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# The Effects of Income Expectations on Redistribution Preferences in Western Europe

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David Rueda

Department of Politics and Nuffield College, University of Oxford  
david.rueda@politics.ox.ac.uk

Daniel Stegmueller

University of Mannheim  
dstegmueller@uni-mannheim.de

Timo Idema

Boston Consulting Group  
timo.idema@gmail.com

## Abstract

Most distributive theories in political economy understand individuals to be motivated by material self-interest, often approximated by their current positions in the income distribution. In this paper, we challenge this traditional view. We argue that individual preferences for more or less redistribution are the result of agents maximizing their life-cycle income, and not just their current income. Based on the labour economics literature on life-cycle profiles, we propose a simple way of estimating the present value of an individual's expected future income. As expectations about life-cycle incomes are the result of the interplay of age and experience, our approach offers promising new insights into the effects of these variables on redistribution preferences. We provide evidence based on the European Social Survey from 2002 to 2010. We estimate expected life-cycle incomes and their effect on preferences and evaluate the extent to which our approach improves our understanding of distributive politics.

## 1 Introduction

Many politicians would agree that an individual's relative income (i.e., whether she is rich or poor) affects her political behavior. Income differentials and the increase in inequality experienced in recent years seem to be an important part of electoral politics in circumstances as diverse as the 2012 presidential election in the USA or the aftermath of the Great Recession in many countries in Western Europe. In political science, there is an influential literature on how pocketbook issues (Downs 1957; Fiorina 1981; Key 1966) and class (Lipset 1983; Brooks and Manza 1997; Evans 1999), both strongly related to income, influence voting choice.

This paper wishes to address one of the assumptions underlying most arguments about the importance of economic circumstances to political outcomes. If income matters to individual political behavior, it seems reasonable to assume that it does so through its influence on redistribution and social policy preferences. These redistribution preferences may (or may not) then be reflected on party positions and, eventually, government policy. To begin at the beginning, the determinants of redistribution preferences is a topic in need of further analysis.

We want to make two related points. Regarding the influence of income, we argue that the most significant determinant of redistribution preferences is not an individual's present income but her expectation of future income. Second, we believe that many of the approaches in comparative political economy (emphasizing things as diverse risk, insurance, religion or mobility) are best understood both theoretically and empirically by being integrated into this conception of expected life income.

## 2 The Argument

This paper attempts to deepen our understanding of one of the most distinct (and influential) approaches to the formation of preferences for redistribution. Most analyses in political economy rely on the idea that the level of redistribution preferred by a given individual is fundamentally a function of her relative income or, more specifically, a function of the distance between her own income and the average income of the population covered by the polity in which she resides. Two different facets of these arguments should be distinguished. One deals with redistribution and the other with insurance, risk and mobility. Or, as we will argue in more detail in this paper, one deals with the present, while the other one with the future.

In the following pages, we will explore in more detail these frameworks and elucidate this paper's claims. In essence, we argue that most material self-interest

arguments emphasize present income while ignoring the importance of future income. We propose that expectations of future income are more relevant to individuals in forming their redistribution preferences than the levels of income they currently enjoy.<sup>1</sup>

## **2.1 Material self-interest: Related and competing arguments**

Most political economy arguments start from the assumption that an individual's position in the income distribution determines her preferences for redistribution. The most popular version of this approach is the theoretical model proposed by Romer (1975) and developed by Meltzer and Richard (1981). To recapitulate very briefly, the RMR model assumes that the preferences of the median voter determine government policy and that the median voter seeks to maximize current income. If there are no deadweight costs to redistribution, all voters with incomes below the mean maximize their utility by imposing a 100% tax rate. Conversely, all voters with incomes above the mean prefer a tax rate of zero.

The RMR model implies that more inequality should be associated with more redistribution. The consensus in the comparative literature on this topic, however, seems to be that there is either no association between market income inequality and redistribution or, contrary to the prediction of the RMR model, less market inequality is associated with more redistribution (Lindert 1996; Moene and Wallerstein 2001; Iversen and Soskice 2009; Alesina and Glaeser 2004; Gouveia and Masia 1998; Rodriguez 1999: 57-60).

These findings must be considered with a degree of caution. This is because most of this literature relies on macro-comparative empirical analyses (with redistribution as the dependent variable) and does not pay much attention to individual preferences.<sup>2</sup> When looking at individual data, in fact, there is some support for the argument that relative income influences preferences. Using comparative data, a relative income effect is found in, among others, Bean and Papadakis (1998), Finseraas (2009), and Shayo (2009). Using American data, Gilens (2005), McCarty et al. (2008), and Page and Jacobs (2009) (again, among others) find similar effects.

It is nevertheless the case that the importance of income as a determinant of redistribution preferences is highly variable. While it is the case that the rich support redistribution less than the poor almost everywhere, the strength of this relationship

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<sup>1</sup>There are other approaches emphasizing non-material factors that matter to redistribution preferences, but they will receive little attention here. See Rueda (2014) and Dimick et al. (2014) and for an analysis of the role of other regarding preferences.

<sup>2</sup>Even the macro-comparative conclusion is less unambiguous that the consensus in the literature suggests. Milanovic (2000) and Kenworthy and Pontusson (2005) show that rising inequality tends to be consistently associated with more redistribution within countries.

is hardly consistent (very significant in the US, quite weak in Portugal).<sup>3</sup> We propose that one of the reasons for this lack of consistent effects in the literature has to do with a general misconception of the basis of material self-interest. The idea that material self-interest determines redistribution preferences should not be limited to a measure of present income. In the words of Alesina and Giuliano, “(e)conomists traditionally assume that individuals have preferences defined over their lifetime consumption (income) and maximize their utility under a set of constraints. The same principle applies to preferences for redistribution. It follows that maximization of utility from consumption and leisure and some aggregation of individual preferences determines the equilibrium level of taxes and transfers” (2011: 1).

Because of the potential to define material self-interest inter-temporally (as lifetime consumption/income), this approach extends the more direct focus on effects of contemporary relative income (as in Romer 1975 and Meltzer and Richard 1981) and opens the door to arguments about social insurance and risk (as in Sinn 1995; Moene and Wallerstein 2003; Iversen and Soskice 2001; Rehm 2009; Mares 2003), and about social mobility and life-cycle profiles (Alesina and Giuliano 2011; Haider and Solon 2006; Benabou and Ok 2001).

