

The Political Representation of Economic Interests: Subversion of Democracy or Middle-Class Supremacy?

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Abstract

A new and highly-cited literature on redistribution and economic policy-making paints a gloomy picture of democracy, which we refer to as the Subversion of Democracy Model (SDM). It comes in two varieties. One uses public opinion data to show that policies are strongly biased towards the preferences of the rich; another uses macro-level data on inequality and redistribution to show that democratic governments are no longer responding to rising inequality. This paper is a critical reassessment of this literature. We point to methodological and theoretical issues that may bias the results, and we propose solutions that point to a very different interpretation of the data, which we refer to as the Representative Democracy Model (RDM). We test the SDM against the RDM on both public opinion data and a new dataset on fiscal policy and find that government policies largely reflect the economic preferences of the middle class, and that middle-class power has remained remarkably stable over time, even as inequality has risen. The rich have no or little influence on redistributive policies, and it does not appear that the democratic state is increasingly constrained by global capital.

1. Introduction

A new highly-cited literature on redistribution and economic policy-making paints a gloomy picture of contemporary democracy. It comes in two varieties. One uses public opinion data to show that policies are strongly biased towards the preferences of the rich (e.g., Gilens 2005, 2012; Bartels 2008, 2017); another uses macro-level data on inequality, partisanship, and redistribution to show that democratic governments are no longer responding to rising inequality (e.g., Streeck 2011, 2016; Piketty 2014). For simplicity, we refer to these arguments as the Subversion of Democracy Model (SDM) because they imply that democratic institutions, supposedly representing majority interests, are either serving the rich or bowing to the pressures of global capital.

This paper is a critical reassessment of that literature. We point to methodological and theoretical issues, which may bias the results, and we propose solutions that point to a very different interpretation of the data. We label the alternative interpretation the Representative Democracy Model (RDM) because it suggests that class interests are represented in government policies in rough correspondence with how representative democracy is expected to work. Since we focus on advanced democracies with well-established party systems, the RDM thesis is related to what is commonly known as the responsible party government model (Kitschelt 2000), as well as to seminal work in comparative political economy that emphasize the critical role of the middle class in the development of the welfare state (e.g., Baldwin 1990; Korpi and Palme 1998; Rothstein 1998).

We make three contributions. First, we show that there is a crucial distinction between enduring class power and short-term spending preferences, which is highly consequential for the choice of empirical model and the interpretation of the evidence. Second, we adopt a multidimensional conception of redistributive politics that allows us to distinguish between the interest-realization of particular classes as opposed to relying on broad measures of “redistribution” or “social spending”. Finally, we offer a strategic test of the SDM against the RDM on both public opinion data, and on a new dataset on fiscal policy that allows us to measure taxes and transfers, spending on services, as well as social insurance by class.

Contrary to much of the existing literature we find that government policies and outcomes largely reflect the economic preferences of the middle class, and that middle-class power over fiscal policies has remained remarkably stable over time, even though market inequality has risen notably. The rich have no or little influence on redistributive policies over and above their role in the representative party system, and it does not appear that the democratic state is increasingly constrained by global capital.

The presentation is divided into two parts. In the first we present a critique of the SDM micro evidence and provide an alternative analysis of public opinion data using twelve waves of the ISSP. In the second we present an analytical framework for analyzing spending data, which sets up our macro-level test of the SDM versus the RDM using data on the net benefits of government spending on each income class. The last section concludes.

2. The Micro Evidence

2.1. Subversion of Democracy: A Critique of the Literature

Work by Bartels (2008), Gilens (2005, 2012), and Gilens and Page (2014) on the US, as well as recent work testing and extending their approach to other advanced democracies (e.g., Bartels 2017, Elsässer et al. 2018, Peters and Ensink 2015) is unapologetically empirical and invites us to forget about pre-conceived notions of democracy and instead examine the evidence. The conclusions they reach about democracy are stark, pessimistic, and provocative. In a nutshell they find that the affluent dominate democratic politics to the point where other income classes do not matter. This is of obvious normative concern, but it also challenges standard models of democracy and political economy.

These findings, however, raise important questions about dynamics. If it is true that the affluent drive public policies, as Gilens (2012) finds for the US and Bartels (2017) and Peters and Ensink (2015) for Europe, where would that leave us in the long run? The natural answer seems to be that we should expect policies to converge to the preferences of the rich. But how then do we explain the two largest government programs in the US, Medicare and Social Security, which are decidedly middle-class programs? For that matter, how do we account for any aspect of the American welfare state including Welfare, Medicaid, food stamps, or the Earned Income Tax Credit? And why would the top one percent of income earners be paying close to 40 percent of the federal income tax bill (IRS 2018)?

The mystery deepens when we consider Western Europe. According to Bartels (2017) and Peters and Ensink (2015) the affluent in Europe have an outsized influence on redistributive policies, but this emphasis on the rich seems at odds with the sheer size of European welfare states. On average close to a third of GDP in Western Europe goes to social spending (OECD 2016), and it is hard to see how countries reached this level of spending if the rich were so powerful; or how such levels of spending could be sustained for so long. Indeed, social spending across all advanced democracies has been rising from about 18 percent of GDP in 1980 to about 25 percent in 2016, the historical peak.¹

The SDM also runs counter to long-standing theories of democratic parties and representation from Downs (1957) to Aldrich (1995) to Kitschelt (1994), and it contradicts standard models of redistribution, from Esping-Andersen (1990) to Meltzer-Richard (1981) to Iversen-Soskice (2006). The key work in social history would also have to be rewritten because the political strength of the center-left is seen in that literature to be a key driver of welfare state expansion (Baldwin 1990; Korpi 1983; Rothstein 1998; Huber and Stephens 2001). While there is an important literature according employers a major role in the formation of the welfare state (Swenson 2002; Martin 2000; Mares 2003), no one claims that the welfare state was created by

¹ This is a simple average of OECD's measure of total social spending as a percent of GDP for 21 OECD countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, USA, and United Kingdom.

the rich. Nor do Bartels or Gilens, or any of their followers. But how then can the rich figure so prominently in their results?

To resolve these puzzles, we first revisit the logic behind the estimation models used in the SDM public opinion literature. We focus on government spending and redistribution because it is far more obvious why class should matter in fiscal policy than in, say, foreign policy or reproductive policies. Moreover, on most policies other than redistributive policies there is little room for unequal representation in the first place since preferences do not diverge (Soroka and Wlezien 2008, 2010).

The main methodological issue we want to draw attention to is illustrated in Figure 1, which is based on simulated (constructed) data. We will assume throughout that there are three income classes: Low (L), Middle (M), and High (H). We measure time as 200 periods on the x-axis, and the mean preferred level of spending for each class is captured as a straight horizontal line, where L (red) wants more than M (green), and M wants more than H (blue).² We define spending as a share of GDP, and in this example we assume that the preferred mean levels of spending of H , M , and L are .1, .3, and .5, respectively (consistent with the survey data used below).

For the sake of argument, we further assume that governments only represent the mean spending preference of M . This could reflect a simple median voter logic, but the reason for making this assumption is analytical. We want to be able to examine whether the standard SDM estimation model applied to our fictive data yields the “correct” answer about representation and policy influence (i.e., that M determines policies).

Over time, spending varies around the M mean preference because of the business cycle, which we represent by a sine-function (black line). We assume that spending follows a New Keynesian counter-cyclical pattern so that spending at the trough of the business cycle is at a maximum (because of outlays peak and revenues bottom out), implying a budget deficit, while at the top of the cycle spending is at a minimum (because of outlays bottom out and revenues peak), implying a budget surplus. These budget swings can be interpreted partly as the result of “automatic stabilizers” (most importantly spending on unemployment benefits), and partly as the result of deliberate counter-cyclical fiscal policies. Note that this logic is independent of the preferred average level of spending; it is purely a function of optimal macroeconomic policies.

People may hold either a naïve “household budget” understanding of fiscal policy or a sophisticated “Keynesian” understanding. It stands to reason that this distinction is closely tied to incentives to be informed about economic policies, and such incentives are likely related to income and education as argued by Larcinese (2005). This is because those with high income more often make investment decisions that require accurate predictions about the economy and hence future economic policies, and they typically also have the education to acquire and process the necessary information at low marginal cost. This suggests a sophisticated view on fiscal policies. Those with low income and education, on the other hand, typically have neither the

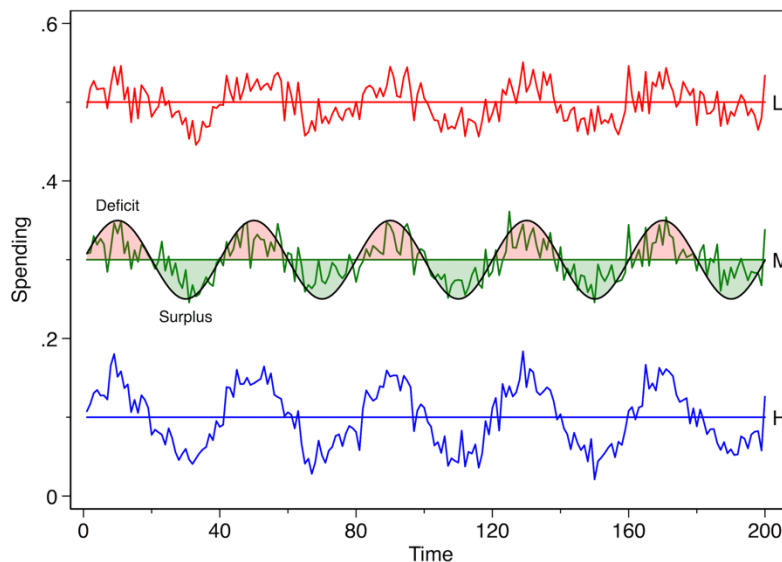
² Class preferences will be deductively derived in the next section; for now it suffices to note that the ranking follows standard assumptions.

incentives nor the education to be well-informed about economic policies, and they consequently tend to adopt a common-sense “household budget” understanding of these policies.

The conjectured differences across classes are a matter of degree since subgroup preferences are known to be highly correlated over time (see Page and Shapiro 1992, Soroka and Wlezien 2008, 2010). We therefore assume a mix of people in L and M who adhere to either a Keynesian or household understanding, with more in the L group adopting a household understanding compared to M . For H we assume high information and a Keynesian understanding that mirror that of the government.

In Figure 1 this logic means that the cross-time preferences of the three groups reflect the actual budget cycle to a greater or lesser extent. To add realism, we assume that idiosyncratic factors affect preferences at each point in time, which is captured by a weighed combination of random draws from two normal distributions of disturbances (with a mean of 0), added to the expected level of preferred spending at each time point.³ Specifically, we assume that the income classes have some disturbances in common while some are unique to the groups. The disturbances could alternatively be interpreted as measurement error if each observation represents the mean of a survey response.⁴

Figure 1. Spending Preferences for Three Groups and Government Spending (black), when M is Politically Dominant.



