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The Political Economy of Compensatory Redistribution: Unemployment, Inequality and Policy Choice

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Macroeconomic conditions, inequality shocks and the politics of redistribution, 1990-2013

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abstract

This paper explores common trends in inequality and redistribution across OECD countries from the late 1980s to 2013. Low-end inequality rises during economic downturns while rising top-end inequality is associated with economic growth. Most countries retreated from redistribution from the mid-1990s until the onset of the Great Recession and compensatory redistribution in response to rising unemployment was weaker in 2008-13 than in the first half of the 1990s. As unemployment and poverty risk have become increasingly become concentrated among workers with low education, middle-income opinion has become more permissive of cuts in unemployment insurance generosity and income assistance to the poor. At constant generosity, the expansion of more precarious forms of employment reduces compensatory redistribution during downturns because temporary employees do not have the same access to unemployment benefits as permanent employees.

This paper seeks to provide a broad-gauged assessment of what has happened to income inequality and redistribution in OECD countries since the global financial and economic crisis of 2007-09 and to draw lessons from this experience for the literature on the political economy of redistribution. Focusing on eleven core OECD countries, our analysis situates the crisis experience of 2008-13 in the backdrop of the preceding twenty years and compares the recent crisis with the crisis experienced by many core OECD countries in the early 1990s. Relative to existing literature, we emphasize common trends among core OECD countries and draw attention to inequality shocks during economic downturns. It is commonplace for scholars and pundits alike to posit that "market forces" have been a source of steadily rising income inequality for the last 20-30 years, with "institutions" resisting market-generated pressures to a greater extent in some countries than in others. Challenging conventional wisdom, we show that relative poverty as well as overall inequality, measured before taxes and transfers, jumped in virtually all OECD countries in the early 1990s, held steady or even declined from 1994 to 2007, and then increased again in the wake of the Great Recession.

We will also show that the redistributive impact of taxes and transfers declined in most countries from the mid-1990s to the onset of the Great Recession. Tax-transfer systems compensated for inequality shocks in the first half of the 1990s and again after 2008, but compensatory redistribution in 2008-13 was less extensive. Taking into account the effects of "inequality stabilizers" built into modern tax-transfer systems, the experience of 2008-13 represents a continuation of the retreat from redistribution that began in 1994-2007.

It is tempting to explain the retreat from redistribution in terms of a growing pro-rich bias in policy-making, but increases in top income shares are not correlated with reductions

in redistribution across countries. Our discussion instead emphasizes support for redistribution among electorally pivotal middle- (and upper-middle) income citizens. While top-income shares rose, relative poverty rates fell and poverty risk became more concentrated among low-educated citizens in the 10-15 years of economic growth that preceded the Great Recession. In most countries, middle-income citizens became less supportive of redistribution in this period, presumably because they became less worried about falling into poverty. While poverty rates rose in the wake of Great Recession, the concentration of poverty risk became even more pronounced, and middle-income support for redistribution held steady.

We begin by situating our analysis and core argument in relation to existing literature on the politics of inequality and redistribution. Moving on to empirics, we provide an overview of changes in overall inequality and redistribution and briefly describe changes in the structure of inequality from the late 1980s until 2013. Against this backdrop, we explore how inequality and redistribution respond to changes in unemployment and, most importantly, how and why "redistribution responsiveness" has changed over time. We present some evidence in favor of our argument about poverty concentration and middle-income support for redistribution. By way of conclusion, we briefly address the crisis experience of more peripheral European countries (Ireland and Southern Europe) and suggest that the rise of "populism" can partly be seen as a response to inequality and economic crisis.

Theoretical perspectives on inequality and redistribution

The topic of redistribution and, in particular, the question of how inequality and redistribution are related to each other has moved to the center stage of comparative political economy in recent years. One strand of research on this topic engages in macro-level cross-national comparisons. Such analyses can be seen as an extension of the tradition of comparative welfare-state research, with redistribution replacing social spending or welfare-state generosity as the outcome to be explained and inequality featuring as one of the explanatory variables of theoretical interest (see Bradley *et al.* 2003; Huber and Stephens 2014; also Kenworthy and Pontusson 2005). To date, macro-comparative research has focused on explaining cross-national variation rather than common trends among OECD countries. This is not to say that macro-comparativists are only interested in why it is that some countries redistribute more than others. The point is rather that they approach change over time with a particular question in mind: Why has inequality grown more in some countries than in others?

A second strand of comparative research focuses on individual preferences for redistribution and explores the impact of inequality on individual preferences. This approach to the politics of redistribution often takes the Meltzer-Richard model (Meltzer and Richard 1981) as its point of departure. In the Meltzer-Richard model, the preferences of pivotal voters determine government policy and these voters, situated near the median of the income distribution, demand more redistribution as inequality rises or, more precisely, as income becomes more concentrated at the top. As commonly noted, the prediction that inequality is positively associated with redistribution does not hold cross-nationally: quite the contrary, governments in countries with a more egalitarian distribution of market

earnings tend to engage in more redistribution through taxes and transfers (Kenworthy and Pontusson 2005; Iversen and Soskice 2009). Focusing on change over time, it is hard to identify any country in which rising top-end inequality has triggered more redistribution.