Analyses of insurance and mobility are most relevant to the topic of this paper. Moene and Wallerstein (2001, 2003) articulate the insurance approach most forcefully (cf. also Sinn 1995, Iversen and Soskice 2001, and Mares 2003). Their model builds on the assumption that demand for insurance rises with income, holding risk exposure constant, and stands the RMR model on its head as far as the predicted association between inequality and redistribution is concerned. As a mean-preserving decline in inequality implies that the income of the median voter is higher, Moene and Wallerstein expect that countries with a more egalitarian distribution of income will have more redistributive government. To arrive at this result, Moene and Wallerstein assume that private markets cannot satisfy the demand for insurance and that publicly-provided social insurance necessarily entails redistribution across income groups. Both of these assumptions seem questionable. But, putting these issues aside, we do agree with Moene and Wallerstein that it makes sense to think that demand for insurance is reflected by support for redistribution at the individual level. We argue, however, that the insurance logic is relevant to support for redistribution to the extent that individuals anticipate the effects of their future income (and of mobility within the income distribution) and therefore should be integrated into a more general conception of expected income.

Arguments about the importance of insurance have also emphasized the impor-

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<sup>3</sup>See Dion (2010), Dion and Birchfield (2010) and Beramendi and Rehm (2014).

tance of risk in determining redistribution and insurance preferences. In this vein, Rehm (2009) argues that, while income captures redistribution preferences, occupation characteristics capture risk exposure and insurance motivations. In a highly influential article, Iversen and Soskice (2001) argue that exposure to risk is inversely related to the portability of individual skills. While we agree with Iversen and Soskice that individual expected utility (across a range of possible labor market stages) is the key factor in determining redistribution preferences, we do not emphasize the difference between general and specific skills. Instead, we will consider expected life income to depend on two key factors: education and labor market experience. We therefore want to integrate these concerns about insurance and risk into a simpler conception of expected individual life income.

Similarly, religiosity may work as an intermediary between individual insurance considerations and demand for redistribution. Scheve and Stasavage (2006) argue that religion, or rather, active membership in religious organizations provides both tangible and intangible benefits (cf. Pergament 1997). Inasmuch as the benefits of religion are non-material (e.g., providing solace in times of hardship and therefore decreasing the demand for insurance), we expect its effect to be unrelated to income. However, if religious groups also provide direct material benefits (such as helping out with money in times of unemployment), a religious individual's expectation of his future income stream would be altered. We are agnostic about the influence of religiosity, but the importance of this literature militates for controlling for this potential effect. We return to this topic in the section on robustness checks below.

Some influential contributions within the existing literature hypothesize that individuals with good prospects for upward mobility might be less inclined to support redistribution than their present income would lead us to expect (e.g., Piketty 1995; Benabou and Ok 2001). By the same logic, we might expect individuals who anticipate downward mobility to be more supportive of redistribution than their present income would lead us to expect. We want to argue here that individuals incorporate interests associated with their anticipated future position in the income distribution into their present-day utility calculus.

Our arguments are perhaps most directly related to those in Alesina and La Ferrara (2005). They explore how individual preferences for redistribution are affected by prospects of future income mobility. Alesina and La Ferrara's measure of expected future profiles are constructed using three types of indicators: individuals' account history of past mobility; individuals' subjective perception of their future standards of living; and objective indexes of mobility for income deciles (based on panel data). While we are inspired by this analysis, we differ in our conceptualization of expected

future income.<sup>4</sup> As Alesina and La Ferrara themselves argue, it is the last component in these income profiles that is most novel (2005: 898). However, while their findings emphasize the effects of an individual's likelihood of being in the upper deciles of the income distribution over the next 1–5 years, we want to explore ways of capturing income prospects over the entire life cycle. In doing this, we follow the labor economics literature on life-cycle profiles (Mincer 1974; Baker 1997; Haider and Solon 2006). Below, we propose a simple way of estimating the value of an individual's expected future income based on the interplay of education and increasing labor market experience.

## 2.2 Our argument

We now briefly formalize our own approach (details about the implications are provided in the empirical section below). Simply put, an individual's utility is given by considerations of present and future income. We write utility as a linear function of present after tax and transfer income  $y_t$  and future after tax and transfer income ( $y_{\text{life}}$ ):

$$u_i = y_t + y_{\text{life}}. \quad (1)$$

We assume individuals to be risk neutral. We model redistribution, rather conventionally, as a lump-sum transfer ( $g$ ) paid for through a marginal tax  $\tau$  on earnings ( $w_{it}$ ), assuming no efficiency losses due to taxation. An individual's income at time  $t$  is given by

$$y_{it} = (1 - \tau)w_{it} + g \quad (2)$$

Assuming a balanced budget for the government, the following constraint holds in each year:

$$g = \tau \bar{w}, \quad (3)$$

where  $\bar{w}$  represents average wage (assumed constant over years for simplicity).

An individual's expected income after tax and transfers is given by

$$y_{it} = \left(1 - \frac{g}{\bar{w}}\right) w_{it} + g. \quad (4)$$

His actual income in year  $t$  is given by the following equation

$$w_{it} = f(s_i, x_{it}) + \epsilon_{it} \quad (5)$$

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<sup>4</sup>Alesina and La Ferrara also emphasize the effects of beliefs in fairness on redistribution preferences, something that we will not address in detail in this paper.

where an individual's expected earnings are a function of education  $s_i$  and age / work experience  $x_{it}$  plus a stochastic component  $\epsilon_{it}$  (assumed to be distributed iid), which represent unexpected income shifts orthogonal to Mincer earnings.

Assuming no discounting, we define expected lifetime income as averaged income over future periods

$$E(y_{\text{life}}) = \frac{1}{x^* - x} \int_x^{x^*} (1 - \tau)w_{it} + g dx \quad (6)$$

where  $x$  is current age/work experience and  $x^*$  represents retirement age (exogenously determined). An individual's utility is now given by

$$u_{it} = \left( 1 - \frac{g}{2\bar{w}} w_{it} t + E(w_{it,\text{life}}) \right) \quad (7)$$

with marginal utility

$$\frac{\partial u_i}{\partial g} = \frac{w_{it} + E(w_{it,\text{life}})}{2\bar{w}}, \quad (8)$$

which illustrates our main argument, namely, that we expect a negative monotonous relationship between levels of expected income and preferred levels of redistribution.

### 3 Data and empirical strategy

In the following pages, we test the theoretical hypotheses explained above using cross-sectional evidence. We calculate expected age-education income profiles from European Social Survey (ESS) data and estimate how these profiles influence redistribution preferences. Our analysis draws on ESS surveys administered in 17 Western European countries in 2002, 2004, 2006, 2008 and 2010. Relative to similar survey data from the International Social Survey Programme (ISSP), there are two noteworthy drawbacks to using the ESS: ISSP surveys cover a longer time period than ESS surveys and include the US and other non-European advanced capitalist countries of interest. On the other hand, the advantage of the ESS is that the surveys use consistent measures of income. By contrast, income measures reported by the ISSP vary not only between countries within each wave, but also, for many countries, between waves. As a reliable measure of income is essential for this paper's purposes, this feature outweighs the aforementioned disadvantages of the ESS relative to the ISSP.<sup>5</sup> We limit our sample to working-age males (age 25 to 65). Restricting the sample to males is commonly

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<sup>5</sup>In contrast to Finseraas (2009), but following Kumlin and Svallfors (2007), we restrict the analysis to West European countries or, in other words, we exclude the former communist countries from our analysis.

