A Just Distribution of Burdens? Attitudes Toward the Social Distribution of Taxes in 26 Welfare States

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Abstract

Whether people believe that tax burdens are fairly distributed is an important condition for welfare state legitimacy. This article examines how people evaluate this distribution of tax burdens in their country by using latent cluster analysis. We use 2006 International Social Survey Program data for 26 countries and define different “tax opinion profiles” for individuals based on their evaluation of tax burdens of different income groups. We find six groups of individuals with typically different “tax opinion profiles,” among which are profiles favoring more progressive taxes, expressing contentedness with present taxes, or showing opposition to all taxes. People’s membership of profile groups is related to their class position, political affiliation, education, and trust, as well as to characteristics of their country’s tax system.

In 1975, Harold Wilensky was one of the first to predict a backlash of welfare support as a result of the so-called “tax squeeze” of the middle class who carried the lion’s share of the increasing costs of the welfare state. He pointed to the fact that perceptions of a fair distribution of tax burdens are of great importance for the legitimacy of the welfare state. Rothstein (1998, p. 163) even argued that a broadly shared perception of a “just distribution of tax burdens” is a necessary condition for the welfare state to be legitimate.

Not without reason, many scholars investigated attitudes about taxes. From the 1970s onward, there is a broad range of (especially American) literature that studies opposition against local and federal taxes and so-called tax revolts (e.g., Bartels, 2005; Citrin, 1979; Kornhauser, 1994; Svallfors, 2011). Other tax attitude

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studies debate issues like tax consciousness, incoherent attitudes about taxes and government spending, and non-attitudes about taxes (Dornstein, 1987; Edlund, 2003; Eriksen & Fallan, 1996; Winter & Mouritzen, 2001). Only a couple of studies focus on the question of whether taxes are fairly distributed among different income groups (Bernasconi, 2006; Confalonieri & Newton, 1995; Edlund, 1999). And although it is argued that perceptions of the just distribution of taxes are important indicators of welfare state legitimacy (Rothstein, 1998; Wilensky, 1975), this issue has hardly been addressed in the welfare attitude literature. In contrast, welfare attitudes about a fair “doling out” or allocation of the yields of the redistribution are widely studied and discussed. For instance, there are several studies that examine deservingness perceptions of individuals regarding who is entitled to benefits and for what reasons (Jeene, Van Oorschot, & Uunk, 2013; Slothuus, 2007; Van Oorschot, 2000; 2006). And many studies examine attitudes about the scope of welfare benefits: Should states spend more or less on welfare benefits, and should the middle class be included in the redistribution schemes (Brooks & Manza, 2006; Korpi & Palme, 1998)? Yet, as Van Oorschot (2013) accurately states, there is less focus on attitudes toward the other side of the redistribution coin: the contribution side. Do people believe that contributions to the welfare state are distributed in a fair manner?

Previous studies that empirically examined attitudes about the social distribution of taxes generally found that people want more progressive taxes. We believe that these studies underutilized the available data: They describe the overall or average opinion in society. Here, instead, we aim to optimize the use of empirical data by revealing the diverse opinions toward the distribution of taxes and, additionally, by explaining why these opinions are different. We formulate the following research questions: (1) What different opinions about the distribution of taxes can we distinguish from the literature? (2) What groups of individuals with opinions about the distribution of taxes can we empirically distinguish? (3) How can we explain differences in opinions about the distribution of tax burdens?

We apply latent class cluster analysis to International Social Survey Program (ISSP) 2006 data for 26 countries to assess whether the qualitatively different tax opinions that we identify in the literature can be found among substantial proportions of individuals in the data. Thereafter we relate these profiles to respondents’ social class position, political affiliation, and education, as well as to characteristics of national tax systems such as the total tax burden, tax progressivity, and visibility.

From Tax Revolts to a Just Distribution of Tax Burdens

Tax attitudes have been studied in different disciplines and from different perspectives. In the history of the welfare state and taxation policies, the 1970s

are marked as a decade of “tax revolts” because, at that moment, almost all individuals were involved in the tax system and income taxes were historically high (Confalonieri & Newton, 1995; Steinmo, 2003). Policy makers responded to these warning signs of tax revolts with major tax reforms. Because it was argued that the visibility of taxes increased public discontent (Hibbs & Madsen, 1981; Wilensky, 1975), welfare states started to rely more on less visible taxes as value added tax (VAT) and corporate taxes (Brys, Owens, & Matthews, 2011; Confalonieri & Newton, 1995; Steinmo, 2003). From that period onward, there has been much attention to studying the increasing opposition against taxes among the public (Bartels, 2005; Blendon, Pelletier, Rosenbaum, & Brodie, 2003; Citrin, 1979; Kornhauser, 1994). Some scholars focused particularly on a specific group that was supposed to bear the heaviest burden of the increasing welfare costs: the middle class. Losing the welfare support of the middle class because they felt that their tax burden is grossly unfair could imply erosion of the legitimacy of the welfare state (Korpi & Palme, 1998; Wilensky, 1975).