The literature on individual preferences for redistribution seeks to resolve this puzzle by challenging the Meltzer-Richard assumption that voters are only or primarily motivated by maximization of their current income. Broadly speaking, this literature can be divided into two camps: studies that emphasize insurance motives or, in other words, prospects for downward or upward mobility in the income distribution (e.g., Iversen and Soskice 2001) and studies that invoke other-regarding motives, such as altruism (e.g., Dimick, Rueda and Stegmueller 2016) or affinity with the poor (e.g., Alesina and Glaeser 2004).[1] While the insurance school argues that democratic politics will tolerate rising inequality if and when it is associated with a decline in economic insecurity among middle-income voters, the other-regarding school suggests that democratic politics will tolerate rising inequality when it is associated with an increase in ethnic or racial minorities among the poor.

While the literature on preferences for redistribution has yielded many interesting insights, it might fairly be faulted, we think, for losing sight of redistribution as a macro-level outcome. This literature has only recently (e.g., Rueda and Stegmueller 2016b) begun to address the question of whether or how support for redistribution matters to political behavior. Even if it is the case that preferences for redistribution determine voting behavior, it is far from self-evident that the preferences of citizens, as expressed in elections, are the key to understanding cross-national and over-time variation in redistribution. Another striking feature of the preferences literature is the absence of any sustained effort to address the sources of rising inequality. Most contributors to this literature treat inequality as an

exogenous variable to which citizens and parties respond (some more than others). This approach becomes deeply problematic to the extent that political choices are a source of rising inequality.

While drawing on the preferences literature, we seek to bring redistribution, understood as a macro-level outcome, back into the spotlight. Relative to the macro-comparative literature to date, our analysis emphasizes income dynamics related to macroeconomic cycles rather than long-term structural changes, such as globalization, the growth of service employment, skill-biased technological change, and changes in household composition. Analytical insights might be gained, we believe, by focusing on how tax-transfer systems respond to inequality shocks during economic downturns.

Our core argument about the politics of redistribution builds on Lupu and Pontusson (2011), who posit that it is the structure of inequality rather than the level of inequality that matters to the formation of middle-income preferences and political coalitions. The Lupu-Pontusson thesis boils down to this: if the distance from the middle to the bottom of the income distribution is smaller than the distance from the middle to the top, middle-income citizens will be inclined to join a pro-redistribution coalition with the poor, but if the distance to the bottom is bigger than the distance to the top, middle-income citizens will be inclined to join an anti-redistribution coalition with the affluent. As mobility prospects are a function of income distances, worries about downward mobility dominate in the former scenario while hopes of upward mobility dominate in the latter scenario, but social affinity may also motivate middle-income citizens to behave in the predicted fashion. (Lupu and Pontusson deliberately equivocate on the extent to which support for redistribution is self-interested or other-regarding).

Lupu and Pontusson (2011) measure the structure of inequality by dividing the 90-50 (upper-to-middle) ratio by the 50-10 (middle-to-lower) ratio. Pooling OECD data on earnings among full-time employees, they present regression results suggesting that skew measured in this fashion is indeed associated with redistribution across countries and over time. Focusing on within-country change over time, this analysis leaves something to be desired. 50-10 earnings ratios have generally changed little while 90-50 ratios have increased in most OECD countries since the mid-1990s. By the logic of Lupu and Pontusson, this should have translated into a general trend for redistribution, which is not what we observe.

As a partial solution to this empirical puzzle, our discussion of low-end inequality focuses on relative poverty rates (the percentage of the population living in households with incomes below 50% of the median income) rather than 50-10 earnings or income ratios. Our measure of low-end inequality is broader than Lupu and Pontusson's in that it encompasses people in non-standard employment and the unemployed as well as individuals who are not in the labor force. More importantly, our expectations for relative poverty are, in a sense, the opposite of those for the 50-10 ratio. Relative poverty is effectively a measure of the number of income percentiles that separates the median-income earner (or household) from "the poor." In Lupu and Pontusson's original formulation, the distance between the middle and the poor increases with the 50-10 ratio. In our alternative formulation, the distance between the middle and the poor falls with the poverty rate.

We go beyond Lupu and Pontusson (2011) not only by conceiving low-end inequality differently, but also by taking into account the distribution of unemployment and poverty risk in a more systematic fashion. The "structure of inequality," as we conceive it in this

paper, pertains to the distribution of risk as well as the distribution of income. An extensive literature demonstrates that labor-market risks—unemployment risk in particular—have become significantly more concentrated among low-skilled workers, immigrants and young people as a result of the expansion of non-standard forms of unemployment over the last two or three decades (e.g., King and Rueda 2008; Emmenegger *et al*. 2012). Some of this literature argues that welfare states have also undergone "dualization" in the sense that the welfare benefits provided to labor-market "outsiders" have deteriorated relative to the benefits provided to "insiders" (e.g., Palier and Thelen 2010; Seeleib-Kaiser, Saunders and Naczyk 2012). Importantly for our purposes, the dualization literature dovetails with Lupu and Pontusson (2011) in the sense that it treats the distribution of economic insecurity rather than the average level of insecurity as the critical variable shaping the politics of compensatory redistribution (see also Rehm, Hacker and Schlesinger 2012; Alt and Iversen 2016).