**Table 1: Redistribution preferences**

Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
26.14	43.89	14.87	12.34	2.49

Note: Average percentages per category. ESS, Rounds 1-5.

done in the literature on life-cycle income and income mobility (as there are selection concerns about measuring the earnings of females regarding fertility decisions).<sup>6</sup>

### 3.1 Redistribution preferences

Our dependent variable, preferences for redistribution, is an item commonly used in individual level research on preferences (e.g., Rehm 2009). It elicits a respondent's support for the statement "the government should take measures to reduce differences in income levels" measured on a 5 point agree-disagree scale. Discarding don't-knows and non-responses (as we also do in the empirical analysis), Table 1 shows the overall distribution of responses in all the countries and years included in the analysis. Western Europe is characterized by a rather high level of popular support for redistribution. While 70% of the respondents either agree or strongly agree with the statement that the government should take measure to reduce income differences, only about 15% explicitly express opposition to redistribution. We group those who strongly disagree or disagree with those who express "middle of the road" preferences ("neither agree nor disagree"), since one could interpret it as another, less overt, expression of opposition.<sup>7</sup>

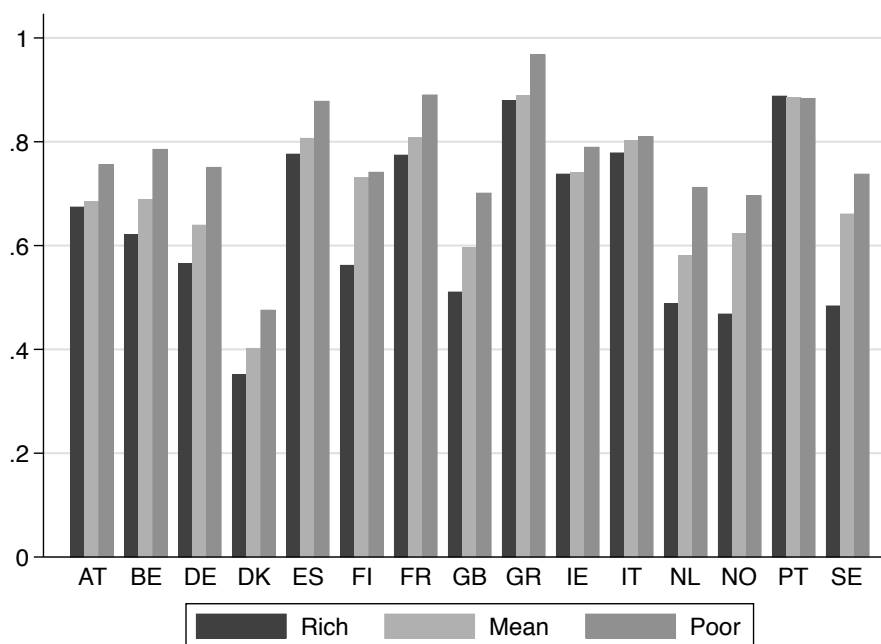
While Table 1 was informative regarding general support for redistribution, it did not illustrate the relationship between present income and redistribution preferences. Figure 1 shows the general level of support (i.e., the percentage of agrees and strong agrees) for redistribution in each of the countries in the sample, and the level of support for redistribution among the poor (those individuals with household incomes at most 20,000 PPP-adjusted 2005 US dollars below the country-year mean) and

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<sup>6</sup>Our use of cross-national data allows us to test the validity of our micro-level argument in varying contexts, characterized by differing political cultures and economic institutions (King et al. 1994: 24). An obvious disadvantage is that the causal status of our findings remains ambiguous. The most obvious criticism is that unobserved individual characteristics (such as ability) might cause both levels of expected income and redistribution preferences. We tackle this issue in a related paper, where we rely on panel data collected in a single country to estimate joint models of income expectation formation and preference changes (including individual-specific effects). We find results comparable to the ones here.

<sup>7</sup>Note that a specification which keeps this "neutral" option in a linear probability model for all five categories does not lead to different results.





**Figure 1:** Support for Redistribution (General, among Poor and among Rich)

among the rich (those with household incomes at least 40,000 PPP-adjusted 2005 US dollars above the mean).<sup>8</sup>

Figure 1 reflects a remarkable amount of cross-national variation. Support for redistribution is generally high in countries like Spain, France, Greece, Ireland, Italy and Portugal. It is generally low in countries like Denmark, Great Britain and the Netherlands. The support of redistribution among the rich and the poor mirrors these general trends, but the differences between poor and rich are quite interesting. For example, in Sweden and Norway, where the general support for redistribution is relatively high, the difference between rich and poor is large (around 23 percentage points). In Austria, where the general support for redistribution is again relatively high, the difference between rich and poor is low, only around 7 percentage points (in Portugal the difference is even smaller). There are countries with large differences between the rich and poor that have high general levels of support (like Finland) and that have low levels of support (like the Netherlands).

### 3.2 Present Income

Our measure of present income is constructed using respondents' answers to the following survey question: "Using this card, if you add up the income from all sources,

<sup>8</sup>More on this measure of present income below.

which letter describes your household's total net income? If you don't know the exact figure, please give an estimate. Use the part of the card that you know best: weekly, monthly or annual income."<sup>9</sup> Respondents are presented with a show-card, which contains several labeled categories representing income ranges.<sup>10</sup> This scheme poses several challenges for this paper's purposes. The income bands used cover very different income ranges. For example, category "R", contains a range comprising €2,400 (€1,800 to €3,600), while the range for category "U" is €30,000 (€90,000 to €120,000). Furthermore, ranges differ between surveys. If we were to introduce these categories into the analysis, they would have completely different meanings and estimates would be difficult to interpret.

To address this issue, we transform income bands into their common-currency mid points. To give an example, this means that via this transformation, category "€1,800 to under €3,600" gets assigned a value of €2,700.<sup>11</sup> Using midpoints has been recognized for some time as an appropriate way to create scores for income categories and has been used extensively in the American politics literature analyzing General Social Survey data (Hout 2004). A complication arises when defining a midpoint for the open-ended top category (which is undefined since this category has no upper limit). We impute the top-coded income category by assuming that the upper tail of the income distribution follows a Pareto distribution (e.g., Kopczuk et al. 2010). This still leaves us with one remaining problem, namely that the purchasing power of a certain amount of money varies across the countries included in our analysis. Simply put, the meaning of being €10,000 below the mean is different in Germany and in Greece. We address this problem by converting national-currency denominated income into PPP-adjusted 2005 US dollars.