The large-scale opposition against taxes, irrespective of the fact that people benefit from them or not, puzzled scholars. Scholars suggested that people are misinformed about taxes, have a low tax consciousness, or carry misperceptions about taxes and tax systems (Citrin, 1979; Dornstein, 1987; Edlund, 2003; Eriksen & Fallan, 1996; Winter & Mouritzen, 2001). In particular, the fact that people support increased social spending and oppose tax increases led scholars to conclude that “people want something for nothing” (Citrin, 1979, p. 113; see also Winter & Mouritzen, 2001). Others argue that people are not naïve, but rather they simply want to shift the burden to someone else or make the tax system fairer. And, although they support progressive redistribution in general, people have different ideas about how progressive the tax system should be in practice (Edlund, 2003).

Also, Confalonieri and Newton (1995) suggest that for understanding tax attitudes we should differentiate between fundamental and procedural attitudes toward taxation. People have a fundamental opinion about the basic principle of the system; for instance, they can support progressive taxation or a flat-tax for all citizens. But they also have an opinion about the procedural implementation of the taxes: Is the system progressive enough and are the tax rates high enough? In general, there is strong support for the idea that people with higher incomes should pay higher taxes, but people do not automatically believe this progressive system is applied in the right manner (Confalonieri & Newton, 1995). The question of whether people feel the progressive principle is applied in a right manner is of high relevance for welfare state legitimacy. Rothstein (1998) argues that, to be legitimate, the welfare state should meet the condition of a *just distribution of burdens*: People should believe that they carry a fair share in the costs of the programs and that others do the same

(Rothstein, 1998). If, instead, there is a tax culture in which everyone tries to take a free ride, people feel less morally obliged to pay taxes (Kahan, 2005).

To our knowledge, there are only a few empirical cross-national studies that examine these perceptions of a just distribution of burdens (Bernasconi, 2006; Confalonieri & Newton, 1995; Edlund, 1999). These studies all use the same three dependent variables from multiple waves of the ISSP that ask whether people feel that taxes for high-income groups, middle-income groups, or low-income groups are (much) too low, about right, or (much) too high. These studies show that people are critical toward the distribution of tax burdens in their country because they believe that taxes for high-income individuals are too low, while low- and middle-income groups pay too much in taxes. But these studies (based on 1987, 1992, 1996 data) are limited to only a couple of countries (with exception of Bernasconi, 2006) and therefore have limited comparative scope. Moreover, we believe that these studies underutilized the available data: They show the average public attitude by reporting the overall percentages of opinions toward the tax burdens of different income groups, but not the variation of opinions in the population (Confalonieri & Newton, 1995; Edlund, 1999). Alternatively, Bernasconi (2006) presents all combinations of attitudes on the three items and combines them in couples manually. This is an inefficient way of dealing with the data compared with revealing the more common response patterns. Also, it might lead to error because the combinations of attitudes are merged by the researcher and are not based on underlying response patterns in the data. Therefore we opt for an alternative analytical strategy in which we apply latent class cluster analysis to find different clusters or groups of individuals with different tax attitudes (or “tax opinion profiles”) in the data. These clusters are based on common response patterns of individuals toward the three items measuring opinions about the tax burden of three income groups. With this method, we can study these items in relation to each other and detect substantial groups of individuals with related response patterns. Also, it allows us to examine why these groups evaluate the distribution of tax burdens differently.

Explaining Differences in Tax Opinions

Building on hypotheses derived from previous research, we formulate our expectations regarding the variety of opinions toward the distribution of tax burdens. First, as progressive taxes are supported by a large majority of the public (Bernasconi, 2006; Confalonieri & Newton, 1995; Edlund, 1999), we expect to find at least a strong progressive cluster in which people express that they find taxes for high-income groups to be too low and taxes for low-income groups to be too high. Second, based on the literature about tax revolts, we expect that there are people who oppose all taxes and regard taxes for all

income groups to be too high (Bartels, 2005; Citrin, 1979). This opposition might be related to the strong ideological belief that a government is not allowed to tax its citizens. Third, we expect that, as Wilensky (1975) predicted, a certain proportion of the population will believe that taxes for middle-income groups are too high and see an overburdened middle class. Finally, we expect that some people are satisfied with the tax current system, as is found by Bernasconi (2006).

Next, we distinguish four factors that explain why people evaluate the distribution of tax burdens in different ways. First, political economic theories on tax attitudes suggest that people will support a certain distribution of tax burdens as long as they are net beneficiaries from the redistribution policies (Heinemann & Hennighausen, 2010). As Meltzer and Richard argue (1981), people with an income below the median income favor higher taxes and more redistribution, while people with an income above the median income demand lower taxes and less redistribution. Several studies found evidence for the hypothesized effect of self-interest and/or class interest (Dornstein, 1987; Edlund, 1999; Hite & Roberts, 1991). Therefore, we expect that people in lower social strata find taxes for low-income groups to be too high, while people in higher social strata find taxes for middle- or high-income groups to be too high. Because there might be a dispersion between the measured social class position and the perceived social class position (Heinemann & Hennighausen, 2010), we expect that people who regard themselves to be in a lower position can be found in a progressive cluster, whereas people who regard themselves as being in a higher social position are in an overburdened middle-class cluster.