Like most of the literature on preferences for redistribution, our approach posits that government policy is responsive to the preferences of middle-income citizens. Several important studies of American politics (most notably Hacker and Pierson 2011 and Gilens 2014) question the extent to which this is so and income bias in political representation has recently become a topic of debate among comparativists. It is tempting to suppose, as suggested by Rosset, Giger and Bernauer (2013), that pro-rich political bias rises with income inequality. In due course, we shall briefly address this question. For the time being, suffice it to note that we do not wish to argue that middle-income preferences are the main, let alone the only, driver of policy changes that have rendered tax-transfer systems less

responsive to rising inequality. In our thinking, public opinion plays a more limited and indirect role, permitting (or not) policy changes initiated for other reasons.

Our analysis of the political economy of compensatory redistribution situates government policy in a broader context. Our point of departure is the observation that "automatic equalizers" are built into modern tax-transfer systems. Suppose, for the sake of argument, that unemployment insurance is financed by a proportional income tax and provides an income replacement that is strictly proportional to the income earned before becoming unemployed. Typically, firms are more likely to shed unskilled labor than skilled labor during economic downturns and adults in the lower half of the income distribution are less skilled than adults in the upper half of the income distribution.[2] Under these conditions, rising unemployment during economic downturns increases inequality, particularly low-end inequality, before taxes and transfers. At the same time, redistribution increases because low-income households' share of income taxes decreases while their share of unemployment benefits increases. By the same mechanisms, redistribution tends to decline as the economy recovers and (cyclical) unemployment falls.

Policy choices affect the extent to which redistribution responds to inequality generated by rising unemployment. The progressivity of taxation undoubtedly matters, but income transfers to the unemployed (i.e., benefits) would appear to be the main source of variation in responsiveness across countries and over time. There are essentially two dimensions of policy choice with respect to income transfers: the replacement rate (or generosity level) and the coverage rate. Though the extent to which individuals in temporary and part-time employment are covered by unemployment insurance or similar benefits varies, it is typically the case that they do not qualify for the same level of income

replacement as individuals in permanent full-time employment. This, then, introduces another potential source of variation in the responsiveness of redistribution: holding generosity and eligibility conditions constant, compensatory redistribution will decline if unemployment becomes more concentrated to individuals with less than full access to unemployment compensation.

Trends in inequality and redistribution

Pooling data from the Luxembourg Income Study (LIS) and the European Union's Statistics on Income and Living Conditions (SILC) allows us to track the evolution of income inequality and redistribution from the late 1980s until 2013. For the time being, we will focus on the eleven OECD countries for which we have data over this entire period. Listed in Table 1, these countries can all be characterized as "core OECD countries." (In the conclusion, we will briefly discuss the recent experience of Ireland and Southern Europe). Like many other comparative studies of redistribution, we restrict our analysis to working-age households. Previous studies make this move to sidestep the problem that retired households typically have very little "market income" in countries with generous public pensions, producing inflated measures of redistribution. In our case, this choice is also motivated by our interest in the impact of macroeconomic conditions, which is surely most direct and most pronounced for working-age households.[3]

The measure of inequality used here is the Gini coefficient multiplied by 100, representing the percentage of total income that would have to be redistributed to achieve perfect equality across all households. In Table 1, we report changes in the Gini coefficient for household income before taxes and income transfers ("pre-fisc inequality") as well as

household income after taxes and transfers ("post-fisc inequality").[4] We also report changes in redistribution, measured as the percentage reduction in the Gini coefficient produced by taxes and transfers by the government (i.e., the difference between the pre-fisc Gini coefficient and the post-fisc Gini coefficient expressed as a percentage of the pre-fisc Gini coefficient). For the two inequality measures and the redistribution measure alike, Table 1 reports change measured as the absolute (percentage-point) difference between the earlier and the more recent observation.

To focus attention on the effects of the macroeconomic conditions, Table 1 records changes in inequality and redistribution over three time periods: from the late 1980s to the mid-1990s, from the mid-1990s to the onset of the Great Recession and from 2008 to the most recent observation available (in most cases, 2013).[5] Generalizing across the OECD area, sharp economic downturns, followed by sluggish growth and persistently high unemployment, characterize the first and the third period. By comparison to the early 1990s as well as 2007-08, the international recession of 2001-02 was a minor downturn and sustained economic growth characterizes the second period as a whole (see Appendix).

For heuristic purposes, Table 1 sorts OECD countries into three conventional groups, based on a combination of geography, language and welfare-state regimes. In the last column of Table 1, we report the most recent observation of post-fisc inequality, with rankings in parentheses. Consistent with conventional wisdom, the Nordic countries tend to be more equal than continental European countries and continental European tend to be more than Anglophone countries (but note that the Netherlands was more equal than Denmark and Australia was more equal than Germany in 2013). More importantly for our purposes, Table

1 brings out common trends that cut across the country groups and shows that these common trends follow the macroeconomic cycle.