Note: Based on 200 simulated time observations where the mean preferred spending levels (measured as a share of GDP) of the three groups are set to $L=0.5$; $M=0.3$; and $H=0.1$. The black sine curve is actual spending reflecting the mean preferred spending level of M plus a counter-cyclical budget reflecting the

³ We could of course also add random disturbances to government spending, but this would not affect any of our substantive conclusions.

⁴ Income group preferences are assumed to have the same level of disturbance. We could also add more disturbance to low- and middle-income preferences, as Stimson (2011) suggests may partly drive differential responsiveness. But that would not change the substantive conclusions.

business cycle (red=deficit; green=surplus). The jagged red, green, and blue lines are the preferred spending levels of L , M , and H at each time point.

Of course, Figure 1 merely presents one possible scenario. We are not claiming that it is an accurate model of the world, although we think it is a plausible one (and present evidence to that effect below). Again, our main purpose is analytical: to present a case where the preferences of governments and all groups are transparent, so we can evaluate whether empirical models correctly identify the relationship between preferences and policies.

We first apply the standard SDM methodology to the simulated dataset and estimate the following model of influence:

$$(1) \quad \Delta S_t = \alpha + \beta_L \cdot \Delta P_{L,t} + \beta_M \cdot \Delta P_{M,t} + \beta_H \cdot \Delta P_{H,t} + \varepsilon_t,$$

where S_t is spending at time t , P_i is the spending preference of group $i = \{L, M, H\}$, and Δ is a change operator (first difference). This corresponds to Gilens' original setup where survey questions ask people to indicate their preferences for changes in policy in one direction or another, and the dependent variable measures actual changes in policies. In Bartels's (2017) analysis of ISSP data, the survey questions are likewise about preferred changes in policy, and all refer to fiscal policies (do people want more or less spending on unemployment, health, old age pensions, and education?).

Model (1) in Table 1 shows the results of estimating equation (1). It is easy to see that they basically mirror those in Gilens and Bartels: only H has a significant impact on policy. But we know that cannot be true since the model is constructed to only reflect the average preferences of M , not H . What the result reflects is the fact that H is better informed about fiscal policy than M and L and therefore expresses more counter-cyclical preferences, which better reflect changes in actual policies. But that does *not* mean that government policies are inattentive to the intertemporal interests of L and M . If we had data about who in each group were, or were not, informed, including this variable would show that the preferences of *informed* members of all groups are equally influential. But without accurate measures of information, *even slightly better information* among the rich will produce the result that only the rich matter (as long as N is large enough).

Table 1. The Effect of Group Preferences on Spending Policies (Based on Simulated Data Presented in Figure 1)

	(1)	(2)	(3)
	First-difference regression	Prais-Winsten AR (1) regression	LDV regression
Constant	-0.00 (0.00)	0.31* (0.02)	0.07* (0.02)
$\Delta P(L)$	-0.03 (0.03)		
$\Delta P(M)$	-0.00 (0.03)		

$\Delta P(H)$	0.10*		
	(0.03)		
P(L)		-0.03	-0.09*
		(0.03)	(0.04)
P(M)		-0.00	-0.01
		(0.03)	(0.04)
P(H)		0.11*	0.19*
		(0.03)	(0.03)
LDV			0.85*
			(0.03)
R-squared	0.09	0.33	0.98
N	199	200	199

Note: * p<0.05, + p<0.1. Standard errors in parentheses

Even if we could measure information perfectly the model would still fail to capture the key message of Figure 1, namely that the government represents *only* the interests of *M*, not *H*. To discover this critical “fact”, we need a model that uses levels, not changes, in spending and spending preferences (see Plümper et al. 2005). We therefore estimate the following model:

$$(2) \quad S_t' = \alpha + \beta_L \cdot P_{L,t}' + \beta_M \cdot P_{M,t}' + \beta_H \cdot P_{H,t}' + \varepsilon_t,$$

where the variables have been corrected for first-order autocorrelation using a Prais-Winsten transformation. This model yields the results reported in column (2) of Table 1. At first glance they look almost identical to column (1). This is because the AR1 correlation is so close to 1 that transforming the data is nearly identical to differencing. But there is one crucial difference: the estimated constant of .31 reflects the fact that the government represent the mean preference of *M* and therefore spend in the neighborhood of 30 percent on average. This model thus essentially recovers the true preference of *M*. By comparing the mean preferences of the three classes to the estimated constant, we immediately discover that *M*'s interests are better represented than those of either *H* or *L*.

The empirical strategy suggested in equation (2) can be extended to multiple countries where the country-specific intercepts are the estimates of the average policy preferences influencing government policies in each country. In principle, we can compare this estimate to the expressed preferences of each income group to arrive at conclusions about which income class exerts greater long-term influence.

We added model (3) as a warning against another potential model misspecification. It is common to use a lagged dependent variable (LDV) to capture first-order autocorrelation while simultaneously modeling the dynamic process (Beck and Katz 1995). Yet, it is clear in our example that this creates a much smaller and misleading estimate of the intercept. The reason is that in the context of high autocorrelation, the LDV will attenuate the effects of any variables that do not change or only change slowly. In our example these are the mean preferences of each group. If this was a time-series cross-sectional analysis it would mean that the effects of stable partisan differences across countries, or country-specific intercepts, would be severely

underestimated, which is a problem first identified by Achen (2000). This downward bias is large in our case since the estimated intercept is 0.07 whereas the true intercept is 0.3. Again, it would lead to the erroneous conclusion that policies are closer to the preferences of H than M .

2.2. An Empirical Test: Whose Preferences Actually Count?

To test our proposed empirical strategy, we rely on two questions from the ISSP that relate to preferences for redistribution. The first question pertains to preferences for change and asks *“Listed below are various areas of government spending. Please indicate whether you would like to see more or less government spending in each area. Remember that if you say “much more”, it might require a tax increase to pay for it”*.⁵ We construct an index of relative support for social spending based on preferences for spending on health, education, old age pensions, and unemployment benefits (similar to Bartels 2017). Relative support is estimated by subtracting the share of people supporting less spending from the share supporting more spending, so higher values mean stronger support for more spending (similar to Soroka and Wlezien 2010).

As an estimate of absolute support for redistribution, we rely on the question that asks *“on the whole, do you think it should or should not be the government’s responsibility to reduce income differences between the rich and the poor?”*.⁶ We code ‘definitely should be’ and ‘probably should be’ as 1 and ‘probably should not be’ and ‘definitely should not be’ as 0. Some of the ISSP surveys also have a ‘neither nor’ category, which is coded as 0.

Since our aim is to test the political representation of economic interests, we estimate support for redistribution by income class, and we use a procedure similar to Gilens (2012). For each country-year survey we, first, assign the respondents a score equal to the midpoint of their income category based on the income distribution from the survey. Next, we regress (absolute or relative) support for redistribution on the respondents’ placement in the income distribution and its squared term in a logistic or linear regression (for absolute and relative support, respectively), and use that model to predict the level of support for people at the 10th, 50th and 90th income percentiles.

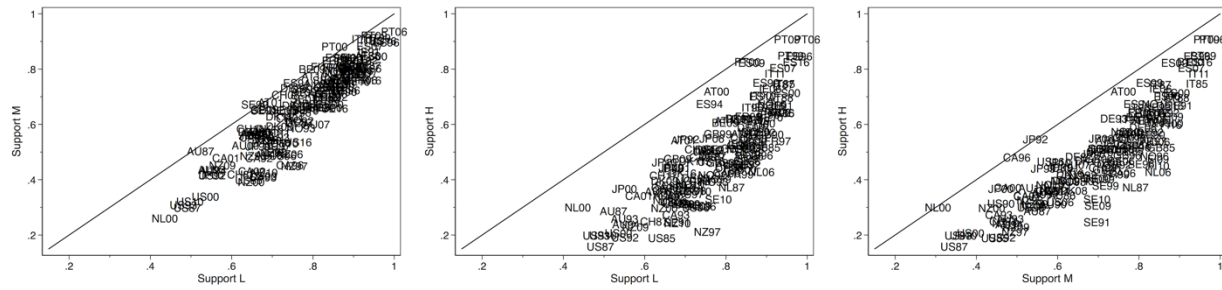
After estimating support for redistribution, we merge the preference data with data on public social spending as a percentage of GDP (from the OECD Social Expenditure Database) using the year in which the survey data was collected as the matching year (we discuss lag structure below).⁷ Performing this procedure gives us a data set containing information on 21 advanced democracies in the period 1985-2016 (unbalanced). The included countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and the United States.⁸

⁵ We use the Role of Government I-IV surveys.

⁶ We use The Role of Government I-V, the Environment I-III, and the Social Inequality I-IV surveys

⁷ We thereby account for the fact that countries collect data for the same ISSP survey waves in different years.

⁸ South Korea’s low levels of social spending makes it an outlier and it is therefore omitted from the sample. We also omit Israel due to lack of comparable data on partisanship of the government. Data are

Figure 2. Absolute Support for Redistribution of L , M , and H 

Note: $N=142$. The axes describe the share of people in an income class that support redistribution.

As a first step in the analysis, we look at how absolute support for redistribution is structured by income. In Figure 2, we compare the preferences of low-, middle-, and high-income groups. The preferences of the lower income group are plotted on the x-axes and those of the higher income group on the y-axes, and for ease of interpretation we include a diagonal line. The figure shows that lower income groups are more supportive of redistribution than higher income groups and that preference divergence is greater at the top of the income distribution.⁹ The figure also shows that preferences are highly correlated, most pronounced between the low and middle classes. These results are consistent with the assumptions in the simulation model and mirror most other studies in the literature.

Next, we turn to an empirical test of which income classes policy-makers respond to. We start by estimating representation using preferences for change and changes, as this relates most closely to the setup of the SDM. In Table 2 we estimate the effect of relative support for social spending on subsequent two-year changes in social spending. Consistent with our expectations, the results show that only the rich have independent influence on changes in social spending, mirroring the stark results of Gilens (2012) and Bartels (2017). However, with this model setup if the poor and uneducated adopt a “household economy” view of the world and the rich and educated adopt a “Keynesian” view, any government pursuing a standard new Keynesian policy would appear to only represent the rich, even if it fully represented the redistributive interests of the poor or the middle. These models, therefore, do not capture the representation of long-run economic interests. To accomplish that, we need to regress levels rather than changes in social spending on absolute support for redistribution.

Table 2. The Effect of Relative Support for Social Spending on Subsequent Two-year Changes in Social Spending, by Income Group

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Two-year change in social spending as percentage of GDP							
Low income	2.25*			-0.32	5.51			-1.92

also available for a set of emerging democracies. Some of these countries have very low levels of social spending compared to the set of advanced democracies but overall our results are robust to including emerging democracies. Appendix C reports the results when including all countries in the analysis.