Second, political or ideological convictions can also explain how people think about the distribution of tax burden among different income groups. Taxes “are loaded with political symbolism” (Confalonieri & Newton, 1995, p. 121). Political parties use a variety of proposals to alter the tax system to explicate their political philosophies of libertarianism to egalitarianism. Therefore, tax attitudes are strongly ideological: Where left-wing parties draw strongly on the “ability-to-pay” principle (higher taxes for those who can afford them), right-wing parties reject high taxes among all income groups and among the middle class in particular (Confalonieri & Newton, 1995). We therefore expect that left-wing affiliation is directly related to more progressive tax attitudes and right-wing affiliation is directly related to a propensity for tax revolt, or rather, to the perception of an overburdened middle class.

Third, theories about the foundations of social and economic cooperation hypothesize that people are conditional co-operators: They are willing to contribute to collective redistribution only if they trust others doing the same (Fehr & Fischbacher, 2005; Gintis, Bowels, Boyd, & Fehr, 2005). We expect that people with higher social trust are more willing to pay taxes, and

thus to not oppose all taxes. More social trust might also lead to more satisfaction with the distribution of taxes because people are more likely to believe that everybody pays their share.

Finally, next to self-interest, ideological ideas, and foundations of social cooperation, we hypothesize that increased knowledge about the tax system makes people more content with the current distribution of taxes (Eriksen & Fallan, 1996). Misperceptions about the procedural implementation of fundamental tax principles could lead to dissatisfaction (Confalonieri & Newton, 1995). Being better informed about this could alter people's tax opinions and explain variation between different tax opinions (Eriksen & Fallan, 1996). Although educational background might only be an indirect and not very effective measure of knowledge of the tax system, we expect that higher educated individuals are more content with the current tax system and less opposed to all taxes.

Attitudes about the distribution of taxes might, of course, also be influenced by the tax system in so-called policy feedback effects (Pierson, 2001). And because countries differ substantially in their tax policies (Brys et al., 2011), tax attitudes might be differently affected. The institutional characteristics of the tax system can therefore be important factors in explaining individual differences in tax attitudes. We hypothesize three effects. First, the amount of taxes collected is important, that is, the so-called tax burden. In countries with a higher overall tax burden, people might feel that they pay too much and see that others pay too much as well. We expect that a higher tax burden in a country would therefore lead to higher tax revolt and less contentedness with the tax system in general. Second, in evaluating opinions about the distribution of tax burdens, the progressiveness of the taxes is an important aspect (Edlund, 1999; Paturot, Mellbye, & Brys, 2013; Whiteford, 2008). Progressive taxes can refer to the redistributive effect of the systems caused by higher tax rates (mostly found in the Nordic countries; Edlund, 1999) or to the actual progressiveness of the tax system (Anglo-Saxon countries have the most progressive tax systems; Whiteford, 2008). In the latter case, when the level of inequality in taxable income is taken into account, the effective progressiveness will be greater in countries with a more unequal distribution of taxable income (Whiteford, 2008). We expect that in countries with less effective progressive tax systems, there is a higher demand for more progressive redistribution. Third, the visibility of the type of taxes countries use influences differences in tax attitudes. The less visible taxes are, the stronger the willingness to contribute (Hibbs & Madsen, 1981; Steinmo, 1993; Wilensky, 1975). Personal income and property tax are regarded to be the most visible taxes, while VAT and employer's taxes are less visible (Edlund, 1999). In countries that rely less on personal income tax (PIT), people might be more satisfied with the current distribution of taxes.

Data and Methods

Data

As in previous research, we use data from the ISSP for the year 2006 (wave Role of Government IV). The ISSP program provides individual survey data collected by face-to-face interviews or self-completed surveys of representative samples of the population of a broad range of countries. For more detailed information see the ISSP Study Monitoring (Scholz, Faaß, Harkness, & Heller, 2008). Our data set contains 36,688 individuals for the 26 welfare states that we selected: Australia (AU), Canada (CA), Croatia (HR), Czech Republic (CZ), Denmark (DK), Finland (FI), France (FR), Germany (GE), Hungary (HU), Ireland (IE), Israel (IL), Japan (JP), South Korea (KR), Latvia (LV), the Netherlands (NL), New Zealand (NZ), Norway (NO), Poland (PL), Portugal (PT), Russia (RU), Slovenia (SI), Spain (ES), Sweden (SE), Switzerland (CH), Great Britain (GB), and the United States (US). In Table A1, we present the number of respondents per country. This survey contains three items about individual's perceptions of the tax burden of three different income groups in their country. All these items are measured on a 5-point scale. The survey question is stated as, "*Generally, how would you describe taxes in [country] today? We mean all taxes together, including national insurance, income tax, VAT and all the rest. For those with [high/middle/low] incomes taxes are: (much) too low, about right, (much) too high.*" The combined answers to these three questions sketch the respondents' opinions toward the distribution of tax burdens among different income groups. The question explicates the different types of taxes including social security contributions. This is important in the context of welfare legitimacy, because for several countries social security contributions are the main source funding the welfare state.