[Table 1]

The role of macroeconomic conditions is most immediately apparent in the data on pre-fisc inequality. While pre-fisc inequality declined in the Netherlands from the late 1980s to the mid-1990s, it increased substantially in the other ten countries and especially in the Nordic countries. Across the eleven countries, the Gini coefficient for pre-fisc income of working-age households increased by an average of 3.7 percentage points. Over the growth period from 1994 to 2007, pre-fisc inequality continued to rise in Norway, Germany and Canada, but held steady in the US and fell in the other seven countries. Averaging across the eleven countries, the Gini coefficient for pre-fisc income among working-age households declined by 0.1 from the mid-1990s to 2007.[6]

Over the period from 2008 to 2013, pre-fisc inequality increased in seven out of eleven countries. The Gini coefficient for pre-fisc income was unchanged in Germany and declined marginally in Norway, France and Australia. While Denmark and the US experienced inequality shocks comparable to those of the early 1990s, the inegalitarian impact of the Great Recession in core OECD countries was, generally speaking, much less dramatic than the impact of the recession of the early 1990s. Averaging across the eleven countries included in Table 1, the pre-fisc Gini increased by less than one percentage point.

The cyclical pattern that we observe for pre-fisc inequality is less evident in the data on post-fisc inequality. By definition, the difference between inequality measures based on these two income concepts is a function of the redistributive effects of taxes and income transfers. The data presented in Table 1 supports two broad observations about

redistribution and the evolution of post-fisc inequality. The first observation concerns the growth period of 1994-2007. As noted above, pre-fisc inequality fell in seven of the eleven countries over this period. However, post-fisc inequality rose in five of these countries (Denmark, Finland, the Netherlands, Australia and the UK) and fell less than pre-fisc inequality in the other two countries (Sweden and France). In the US, post-fisc inequality rose while pre-fisc inequality was unchanged and in Canada post-fisc inequality rose more sharply than pre-fisc inequality. Norway, France and Germany are the only three countries in which redistribution, measured as the percentage change in the Gini coefficient produces by taxes and transfers, increased over the period 1994-2007. In the cautious formulation of the OECD (2011: 18), ''from the mid-1990s to 2005, the reduced redistributive capacity of tax-benefit systems was sometimes the main source of widening household-income gaps.''

The second observation concerns the extent of compensatory redistribution during economic downturns. In nine of the ten countries in which pre-fisc inequality rose from the late 1980s to the mid-1990s, post-fisc inequality rose less or, in the Danish case, actually declined. Averaging across these ten countries, the Gini coefficient for pre-fisc income rose by 4.2 while the Gini coefficient for post-fisc income only increased by 1.3. In other words, changes in the incidence of taxation and income transfers offset roughly 69% of the increase in pre-fisc inequality. In the 2008-2013 period, taxes and transfers again compensated for rising pre-fisc inequality, but not to the same extent. On average, the Gini coefficient for pre-fisc income increased by 1.4 while the Gini coefficient for post-fisc income increased by 0.9 in the seven countries that experienced a rise in pre-fisc inequality from 2008 to 2013, i.e., taxes and transfers offset only 36% of the increase in pre-fisc inequality (and only 25% across all eleven countries). What distinguishes the experience of the Great Recession from

that of the early 1990s is not only smaller inequality shocks, but also less compensatory redistribution.[7]

It deserves to be noted that much of the retreat from redistribution over the period 1994-2007 occurred after 2000. In all but two countries (Denmark and Finland), the decline in redistribution from 2000 to 2007 was greater than the decline in redistribution from 1994 to 2000. The reversal of automatic equalizers accounts for only part of the retreat from redistribution that began in the mid-1990s.

For the eleven countries included in Table 1, Figure 1 shows the relationship between changes in pre-fisc and post-fisc inequality for each of the three time periods. The 45-degree lines in these scatterplots represent a hypothetical scenario in which there is no change in redistribution and, as a result, changes in post-fisc inequality correspond perfectly to changes in pre-fisc inequality. In the first period, most observations fall below the 45-degree line, meaning that increases in redistribution offset at least some of the increase in pre-fisc inequality. In the second period, quite a few observations fall above the 45-degree line, meaning that changes in redistribution were regressive. Changes in pre-fisc inequality provide surprisingly little leverage on changes in post-fisc inequality across countries in either of these periods. By contrast, they are a strong and consistent predictor of changes in post-fisc inequality in the third period (with most countries below the 45-degree line, as in the early 1990s). We interpret this to mean that tax-transfer systems have become more market-conforming.

[Figure 1]

The changing structure of inequality

We now turn to the question of how macroeconomic conditions affect relative incomes at the bottom and the top of the income distribution or, in other words, how they affect the structure of inequality. With the same periodization as Table 1, Table 2 reports on changes in relative poverty rates and top 1% income shares. Estimated based on LIS and SILC data, the poverty rate is here defined as the percentage of working-age households that have a pre-fisc income below 50% of the median pre-fisc income of working-age households. Taken from the World Wealth and Income Database, the top 1% income share is the percentage total tax-declared income (including transfers) of "physical persons" that is declared by the top 1% of households or individuals. As noted in the last column of Table 2, the top-income share data end before 2012-13 for some countries and thus capture only the initial phase of the crisis.

[Table 2]

Pre-fisc poverty rates follow the macroeconomic cycle in much the same way as pre-fisc Gini coefficients.[8] From the late 1980s to the mid-1990s, relative poverty increased in all eleven countries for which we have on data pre-fisc income (including the Netherlands, where the pre-fisc Gini coefficient fell in this period). While the inequality shocks experienced by the Nordic countries in this period again stand out, the poverty rate rose by at least two percentage points in nine countries. By contrast, Norway and Germany stand out as the only two countries in which the pre-fisc poverty rate rose from the mid-1990s to the onset of the Great Recession. Norway and Germany are also the only countries in which the pre-fisc poverty rate did not rise in the wake of the Great Recession. As with pre-fisc Gini

coefficients, poverty increases in the recent crisis were typically less sharp than poverty increases during the crisis of the early 1990s (with the notable exception of the US).

