens in such small towns (or better village) can be expected which may explain such preferences. On the other hand, we find that the lowest preferences towards income equality in towns with a population size 5.000 to 10.000 and 10.000 to 20.000 inhabitants. Moreover, the results about regional dummies are very interesting too. We find negative coefficients in some SPANISH REGIONS, and the majority of those regions are characterized by having right wing governments and inequality levels below national level (INE, 2004). Another important finding is that those regions under nationalist governments, País Vasco and Cataluña, present low preferences for equality. Both regions are characterized by high-income levels too.

Table 7 includes the variables INCOME INEQUALITY and SOCIAL EXPENDITURES. In Eq. 9 we include only INCOME INEQUALITY. As can be seen the coefficient is highly statistically significant with a positive sign. Thus, greater inequality leads to stronger preferences towards equality. In Eq. 11, we present an estimation considering also SOCIAL EXPENDITURES. Also here the coefficient is statistically significant, but with lower marginal effects. A higher level of social expenditures leads to lower preferences towards income inequality. However, it can be argued that including an aggregated regional will produce downwardly biased standard errors. Thus, to check the robustness of the results we address the problem of heteroscedasticity by presenting standard errors adjusted for clustering on cantons. The advantage of this class of estimators is that they do not require a precise modelling of the heteroscedasticity source. Therefore, they are robust to heteroscedasticity of arbitrary form. In general, cluster estimators tend to increase the reported standard errors by a relatively large amount, which reduces the levels of statistical significance for the estimated coefficients. As can be seen in Eq. 10 and 12, the coefficient INCOME INEQUALITY remains highly statistically significant. On the other hand, the

coefficient SOCIAL EXPENDITURES is not anymore significant. Nevertheless, the results

clearly indicate that regional conditions matter.

Table **7.- Preferences for equality and redistribution: regional conditions**

DEPENDENT VARIABLE: PREFERENCES TOWARDS INCOME EQUALITY (INCOMES MORE EQUAL)	*weighted ordered probit*			*weighted ordered probit clustering on regions*			*weighted ordered probit*			*weighted ordered probit clustering on regions*		
	Coeff.	*z-Stat.*	*Marg. Effects*	*Coeff.*	*z-Stat.*	*Marg. Effects*	*Coeff.*	*z-Stat.*	*Marg. Effects*	*Coeff.*	*z-Stat.*	*Marg. Effects*
INDEPENDENT V.	*9*			*10*			*11*			*12*		
Socio-Demographic Factors (SOCDEM)												
AGE												
AGE 30-39	0.172	1.60	0.042	0.172	1.18	0.042	0.174	1.62	0.042	0.174	1.19	0.042
AGE 40-49	0.067	0.56	0.016	0.067	0.48	0.016	0.064	0.53	0.015	0.064	0.46	0.015
AGE 50-59	0.032	0.26	0.008	0.032	0.19	0.008	0.035	0.27	0.008	0.035	0.20	0.008
AGE60-69	0.084	0.62	0.020	0.084	0.41	0.020	0.087	0.64	0.021	0.087	0.44	0.021
AGE 70+	0.225	1.61	0.057	0.225	1.57	0.057	0.213	1.53	0.053	0.213	1.51	0.053
GENDER												
FEMALE	0.026	0.37	0.006	0.026	0.43	0.006	0.025	0.37	0.006	0.025	0.43	0.006
MARITAL STATUS												
MARRIED	-0.144*	-1.77	-0.034	-0.144	-1.64	-0.034	-0.152*	-1.87	-0.035	-0.152	-1.62	-0.035
Formal and Informal Education (EDUC)												
EDUCATION												
MIDDLE EDUCATION	-0.163*	-1.85	-0.036	-0.163	-1.50	-0.036	-0.156*	-1.77	-0.035	-0.156	-1.44	-0.035
UPPER EDUCATION	-0.215*	-1.87	-0.046	-0.215*	-1.72	-0.046	-0.213*	-1.84	-0.045	-0.213*	-1.68	-0.045
IMPORTANCE OF POLITICS	0.139***	3.31	0.032	0.139***	3.05	0.032	0.137***	3.26	0.032	0.137***	2.91	0.032
Economic Situation (ECONSIT)												
FINANCIAL SATISFACTION	-0.043**	-2.20	-0.010	-0.043	-1.15	-0.010	-0.043**	-2.20	-0.010	-0.043	-1.13	-0.010
ECONOMIC CLASS												
UPPER CLASS	-0.656	-1.23	-0.104	-0.656	-0.89	-0.104	-0.632	-1.17	-0.101	-0.632	-0.86	-0.101
UPPER MIDDLE CLASS	-0.102	-1.01	-0.023	-0.102	-0.81	-0.023	-0.119	-1.18	-0.026	-0.119	-0.90	-0.026
LOWER MIDDLE CLASS	-0.157**	-2.00	-0.035	-0.157**	-2.15	-0.035	-0.171**	-2.16	-0.038	-0.171**	-2.33	-0.038
Occupational status (EMPLOY)												
EMPLOYMENT STATUS												
SELFEMPLOYED	-0.081	-0.56	-0.018	-0.081	-0.84	-0.018	-0.079	-0.55	-0.018	-0.079	-0.79	-0.018
UNEMPLOYED	-0.052	-0.41	-0.012	-0.052	-0.30	-0.012	-0.066	-0.52	-0.015	-0.066	-0.39	-0.015
Ideology and Social Capital (IDSC)												
OTHERS TAKE ADVANTAGE	-0.260***	-3.65	-0.060	-0.260***	-2.78	-0.060	-0.257***	-3.63	-0.059	-0.257***	-2.76	-0.059
TRUST IN THE PARLIAMENT	-0.115**	-2.54	-0.027	-0.115	-1.43	-0.027	-0.125***	-2.75	-0.029	-0.125	-1.51	-0.029