⁹ Relative support for redistribution is structured similarly by income class.

	(0.93)			(2.49)	(3.69)			(6.51)
Middle income		1.94*		-4.57		4.01		-6.60
		(0.78)		(3.82)		(2.54)		(4.90)
High income			2.46*	6.66*			5.64*	12.35*
			(0.80)	(2.85)			(2.41)	(4.71)
Country FE					✓	✓	✓	✓
Constant	-0.72	-0.37	-0.30	0.62	-2.59	-1.38	-1.42	0.51
	(0.54)	(0.38)	(0.33)	(0.59)	(2.12)	(1.24)	(0.85)	(2.34)
N	43	43	43	43	43	43	43	43
R-squared	0.06	0.06	0.12	0.17	0.10	0.09	0.20	0.26

Note: * $p < 0.05$, + $p < 0.1$. Standard errors clustered by country in parentheses. Preference data not available for Belgium and Iceland, 19 countries included.

We model the relationship between the level of social spending and absolute support for redistribution in Prais-Winsten regression models for reasons discussed above. In Table 3, we first we estimate simple bivariate responsiveness models to examine how well social spending aligns with the preferences of the income classes.¹⁰ Models (1) through (3) show that the level of social spending across countries over time is aligned with the preferences of all income classes. The association is strongest for the middle class, which suggests that it is instrumental in setting the level of redistribution. In model (4), we include the preferences of all three income classes simultaneously to test which income class(es) policy-makers respond to most. Strikingly, the level of redistribution turns out to be influenced *only* by the preferences of the middle class, consistent with the RDM. The preferences of *L* and *H* have no significant effect (and are in the wrong direction).

Table 3. The Effect of Absolute Support for Redistribution on the Level of Social Spending, by Income Group

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Social Spending as Percentage of GDP							
Low income	12.62*			-6.13	-1.01			-7.93*
	(2.94)			(4.94)	(2.32)			(3.33)
Middle income		12.64*		19.98*		2.75		6.89*
		(2.01)		(4.72)		(2.32)		(3.49)
High income			8.38*	-3.61			2.40	3.00
			(2.01)	(3.50)			(2.29)	(3.10)
Country FE					✓	✓	✓	✓
Constant	11.70*	12.60*	16.87*	14.05*	15.95*	13.83*	14.44*	15.53*
	(2.22)	(1.36)	(1.10)	(2.11)	(1.59)	(1.39)	(1.03)	(1.65)
R-squared	0.58	0.71	0.66	0.72	0.90	0.87	0.87	0.88

¹⁰ We have imputed two values of social spending as percentage of GDP for Austria (1986 and 1988) by linear interpolation.

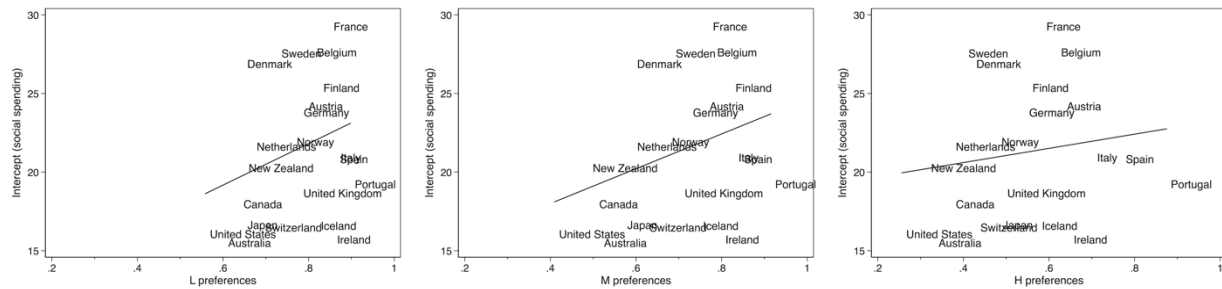
N	140	140	140	140	140	140	140	140
N of countries	21	21	21	21	21	21	21	21

Note: * $p < 0.05$, + $p < 0.1$. Standard errors corrected for heteroscedasticity in parentheses. Baseline for country intercepts is Australia.

These results directly contradict the SDM and specifically Bartels (2017) and Peters and Ensink (2015). Yet, they do not convey much information about the congruency between the actual level of social spending and that preferred by the income classes. Ideally, we would estimate a model with country-specific intercepts and compare the intercepts to the preferred spending levels, as in our hypothetical scenario. But because we do not have measures of preferred spending levels, we are forced to take a more indirect approach and instead estimate how strongly the country-specific intercepts correlate with support for redistribution in different classes. That gives an indication of the influence of income classes on the long-run level of social spending, unrelated to fluctuations caused by the business cycle.

In models (5)-(8) we therefore add country-specific intercepts to the specification. The coefficients of these models suggest that the within-country fluctuations in social spending align with the preferences of the middle- and high-income groups and not with those of the poor. This is consistent with our simulated regression results. But we are more interested in how the long-run level of social spending is related to support for redistribution, which is illustrated in Figure 3. The figure depicts the relationship between the country-specific intercepts from Table 3 (model 8) and mean support for redistribution by income class. It turns out that there is a fairly strong positive association between the long-run level of social spending and support for redistribution among the low and middle classes, whereas the association is much weaker for the rich. This finding is consistent with the regression results in Table 3 and hints that the long-run level of redistribution is decided largely by middle-class preferences

Figure 3. The Effect of Absolute Support for Redistribution on the Estimated Long-Run Level of Social Spending, by Income Group



Note: The correlation between the intercepts and the preferences of L , M , and H are .3, .34, and .16. The estimated long-run levels of social spending are the intercepts from Table 3, model 8.

None of the bivariate relationships in Figure 3 are statistically significant, however. This is visible from the first three regression models in Table 4, which regress the country-specific intercepts on mean support for redistribution. But when we include the mean preferences of all

three groups simultaneously we find that the preferences of M have a positive effect, which is statistically significant at the .1 level, whereas those of L and H are negatively associated with spending levels (in the case of H significantly so). We should of course interpret this result with caution due to the small sample size and high preference correlations, but again it points to the critical role of the middle class. There is no indication that the rich matter for levels of redistribution.

Overall the results indicate that the level of redistribution is decided by the middle class, but they contain no information about how representation happens. Following a long tradition, the RDM implies that parties respond to voters and that representation of different interests is a function of who controls the government. If representation takes place through parties and governments, we would expect that the direct effect of preferences on social spending decreases when adding government partisanship to the regression. Models (5)-(8) in Table 4 show this is precisely what happens. The direct effect drops to zero, which suggests that most representation takes place through parties. The level of social spending is higher in countries which have experienced stronger left party governments, while stronger right party governments are associated with lower levels of social spending. These results support the RDM.

Table 4. The Effect of Partisanship on the Long-Run Level of Social Spending

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Estimated Long-Run Level of Social Spending (Intercepts)							
Low income	13.20 (9.66)			-23.48 (39.46)	2.44 (8.86)			-5.74 (37.21)
Middle income		11.06 (7.00)		63.66+ (32.59)		2.10 (6.72)		31.38 (33.78)
High income			4.52 (6.34)	-33.09* (15.58)			-1.09 (5.42)	-21.55 (15.35)
Government partisanship (right)					-7.05* (2.35)	-6.96* (2.43)	-7.46* (2.27)	-5.51+ (2.69)
Constant	11.25 (7.29)	13.58* (4.87)	18.80* (3.42)	12.32 (11.89)	19.81* (6.75)	20.19* (4.74)	22.23* (2.96)	15.52 (11.02)
N	21	21	21	21	21	21	21	21
R-squared	0.09	0.12	0.03	0.32	0.39	0.39	0.39	0.46

Note: * $p < 0.05$, + $p < 0.1$. Standard errors in parentheses. Income group preferences are mean support for redistribution between 1985-2016. Government partisanship is measured as the share of government controlled parliamentary seats held by right parties minus the share held by left parties averaged between 1960-2016 (Portugal: 1976-2016, Spain: 1977-2016), using data from the Comparative Political Data Set (Armingeon et al. 2018).

3. The Macro Evidence

3.1. Weak States in a Globalized World?

The results from our re-analysis of public opinion data and spending suggest that the middle class is far more influential than suggested in the recent SDM literature. But the use of public opinion data has limitations. Questions about spending and redistribution are broad and do not capture the multidimensionality of distributive politics, and responses to survey questions tend to be unstable and noisy. This raises concerns about how confident we can be about the public opinion results. At the same time new work in comparative political economy has highlighted macro-trends that appear to show that governments do not respond to rising inequality as predicted by RDMs – a puzzle that is commonly referred to as the “Robin Hood Paradox” (following Lindert 2004).

It is conceivable that this paradox is explained by the rich exerting rising influence behind the scenes, outside the light of public opinion surveys (Hacker and Pierson 2010). Or perhaps governments are so constrained by footloose capital that whatever policies are initiated in response to popular demands, these policies are woefully inadequate. Prominent proponents of this view are Streeck (2011; 2016), Piketty (2014), and Rodrik (1997; 2018), who all argue that capital mobility has undermined the capacity of governments to tax-and-transfer. A distinct, but related, literature has highlighted the declining role of partisanship in determining social and redistributive policies, possibly reflecting the limited economic room for governments to maneuver (Huber and Stephens 2001; Kwon and Pontusson 2010).

Yet, there are theoretical reasons to be skeptical of these arguments. Advanced capitalism is based on investment in skill-intensive production, and such production is rooted in local skill clusters (mostly in the successful cities) that are complemented by dense co-located social networks, which are very hard to uproot and move elsewhere (Iversen and Soskice 2018). In this perspective trade and foreign investment reinforce local specialization and raise the dependence of multinational capital on highly location co-specific assets, most importantly highly-skilled workers. Intense market competition, especially in globalized markets, also makes it hard for business to coordinate politically.

To critically reassess the macro evidence, we adopt an axiomatic approach in which class interests are derived deductively and then tested on macro-level policies. Whose interests are better reflected in actual policies? Do policies change over time in a manner that is more consistent with an SDM or RDM interpretation?

3.2. Class Preferences and Government Policies

We retain the three-class setup where each class is now precisely defined as a third of the distribution of pre-fisc income: L (bottom third); M (middle third), and H (top third). The goal of each class is to maximize net income.¹¹ In the case of M this means that it wants to unilaterally set taxes and transfers to maximize its own net income:

$$(1) \quad \text{Max} \quad y_M^{\text{net}} = y_M + t \cdot (y_H - \frac{1}{2} \cdot \alpha \cdot t \cdot y_H)$$

¹¹ We consider spending on public goods and insurance below.

where t is the tax rate and α is a measure of the efficiency loss from taxation – including the possible loss of income and revenue because of capital flight. Consistent with this maximand, it is assumed that M will not want to tax itself.¹² We also rule out the possibility of regressive taxation so that M cannot tax L and transfer to itself. By a similar logic, H cannot tax M and use the proceeds for itself.¹³ L , however, is unconstrained to tax both M and H .