The pattern in the data for top 1% income shares is strikingly different. From 1989 to 1994, top income shares rose in half the countries and fell in the other half. In the ensuing period of relatively robust economic growth, rising top income shares became an OECD-wide phenomenon. On average, top income shares rose by nearly 3 percentage points from 1994 to 2007. Finally, top income shares fell in all but two countries (Denmark and Sweden) in the immediate aftermath of the financial crisis of 2007-08.

Unemployment and inequality

The observation that low-skilled workers are particularly affected by cyclical unemployment provides a straightforward and compelling explanation of why it is that low-end inequality tends to rise during economic downturns and decline during periods of sustained economic growth. As shown in Table 3, change in unemployment is a powerful predictor of changes in pre-fisc poverty rates as well as pre-fisc Gini coefficients for working-age households over the entire period 1990-2013. This holds for the eleven OECD countries included in Tables 1-2, but also for a larger sample of nineteen OECD countries.[9]

[Table 3]

As far as pre-fisc inequality trends are concerned, the most striking feature of the data presented in Tables 1-2 is surely the fact that the Great Recession generated less sharp increases in inequality than the international recession of the early 1990s. Has the relationship between unemployment and inequality changed in ways that can explain the contrast between these two crisis episodes? As shown in Table 4, unemployment became

more concentrated to workers with low education in the growth period from 1994 to 2007. Among the eleven countries considered here, Denmark is the one country that bucked this general trend. With three exceptions (the Netherlands, Canada and the US), the concentration of unemployment among workers with low education increased further in the crisis period of 2008-13. Given the close correlation between education and income, this development renders the limited extent of the inequality shocks associated with the Great Recession even more puzzling. (Based on the data presented in Table 4, we would expect the inegalitarian consequences of rising unemployment to be bigger today than in the 1990s).

[Table 4]

Using the same data and setup as in Table 3, we explore time-varying distributive effects of unemployment by interacting in changes in the unemployment rate with dummies for our three sub-periods (1990-95, 1996-2007 and 2008-13) in Table 5. When these models are estimated with data for nineteen countries, the positive effect of rising unemployment on pre-fisc Gini coefficients and poverty rate appears to have been marginally bigger in 2008-13 than in 1990-95, and smaller in 1996-2007, but none of the these between-period differences clear conventional thresholds of statistical significance. When the analysis is restricted to the eleven countries for which we have inequality data going back to the late 1980s, the story becomes more complicated. In these countries, rising unemployment is associated with rising inequality, measured by the pre-fisc Gini coefficient, in 2008-13 as well as 1990-95, but not in the intervening period. The magnitude of the effect of a one-percentage point change in unemployment is roughly the same for the two crisis periods, but the effect is less precisely estimated for the latter period. More strikingly, we do not find any significant effect of rising unemployment on poverty rates in the eleven

countries from the mid-1990s onwards. Perhaps as a result of the expansion of low-wage employment, poverty dynamics appear to have become less closely linked to macroeconomic conditions in core OECD countries (cf. Brady and Jäntti 2016).

[Table 5]

As suggested by Jenkins *et al.* (2013: 55), the limited impact of the Great Recession on the distribution of income in core OECD countries may have to do with changes in the relationship between GDP growth and unemployment as well as changes in the incidence of unemployment. Averaging across the eleven countries included in Tables 1-2, the rate of unemployment increased by 3.7 percentage points from 1990 to 1993, but only by 1.6 points from 2008 to 2011. As shown in the appendix, these averages conceal a great deal of cross-national variation (see also Amable and Mayhew 2011). Most notably, the average for the early 1990s drops to 2.8 if we exclude Finland. Still, unemployment rose significantly less from 2008 to 2011 than from 1990 to 1993 in eight of our eleven countries (and rose by the same magnitude in Norway). This contrast is particularly striking because most of these countries experienced much sharper contractions of GDP in the Great Recession than in the early 1990s.[10]

The question of why the Great Recession resulted in less unemployment than we might have predicted based on historical experience lies beyond the scope of this paper. For our present purposes, a couple of observations must suffice. First, it may well be the case that wages, especially the wages of low-skilled workers, have become more downwardly adjustable as a result of union decline, the expansion of fixed-term employment contracts, and other forms of "flexibilization." Secondly, the Great Recession was not only a very sharp downturn by postwar standards, but also, for core OECD countries, remarkably short and

synchronized. Virtually all OECD economies contracted in 2009 and virtually all core OECD economies recovered in 2010. By contrast, the recession of the early 1990s was staggered and, in some countries (notably Finland and Sweden), lasted much longer. As it typically takes firms some time to respond to downturns by laying off workers, timing might explain why the recession of the early 1990s appears to have been more "unemployment intensive" than the Great Recession. Arguably, the synchronized nature of the Great Recession also meant that governments were more willing to engage in fiscal stimulus, expecting most other governments to behave in a similar fashion (see Pontusson and Raess 2015).