### 3.3 Calculating expected income

Our central independent variable, expected income, is generated by a statistical model for education–age income profiles. It describes how income develops over the life cycle for individuals with different levels of education. The most commonly used spec-

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<sup>9</sup>The wording of this question after 2006 is a bit different, but the meaning remains the same. In 2008 and 2010, "after tax and compulsory deductions" replaces "net."

<sup>10</sup>More precisely, two different cards are shown to respondents, depending on the year of the survey. In the surveys from 2002 to 2006, the card places the respondent's total household income into 12 categories associated with different weekly, monthly or annual ranges. These are the annual ranges associated to each letter category (for country-years before the Euro, these were in national currency equivalents). The surveys in 2008 and 2010, on the other hand, use 10 categories which represent the deciles in the country income distribution.

<sup>11</sup>Mid-point value assignments differ among survey waves. For 2002-2006 we used mid-points based on common value categories, while for the 2008 and 2010 surveys, we use mid-points derived from country-specific income deciles.

ification for life-earning profiles is the Mincer earnings function (Mincer 1958, 1974):

$$\log(\text{income})_i = \alpha + \beta_1 s_i + \beta_2 t_i + \beta_3 t_i^2 + \epsilon_i \quad (9)$$

where  $s_i$  represents an individual's years of schooling and  $t_i$  measures years of work-experience. Under Mincer's specification, log income is thus a linear function of education (typically measured as years of schooling) and a quadratic function of work experience (the years following schooling). The quadratic effect allows for the increasing but flattening effect of experience on wages (representing decreasing returns to experience). The purely additive effects of schooling and experience in the Mincer specification, suggest that the effect of work experience on wages is similar across education groups. Heckman et al. (2006) argue to extend the Mincer model in two ways. First, one should allow for variable returns to education, instead of specifying a single rate of return. Second, they argue for allowing heterogeneity in returns to experience. Thus, in our model specification, we estimate return-to-education coefficients for different levels of education. We capture (some) heterogeneity in returns by including interactions between each level of education and years of work experience, effectively allowing for differential returns to experience by education groups.<sup>12</sup>

Let  $y_{ij}$  be the (log) income of individual  $i$  in country  $j$ , and  $s_{ij}$ ,  $t_{ij}$  his education certificate and work experience, respectively.<sup>13</sup> Let  $\mathbf{y}_j$  be a stacked vector of individual incomes of country  $j$ . Similarly, stack work experience into  $\mathbf{t}_j$ . Stacking education certificates yields a vector  $\mathbf{s}_j$  with four possible values of education certificates: (1) less than upper-secondary, (2) upper-secondary, (3) post-secondary, (4) tertiary.<sup>14</sup> Since we estimate different rates of returns for each education group, we create an education-indicator matrix  $\mathbf{S}_j$  with one column for each education group. Our estimated income equation is

$$\mathbf{y}_j = \beta_{1j} \mathbf{S}_j + \beta_{2j} \mathbf{S}_j \mathbf{t}_j + \beta_{3j} \mathbf{S}_j \mathbf{t}_j^2 + \epsilon_j. \quad (10)$$

Errors  $\epsilon_j$  are white noise within each country. All coefficients are country-specific.<sup>15</sup>

<sup>12</sup>In other work, where we use individual-level panel data instead of cross-sections, we are able to estimate individual-specific returns to experience.

<sup>13</sup>More precisely, since we lack detailed work histories for each individual, we use potential work experience, which is calculated as current age minus school leaving age.

<sup>14</sup>These categories are mutually exclusive and collectively exhaustive, meaning that no individual belongs to more than one category, and no individual belongs to no category.

<sup>15</sup>Thus we estimate what Gelman and Hill (2007) call completely un-pooled models, where estimated country coefficients are not influenced by other countries. We prefer this specification to a multi-level model since our sample size is large enough, and, more importantly, since national labor markets with very different structures might exhibit quite different age-income profiles.

Thus we estimate country-specific life-earning profiles for seventeen West European countries in the European Social Survey spanning the period from 2002 to 2010.<sup>16</sup>

Next, we use these predictions of age–income profiles to calculate average earnings over the remaining working life. Looking forward, what is the average income expected to look like in the future? We simply predict future earnings up to the retirement age of 65. For simplicity, we thus assume away any specific discounting of future income (we weigh income 20 years in the future the same as income 10 years in the future). Denote by  $\widehat{y_{ij}(s_i, t_i)}$  income of individual  $i$  in country  $j$  with level of education  $s_i$  and experience  $t_i$  predicted from equation (10). Let  $R_i$  be a scalar indicating years until retirement for each individual. An individual’s estimate of annualized expected lifetime income,  $w_{ij}$ , is then given by:

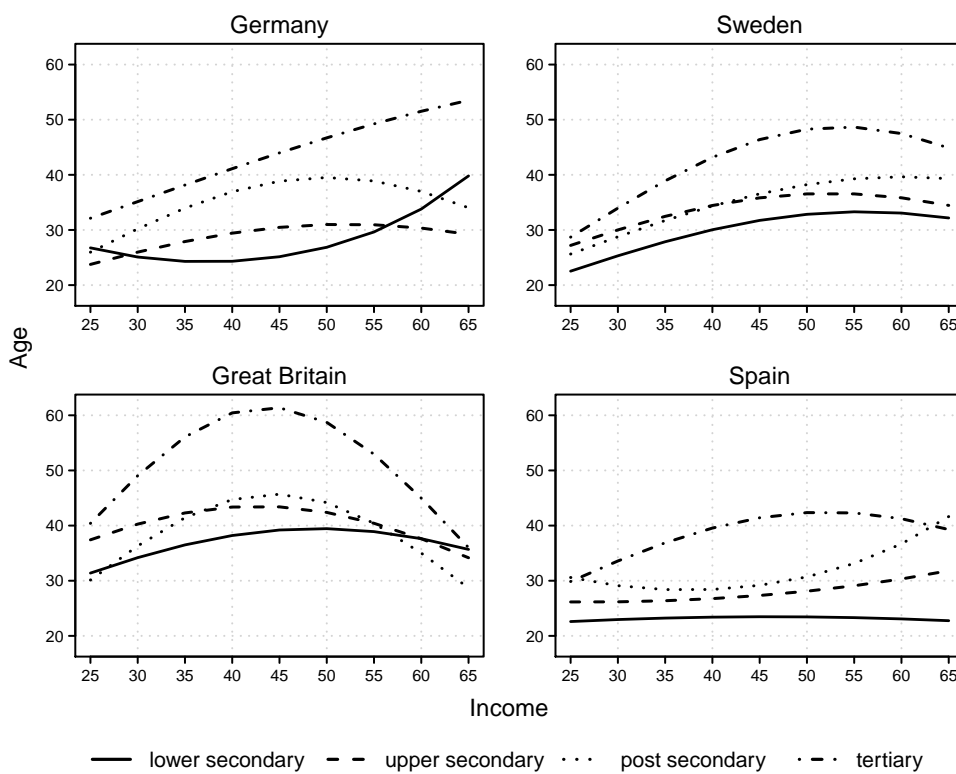
$$w_{ij} = R_i^{-1} \sum_1^{R_i} \widehat{y_{ij}(s_i, t_i)}. \quad (11)$$