We cannot observe α (the efficiency cost of taxation), but if $t=1$ H would have no incentive to engage in productive activities and tax proceeds would be zero, so we know that $\alpha \geq 2$. The equation assumes that tax disincentives is exponentially rising in the tax rate, as is standard (see, e.g., Moene and Wallerstein 2001). The specific form is for mathematical convenience.

The tax rate on H that maximizes M 's net income is then:

$$t_M^{H*} = \frac{1}{\alpha}.$$

We see that the optimal tax rate only depends on the efficiency losses of taxation, not on the income of either M or H . Again, M does not want to tax itself, so

$$t_M^{M*} = 0.$$

At M 's optimal tax rate, M 's net income is:

$$y_M^{net*} = y_M + T_M = y_M + \frac{1}{\alpha} \cdot (y_H - \frac{1}{2} \cdot y_H) = y_M + \frac{1}{2} \cdot \frac{y_H}{\alpha}.$$

where T_M is the net transfer to M (the second term). Correspondingly, H 's net income is:

$$y_H^{net} = y_H + T_H = y_H - t \cdot (y_H + \frac{1}{2} \cdot \alpha \cdot t \cdot y_H) = y_H - \frac{3}{2} \cdot \frac{y_H}{\alpha}.$$

Note that H 's loss is greater than M 's gain because of the efficiency cost of taxation, which reduces H 's income without raising M 's income by the same amount.

We can conveniently express the (observed) transfer to M as a proportion of H 's net income:

¹² This however implies a sharp discontinuity between middle and high incomes, which introduces a discontinuous marginal tax rate right around the threshold. For this reason, a more proportional tax rate may be preferable, with income-graduated transfers. The model abstracts from this complication, but the distributive logic would not change with a more proportional tax rate.

¹³ A simple justification is this. If we follow Acemoglu and Robinson's (2006) notion that democracy is a credible commitment to redistribution, then there must be safeguards in place to prevent regressive redistribution. There is no reason to think that this is generally true, but for established democracies it is reasonable based on the collective action capacity of L and M , which is guaranteed by civil liberties, notably the right of free assembly. Indeed, the constraint may be tighter than the richer not taking from the poorer; we seek to control for this possibility in the empirical analysis by including a control for union power and we report these models in appendix D.

$$(2) \quad \tau_M^{H*} = \frac{T_M}{y_H^{net}} = \frac{\frac{1}{2} \cdot \frac{y_H}{\alpha}}{y_H - \frac{3}{2} \cdot \frac{y_H}{\alpha}} = \frac{1}{2\alpha - 3}$$

We refer to this as the *rate of transfer*, τ_M^{H*} , and just like the tax rate it is not dependent on the income of either M or H .¹⁴ In a RDM where the middle class is pivotal – loosely speaking a median voter model – this is therefore the expected transfer rate. We cannot observe this rate directly since we do not know α , but we can infer that τ_M^H will be orthogonal to relative income:

$$\tau_M^H(M) \perp y'_M / y'_H.$$

where y'_M / y'_H is the observed pre-fisc income of M relative to H .¹⁵

This implication of the RDM is important because it means that top end inequality does not matter, in stark contrast to the SDM. If the rich becomes richer it does not increase the power of the rich if RDM is taken at face value. Indeed, with a constant transfer rate the middle will also become richer. In the SDM, by contrast, the transfer rate, τ_M^H , should respond to the relative income of M and H :

$$\tau_M^H = f(y'_M / y'_H).$$

Money begets influence and more money begets more influence. Rising top end inequality therefore reduces taxation and transfers from the rich to the middle – a conjecture that corresponds to much contemporary commentary as well as academic work (Hacker and Pierson 2010; Page, Bartels, and Seawright 2013).

A complementary SDM interpretation is that capital is becoming more mobile, raising the cost of taxation, α . As α rises the transfer rate falls (see equation 2). Hence,

$$\tau_M^H = g(\text{capital mobility})$$

Again, in the “pure” RDM neither rising inequality nor growing capital mobility affects the transfer rate to M .

¹⁴ The reason we express transfers as a proportion of net income instead of as a proportion of y_H is that we cannot observe gross income in a hypothetical world without taxes. We can however observe the net income of H , just as we can observe the net transfer to M by comparing the change in the income of the middle from before to after taxes and transfers. This is convenient because the effective tax rate of H or M is usually not known.

¹⁵ Again, observed pre-fisc income is different from y_M and y_H because of the efficiency costs of taxation. Any actually observed income is always in a world with taxes so we can only measure y'_M / y'_H .

We can generalize the RDM by defining the preferred rate of L and allow for government coalitions between any pair of classes.¹⁶ If M cannot govern alone, the outcome will reflect the outcome of a coalition bargain, which is a policy vector of taxes and transfers to and from each class. We show the implications of different coalitions in Web Appendix A, but the results confirm the intuition that an LM coalition will benefit L more, and hurt H more, than an MH coalition. Depending on bargaining power within the coalition, which may be captured by the share of seats or votes, M can ordinarily ensure that it will come out as a net beneficiary, but this is of course an empirical question. Again, this conclusion only holds if the power of democratic governments is not subverted by money or by the structural power of capital.

3.3. The Role of Insurance and Services

We have focused exclusively on redistribution of income, but many models of the welfare state emphasize the role of insurance and public goods provision (Baldwin 1990, Moene and Wallerstein 2001; Rehm 2011). How do we incorporate these aspects of the welfare state into the analysis? For public goods – health, education, care for the old and young, housing, and other in-kind services – the answer is simple in principle: include the net (after tax) value of these services in the disposable income of each class. Below we construct a new dataset that does this based on recent estimates from the OECD and Eurostat.

In the case of insurance we can indirectly account for its value by assuming that there is a risk of downward mobility, so that M benefits in some measure from transfers to L . The same is true of H , although those in the high group tend to be shielded from risks (risk of unemployment, for example, is strongly negatively related to income; see Moene and Wallerstein 2001 and Rehm 2011 for evidence). With a standard concave utility function (which implies risk-aversion), the value to those in the “good” state from transfers to those in the “bad” is proportional to the risk of falling into the bad state, measured over some politically relevant time-horizon.¹⁷ We can capture this logic by weighting the transfer rate for M by the transfer rate for L , where the risk of

¹⁶ In Appendix A we show that in a model of pure redistribution, where public goods and insurance do not matter, H wants no taxation while L wants to tax both M and H at their maximum rates and transfer the proceeds to L . This corresponds to the preference ordering assumed in Figure 1 and shown in Figure 2 above.

¹⁷ Formally, if we assume a log utility function and that those in the good state make targeted transfers to those in the bad, the utility function to be maximized is:

$$U = \ln[(1-t) \cdot y] \cdot (1-p) + \ln\left(\frac{t \cdot \bar{y}}{(1-\Theta)}\right) \cdot p,$$

where t is the tax rate, y is income in the good state, \bar{y} is mean income, Θ is the share of the population in the good state, and p is the risk of falling into the bad state. The first bracketed term is income in the good state; the second in the bad. The tax rate that maximizes this function is simply p . If M is in the good state, M derives utility of the transfer to L , which is weighted by p .

falling into the bad state determines the weight. In the empirical analysis we proxy this risk by the unemployment rate plus the rate of involuntary part-time employment.

3.4. Estimating Equation

We can put these predictions together in a simple encompassing regression model, using the transfer rate to M (including services and insurance) as the dependent variable:

$$\tau_{M,i,t}^H = a_i + \beta_1 \cdot \left(\frac{y_H}{y_M} \right)_{i,t} + \beta_2 \cdot \left(\frac{y_M}{y_L} \right)_{i,t} + \beta_3 \cdot Mobility_{i,t} + \beta_4 \cdot Right_{i,t} + \beta_5 \cdot Left_{i,t} + \varepsilon_{i,t},$$

where the first two terms measure the direct effects of relative income on the transfer share to M , while *Right* and *Left* capture the influence of right and left parties in government (measured by cabinet shares). *Mobility* refers to measures of the internationalization of capital. The relative income of M to L is included to test whether the power of income (also) matters at the lower half.

The hypotheses are as follows:

Subversion of Democracy Model: $\beta_1 < 0$; $(\beta_2 > 0)$; $\beta_3 < 0$; $\beta_4 = \beta_5 = 0$

Representative Democracy Model: $\beta_1 = \beta_2 = \beta_3 = 0$; $\beta_4 < 0$ $\beta_5 > 0$

The hypothesis $\beta_2 > 0$ (in the SDM model) is in parentheses because it is not clear that there is any scope for M to shape outcomes under SDM assumptions. Needless to say, it is possible that both models capture part of the variance.

3.5. Empirical Analysis: Who Actually Benefits?

In this part of the analysis, we use a new dataset developed for this project that relies on data from the Luxembourg Income Study (LIS), supplemented by OECD and Eurostat data on spending on services and transfers, taxation of property, capital, and consumption. LIS provides an impressive database with household income data stretching as far back as the 1970s across a broad range of countries. We restrict our sample to 18 advanced democracies (although we have robust results for 21) for which data are recorded at more than one point in time between 1974-2016: Australia, Austria, Belgium, Canada, Denmark, Finland, Germany, Greece, Iceland, Ireland, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom, and

the United States.¹⁸ And we confine the sample of households to those that are active on the labor market and have positive market and disposable incomes.¹⁹

We measure market income as factor income (labor cash income + capital income) plus private transfers, and disposable income as total cash income minus income taxes and social contributions. Following LIS recommendations, market and disposable incomes are equivalised by the square root of the number of household members and bottom- and top-coded at one percent of the mean income and ten times the median income. We use market income to calculate inequality indices and to divide households into deciles.

The LIS database accounts for cash transfers but not for in-kind services. To include the value of services, we rely on estimates of the combined value of education, health care, social housing, elderly care, and early childhood education and care (OECD 2011). The estimates are from the OECD/EU database on the distributional impact of in-kind services and are, to the best of our knowledge, the only available data. We also rely on an allocation key from this database to distribute the gross value of services to each income decile's disposable cash income.²⁰ The exact procedure we used is explained in Web Appendix B.

Before estimating the transfer rate, we allocate the costs of transfers and services to the income deciles' disposable income. Transfers and services are financed by tax revenues that mainly come from taxation of income, capital, property, and consumption. The LIS data capture the income tax burden of each income decile. Capital taxes are treated as neutral with respect to income classes and simply added to government revenues. The rest is financed by (i) property and wealth taxes, which are paid almost exclusively by those in the top few percentiles and therefore added to the tax burden of the top income decile, and (ii) consumption taxes, which we assume are paid in proportion to each income decile's consumption share. Further details are provided in Web Appendix B.