Unemployment and redistribution

Let us now explore how redistribution responds to changes in unemployment. For this purpose, it makes sense to set taxes aside and to focus on redistribution through income transfers, measured as the percentage reduction of the Gini coefficient from net income (i.e., post-tax, pre-transfer income) to disposable income (in our terminology, post-fisc income).[11] Based on data for our eleven countries, Table 6 reports the results of estimating fixed-effects models with change in the redistributive effect of income transfers as the dependent variable. The first two models replicate the setup in Tables 3 and 5. Over the entire period 1990-2013, change in unemployment is a strong predictor of change in redistribution (Model 1), but when we interact change in unemployment with period dummies (Model 2) this effect turns out to be entirely attributable to the 1990-95 period. For the period 2008-13, the (insignificant) coefficient for change in unemployment actually has a negative sign. While change in unemployment remains an important of predictor of change in inequality (see Table 5), it no longer predicts change in redistribution.

[Table 6]

Reductions in the generosity of unemployment insurance benefits provide a potential explanation of why redistribution responsiveness to unemployment has declined. A second factor that ought to be considered is change in the distribution of unemployment across groups with unequal access to unemployment insurance benefits. As shown in Table 4, unemployment has become increasingly concentrated among workers with low education. We hypothesize that this development has reduced redistribution responsiveness for two reasons. First, workers with low education are less likely to have permanent jobs and access to full unemployment insurance benefits. Secondly, workers with low education are likely to be unemployed for longer periods of time and hence more likely to run out of insurance benefits.

To measure the generosity of unemployment insurance, we rely on the aggregate index developed by Scruggs (2014). Table 7 presents descriptive data for the eleven countries included in Table 6. In the first half of the 1990s and again in 1995-2008, some countries decreased unemployment insurance generosity while others increased generosity, but the balance appears to have shifted towards cutbacks in the second period, and we observe a pretty consistent pattern of retrenchment during the Great Recession (see also Pontusson and Raess 2012). The substantial cuts in generosity implemented in Denmark, Sweden, Finland and Germany between 1995 and 2008 are noteworthy, as is the contrast between Nordic responses to rising unemployment in the early 1990s and in the Great Recession. In the early 1990s, Sweden maintained generosity while Denmark, Finland and Norway substantially increased generosity. In the Great Recession, Norway and Sweden

both cut generosity while Denmark and Finland marginally increased generosity (against the backdrop of big cuts in the preceding period).[12]

[Table 7]

Returning to Table 6, the concentration of unemployment among workers with low education has a significant negative effect on redistribution in Model 3, but this effect falls below conventional significance thresholds when we add unemployment insurance generosity in Model 4. Controlling for both concentration and generosity, we still observe a significant decline in redistribution responsiveness over time (Model 5). The last two models presented in Table 6 interact unemployment change with generosity and concentration respectively. The effect of interacting unemployment change with generosity is positive, but not even borderline significant (Model 6). By contrast, the effect of interacting unemployment change with concentration of unemployment among workers with low education turns out be strongly significant (Model 7), indicating that rising unemployment only triggers increases in redistribution when unemployment concentration is relatively low.[13] In sum, these results suggest that the growing concentration of unemployment among workers with low education explains much of the decline in redistribution responsiveness.

The growing concentration of unemployment among workers with low education has to do with organizational and technological changes that are commonly referred to with the shorthand expression "knowledge economy" (Iversen and Soskice 2015), but politics must also be taken into account. Many European OECD countries deliberately undertook to deregulate temporary employment in order stimulate employment growth in the late 1990s and 2000s. Arguably, such reforms generated jobs for the losers in the transition to the

knowledge economy, but they also created inequality in access to unemployment benefits. Employment regulation thus emerges a policy domain with important implications for compensatory redistribution during economic downturns.

The politics of redistribution

It is tempting to attribute the widespread retreat from redistribution over the last 15-20 years to increased pro-rich bias in the way that democratic politics work and, in turn, to attribute the increase in pro-rich bias to the equally-widespread increase in top income shares prior to the financial crisis. As shown in Figure 2, however, there is no consistent cross-national association between changes in overall redistribution and changes in top 1% income shares over the period 1994-2007. By contrast, we do observe a strong positive correlation between changes in redistribution and changes in the pre-fisc poverty rate.

[Figure 2]

It should be noted that the retreat from redistribution that we observe over the period 1994-2007 primarily involved a reduction in the redistributive effect of income transfers (see Weisstanner and Pontusson 2016). On the assumption that the rich care primarily about reducing their share of taxes, we would expect pro-rich bias to manifest itself first and foremost as a retreat from progressive taxation. Redistribution through taxes actually increased in seven of our eleven core countries between 1994 and 2007, but it declined in all but two countries in the first half of the 1990s. The retreat from progressive taxation appears to have preceded the rise in top income shares and, following Piketty and Saez (2014), might be invoked to explain the latter development (see also Huber, Huo and Stephens 2016). To be clear, we do not wish deny there is widespread pro-rich bias in advanced democracies nor

to deny that pro-rich bias has increased over time. The point of the left-hand panel in Figure 2 is simply that changes in top income shares do not seem to provide a compelling explanation of the retreat from redistribution.