Figure 2 illustrates the resulting age income profiles by education group in four selected countries. Germany, Sweden, Great Britain and Spain reflect the existing macro institutional differences in our sample. In Figure 2, most earnings curves start out with a steep increase, reflecting both the increasing probability of being employed and the positive effect of work experience. The effect of work experience is not parallel across education groups. Instead, the effect of work experience is steeper for higher educated individuals than for those with primary education. Moreover, most life-earnings profiles show a dip in household earnings after the age of 50 (but compare all education profiles in, for example, Sweden to those associated with lower secondary education in Germany or post secondary education in Spain). This dip reflects the increasing probability of unemployment, a reduction in working-hours and early retirement.

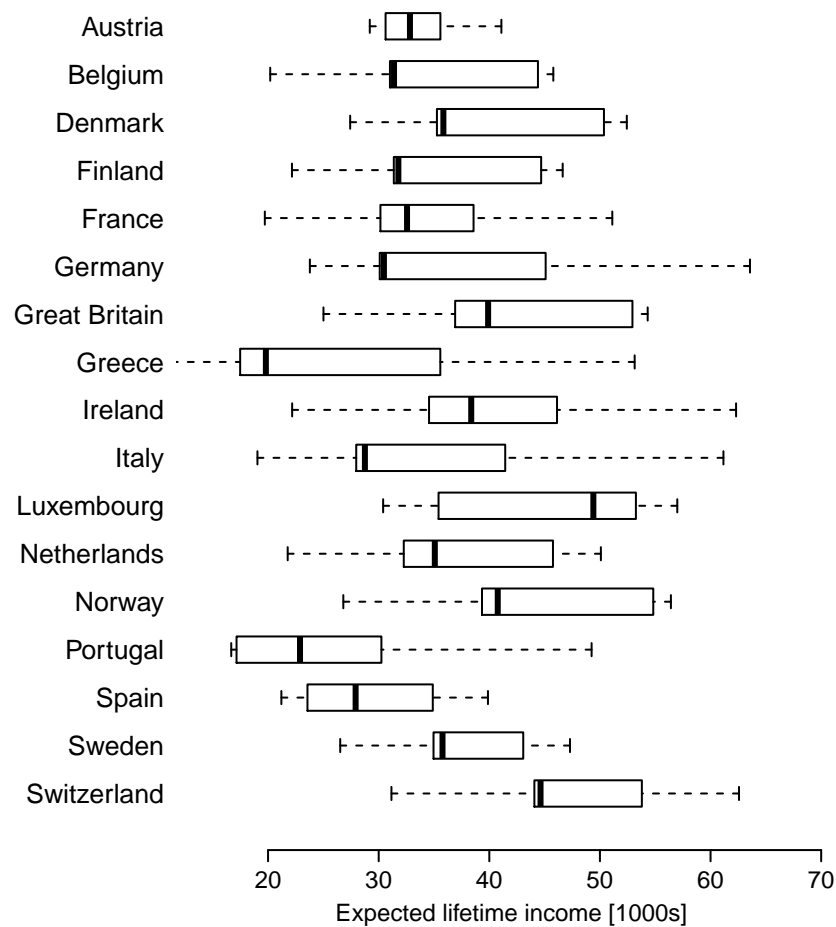
The overall distribution of expected lifetime income in the countries in our sample is presented in Figure 3. Each country’s distribution (all rounds of the ESS are aggregated) is summarized by a box plot. Each of the boxes reflect the degree of dispersion (the spread within the box) and skewness (represented by the position of the median in the box) in the data. The dotted lines reflect the range between minimum and maximum values. Figure 3 makes clear the cross-national diversity in our sample. In

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<sup>16</sup>In the absence of detailed work histories for each individual, we proxy experience by age. It is also important to remember that, to minimize complications derived from retirement earnings and household composition, we restrict our analysis to working-age (25-65) male respondents. The household income therefore becomes individual income (whether the household contains just a man or a couple in which the woman is not in paid employment).



**Figure 2:** Age income profiles by education level in four selected countries

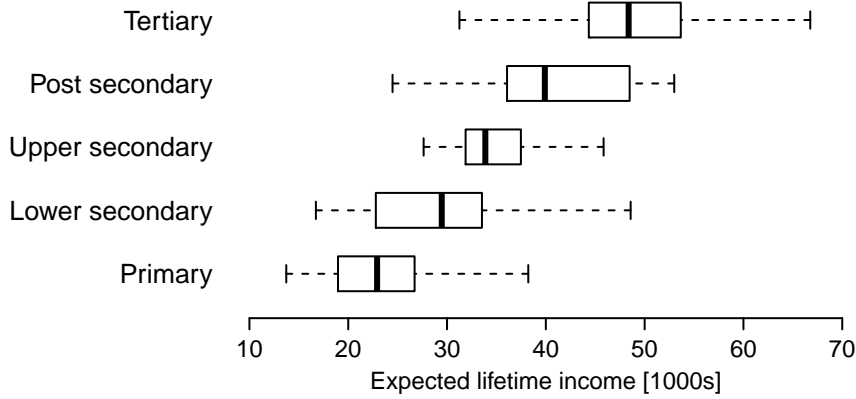


**Figure 3:** Distribution of expected lifetime income over countries

a country like Austria, the distribution of expected life income is quite compressed and the median is relatively high. In countries like Belgium or the Netherlands, the median expected lifetime income is similar to that at Austria but the distribution is much more dispersed. The case of Portugal is a good illustration of moderately high levels of dispersion around a very low median of expected lifetime income.

Perhaps more meaningful for the hypotheses in this paper, Figure 4 reflects the distribution of expected lifetime income for different levels of education (for the entire sample). As one would suspect, the figure makes clear how median incomes increases with education. The figure also indicates that dispersion in expected lifetime income is greater when an individual posses a lower secondary or post-secondary education. Expected lifetime income is more compressed when individual have either the highest (tertiary) or lowest (primary) levels of education.