We use the following individual-level variables. To measure self-interest and class interest, we use three indicators: the respondents' relative income position, social class position, and subjective social position in society. First, we compute a comparative measure of people's relative income position in their country. We use an item measuring per country people's family income on an 11-point scale in the country's currency. The categories show a range of annual income, of which we take the mean income position as an indicator. We convert these categories to purchasing power parities for 2006 using Organization for Economic Co-operation and Development (OECD) statistics and divide this by a weight for the household composition. Next, we standardize the results to make them comparable across countries. This results in a comparative measure of *relative household income* measuring the respondents' relative income position in their country. This variable has minimum score of -2.05 and a maximum score of 29.90. To improve interpretability, this variable was divided in to three dummy variables: *high income position*

(respondents with a relative income in the top 25%), *low income position* (in the bottom 25%) and *middle income position* (between 25 and 75%). We use the middle income position as a reference category. Occupational class was measured using Goldthorpe's international comparable occupational class scheme (EGP class scheme) (Erikson, Goldthorpe, & Portocarero, 1979). The occupational categories are based on the International Standard Classification of Occupations (ISCO88) (Ganzeboom, De Graaf, & Treiman, 1992). To convert these codes into the EGP class scheme, we used conversion tools provided by Ganzeboom and Treiman (2013). We follow Svallfors (1997) in a six-version categorization of the EGP class scheme distinguishing *unskilled workers*, *skilled workers*, *routine non-manual employees*, *self-employed*, *lower service class*, and *higher service class*. We use routine non-manual employees as reference category. For the subjective measure of social class position, we use the top-bottom item (10-point scale): "In our society there are groups which tend to be towards the top and groups which tend to be toward the bottom. Where would you put yourself on this scale?" The objective and subjective class measures negatively correlate, $r = -.26$ (taking the EGP class variable as a six-point scale).

For ideological affiliation, we use a derived ISSP measure of left or right *party affiliation* based on the respondent's given party preference. This measure distinguished the following categories: far left, left/center left, center/liberal, right/conservative, far right, other/no specific, and no party/no preference. We merged this variable into four categories: *left wing* (far left, left/center left), *middle* (center/liberal), *right wing* (right/conservative, far right), and *no preference/other* (other/no specific, no party/no preference). We use left wing as a reference category. Because this variable was not available for Israel, we had to exclude Israel from the part of the analysis in which we relate covariates to the latent clusters.

For the respondents' education, we use a derived ordinal measure of *educational attainment* that has six categories: no formal qualification, lowest formal qualification, above lowest qualification, higher secondary completed, above higher secondary level, and university degree completed. To measure social trust, we make a scale of the following two items (Cronbach's $\alpha = 0.69$) asking to what extent the respondent agrees or disagrees with: "There are only a few people that I can trust completely" and "If you are not careful, other people will take advantage of you" (scale is 1–5). Finally we add two control variables *gender* (male is reference category) and *age*.

For the country-level covariates, we use first a measure of *tax burden* called fiscal freedom for the year 2005 from data provided by The Heritage Foundation. This measure includes three components that are weighted equally: the top tax rate on individual income, the top tax rate on corporate income, and the total tax burden as a percentage of Gross domestic product

(GDP). Countries can have a score between 0 and 100, with a higher score meaning a higher fiscal freedom and a lower tax burden. To better interpret this variable, we reversed the scale.

For the second variable *tax progressivity*, we use data provided by the OECD stat database on taxing wages. We follow Oishi, Schimmack, and Diener (2012) in using a measure of “effective” progressive taxation by calculating the difference between the effective wage taxation for individuals on 67% of the national averaging wage and individuals on 167% of the national average tax wage. We measure the effective tax rate by the 2005 indicator: “Increase in net income after an increase of 1 currency unit in gross wages (%).” Unfortunately, this variable was not available for Croatia, Latvia, or Russia.

The third variable measures *tax visibility*. We use the tax revenue of PIT as a percentage of the total tax revenue in 2008, because PIT is seen as the most visible tax (Brys et al., 2011). This variable was not available for Croatia or Latvia.

Finally, we use *GDP per capita* in purchasing power parities provided by the World Bank as a control variable. Because we have only between 22 and 25 countries (Israel is excluded because of missing data on the individual level), we cannot include many second-level covariates. We argue that controlling for the wealth of the country is most effective, because wealth is associated with many other country-level characteristics that might be relevant for tax attitudes such as social spending, benefit generosity, corruption, and social trust.