RELIGION DENOMINATION	-0.312***	-3.00	-0.080	-0.312***	-2.85	-0.080	-0.311***	-2.98	-0.080	-0.311***	-2.82	-0.080
Location variables (LOC)												
SIZE OF TOWN												
2,000 - 5,000	-0.177	-0.97	-0.038	-0.177	-0.79	-0.038	-0.142	-0.77	-0.031	-0.142	-0.61	-0.031
5 - 10,000	-0.599***	-3.29	-0.105	-0.599***	-3.45	-0.105	-0.602***	-3.30	-0.105	-0.602***	-3.47	-0.105
10 - 20,000	-0.393**	-2.39	-0.076	-0.393**	-2.31	-0.076	-0.339**	-2.04	-0.067	-0.339*	-1.87	-0.067
20 - 50,000	-0.257	-1.49	-0.053	-0.257	-1.13	-0.053	-0.230	-1.33	-0.048	-0.230	-0.97	-0.048
50 - 100,000	-0.311*	-1.81	-0.063	-0.311*	-1.75	-0.063	-0.287*	-1.66	-0.059	-0.287	-1.53	-0.059
100 - 500,000	-0.050	-0.32	-0.011	-0.050	-0.32	-0.011	-0.014	-0.09	-0.003	-0.014	-0.08	-0.003
500,000 and more	-0.243	-1.48	-0.052	-0.243	-0.95	-0.052	-0.184	-1.11	-0.040	-0.184	-0.69	-0.040
REGIONAL CONDITIONS												
INCOME INEQUALITY	14.067***	7.16	3.249	14.067***	4.08	3.249	14.837***	7.42	3.413	14.837***	4.56	3.413
SOCIAL EXPENDITURES							-0.009**	-2.36	-0.002	-0.009	-1.35	-0.002
(Pseudo) R2	0.031						0.032					
Number of observations	946						946					
Prob > chi2	0.000						0.000					

*,**,*** Significantly different from zero at the 0.10, 0.05, 0.01 significance level.

VI. CONCLUSIONS

Although there are a few papers that investigate the factors that influence preferences for income equality and redistribution programs, we still know very little about people's preferences about the distribution of income and redistribution policies in society. There is especially a lack of papers related to a country and its regions. Thus, this paper has the aim to reduce such shortcomings using *World Values Survey* data focusing on Spain (year 2000) and its regional conditions. Furthermore, the paper has the aim to search empirically for factors that have been strongly neglected in previous studies, such as, for example, informal education, perceptions about societies' fairness, trust in institutions. Thus, compared to many previous studies, we have presented a richer set of independent variables to better isolate the impact of a specific variable on individuals' preferences for improving income inequality and provide a test whether regional conditions such as income inequality or social expenditures matter.

The results indicate not only regional differences, but also show that regional conditions matter. A higher income inequality at the regional level increases the preferences for income equality. On the other hand, governments' effort to increase social expenditures in relation to the total regional public expenditures leads to lower preferences of equality and therefore a higher level of satisfaction with the income situation in the region. The regional differences also indicate that regions that have right or nationalist governments individuals have lower preferences for income equality.

In general we also find that socio-demographic factors (age, gender) have a low impact on our dependent variable. On the other hand, variables such as economic status, education, political interest, ideology, trust in institution and perceptions about individuals' fairness matter. Better-educated people are less in favor to redistribute and reduce inequality. Additionally, a higher political interest (importance of politics) is strongly correlated with preferences towards income equality. Surprisingly, this factor, which can also be seen as a proxy for informal education, has not been investigated in detail in previous studies.

We also find that ideology matters. Right political orientation is correlated with a lower willingness to reduce income inequality. Furthermore, trust in the government and the parliament is associated with lower preferences towards income equality. This result cannot be interpreted without checking the political situation in Spain during the time the survey has been done. Around six moths before the survey was conducted in November 2000, José Maria Aznar was re-elected president. His Popular Party (PP) also obtained an absolute majority of seats in both the Congress of Deputies and the Senate as a result of the March 2000 election. Thus, it can be argued that trust is an indicator for citizens' evaluation of the current political program. Traditionally, right wing party programs are less inclined to improve income inequality than left wing party programs. Thus, it is not a surprise that we observe a negative

correlation between trust and our dependent variable. Furthermore, it is possible that people with a lower trust have a stronger preference and demand to improve the (social) situation in Spain.

Interestingly, people without a religion denomination have stronger preferences to improve income inequality than people with a religion denomination, perhaps due to the fact that they are a minority in Spain. On the other hand, religiosity (negative sign) and church attendance (positive correlation) are not statistically significant. Interestingly, if people perceive that others are going to take advantage of them, they are less willing to reduce income inequality. Thus, individuals' perception about others' fairness help to explain preferences towards equality. We also observe that people living in a place with less than 2000 have the strongest aversion against inequality, perhaps due to a higher level of familiarity among other citizens.

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