Is expected future income distinct from present income? The theoretical model we have explained above and, more importantly, the implications about redistribution



**Figure 4:** Distribution of expected lifetime income by education group

**Table 2:** Correlation between current and expected income

Country	Corr.	Country	Corr.
Austria	0.240	Italy	0.216
Belgium	0.314	Luxembourg	0.581
Denmark	0.311	Netherlands	0.300
Finland	0.282	Norway	0.269
France	0.363	Portugal	0.317
Germany	0.312	Spain	0.311
Great Britain	0.309	Sweden	0.253
Greece	0.229	Switzerland	0.313
Ireland	0.332		

Note: Correlation between present income and expected lifetime income  $w_{ij}$  calculated following equation (11).

preferences we extract from it, fundamentally depend on future income expectations capturing something that is not highly correlated to present income. It would be tempting for a critical reader to suspect that the relationship between present income and future income expectations is in fact very strong. To address this possibility, we present the correlation between an individual's expected income  $w_{ij}$  and her present income for each country in our sample in Table 2. The table shows that the correlations to be generally low (around 0.2 in some countries, around 0.3 in many others). The only exception is Luxembourg, where the relationship between present income and expected future income is much higher. We address the sensibility of our analysis to this and other country-specific factors in the sections below.

### 3.4 Modeling preferences

We now turn to the model used to estimate the role of present and expected income on individuals' redistribution preferences. Denote by  $z_{ij}$  an individual's preferred level of redistribution. It is a latent variable determining observed survey responses, such that he "agrees" or "strongly agrees" that "the government should take measures to reduce differences in income levels" if  $z_{ij} \geq 0$ . He opposes redistribution ("disagrees" etc.) when when  $z_{ij} < 0$ . Our estimated preference equation is

$$z_{ij} = \gamma w_{it} + \delta \mathbf{x}_{ij} + \xi_j + \zeta_{ij} \quad (12)$$

where  $\gamma$  captures the effect of expected income,  $w_{ij}$ . As our respondents are clustered within countries, we include country random effects  $\xi_j$ , assumed to be normally distributed with mean zero and freely estimated variance. Residuals  $\zeta_{ij}$  are white noise with variance fixed to  $\pi^2/3$ , yielding a logit model.<sup>17</sup> Finally,  $\delta$  is a vector of estimates of control variables (including present income),  $\mathbf{x}_{ij}$ , which we will describe next.

### 3.5 Individual-level Control Variables

We include individual-level control variables commonly used in analyses of redistribution preferences.<sup>18</sup> These include age (measured in years) and household size. The model also includes a dummy for being a union member. We expect this variable to be positively associated with support for redistribution. Finally, the model also includes a control for being a foreigner. We introduce this variable to test whether there is a connection between expected future income and identity. A large literature that has recently emerged on the role of racial and ethnic identities on the formation of preferences for redistribution. Table 3 summarizes the variables described in the previous paragraph and the education variables used (in addition to age) to estimate expected lifetime income.

### 3.6 Estimation

Our statistical analysis consists of two stages. In the first stage, we calculate annualized expected lifetime income following the logic explained above. In other words, in this stage we estimate equations (10) and (11) using least squares. The second stage

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<sup>17</sup>Our results do not change substantively if we employ an ordered probit specification.

<sup>18</sup>Previous analyses of individual preferences using similar controls include Corneo and Grüner (2002); Blekesaune and Quadagno (2003); Cusack et al. (2006); Iversen and Soskice (2001), Rehm (2009), and Stegmueller et al. (2012).



**Table 3:** Characteristics of estimation sample

	Mean	SD
Current income [in 1000 USD]	42.234	28.080
Household members	2.826	1.350
Union member	0.538	0.499
Foreign	0.101	0.301
Age	43.144	10.359
Education		
Lower secondary	0.139	0.346
Upper secondary	0.397	0.489
Post secondary	0.085	0.279
Tertiary	0.300	0.458

Note: European Social Survey 2002–2010

consists of our analysis of redistribution preferences as given in equation (12). We estimate this equation via maximum likelihood using 15-point adaptive Gaussian quadrature to integrate over the random effects distribution. Since our first-stage expected lifetime income,  $w_{it}$ , is based on estimates, we need to account for its uncertainty (the standard error of the prediction) in order to avoid well-known error-in-variables attenuation (Greene 2002: 84; Chesher 1991). We incorporate this first-stage uncertainty into our preference equation estimates via nonparametric bootstrapping (Cameron and Trivedi 2005: 357). To be precise, we take 500 bootstrap samples and for each sample we estimate first-stage expected lifetime income (from equations 10 and 11), which we then insert into equation (12). This strategy yields estimates corrected for errors-in-variable bias and adjusted (conservative) standard errors.

In order to check the robustness of our results against specific statistical choices, we estimated three more model specifications. First, we simply omit all control variables including only present and expected income as right-hand-side variables. In the next specification, we replace country random effects by fixed effects, i.e., we include a set of country dummies. Finally, we jettison our bootstrapping procedure and employ simple heteroscedasticity-consistent standard errors.

## 4 Results

Table 4 presents estimates of our redistribution preference equation using these different specifications. Our main interest is focused on the effects of the two measures of income on redistribution preferences. Are redistribution preferences mainly a function of how individuals do currently, or – as we argue in this paper – do considerations

**Table 4:** Expected income and redistribution preferences.

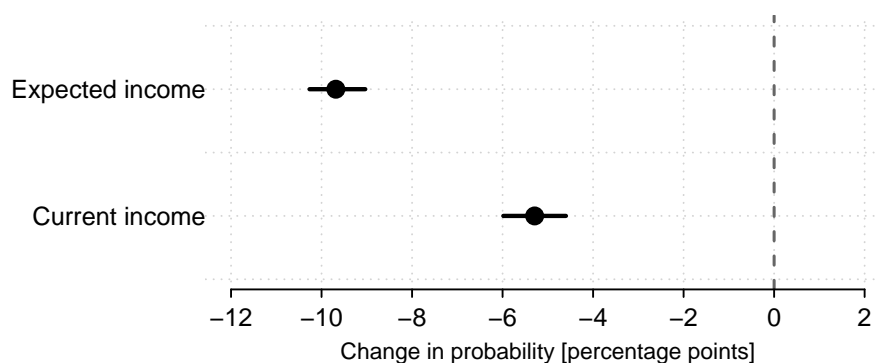
	(1)	(2)	(3)	(4)
Expected income	-0.247 (0.021)	-0.237 (0.021)	-0.235 (0.021)	-0.250 (0.016)
Current income	-0.095 (0.006)	-0.096 (0.006)	-0.096 (0.006)	-0.095 (0.006)
Household members		-0.010 (0.010)	-0.011 (0.010)	-0.012 (0.010)
Union member		0.417 (0.030)	0.421 (0.030)	0.422 (0.029)
Age		0.008 (0.001)	0.008 (0.001)	0.007 (0.001)
Foreigner		0.156 (0.046)	0.155 (0.046)	0.155 (0.045)
Controls	no	yes	yes	yes
Time dummies	yes	yes	yes	yes
Country effects	Random	Random	Fixed	Fixed
Standard errors	Bootstrap	Bootstrap	Bootstrap	Robust

Note: N=29,766. Bootstrapped standard errors based on 500 replicates.

of future expected income play a role as well? A first look at the results in Table 4 suggests that both measures of income play a significant role. Looking at the respective magnitudes of each of these effects, however, we find that considerations of present and future income matter very differently. Our results in fact suggest that a one-dollar change in expected lifetime income has a much larger impact on redistribution preferences than a one-dollar change in actual current income.