Methods

We use latent cluster analysis (LCA) to identify groups of individuals with different perceptions toward taxes for different income groups in their country. In this method, the response pattern of a respondent toward the three selected items determines the chance of an individual being in a certain latent cluster. Individuals with related response patterns are in the same cluster. The cluster can be interpreted as a segment of people with a specific “opinion profile” toward the distribution of tax burdens in a country. Because we are interested in people’s opinions toward a set of three items, we believe that LCA is the best way to analyze these items in relation to each other, and, at the same time, find differences in response patterns.

After identifying the different latent classes that characterize different segments of individuals with related opinion profiles, we regress cluster membership on the individual- and country-level characteristics. We use the three-step procedure, a model-based approach in which we can use the predicted latent classes (i.e., the probability of the respondent to be in a certain latent class) to get unbiased estimates of the relationship between cluster membership and individual and contextual covariates (Bakk, Tekle, & Vermunt, 2013;

Vermunt, 2010). We use robust standard errors because the data are clustered by individuals in countries. Models were estimated with the program LatentGOLD 5.0 (Vermunt & Magidson, 2005).

In particular, the variables relative household income and party affiliation have a high amount of missing data (around 20%). We therefore use multiple imputation to replace the missing data (Allison, 2001) according to the chained equations procedure. In this procedure, all variables with missing data are imputed sequentially by a regression model appropriate for the measurement level of the variable to be imputed (Raghunathan, Lepkowski, Van Hoewyk, & Solenberger, 2001). To take into account the clustered structure of the data, we include country dummies in the imputation procedure (Graham, 2009). The five imputed data sets ($M=5$) that we generated in Stata 12 were imported in LatentGOLD for the analysis of the three-step procedure (Vermunt, Van Ginkel, Van Der Ark, & Sijtsma, 2008). We used the simultaneous option for three-step procedure to be able to estimate the model.

Results

Six Tax Opinion Profiles

In LCA, the number of latent classes is not determined by a strict rule, but rather by assessing fit statistics and evaluating interpretability of the models. More parsimonious models are preferred. As a main fit statistic, we use the Bayesian Information Criterion (BIC), which is based on the likelihood function but introduces a penalty for adding more parameters. The lower the BIC the better the fit. We assess the reduced BIC when one class is added to the model. After adding the fourth and the sixth cluster, we see that the BIC is reduced less steeply. The six-cluster model, compared with the model with four clusters, contains additional clusters that are of substantial interest. When we add a seventh cluster, however, not much additional reduction in BIC is observed. But more importantly, it does not improve our understanding of the population because the new cluster is a refinement of another cluster (results for this model are available from the first author). We therefore choose the more parsimonious model with a low BIC and where all (six) of the clusters are of theoretical interest. The results for this model are given in Table 1.

Before discussing the six latent clusters, we point at the overall column that summarizes the result for the total sample. These results confirm the conclusions of previous studies that focused on the overall opinion in the population: On average, people want a bit more progressive taxing. They believe high-income groups pay too few taxes, while middle- and, especially, low-income groups pay too many taxes. Yet, as we will see, this overall picture of the data conceals the variation in opinions: There are progressive clusters but also other tax opinions held by individuals. We will discuss them below.

A typical response pattern for the first cluster shows contentedness with the level of taxes for all income groups. Remarkably, this *contentedness cluster* is the largest cluster (29.2%), implying that a substantial proportion of the population in the sampled welfare states believes that tax burdens are distributed in a fair manner. The second cluster is the best-fitting profile for 23.2% of the respondents. The typical response pattern of individuals in this cluster reflects the feeling that the high-income groups pay too few taxes, the low-income groups pay too many taxes, and taxes for the middle-income groups are about right. We call this the *linear progressive cluster* because the ability-to-pay principle is applied to all three income groups. The third cluster contains 21.1% of the population under study, and we call it the *overburdened low- and middle-class cluster*. People with a typical response pattern in this cluster feel that both the low and the middle class pay much in taxes, while they regard the taxes of high-income groups as about right. So both middle- and low-income groups are seen as overburdened, while high-income groups are seen as to pay a fair share. The fourth cluster shows a response pattern in which individuals feel that taxes for low- and middle-income groups are too high, while taxes for high-income groups are too low. We call this cluster the *broad progressive cluster* because individuals in this cluster believe that high-income groups should pay more taxes, while both the middle- and the low-income groups carry a too high tax burden. The fifth cluster has some similarities with the third cluster. However, in this cluster only the middle class is seen as overburdened by taxes, while taxes for high- and low-income groups are seen as about right. There is a small tendency to find taxes for high-income groups also too high, but this cluster stands out in its view that the middle class pays a too high price. This cluster contains 6.2% of the individuals and we interpret it as the *overburdened middle-class cluster*. Finally, the sixth cluster shows a small group of 6.1% of the respondents with a strong profile. Almost all individuals who are in this segment believe that taxes for all income groups are too high. We label this cluster the *tax revolt cluster*.