The sum of disposable cash income and the net value of in-kind services is the net "extended" income of each income decile. Subtracting market income from net extended income yields net transfers received. The rate of transfers to M , our main dependent variable, is net transfers received by the 5th income decile divided by the net extended income of the top income decile. To account for the value of insurance we add the transfer rate to L weighted by the sum of the

¹⁸ Italy and France and some country-years are omitted because data on pre-fisc income are not recorded. South Korea is omitted because it has no information about the employment status of household members. Japan is omitted because there is only one observation, and it therefore drops out in the FE regressions. We also omitted Israel because of lack of comparable data on a number of independent variables. All the reported results are substantively identical if Italy, France and Japan are included (the latter for regressions without FEs). These models are reported in Web Appendix D.

¹⁹ Market income inequality and transfers are greatly exaggerated if including non-working households in the sample, primarily because of retirees. Studies using LIS data therefore usually restrict the sample to working-age households (e.g. Iversen and Soskice 2006; Lupu and Pontusson 2011).

²⁰ For more information about these data see Verbist et al. (2012). We are thankful to these authors for providing us with the estimates.

unemployment and involuntary part-time employment rates, as explained above (the mean weight is .1).²¹

Figure 4 presents the spatial and temporal variation in net transfers to M as a share of the net extended income of H (top panel) and M (bottom panel) with and without accounting for insurance (left and right panels). The grey lines are country-specific local polynomial smoothers and the black line describes the entire sample of countries and years. The panels illustrate that there is considerable spatial and temporal variation in the rate of transfers to M . The highest average values are observed in Luxembourg, Ireland, and Sweden and the lowest in the Netherlands and Germany. The average transfer rate to M is .05, ranging from -.06 in the Netherlands in 1993 to .16 in Luxembourg in 2010 (top left panel). The negative values imply that the 5th income decile is a net contributor to spending in a few country-years. That is the case in Germany in the 1990s, in Netherlands in the 1990s and 2000s, and in Australia in 1981.

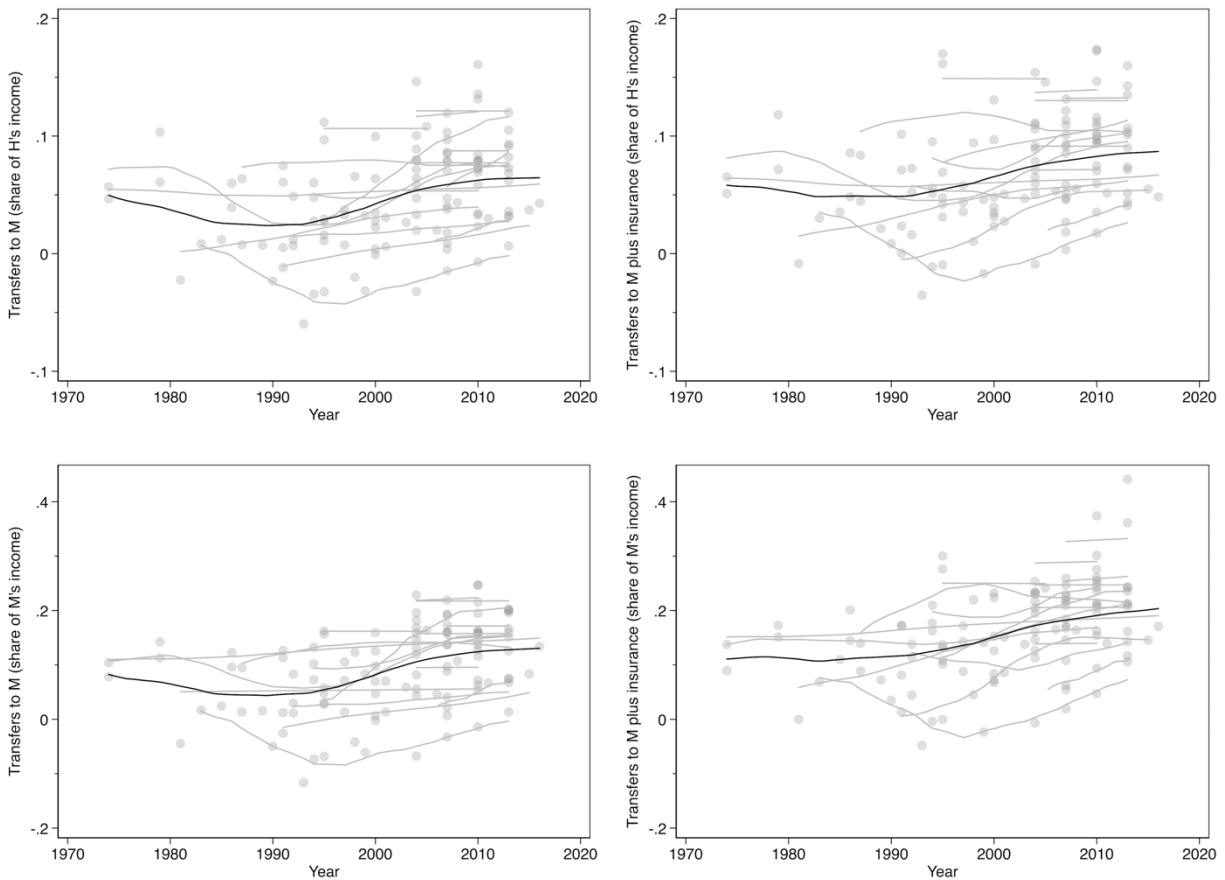
Accounting for insurance increases the rate of transfers to M on average by .022 and makes the 5th income decile a net beneficiary of spending in Germany already in the mid-1990s and in the Netherlands in the mid-2000s (top right panel). However, we may significantly underestimate the value of insurance. The calculation is based on the twin assumptions that people are mildly risk-averse ($RRA=1$), and that the risk of falling into the L group is equal to the rate of unemployment and underemployment. If people are more risk-averse (as empirical estimates suggest), and if there are risks of falling into the L group for other reasons (such as illness), the value of insurance will be higher. More accurately accounting for the value of insurance is an important task for future research, but our substantive results are robust to increasing the weight of L 's transfer rate all the way to 50 percent.

The lower panels show that transfers and services account for a substantial part of M 's extended income. On average 9.3 percent of M 's extended income comes from transfers and services, topping at 25 percent in Ireland in 2010. Adding the value of insurance increases the average to 16 percent with a maximum of 44.1 percent in Spain in 2013.

The trends in Figure 4 show that during the last forty years, a period of sharply rising inequality, the rate of transfers to M has been remarkably stable if not slightly increasing over time. That serves as a first indication that increased inequality has not weakened the power of the middle class to tax and redistribute income from the rich.

²¹ To maintain a full sample when accounting for insurance, we have imputed nine values of involuntary part-time employment in Australia, the UK, and the US. The exact procedure is described in Web Appendix B.

Figure 4. Net Transfers to M as a Share of the Net Extended Income of H and M



Note: N=110.

We test this descriptive result in Table 5, where we regress the rate of transfers to M on market income inequality, capital mobility, and partisanship of the government. Capital mobility is measured by Chinn and Ito's (2006, 2008) capital account openness variable as well as the sum of imports and exports as a share of GDP (trade openness).²² Partisanship of the government is a 20-year moving average of the share of government controlled parliamentary seats held by right parties minus the share held by left parties (Armingeon et al. 2018).²³

The results of Table 5 suggest that there is *no* association between top end market income inequality and the rate of transfers to the middle class. In fact, contrary to the prediction of the

²² We have imputed five values on Chinn and Ito's capital account openness variable. One for Switzerland in 1992 and four values for Luxembourg between 2004-2013. In all cases, we have imputed values equal to 1. The mean for Switzerland is 1 with a standard deviation of 0 and the mean of the EU countries included in our models between 2004-2013 is also 1 with a standard deviation of 0.

Two values of trade openness have been linearly extrapolated: Germany 2014 → 2015 and the United States 2014 → 2016.

²³ The Comparative Political Data Set (CPDS) (Armingeon et al. 2018) contains data going back to 1960. That means that the average partisanship of the government in the UK and US in 1974 are only 15-year averages. Trade openness and control variables are also from the CPDS.

SDM the coefficient is positive. The coefficient is also positive for bottom end inequality, which suggests that M is becoming politically more powerful with rising bottom-end inequality. Capital mobility, whether measured by capital account openness or trade openness, has no impact on the rate of transfers to the middle class. The fact that the rate of transfers to the middle class is unaffected by the level of top end inequality and by the openness of the economy suggests that political power is not a function of relative income and capital mobility.

Instead, political power seems to depend heavily on electoral strength. That is visible from the results for partisanship. In model (1) the coefficient for partisanship of the government suggests that stronger left party participation in government is associated with higher rates of transfers to the middle class. And the size of the effect is substantial. A one standard deviation increase in left (right) partisanship of the government is associated with a 1.9 percentage points increase (decrease) in the rate of transfers to M (or .44 sd). In model (2) we add a time trend to the specification to ensure that our results are not driven by temporal trends. The results are robust to this alternative specification.

In models (3) and (4), we include insurance as part of the transfer rate to M . Overall, the effects are very similar to those of models (1) and (2). Top end inequality and capital mobility are not related to the transfer rate, while bottom end inequality is. The effect size of partisanship remains stable. All in all, accounting for insurance increases the transfer rate to the middle class but the associations between the transfer rate, inequality, capital mobility, and government partisanship are very stable.

In appendix D, we test the robustness of the results using a series of additional model specifications. In all specifications we find that top end inequality and capital mobility are irrelevant to the transfer rate to M , while left (right) partisanship increases (reduces) it. That indicates that the power of the middle class is very stable over time, despite the sharp rise in top end inequality. The rich are becoming richer, but the political power of capital and the rich is only as great as their electoral strength implies (via right parties). This is entirely consistent with the public opinion evidence in the previous section, and it is much more consistent with the RDM than the SDM.

Table 5. Determinants of Net Transfers to M as a Percentage of H 's Net Extended Income

	(1)	(2)	(3)	(4)
	Transfer rate M (%)		Transfer rate M incl. insurance (%)	
P90/P50	0.753 (3.418)	1.458 (4.408)	0.791 (3.186)	2.289 (3.917)
P50/P10	1.953* (0.649)	1.474* (0.650)	3.231* (0.565)	2.812* (0.700)
Trade openness (ln)	1.828 (1.982)	-0.368 (2.932)	0.977 (1.793)	-0.420 (2.616)
Capital account openness	-0.914	0.806	-1.523	0.094

	(1.383)	(1.802)	(1.160)	(2.277)
Government partisanship (right)	-4.921*	-3.965*	-4.940*	-4.201*
	(1.230)	(0.998)	(1.334)	(1.227)
Labor force participation	-0.229*	-0.172	-0.355*	-0.287*
	(0.082)	(0.102)	(0.068)	(0.095)
Trend		✓		✓
Trend ²		✓		✓
Country FE	✓	✓	✓	✓
Constant	7.139	12.660	18.548*	18.394
	(8.872)	(19.323)	(8.593)	(17.662)
R-squared	0.331	0.391	0.422	0.452
N	110	110	110	110
N of countries	18	18	18	18

Note: * $p < 0.05$, + $p < 0.1$. Standard errors clustered by country in parentheses.