Looking at the estimates for the individual control variables, our results show some of these factors to be relevant determinants of redistribution preferences. Consistent with previous findings in the literature, age, being a union member, and being a foreigner increases the likelihood of agreeing that the government should reduce income differences.

Going back to the income effects that are the main focus of this paper, Table 4 is unequivocal in showing the statistical significance of both measures of income but it is germane to ask what the substantive effects of income expectations on preferences are. Figure 5 reflects the magnitude of expected income effects in a more substantive way, and compares them with the effects of current income. We calculate predicted probabilities of demand for redistribution before and after a standard deviation change in current and expected income. The figure displays the differences in predicted probabilities and their associated 95% confidence intervals. A positive standard deviation



**Figure 5:** First differences in predicted probabilities of support for redistribution

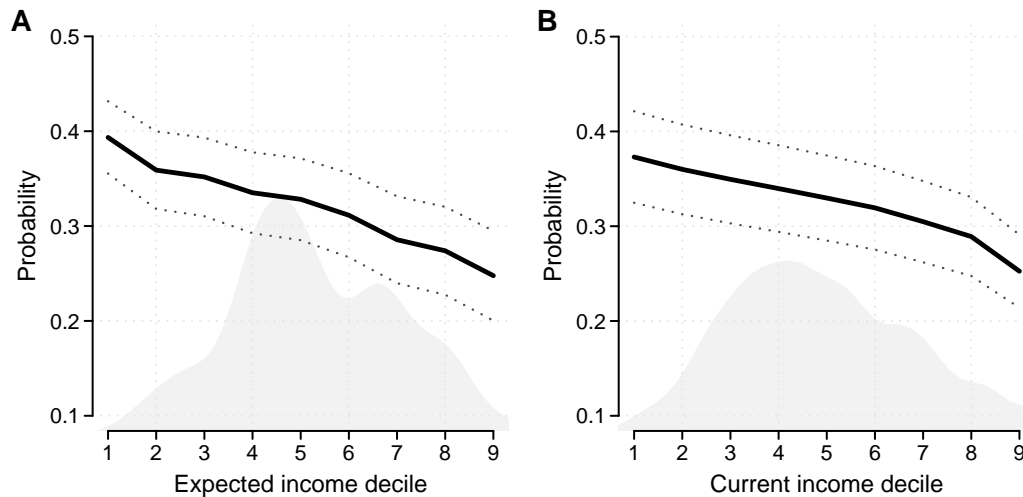
shock to current labor income reduces an individual’s probability of redistribution support by almost 6 percentage points. On the other hand, a positive standard deviation change in expected income reduces support for redistribution by almost 11 percentage points. For both estimated effects we find narrow confidence intervals that are clearly bound away from zero.

We illustrate our results in one final way in Figure 6. It shows predicted probabilities of redistribution support over deciles of the distribution of expected (A) and current income (B). In other words, for each decile we calculate the predicted probability of supporting redistribution holding all other individual characteristics constant. Figure 6 plots these predicted probabilities and their associated 95% confidence intervals. Given as shaded area in the background are the distributions of both variables, calculated via kernel density estimation evaluated over a 200-point grid. Moving up the deciles of the distribution of expected income, and holding all other relevant individual-level factors constant, support for redistribution decreases considerably. Confirming our central argument, we find that expected income is just as relevant as (if not more than) present-day income in shaping citizens’ preferences.

**Robustness tests** Table 5 presents a set of robustness tests designed to address alternative explanations of redistribution (as well as possible criticisms of our approach).

Previous research indicates that average support for redistribution tends to fall when the existing levels of redistribution are high. The idea that there is some threshold at which the disincentive effects of redistribution become more severe (see for example Tanzi and Schuhknecht 2000) provides a possible explanation for this relationship. Arguably, people who live in countries with large redistributive welfare states are more concerned about, and more aware of, the disincentive effects of redistribution.<sup>19</sup> It is

<sup>19</sup>It also seems likely that some respondents take actual levels of redistribution into account when expressing their preferences, i.e., that they are expressing agreement or disagreement with the



**Figure 6:** Predicted probability of support for redistribution by deciles of expected (A) and current (B) income.

also common to react to the data in Figure 1 by pointing out that the general levels of support for redistribution in Spain, Portugal and Greece (countries with well-know problems of tax compliance) are much higher than in Sweden or Denmark. Perhaps, it is argued, those paying low taxes are more likely to agree that redistribution is, in principle, desirable.

We address these concerns in two ways. In specification (1) we control for the effect of existing levels of social policy generosity. Spending data are total public social spending (in cash and in kind), per head, in constant 2006 prices and PPP US dollars from the OECD's SOCX database. The main social policy areas covered are: old age, survivors, incapacity-related benefits, health, family, active labor market programs, unemployment, and housing. Secondly, in specification (2), we restrict our sample to strictly wage earners, excluding all individuals whose income contains non-wage elements (e.g., self-employment, income from investments). The reason for this is that we know that even in Southern Europe (where tax compliance is limited) cheating is more difficult among wage-earners (and easier for the self-employed). This yields a reduced sample of 25,124 cases. But neither specification changes our substantive results.

As discussed above, religion might provide direct material benefits, such as help from fellow church members in times of unemployment (Scheve and Stasavage 2006). If the material benefits of religiosity enter income expectation considerations in an additively separable fashion (in other words, if an individual's expectation has two

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proposition that the government should do *more* to reduce income differences.

**Table 5:** Robustness checks.

		Expected income		Current income	
		Est.	s.e.	Est.	s.e.
(1)	Redistribution	-0.237	0.026	-0.097	0.006
(2)	Wage earners	-0.246	0.035	-0.096	0.007
(3)	Religion	-0.237	0.021	-0.096	0.006
(4)	Social class	-0.117	0.021	-0.081	0.006
(5)	Skill specificity	-0.137	0.021	-0.086	0.006
(6)	Altruism	-0.264	0.021	-0.095	0.006
(7)	Ideology	-0.279	0.023	-0.094	0.006
(8)	Country jackknife	-0.253	0.037	-0.095	0.011

Note: Bootstrapped standard errors, based on 500 replicates.

additive components, Mincer expected income, and income from one's church in the event of unemployment), its effect will be captured by the residual term in our income expectation equation. However, to explicitly allow for that not being the case, and to account for any direct preference effects of religion (those not captured by income expectations), specification (3) includes an indicator variable of regular church attendance. We find that our core results are indeed unchanged.