We conducted a measurement equivalence analysis in which we ensured the cross-national comparability of this cluster model for the selected 26 countries. We followed Kankaraš, Moors, and Vermunt (2010) in estimating a multigroup latent class cluster model for assessing the measurement invariance. We estimated a range of nested models in which more and more parameters are constrained to be equal over countries and assessed the model fit (BIC). The results show that our model is partially structurally homogeneous. In this model, the relation (slope) between the latent variable and the items is the same across countries; one item also has the same intercept, but two items have different intercepts in different countries. This is a relatively high level of measurement equivalence, and on this level, comparison of country

differences in class membership is possible (Kankaraš et al., 2010). Results of this analysis are available from the first author.

We see that there are clearly different opinion profiles that show the diversity of opinions toward the distribution of taxes. As expected, progressive attitudes toward the distribution of taxes are strong. We distinguish two clusters; one includes the middle class in the demand for a more progressive redistribution (the broad progressive cluster) and one believes the middle class pay a fair share (the linear progressive cluster). Although they are relatively small clusters, we also find the tax revolt cluster and the overburdened middle-class cluster that are suggested in the tax attitude literature. Table A2 presents the cluster sizes per country. This table shows that the tax revolt cluster, the overburdened middle-class cluster, and the contentedness cluster are relatively stronger in Anglo-Saxon countries, while the post-communist and Mediterranean countries have a higher proportion of the population in the progressive clusters.

Individual- and Country-Level Factors

Next, we try to explain differences in these different tax opinion profiles. Is a particular cluster membership mostly explained by self-interest or class interest, political ideology, social trust, or educational background? Table 2 shows the results. We give an example of how to interpret the coefficients, which are logistic coefficients and should be interpreted as factors increasing or reducing the odds of belonging to a certain cluster. For example, the significant effect of .585 for high-income on the overburdened middle-class cluster indicates that having a high income, in comparison with having a middle income, increases the odds of belonging to the overburdened middle-class cluster by a factor of $e^{0.585} = 1.795$ (holding all other variables constant). For people with a high income, the chance of belonging to the overburdened middle-class cluster is thus 79.5% higher, compared with the reference category, the middle incomes.

When we look at the indicators of self-interest and class interest we see that relative income, occupational class, and subjective social class all influence tax attitude perceptions. Having a lower class position indeed increases the likelihood to have progressive tax attitudes. In the linear and broad progressive clusters, there are fewer people with a relatively high income and more skilled and unskilled workers. People who believe they are “at the bottom of society” more often have a linear progressive response pattern. Having a higher social class position increases the chance of being in the tax revolt or overburdened middle-class cluster. These clusters contain more individuals with higher incomes and from higher occupational classes. Yet, in the tax revolt cluster, we find more people being self-employed, while in the overburdened middle-class cluster, there are fewer self-employed individuals. The contentedness

Table 2
Effects of Individual-Level Determinants on Each Latent Cluster in a Three-Step Approach

Individual-level variables	Latent clusters				
	Contentedness	Linear progressive	Overburdened low and middle class	Broad progressive	Overburdened middle class
Household Income (middle income is reference)					
High income (>25%)	0.023 (0.069)	-0.434*** (0.072)	-0.031 (0.095)	-0.375*** (0.102)	0.585*** (0.113)
Low income (<25%)	-0.052 (0.070)	-0.083 (0.084)	-0.037 (0.097)	-0.017 (0.099)	-0.077 (0.122)
Social class (EGP) (III-routine nonmanual is ref.)					
I—Higher professionals and managers	0.108 (0.073)	-0.398*** (0.126)	-0.050 (0.084)	-0.256 (0.157)	0.334*** (0.114)
II—Lower professionals and managers	-0.027 (0.066)	-0.088 (0.101)	0.151** (0.075)	-0.134 (0.146)	0.026 (0.109)
IV—Self-employed	0.004 (0.070)	0.078 (0.144)	0.092 (0.114)	-0.026 (0.100)	-0.427*** (0.166)
V/VI—Skilled workers	0.096 (0.150)	0.371*** (0.126)	0.203*** (0.067)	0.361*** (0.133)	-0.861*** (0.230)
VII—Unskilled workers	0.142 (0.101)	0.343*** (0.113)	0.253*** (0.087)	0.391*** (0.112)	-0.888*** (0.181)
Top bottom self-placement	0.37*** (0.019)	-0.083*** (0.026)	0.039** (0.019)	0.007 (0.032)	0.017 (0.035)
Educational degree	0.087*** (0.027)	0.025 (0.46)	-0.046* (0.024)	-0.002 (0.036)	0.041 (0.045)
Political affiliation (left wing reference)					
Middle	0.021 (0.120)	0.040 (0.174)	0.163 (0.102)	-0.087 (0.150)	-0.164 (0.164)

(continued)