What about those at the low end of the income distribution, L ? In the public opinion results L exerts little independent influence over policies, although L 's preferences are fairly well-aligned with those of M . If we use the transfer rate to L as the dependent variable and run the same set of regressions as in Table 5, we find that L 's interest in more transfers is at least partly met under center-left governments (results are included in Appendix D). A one standard deviation increase in left (right) partisanship increases (decreases) the transfer rate to L by 3.2 percentage points (or .4 sd). Since left-leaning governments are almost always supported by center parties, and therefore includes middle-class constituencies, it is hard to disentangle the effect of middle-class preferences for public goods and social insurance from the political clout of the poor. But “who governs” clearly matters. We also note that top end inequality and capital mobility are negatively related to the transfer rate to L in some specifications, but the effects are unstable. Surprisingly, bottom end inequality has a positive effect, for which we have no explanation (it is predicted by neither the SDM nor the RDM).

4. Conclusion

The rise in income inequality over the past four decades has created concerns that democracy is being undermined by the rich or by footloose capital -- what we have labeled the Subversion of Democracy Model. These concerns have been backed by alarming recent evidence that public policies -- especially those pertaining to taxes, social spending, and redistribution -- are being dictated by the rich or by the rising structural power of capital. In this paper we do not assuage the concern over rising inequality, but we have challenged the idea that democratic governments are no longer responsive to majority demands, and in particular to those of the middle class.

Using both survey evidence for individual policy preferences and macro evidence for transfer rates, we find consistently and unambiguously that policies are much better aligned with the distributive interests of the middle class than with those of either the poor or the rich. The level of spending is closely associated with the expressed preferences of the middle class, and the

transfer rate (including the value of services) to the middle class has remained constant or even slightly risen during a period where top end inequality grew notably. This is not consistent with a view that accords exceptional influence to the rich. Indeed, since we measure transfer rates as a share of the net income of the rich, it is unambiguously the case that net transfers as a share of middle incomes have risen over time. This finding is unacknowledged in the current literature, but it is very much in accordance with a long-standing tradition in the field, which emphasizes the pivotal role of the middle class – what we have referred to as the Representative Democracy Model.

We believe our results gain credibility because we are able to replicate, and explain, the accumulated evidence suggesting that the rich exert an outsized influence on public policies. This finding often follows when regressing changes in spending policies (or redistribution) on class preferences for changes in such policies. But this approach can be deeply misleading because it completely discounts preferred levels of spending across classes and picks up differences in information about counter-cyclical fiscal policies. Such differences in information need not be large to cause havoc with the results. Our simulations show that these models can lead to completely wrong conclusions, and when preferred spending levels are used in the empirical analysis we find no evidence that the rich drive policies. By contrast, the evidence that the middle class does is strong, consistent across micro and macro data, and robust to alternative model specifications.

Our results are thus reassuring about the continued importance of democracy for distributive politics. But it is important to add that democratic politics does not guarantee that inequality is adequately addressed. One of the misleading assumptions in much of the contemporary literature is that a working democracy will compensate for inequality, meaning that when we see rising inequality we should also expect to see more redistribution. That is not implied by majority rule. Distributive politics is multidimensional, and political alliances determines who benefit and who don't. Since the middle class and its representatives usually stand at the center of the political coalition game, middle-class interests are generally well-attended to. But that is not true of the poor or the lower middle classes, who depend on participation in government coalitions. Precisely because democratic governments are so important for redistribution, explaining partisanship remains an important task for political economy.

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Web Appendix A:

Class Preferences and Transfer Rates with Coalition Governments

The preferred taxation of H is straightforward since H wants to minimize transfers to M (or to L), and since regressive taxation is ruled out H simply sets the tax rate equal to zero:

$$t_H^* = 0 \quad \Rightarrow \quad \tau_H^{H*} = 0$$

L wants to tax both M and H to maximize transfers to itself:

$$y_L^{net} = y_L + t \cdot (y_M + y_H - \frac{1}{2} \cdot \alpha \cdot t \cdot (y_M + y_H)),$$

which implies a tax rate of:

$$t_L^{M*} = t_L^{H*} = \frac{1}{\alpha},$$

and a net income of

$$y_L^{net*} = y_L + \frac{1}{2} \cdot \frac{y_M + y_H}{\alpha}.$$

Total taxation demanded by L is greater than for M since L wants to tax $2/3$ of all income by $1/\alpha$, whereas M only taxes $1/3$ of all income (again, H sets taxes equal to 0). This is the preference ordering assumed in Figure 1 in the main text.

L 's optimal transfer as a share of the net income of M and H (L 's transfer rate) is identical to M 's optimal transfer rate from H :

$$\tau_L^{M,H*} = \frac{T_L}{y_M^{net} + y_H^{net}} = \frac{\frac{1}{2} \cdot \frac{y_M + y_H}{\alpha}}{(y_H + y_M) \cdot \left(1 - \frac{3}{2\alpha}\right)} = \frac{1}{2\alpha - 3}.$$

This completes the definition of preferences for each class. The next question is how political power shapes actual outcomes.

If M and H share power the observed transfer ratio is a weighted average of the preferred levels by M and H :

$$\tau_M^H(MH) = w_{M/H} \cdot \frac{1}{2 \cdot \alpha - 1} + (1 - w_{M/H}) \cdot 0 = w_{M/H} \cdot \frac{1}{2 \cdot \alpha - 1},$$

where $w_{M/H} = [0, 1]$ is a weight that measures the political power of M over H (MH indicates that both M and H matter politically).

Since we cannot observe α we cannot identify $w_{M/H}$, but we can test empirically whether the transfer rate, τ_M^H , responds to the relative income of M and H , as opposed to who are in government. If the democratic subversion thesis is correct, we should observe that

$$\tau_M^H(MH) = f(w_{M/H}) = g(y_M'/y_H') ,$$

where y_M'/y_H' are the observed relative pre-fisc incomes of M and H .²⁴

In a model where the middle class is pivotal, as in the main text, the transfer rate is the preferred rate of M . As explained in the main text, but we can infer that τ_M^H in that case will be orthogonal to y_M'/y_H' :

$$\tau_M^H(M) \perp y_M'/y_H' .$$

Note that this implication is stark because it means that even if top end inequality, y_H'/y_M' rises, as it has in most countries, this should have no effect on the transfer rate, which will remain constant (*ceteris paribus*). Note also that this implication is contrary to the Meltzer-Richard model. The reason is that the M-R model implicitly assumes that the interests of L and M are aligned so that when M 's income falls its preference for taxation rises. As soon as taxes and benefits can be targeted, M always wants to tax as much as it can and spend the proceeds on itself.

If government power matters (so the RDM applies) and M cannot govern on its own we need to derive the policy under different government coalitions. We assume such coalitions consist of at most two class parties. In the case of an MH coalition the bargain will lie between the optimal tax rate of M (which is $\frac{1}{\alpha}$) and the optimal tax rate of H (which is 0):

$$t_M^{H*}(MH) = w_M \cdot \frac{1}{\alpha} + (1 - w_M^H) \cdot 0 = \frac{w_M}{\alpha} ,$$

where $w_M = [0,1]$ is the bargaining weight of M vis a vis H . If the parties split their policy differences (i.e., have equal bargaining weights), M gets a transfer of $\frac{1}{2 \cdot \alpha} \cdot y_H$. Empirically we may think of w_M^H as the relative seat share of M in a coalition government with H .

The case of an LM coalition is more complicated because both L and M can tax H , and L can also tax M . So L and M must compromise on both dimensions. The policy vector is $P_j = \{t_L^H, t_M^H, t_L^M\}$, but because there is no incentive by either L or M to tax H beyond the point where additional

²⁴ Again, observed pre-fisc income is different from y_M and y_H because of the efficiency costs of taxation. Any actually observed income is always in a world with taxes so we can only measure y_M'/y_H' .

taxation leads to lower revenues, the former two policies lie on a line. The logic is illustrated in Figure 2, where each axis represents a tax rate in the policy space and where the optimal taxation of H is constrained to a linear combination of taxes preferred by L and M .²⁵ The optimal policies of L and M (defined above) are indicated by solid circles.

When L and M form a coalition, they must find a compromise that divide the difference between their preferred policies. If the compromise is a simple 50-50 split, half the taxes on H will go to L and the other half to M , and M will only be taxed half the rate of that preferred by L . This is the case illustrated in Figure 2.

But this may not be a feasible outcome if M has the option of allying with H , since M should then be able get at least as much as it can get from H (which is M 's outside option). In the split-the-difference scenario above, that means that M must get $T_M = \frac{1}{2 \cdot \alpha} \cdot y_H$, which is the middle of the solid line in Figure 2. Indeed, in any scenario with a binding outside constraint, the LM bargain must lie on this line. This implies that M gets the same in an LM coalition as in an MH coalition. In general, both L and M would be expected to get a share of the “full” taxation of H that equals their bargaining weigh:²⁶

$$T_M = w_M \cdot \frac{1}{\alpha} \cdot y_H$$

$$T_L = (1 - w_M) \cdot \frac{1}{\alpha} \cdot y_H$$

where $w_M = [0,1]$ is again the bargaining weight of M relative to L . The net transfer rates from H to M and L are then:

$$\tau_M^H(LM) = \frac{T_M}{y_H^{net}} = \frac{w_M \cdot \frac{1}{\alpha} \cdot y_H}{y_H - \frac{3}{2} \cdot \frac{y_H}{\alpha}} = \frac{w_M}{\alpha - \frac{3}{2}}$$

$$\tau_L^H(LM) = \frac{T_L}{y_H^{net}} = \frac{1 - w_M}{\alpha - \frac{3}{2}}$$

²⁵ This assumes that H has no economic power to influence policies. We control for such influence in the empirical estimation.

²⁶ Admittedly, L may have bargaining leverage over M either because it can offer M concessions in other policy areas, or because H and M cannot fully exclude L from sharing in the spending in an MH coalition (as in Iversen and Soskice 2006). Either way, it would reduce M 's transfer rate. We let the data speak to whether that is the case.

Web Appendix B:

Allocating the Value of Services and the Cost of Taxation to Each Income Group

As explained in the main text, we include the value of services in the net “extended” income (disposable cash income + the net (after tax) value of services) of the income groups using estimates computed from the OECD/EU database on the distributional impact of in-kind services (OECD 2011, figure 8.2). The estimates include the value of education, health care, social housing, elderly care, and early childhood education and care, and are measured as a share of disposable income. For a detailed description of these data, see Verbist et al. (2012).