Specification (4) tests whether our main results are robust to controlling for the effects of social class. While income and class are clearly strongly related, we argue that within the broad class categories usually used in political-sociological research, both income expectations and actual income can vary considerably (Brynin 2010). Thus we expect to find an effect of income expectations even when including class. We rely on the six-category version of the Erikson-Goldthorpe social class scheme (Erikson and Goldthorpe 1992).<sup>20</sup> Our estimates show a reduced, but still highly relevant effect of expected income. This suggests that income is a mechanism linking class and preferences, but that income also shapes preferences beyond social class.

As we mentioned above, an influential literature in comparative political economy has argued that redistribution preferences are affected by the demand for insurance against an uncertain future (Moene and Wallerstein 2001; Iversen and Soskice 2009; Rehm 2009). To address this, we introduced explicit measures of risk into the analysis. An important component of the demand for insurance and redistribution has to do with the risk of becoming unemployed. Iversen and Soskice (2001) argue that individuals

<sup>20</sup>The six classes are: service class I (higher level controllers and administrators), service class II (lower-level controllers and administrators), routine non-manual employees, skilled workers, unskilled workers, and the self-employed.

who have made risky investments in specific skills will demand insurance against the possible future loss of income from those investments. We introduce a measure of skills (taken from Fleckenstein et al. 2011) distinguishing among specific, high and low general skills that is meant to capture this individual risk directly.<sup>21</sup> Results are presented in specification (5) and show a similar picture to the one we find when including social class.

A most significant approach to non-economic motivations for redistribution preferences has focused on other-regarding concerns (for reviews, see Fehr and Schmidt 2006; DellaVigna 2009). To address this issue directly, we introduce a control for other-regarding preferences. Due to the sparsity of data on altruism, we rely on a proxy measure. The ESS surveys ask respondents to listen to a description of different kinds of persons and to declare whether these persons are (or are not) like them. One of the descriptions is as follows: “She/he thinks it is important that every person in the world should be treated equally. She/he believes everyone should have equal opportunities in life.” Respondents can then decide whether this person is ‘Very much like me,’ ‘Like me,’ ‘Somewhat like me,’ ‘A little like me,’ ‘Not like me,’ or ‘Not like me at all.’ We create an indicator variable equal to one for respondents who indicate full agreement with this statement of equality (by responding ‘Very much like me’). Our results in specification (6) show that including other-regarding preferences does not alter our basic findings.

Our main analysis excludes a measure of ideology or left-right self-placement, since we believe that explaining economic preferences helps us understand a key constituent of ideology and therefore it should not be an ‘explanatory’ variable in our model. Nonetheless, it has been argued that ideological positions are an independent source of redistribution preferences (see Margalit (2011)) and we can show that the expected income–redistribution preferences link is robust to the inclusion of this variable. In specification (7), we account for respondents’ ideology through an indicator equal to 1 if a respondent self-classifies as left of center on a standard left rights scale. Again, we find our results confirmed.

Finally, in a more technical robustness test, we study the sensitivity of our results against extreme values of a single country. It is well known that results from pooled analyses might be driven by a few influential macro-units (Van der Meer et al. 2010). We use jackknifing (Wu 1986), which successively deletes one country at a time, re-estimates the model, and then produces model-averaged parameter estimates and

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<sup>21</sup>Note that we have to rely on a somewhat crude measure of skills based on occupational job categories. A more sophisticated measure of skill specificity is employed in other work available from the authors.

standard errors adjusted for the (possibly) additional variation between models.

## 5 Conclusion

We have argued in this paper that the common political economy approach to material self-interest as a motivation for redistribution preferences is too limiting. Focusing exclusively on present income as the main determinant of support for redistribution is constraining and nonintuitive. It is natural to think that life-cycle income concerns would matter to redistribution preferences as much, if not more, than the position an individual presently holds in the income distribution. Using a well-established labor economics literature as our inspiration, we have provided a simple way of operationalizing expected future income, and have proposed that this is an effective way of unifying different (and often disconnected) political economy approaches emphasizing risk, insurance, mobility, etc. Using European cross-country survey data, we have presented convincing evidence that our hypotheses contribute to a better understanding of individual demands for redistribution.

Why should we care about the relationship between expected future income and redistribution preferences? Assumptions about what determines redistribution preferences are the building bloc of most approaches in political economy (and much of comparative politics). Ultimately, however, we care about political outcomes. In other words, we want to know how these relationships are translated into political behavior. Perhaps the most momentous outcome of interest is voting. A significant and influential literature in comparative politics, perhaps starting with Almond and Verba's *The Civic Culture*, has been dedicated to the question of whether income influences voting. In the "resource" model of participation, it is argued that high income is associated with more resources (whether material or other) and therefore linked to more participation in politics (see, for example, Anderson and Beramendi 2008, Verba et al. 1995 and Leighley 1995). The evidence for this relationship, however, has not been unambiguous.<sup>22</sup>

While we understand that the effects on voting of the relationships we have analyzed in this paper are causally complex (and would require a detailed analysis we have no space to develop here), we nevertheless want to engage with this question in a preliminary way to conclude this paper. In Table 6 we explore the determinants of voter turnout using the same ESS data we have analyzed in the rest of our paper. We present the results of regressing turnout<sup>23</sup> on present income, our measure of expected

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<sup>22</sup>See, for example, Chapman and Palda (1983) and some of the evidence in Verba et al. (1995).

<sup>23</sup>The exact question wording in the ESS is: "Some people don't vote nowadays for one reason or

**Table 6:** Income, expected income and turnout. First differences in predicted probabilities.

	(1)	(2)
Current income	3.02 (0.29)	1.40 (0.27)
Expected income		5.55 (0.30)

Note: Shown are first differences in turnout probabilities as function of a standard deviation change in income. Both models include controls (household size, age, gender, education, foreigner, union membership) and country and election fixed effects. Huber-White standard errors.

future income (as constructed above) and a set of common controls. We meant for these results to be mostly descriptive, rather than strictly causal.<sup>24</sup> The table shows in column (1) that, when we omit future income expectations, an increase in present income is indeed associated with an significant increase in the probability of voting. A change equal to a standard deviation in present income promotes a 3 percentage point increase in the likelihood of voting. When we explicitly estimate the influence of expected future income, however, the effect of present income is dramatically reduced. More importantly, the effects of future income expectations become quite significant. An increase equal to a standard deviation in expected future income is associated with a 5.6 percentage point increase in the probability to vote. This is certainly a result that emphasizes the potential political importance of income expectations, and the need for further research to explore the implications of the main arguments in this paper.

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another. Did you vote in the last general election?" Possible answer categories are "Yes", "No", and "Not eligible to vote".

<sup>24</sup>We ignore the intermediary role of redistribution preferences in this (very preliminary) analysis. A more rigorous analysis would explore a causal path that went from present and expected income to preferences and from both to voting.



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