Table 2
Continued

Individual-level variables	Latent clusters				
	Contentedness	Linear progressive	Overburdened low and middle class	Broad progressive	Overburdened middle class
Right wing	-0.113 (0.103)	-0.548*** (0.124)	0.157 (0.099)	-0.535*** (0.131)	0.752*** (0.118)
No preference/other	-0.153 (0.174)	0.109 (0.132)	0.247* (0.140)	-0.015 (0.216)	-0.410 (0.324)
Social trust	0.146*** (0.015)	0.055*** (0.017)	0.078*** (0.017)	-0.116*** (0.022)	-0.032 (0.023)
Gender (male reference)	-0.142** (0.057)	0.048 (0.047)	0.154** (0.065)	0.12*** (0.052)	-0.242** (0.081)
Age	-0.002 (0.002)	0.017*** (0.002)	-0.005** (0.002)	0.012*** (0.002)	-0.015*** (0.004)
					0.288** (0.125)
					0.223* (0.123)
					-0.131*** (0.026)
					-0.030 (0.073)
					-0.007*** (0.002)

Note. Standard errors are between parentheses. Analysis based on imputed data $M=5$. Model information: $N=31,543$; Likelihood ratio (L^2): 76647.3535; Pearson χ^2 : 105021.4009; Cressie-Read: 82797.9992; LL: -50532.396; BIC (LL): 101841.545; Number of parameters: 75; *df*: 31.468; Classification error: 0.6505. This model excludes Israel because political affiliation was not available for this country.

*** $p < .01$, ** $p < .05$, * $p < .10$.

cluster is hardly influenced by the self-interest indicators; there is only a small effect of individuals perceiving themselves more at “the top of society.” The overburdened low- and middle-class cluster seems to contain more skilled and unskilled individuals and lower professionals. In sum, self-interest and class interest are important explanations for differences in opinions on the distribution of taxes: Individuals in lower social class positions demand a more progressive distribution, individuals in higher social class positions see an overburdened middle class because they see themselves as part of that middle class, and people in higher positions more often believe that all taxes are too high.

As expected, there are also strong effects of political affiliation on tax opinions. Being a member of the overburdened middle-class cluster can be partly explained by right-wing political affiliation, while progressive tax attitudes (membership of the progressive clusters) are related to left-wing political affiliation. People who oppose all taxes are more right-wing affiliated, but this effect is smaller than expected.

Social trust seems to be an important predictor of the contentedness cluster membership. People who feel that others can be trusted are more satisfied with the current distribution of tax burdens. High social trust strengthens the feeling that others pay their fair share of taxes. On the contrary, low social trust explains tax revolt, implying that people reject redistribution via taxes at all because they do not trust others to pay their fair share.

Higher educational attainment explains being content with the distribution of taxes, which is in line with previous research (Eriksen & Fallan, 1996), and lower educations leads people to revolt against all taxes. This implies that increasing knowledge about the procedural implementation of taxes could increase the legitimacy of the tax system.

Next, we ran separate analyses including one country-level variable at the time, controlling for GDP per capita and all individual-level variables. Table 3 shows the results.

There are only a few significant effects of the country-level covariates. We see that if a tax burden in a country is high, there are fewer people who are content with the current distribution of taxes. However, a high tax burden seems not to lead to more tax revolt. Instead, it is the design of the tax system that leads people to oppose all taxes rather than the total tax burden. Model 2 shows that in countries with more progressive tax systems, the proportion of individuals in the tax revolt cluster is higher. Model 3 shows that tax systems with a relatively higher share of the more visible PIT increases tax revolt, but not contentedness as we expected. Against our expectations, less progressive tax systems do not lead to a higher demand for more progressive taxes, but tax visibility decreases the support for broad progressive redistribution. Although the effects for the individual characteristics seem more convincing than the

Table 3
Effects of Country-Level Determinants on Each Latent Cluster—Three-Step Approach

Model	Context variable	Latent clusters					
		Contentedness	Linear progressive	Overburdened low and middle class	Broad progressive	Overburdened middle class	Tax revolt
1	Tax burden	-0.019*** (0.007)	-0.006 (0.008)	0.003 (0.008)	0.012 (0.010)	0.004 (0.021)	0.006 (0.006)
2	Tax progressivity	-0.791 (0.647)	-1.545 (1.119)	-0.037 (0.927)	-0.715 (1.472)	0.303 (1.337)	2.785** (1.102)
3	Tax visibility	0.004 (0.005)	-0.015 (0.013)	0.001 (0.012)	-0.033*** (0.012)	0.012 (0.021)	0.031*** (0.011)

Note. Standard errors are between parentheses. Models control for GDP per capita in PPP. Models control for all individual-level variables introduced (based on imputed data $M=5$). Models exclude Israel because political affiliation was not available for this country.

*** $p < .01$, ** $p < .05$, * $p < .10$.

contextual effects, the design of the tax system does matter. Especially the amount of tax revolt in a country can be diminished if countries rely less on visible taxes or progressive tax systems. A high tax burden leads to less support for taxes.

Conclusion and Discussion

With this study, we seek to find an answer to the question of whether people believe taxes are distributed in a fair manner, and in relation to that, what the answer means for the legitimacy of the welfare state. First of all, we conclude that opinions toward the distribution of taxes are far more diverse than previous research has shown. There are different ideas about whether the current distribution of taxes is fair. As found in previous research, a substantial amount of the population believes that tax burdens should be distributed in a more progressive manner. But, additionally to previous research, we also find a large proportion of individuals that believes that the current distribution of taxes is “about right.” The group that is relatively satisfied with the current distribution is, in our view, remarkably high. Although there is a group of people that opposes all taxes, which supports the tax revolt theory, this group is marginal in every country. However, in 2006 there were still signs that Wilensky (1975) was right: Many people still see a tax squeeze of the middle class.