Before adding the value of services to the disposable income of the income groups, we made the following adjustments. First, because of missing data for Switzerland we assigned it the average value of countries belonging to the conservative welfare state cluster (Germany, Austria, Italy, and France). Second, country-specific estimates are only publicly available for the overall population. We therefore adjusted the value of services to reflect our working household sample by the ratio of the OECD average value for the working age population (18-65 years) to the overall population, lowering the value by roughly 20 percent in all countries (Verbist et al. 2012, 33-34). Third, the OECD/EU estimates of the value of services are only calculated for 2007 and not all countries have data for 2007 in the LIS database. We therefore matched the OECD/EU estimates to the year closest to 2007 for Australia (2008), Belgium (1997), and Sweden (2005). To get time-varying estimates, we adopted a production cost approach and imputed the value of services in years other than the base-year (2007 or the year closest to it) assuming that the ratio of the value of services/transfers moves proportional to the ratio of spending on services/transfers.²⁷ Specifically, we multiplied the country-specific estimates of the value of services as a share of disposable income by total disposable income and divided by total transfers received. Then, this ratio of the value of services/transfers from the base-year was multiplied by the ratio of spending on services/transfers indexed to 1 in the base-year, using OECD data on spending on services and transfers. Finally, we multiplied the ratio of the value of services/transfers by total transfers received to get the total gross value of services for each country-year.

The total gross value of services is distributed to each income group’s cash disposable income using an allocation key computed from the OECD/EU database on the distributional impact of in-kind services.²⁸ The allocation key is only calculated for 2007 but the distributive impact of services is fairly stable over time and seems to be driven almost entirely by changes in level of spending (Verbist et al. 2012, 60). We therefore assign the country and quintile specific values from 2007 to all years.²⁹ The quintile specific values are recalculated to fit our deciles using the ratio of the value of services for the first quintile (q1) to the value of services for q1+q2 as a

²⁷ This is a standard approach to estimate the value of services. The OECD/EU estimates are also calculated using a production cost approach with the exception of social housing, where the value is calculated from the prevailing market rents (Verbist et al. 2012, 13).

²⁸ We thank Verbist et al. (2012) for providing us with these data.

²⁹ Again, data are missing for Switzerland, which is assigned the mean of countries belonging to the conservative welfare state cluster (Germany, Austria, Italy, and France).

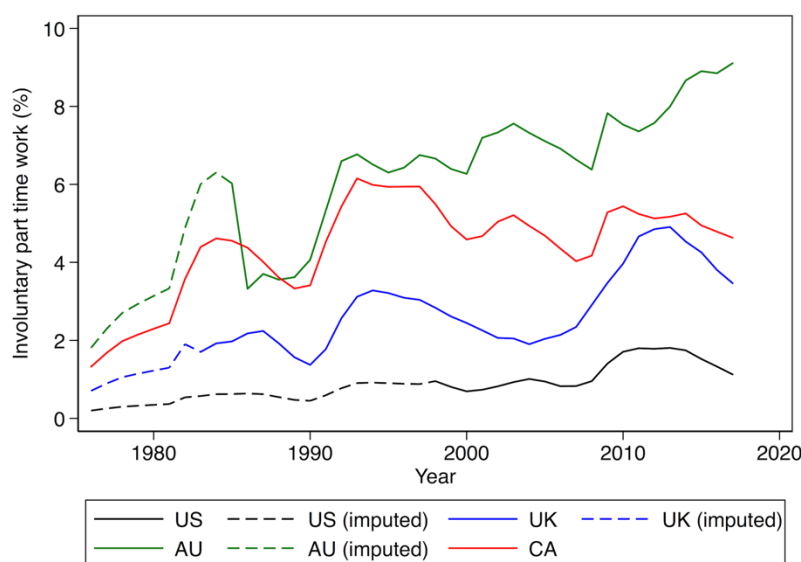
weight for the first decile (d1) and the inverse for d2 and so on. At the top, we assign an equal weight of the value of q5 to d9 and d10. This ensures that services also have a redistributive effect between deciles within a quintile and that it becomes less redistributive towards the upper end of the income distribution, just as the quintile-specific estimates suggest (see Verbist et al. 2012, 35).

Finally, we need to allocate the costs of transfers and services to the income deciles' disposable income. The costs are paid for by tax revenues that primarily come from taxation of income, capital, property and wealth, and consumption. Income taxes are accounted for in the LIS data. We treat capital taxes as neutral with respect to the income classes and simply add it to government revenues. Remaining costs are covered by property and wealth taxes, which are paid almost exclusively by households in the absolute top of the income distribution and we therefore add it to the tax burden of the top income decile, and consumption taxes, which we assume are paid in proportion to each income decile's consumption share and allocate accordingly.

We rely on OECD data to include revenues from taxation of capital, and property and wealth (OECD Revenue Statistics Database). Data on consumption shares are from the Eurostat Household Budget Survey for EU member states (and Norway) and from national statistics bureaus for non-EU countries (Australia, Canada, Iceland, Switzerland, and the United States). In most countries consumption shares are quite stable over time but data are not available for every country-year. We linearly inter- and extrapolate the series to maintain a full sample. In total, we extrapolate five observations, at most nine years back in time (UK:1988→1979) and three years into the future (Norway 2010→2013). Our results do not change when excluding the extrapolated observations.

Imputation of Data on Involuntary Part-Time Employment

To maintain a full sample when accounting for insurance, we have imputed nine values of involuntary part-time employment rates in the following countries and years: Australia 1981, the United Kingdom 1974 and 1979, and the United States 1974, 1979, 1986, 1991, 1994, and 1997. Australia's and the United Kingdom's values are imputed based on the trend in Canada (see figure B1). And the United States's values are imputed based on the average trend of the United Kingdom and Canada. The OECD data only go back to 1976, so the values for the United Kingdom and the United States in 1974 have been linearly extrapolated based on the full imputed time-series of each country. Figure B1 shows the trend recorded by the OECD (solid lines) and that following the imputation (dashed lines).

Figure B1. Imputation of Involuntary Part-Time Employment

Note: Values for Australia and the United Kingdom are imputed from the trend in Canada. Values for the United States are imputed from the average trend of the United Kingdom and Canada.

Web Appendix C:

Alternative Model Specifications: The Micro Evidence

Appendix C reports the models presented in part 1 of the analysis including all the countries that are in the ISSP surveys. These countries are Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States. This set of countries is very heterogenous in terms of history, political institutions, and democratic norms and traditions. Still, the overall results are quite similar to those presented in the main text.

Table C1 shows that changes in social spending also reflect the preferences of the rich more closely than those of the low and middle classes when including all countries. And table C2 shows very similar substantive effects to Table 3 in the main text, albeit with smaller coefficients.

Figure C1 shows that Chile, Latvia, Mexico, South Korea, and Turkey have very low levels of social spending compared to the other countries in the sample, and that including these countries in the sample attenuates the association between the long-run level of social spending and average preferences for redistribution. When excluding these countries, the pattern resembles that of Figure 3 in the main text but with smaller coefficients, which is expected given the much weaker democratic traditions among the set of emerging democracies that are now part of the sample. For this reason, it is also not surprising that partisanship of the government has no effect on social spending in Table C3.

Table C1. The Effect of Relative Support for Social Spending on Subsequent Two-year Changes in Social Spending, by Income Group Including All Countries in the ISSP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Two-year change in social spending as percentage of GDP								
Low income	5.59+			-4.01	8.43+			-11.84
	(3.05)			(3.75)	(4.36)			(12.16)
Middle income		5.22+		-5.24		7.35+		-
		(2.83)		(5.69)		(3.67)		(7.10)
High income			5.40+	12.51+			10.86*	28.91*
			(2.66)	(6.62)			(4.71)	(14.02)
Country FE					✓	✓	✓	✓
Constant	-2.26	-1.65	-1.11	1.19	-4.00	-2.79	-3.41+	3.65
	(1.51)	(1.19)	(0.79)	(1.36)	(2.68)	(1.98)	(1.99)	(4.05)
N	56	56	56	56	56	56	56	56
R-squared	0.09	0.11	0.15	0.18	0.06	0.07	0.21	0.32

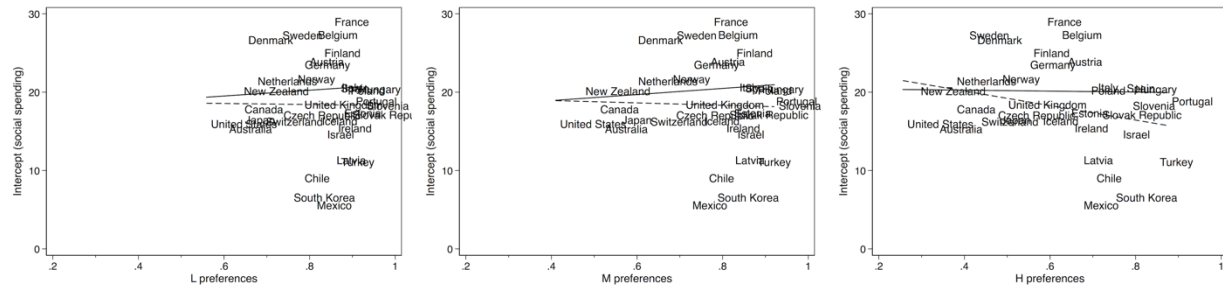
Note: * p<0.05, + p<0.1. Standard errors clustered by country in parentheses. Preference data not available for Belgium, Estonia, Iceland, Mexico, Slovak Republic, and Turkey, 27 countries included.

Table C2. The Effect of Absolute Support for Redistribution on the Level of Social Spending, by Income Group Including All Countries in the ISSP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Social Spending as Percentage of GDP								
Low income	4.77+			-0.61	-0.20			-8.54*
	(2.74)			(6.08)	(2.19)			(3.78)
Medium income		4.92*		21.34*		3.58		7.98*
		(2.07)		(5.89)		(2.35)		(3.92)
High income			-0.10	-15.91*			3.03	2.87
			(1.96)	(4.13)			(2.52)	(3.53)
Country FE					✓	✓	✓	✓
Constant	15.97*	16.14*	19.71*	13.78*	15.44*	13.42*	14.23*	15.37*
	(2.10)	(1.46)	(1.10)	(2.40)	(1.51)	(1.40)	(1.08)	(1.59)
R-squared	0.54	0.59	0.57	0.55	0.86	0.85	0.84	0.85
N	195	195	195	195	195	195	195	195
N of countries	33	33	33	33	33	33	33	33

Note: * p<0.05, + p<0.1. Standard errors corrected for heteroscedasticity in parentheses. Baseline for country intercepts is Australia.