Support for redistribution among middle-income citizens has evolved in a manner that roughly corresponds to changes in redistribution over time. Based on data from the International Social Survey Program (ISSP) and the European Social Survey (ESS), Table 8 reports on changes in the percentage of survey respondents in the middle third of the income distribution who agree or strongly agree with the statement that "the government should take measures to reduce differences in income levels." As the country coverage is uneven and the volatility of the ISSP data for the 1990s rather suspicious, this table must be read with caution. For our purposes, it is the direction rather than the magnitude of change that matters. In every country for which ISSP data are available, middle-income support for redistribution increased in the first half of the 1990s and dropped in the second half of the 1990s and early 2000s. According to the ESS data, middle-income support for redistribution fell from 2002 to 2008 in all countries but Germany. In the wake of the Great Recession, middle-income support for redistribution continued to rise in Germany and continued to decline in Denmark, Finland and Norway. In the UK and the Netherlands, the Great Recession appears to have reversed the decline in support for redistribution.

[Table 8]

Why have middle-income citizens apparently become less supportive of redistribution? Again, our argument is that the concentration of unemployment and poverty risk among low-educated workers—in particular, among immigrants, minorities and other marginal groups—has rendered middle-income citizens less worried about falling into

poverty and less sympathetic with the plight of the poor. Figure 3 provides some additional evidence in support of this argument. Based on LIS microdata, the top panel of this figure reports pre-fisc poverty rates for individuals who have not completed upper secondary education divided by poverty rates for the adult population as a whole. The bottom panel in turn reports on the share of the total adult population represented by individuals who have not completed upper secondary education. With the exception of the US, the population share of the low-educated has declined dramatically in all the countries for which we have LIS data going back to the 1980s and, with the exception of Norway, this decline has been continuous. At the same time, the average poverty rate for the low-educated rose relative to the overall poverty rate from 1980-94 to 1995-2007 in everyone of the ten countries for which we can estimate poverty rates for both of these time periods. While overall poverty rates have risen in the wake of the Great Recession, the concentration of poverty risk among the low-educated has become still more pronounced in all but two countries (the Netherlands and the US). Again, the Great Recession appears to have reinforced, rather than reversed, the concentration of economic insecurity in core OECD countries (see also Heidenreich 2015; Schwander 2016).

[Figure 3]

Our argument is not that middle-income opinion has been the driver of changes in redistribution. More plausibly, governments have retreated from redistribution in response to fiscal pressures associated with globalization and European integration and, perhaps, in response to pressure from export-oriented firms seeking to improve competitiveness by lowering domestic costs (Baccaro and Pontusson 2016). Intended as complementary to such an explanation, our argument is that the concentration of unemployment and poverty risk

have rendered public opinion more permissive and thus made "anti-poor" policy choices a more attractive option for governments concerned about re-election.

Final remarks

The preceding discussions focuses on macroeconomic cycles and ignores the question of how growth occurs or, in other words, the idea that there are several different post-Fordist growth models. As noted by Baccaro and Pontusson (2016), the British model of consumption-led and credit-financed growth was associated with rising top-end inequality while the German model of export-led growth was associated with rising low-end inequality in the period from the mid-1990s to the global financial crisis of 2007-08 (see also Hall 2017). We have instead emphasized that top income shares rose and market-generated poverty declined in most OECD countries over this period. To integrate macroeconomic cycles and growth models into a unified framework is a challenge that we intend to tackle in future work.

Our discussion has focused on countries that survived the Great Recession in relatively good shape. We lack comparable historical data for Ireland and Southern Europe, but we do have data on what happened to inequality and redistribution in these countries in the wake of the Great Recession, and a few remarks about their experience might serve as a way to summarize our main findings.

From 2008 to 2013, unemployment rates increased more sharply in Greece, Ireland, Italy, Portugal and Spain than in any of the eleven countries on which we have focused so far. As shown in Table 8, the unemployment crises experienced by these countries triggered inequality shocks comparable to the inequality shocks experienced by the Nordic countries

in the first half of the 1990s. Perhaps more surprisingly, increased redistribution through taxes and transfers offset much of the increase in market inequality. Except for Italy, the redistributive response to inequality in the so-called PIIGS was much stronger than in most of the eleven core OECD countries discussed above. Critically for our purposes, the concentration of unemployment increased less in these countries than in the OECD core and in the three countries for which we have ESS data for 2008 and 2012 (Ireland, Portugal and Spain) public support for redistribution increased significantly (see Rosset and Pontusson 2014). In all these respects, the experience of the PIIGS resembles the experience of core OECD countries, especially the Nordic countries, in the first half of the 1990s. Needless to say perhaps, the difference is that in the case of the PIIGS compensatory redistribution involved the build-up of unsustainable public debt and that Eurozone membership forced them, from 2010-11 onwards, to cut public spending on unemployment benefits and other redistributive programs (Koehler and König 2015, Hall 2017), with distributive consequences that we do not yet see in SILC data.

[Table 9]

Top income shares fell in the wake of the financial crisis of 2007-08, but there are good reasons to suppose that they have subsequently rebounded. We know that this happened in the US in 2010-14.[14] In a context characterized by income stagnation and rising economic insecurity for the working class and the lower-middle class, we might expect rising top income shares to become more politically contested than they were prior to the financial crisis. However, economic insecurity in core OECD countries is more unequally distributed than it has been for many decades and this poses an obstacle to the formation of a pro-redistribution coalition of the poor and the middle. The new "right-wing populism" can be

seen, in part, as a project that promises to redistribute resources from the rich to the working class, or the lower-middle class, through protectionist measures, while keeping income support for the poor to a minimum. It is hardly a coincidence that populism primarily takes right-wing forms in core OECD countries whiles it primarily takes left-wing forms in Southern Europe.