These differences in opinions can be explained by different factors. As we hypothesized, self-interest and class interest explains why people in the higher social strata see an overburdened middle class or oppose all taxes, while people in the lower social strata are supportive of a more progressive distribution of tax burdens. But additionally, the idea that tax attitudes are highly political is

found in the strong effect of political affiliation on four of the six clusters. Clearly, tax attitudes will remain to be a point of ideological dispute within the population, and, to some extent, there will always be a group of people that is dissatisfied with the distribution of taxes. Our indirect measure of knowledge about the tax system confirms our hypothesis that more knowledge about the procedural implementation increases contentedness with the tax system. The results imply that people are more content with their share of the tax burden when they trust others to pay their fair share as well, and this result strengthens theories claiming that people are conditional co-operators. Institutional factors influence the legitimacy of the tax system in different ways, although the effects are smaller than expected. A high tax burden leads to less contentedness with the distribution of taxes implying that people want to shift the burden to someone else if taxes are too high. A specific design of the tax system (progressive and visible taxes) induces people to oppose all taxes.

In answering the question of whether there is a just distribution of tax burdens, we found that the LCA method has led to a more complete picture of the diverse ideas in society about the distribution of taxes. Further research could extend this study to more countries to be able to examine more contextual factors that influence tax attitudes.

Rothstein (1998) argued that a broadly shared perception of a just distribution of tax burdens is a necessary condition for welfare state legitimacy. We conclude that a substantial proportion of the population is relatively satisfied with this distribution of burdens, although taxes remain a matter of political dispute. Still, the tax burden of the middle class should be regarded as a threat for welfare legitimacy because many individuals see their tax burden as too high. Wilensky (1975) might therefore be right: A welfare state that relies strongly on the financial contributions of the middle class can cause a backlash of welfare legitimacy. This effect would especially occur when the middle class does not benefit from the welfare state. Not without reason, it is argued that universal welfare states that include the middle class in their redistribution will be able to redistribute more than selective welfare states that target their benefits at the poor only. The middle class is willing to contribute if, on the distribution side, they can get a slice of the cake as well (Korpi & Palme, 1998; Van Oorschot, 2013).

Appendix

Table A1
Descriptive Information per Country

Country	N	Missing data per dependent variable		
		Taxes for high incomes	Taxes for middle incomes	Taxes for low incomes
All countries	36,688	4,088	3,074	2,939
Australia	2,781	216	164	192
Canada	933	83	48	66
Croatia	1,200	245	177	136
Czech Republic	1,201	93	78	65
Denmark	1,368	81	52	68
Finland	1,189	92	70	60
France	1,824	147	61	172
Germany	1,643	184	154	139
Great Britain	930	83	80	69
Hungary	1,010	109	104	86
Ireland	1,001	52	38	32
Israel	1,345	149	92	94
Japan	1,231	217	161	189
Latvia	1,069	202	147	94
Netherlands	993	75	58	66
New Zealand	1,263	123	77	90
Norway	1,330	68	41	64
Poland	1,293	168	163	111
Portugal	1,837	294	263	179
Russia	2,407	657	588	515
South Korea	1,605	47	46	46
Spain	2,517	395	193	190
Sweden	1,194	81	68	71
Switzerland	1,003	43	28	32
United States	1,518	102	46	57

Table. A2
Proportions of Individuals per Latent Cluster per Country in %

Country	Latent clusters				
	Contentedness	Linear progressive	Overburdened low and middle class	Broad progressive	Overburdened middle class
All countries	29.2	23.2	21.1	14.2	6.2
Anglo Saxon					6.1
Australia	28.2	14.4	27.4	7.6	10.4
Canada	31.8	12.8	18.2	10.9	15.3
Ireland	40.0	28.6	14.4	7.8	4.1
New Zealand	38.7	13.6	16.6	5.8	11.8
Great Britain	34.3	21.3	22.1	3.4	12.0
United States	43.3	16.9	15.1	12.5	9.0
Social democratic					3.2
Denmark	38.2	19.5	20.8	6.4	7.1
Finland	28.7	28.7	17.8	15.4	7.0
Norway	29.2	15.8	32.1	11.6	5.1
Sweden	23.3	22.0	29.0	13.0	4.2
Corporatist					8.6
France	28.2	31.3	14.7	18.5	18.1
Germany	28.3	31.9	21.6	8.5	7.2
Japan	29.8	19.5	18.2	23.8	4.4
South Korea	35.1	34.5	14.5	10.2	4.6
Netherlands	37.6	23.7	14.2	14.9	7.3
Switzerland	43.4	29.3	11.2	11.8	3.1

(continued)

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