Figure C1. The Effect of Absolute Support for Redistribution on the Estimated Long-Run Level of Social Spending, by Income Group Including All Countries in the ISSP



Note: The correlation between the intercepts and the preferences of *L*, *M*, and *H* are .09, .13, and -.02 (excluding Chile, Latvia, Mexico, South Korea, and Turkey). The estimated long-run levels of social spending are the intercepts from Table C2, model (8). The solid lines are fitted lines excluding Chile, Latvia, Mexico, South Korea, and Turkey. Dashed lines are fitted lines including all 33 countries.

Table C3. The Effect of Partisanship on the Long-Run Level of Social Spending, by Income Group Including All Countries in the ISSP

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimated Long-Run Level of Social Spending (Intercepts)								
Low income	3.70 (7.61)			-20.05 (32.10)	3.91 (8.07)			-27.31 (34.26)
Middle income		3.90 (5.69)		54.17+ (26.89)		4.68 (6.15)		54.82+ (27.89)
High income			-0.61 (4.84)	-31.84* (13.23)			0.04 (5.35)	- (14.31)
Government partisanship (right)					-0.58 (1.74)	-0.37 (1.75)	-0.85 (1.78)	-0.38 (1.69)
Constant	17.29* (5.96)	17.36* (4.16)	20.50* (2.82)	14.61 (9.75)	17.36* (6.32)	17.04* (4.50)	20.38* (3.09)	17.42 (10.28)
N	28	28	28	28	27	27	27	27
R-squared	0.01	0.02	0.00	0.23	0.02	0.03	0.01	0.21

Note: * $p < 0.05$, + $p < 0.1$. Standard errors in parentheses. Income group preferences are average absolute support for redistribution between 1985-2016. Government partisanship is the share of government controlled parliamentary seats held by right parties minus the share held by left parties averaged over all years where data are available in the Comparative Political Data Set (Armingeon et al. 2018). Chile, Latvia, Mexico, South Korea, and Turkey are excluded. No data on partisanship for Israel, and it is therefore omitted in models (5)-(8).

Web Appendix D:
Alternative Model Specifications: The Macro Evidence

Table D1. Determinants of Net Transfers to M as a Percentage of H 's Net Extended Income, Including France, Italy, and Japan

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Transfer rate M (%)				Transfer rate M incl. insurances (%)			
P90/P50	1.086 (3.196)	1.854 (3.733)	3.796 (3.139)	3.843 (3.281)	-0.077 (3.039)	0.827 (3.582)	3.233 (2.879)	3.411 (3.009)
P50/P10	1.676* (0.669)	1.232+ (0.633)	1.397* (0.593)	1.045* (0.520)	2.917* (0.639)	2.479* (0.743)	2.708* (0.449)	2.423* (0.486)
Trade openness (ln)	2.257 (1.741)	-0.344 (2.685)	1.187 (1.095)	0.160 (1.369)	1.935 (1.761)	-0.486 (2.424)	1.248 (0.852)	0.766 (1.040)
Capital account openness	- 2.830+ (1.607)	-1.563 (2.083)	- 3.361* (1.595)	-1.640 (1.990)	-1.122 (1.058)	0.371 (1.953)	- 2.760+ (1.620)	-0.754 (2.216)
Government partisanship (right)	- 3.836* (1.335)	-3.181* (1.063)	- 2.947* (1.332)	-2.487* (1.067)	- 4.095* (1.633)	-3.489* (1.412)	- 3.360* (1.299)	- 3.049* (1.218)
Labor force participation	- 0.180* (0.085)	-0.147 (0.095)	-0.103 (0.076)	-0.091 (0.080)	- 0.291* (0.093)	-0.253* (0.097)	- 0.222* (0.062)	- 0.195* (0.059)
Trend		✓		✓		✓		✓
Trend ²		✓		✓		✓		✓
Country FE	✓	✓			✓	✓		
Constant	4.215 (9.403)	13.106 (17.030)	-0.462 (9.539)	5.044 (11.715)	12.412 (9.491)	19.798 (15.572)	6.232 (8.081)	7.816 (9.350)
R-squared	0.276	0.344			0.363	0.415		
N	125	125	125	125	122	122	122	122
N of countries	21	21	21	21	20	20	20	20

Note: * $p < 0.05$, + $p < 0.1$. Standard errors clustered by country in parentheses. Models (3), (4), (7), and (8) are random effects models. Japan cannot be included in models (5)-(8) because of lack of data on involuntary part-time employment. Italy 2014 is an influential observation and is therefore omitted from the regressions.

Table D2. Determinants of Net Transfers to M as a Percentage of H 's Net Extended Income, Including Extra Controls

	(1)	(2)	(3)	(4)
	Transfer rate M (%)		Transfer rate M incl. insurance (%)	
P90/P50	1.368 (3.224)	2.387 (4.628)	1.087 (2.340)	2.373 (3.550)
P50/P10	1.731 (1.028)	1.437 (0.871)	3.094* (0.913)	2.841* (0.869)
Trade openness (ln)	3.422	1.635	3.119	1.802

	(2.631)	(2.201)	(2.538)	(2.306)
Capital account openness	1.352	2.912	1.140	2.654
	(3.023)	(2.155)	(2.355)	(1.894)
Government partisanship (right)	-5.126*	-3.967*	-5.517*	-4.554*
	(1.547)	(1.123)	(1.745)	(1.511)
Labor force participation	-0.246*	-0.081	-0.347*	-0.205*
	(0.075)	(0.074)	(0.067)	(0.086)
Real GDP growth	-0.245+	-0.124	-0.319*	-0.222*
	(0.138)	(0.099)	(0.127)	(0.102)
Population 65+ (%)	-0.097	-0.483	-0.058	-0.364
	(0.459)	(0.481)	(0.418)	(0.415)
Voter turnout	0.021	0.089	0.063+	0.119*
	(0.037)	(0.057)	(0.034)	(0.055)
Union density	0.013	0.016	0.058	0.050
	(0.100)	(0.059)	(0.085)	(0.061)
Bargaining Coverage (adjusted)	-0.006	-0.059	-0.024	-0.065
	(0.072)	(0.064)	(0.069)	(0.066)
Trend		✓		✓
Trend ²		✓		✓
Country FE	✓	✓	✓	✓
Constant	-0.605	-0.113	2.631	1.420
	(9.775)	(14.043)	(8.908)	(11.281)
R-squared	0.406	0.509	0.532	0.586
N	104	104	104	104
N of countries	18	18	18	18

Note: * p<0.05, + p<0.1. Standard errors clustered by country in parentheses.

Table D3. Determinants of Net Transfers to *M* as a Percentage of *H*'s Net Extended Income, Random Effects Models

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Transfer rate <i>M</i> (%)				Transfer rate <i>M</i> incl. insurance (%)			
P90/P50	5.221+	6.469+	4.759	3.943	4.804+	6.899*	5.005+	4.948
	(2.851)	(3.620)	(3.007)	(3.989)	(2.891)	(2.839)	(2.920)	(3.067)
P50/P10	1.672*	1.372*	1.947*	1.758*	2.831*	2.639*	3.201*	3.035*
	(0.499)	(0.451)	(0.597)	(0.587)	(0.450)	(0.443)	(0.506)	(0.539)
Trade openness (ln)	1.493	1.610	2.874*	1.537	1.345	1.784+	2.295+	1.504
	(1.131)	(1.189)	(1.287)	(1.579)	(0.890)	(0.944)	(1.214)	(1.326)
Capital account openness	-3.301+	-0.274	-1.559	1.223	-	-1.747	-2.441	0.726
	(1.721)	(1.976)	(2.264)	(1.811)	4.417*	(2.835)	(1.987)	(2.009)
Government partisanship (right)	-3.183*	-3.033*	-4.369*	-3.765*	-	-	-	-3.910*
	(1.243)	(1.074)	(1.018)	(0.724)	3.191*	3.312*	4.419*	
Labor force	-0.116	-0.039	-0.098	-0.067	-	-	-	-0.110

participation					0.199*	0.110+	0.147+	
	(0.072)	(0.081)	(0.081)	(0.078)	(0.076)	(0.067)	(0.088)	(0.068)
Real GDP growth			-0.168	-0.083			-0.218	-0.159
			(0.150)	(0.117)			(0.142)	(0.122)
Population 65+ (%)			-0.482*	-0.633*			-	-0.620*
							0.552*	
			(0.242)	(0.311)			(0.184)	(0.231)
Voter turnout			-0.024	0.026			0.004	0.047
			(0.031)	(0.040)			(0.030)	(0.036)
Mod. PR (AU)			-1.951	-3.560+			-2.297	-3.231+
			(1.520)	(1.893)			(1.744)	(1.806)
PR			-1.761	-1.302			-1.013	-0.650
			(1.849)	(1.688)			(1.784)	(1.541)
Trend		✓		✓		✓		✓
Trend ²		✓		✓		✓		✓
Constant	-5.536	-11.814	-3.555	0.426	1.574	-8.618	-0.484	-1.304
	(10.137)	(12.564)	(10.301)	(13.566)	(9.365)	(9.640)	(9.675)	(9.419)
N	110	110	107	107	110	110	107	107
N of countries	18	18	18	18	18	18	18	18

Note: * p<0.05, + p<0.1. Standard errors clustered by country in parentheses.

Table D4. Determinants of Net Transfers to *L* as a Percentage of *H*'s Net Extended Income

	(1)	(2)	(3)	(4)
	Transfer rate <i>L</i> (%)			
P90/P50	-8.438	-9.575	-8.792	-11.231
	(5.047)	(6.806)	(5.785)	(7.217)
P50/P10	5.343*	4.877*	5.971*	5.724*
	(0.829)	(0.966)	(0.839)	(0.901)
Trade openness (ln)	-5.150	-8.366*	-2.035	-5.322
	(3.137)	(3.542)	(4.228)	(3.283)
Capital account openness	-6.978*	-5.538	-1.432	-1.503
	(2.538)	(4.017)	(3.068)	(3.084)
Government partisanship (right)	-8.514*	-7.383*	-9.488*	-8.227*
	(2.500)	(2.252)	(2.958)	(2.238)
Labor force participation	-0.217+	-0.201	-0.209	-0.076
	(0.106)	(0.186)	(0.140)	(0.187)
Real GDP growth			-0.385+	-0.224
			(0.183)	(0.180)
Population 65+ (%)			-0.393	-0.932*
			(0.506)	(0.435)
Voter turnout			0.146+	0.231*
			(0.072)	(0.096)
Union density			-0.050	0.047

			(0.103)	(0.096)
Bargaining Coverage (adjusted)			0.090	0.009
			(0.074)	(0.072)
Trend		✓		✓
Trend ²		✓		✓
Country FE	✓	✓	✓	✓
Constant	70.614*	86.294*	43.037*	56.621*
	(11.015)	(25.145)	(13.293)	(17.695)
R-squared	0.391	0.423	0.466	0.529
N	110	110	104	104
N of countries	18	18	18	18

Note: * p<0.05, + p<0.1. Standard errors clustered by country in parentheses.