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Table 1: Change in pre-fisc income Ginis, post-fisc income Ginis and redistribution.

	early 1990s			ca. 1994-2007			ca. 2008-13			2013
	pre-fisc Gini	post-fisc Gini	redistri-bution	pre-fisc Gini	post-fisc Gini	redistri-bution	pre-fisc Gini	post-fisc Gini	redistri-bution	post-fisc Gini
Nordic:										
Denmark *(87-95, 95-07, 08-13)*	+2.8	-2.9	+12.8	-0.6	+2.3	-7.1	+3.7	+2.8	-1.0	27.7 (5)
Finland *(87-95, 95-07, 08-13)*	+8.8	+1.8	+8.0	-2.4	+4.2	-13.4	+1.2	0.0	+1.9	26.0 (3)
Norway *(86-95, 95-07, 08-13)*	+5.8	+1.4	+8.6	+3.5	+1.5	+2.2	-0.8	-0.5	-0.2	24.6 (1)
Sweden *(87-95, 95-05, 08-13)*	+7.5	+2.7	+4.5	-3.2	-0.7	-2.9	+0.7	+1.1	-1.7	25.4 (2)
Continental:										
France *(89-94, 94-05, 08-13)*	+0.6	+0.7	-0.7	-2.0	-1.7	+0.8	-0.2	0.0	-0.4	29.1 (6)
Germany *(89-94, 94-07, 08-13)*	+3.1	+1.8	+1.1	+4.3	+2.4	+1.5	0.0	+1.5	-3.5	31.6 (8)
Netherlands *(87-93, 93-07, 08-13)*	-1.2	+1.5	-5.2	-1.0	+1.8	-5.9	+0.7	-0.3	+1.9	27.0 (4)
Anglo:										
Australia *(89-95, 95-08, 08-10)*	+3.7	+1.2	+3.7	-0.6	+2.2	-6.3	-0.2	-0.8	+1.6	31.3 (7)
Canada *(87-94, 94-07, 07-10)*	+3.4	+0.5	+5.2	+2.5	+3.4	-3.8	+0.7	+0.4	+0.3	32.2 (9)
UK *(86-94, 94-07, 08-13)*	+3.5	+3.5	-2.3	-1.3	+0.4	-2.9	+0.3	+1.3	-2.4	32.5 (10)
USA *(86-94, 94-07, 07-13)*	+2.5	+2.2	-0.5	0.0	+1.1	-2.5	+2.8	+1.2	+2.4	37.4 (11)
average	*+3.7*	*+1.3*	*+3.2*	*-0.1*	*+1.5*	*-3.7*	*+0.8*	*+0.6*	*-0.1*	*29.5*

Note: The table records absolute changes (first differences) in pre-fisc Gini coefficients, post-fisc Gini coefficients and (relative) redistribution among working-age households. The time periods over which changes are measured are indicated the first column.

Sources: LIS (early 1990s, 1994-2007 and recent period for Australia, Canada and the US) and EU-SILC (2008-13) microdata.

Table 2: Change in pre-fisc poverty rates and top 1% income shares.

	Δ pre-fisc poverty rates				**Δ top 1% income shares**			
	late-1980s to mid-1990s	mid-1990s to ca. 2007	ca. 2008 to 2013	most recent level (2013)	1989 to 1994	1994 to 2007	2007 to most recent	most recent level (year)
Nordic:								
Denmark	+2.1	-1.8	+2.2	26.2	-0.2	+1.1	+0.3	6.4 (2010)
Finland	+7.5	-3.8	+1.5	24.5	-0.2	+2.6	-0.8	7.5 (2009)
Norway	+6.5	+2.1	-1.1	20.2	+3.3	+1.1	-0.7	7.8 (2011)
Sweden	+6.7	-4.8	+1.7	21.3	+1.1	+1.4	+0.3	7.2 (2013)
Continental:								
France	+0.5	-0.7	+0.5	23.5	-0.5	+1.4	-0.2	8.9 (2012)
Germany	+3.8	+3.5	-0.7	25.3	*-2.3*	*+4.9*	*-0.9*	*13.1* (2010)
Netherlands	+2.0	-3.2	+1.4	24.4	-0.4	+2.2	-1.2	6.3 (2012)
Anglo:								
Australia	+3.5	-2.1	+1.2	23.7	+0.7	+2.7	-0.7	9.2 (2010)
Canada	+4.1	0.0	+1.2	25.5	-0.2	+4.1	-1.5	12.2 (2010)
UK	+2.3	-1.4	+0.4	26.2	+0.8	+4.8	-2.7	12.7 (2012)
USA	+0.9	-0.3	+2.5	26.1	+0.2	+5.5	-0.8	17.5 (2013)
average	*+3.6*	*-1.1*	*+1.0*	*24.3*	*+0.2*	*+2.9*	*-0.8*	*9.9*

Note: Pre-fisc poverty rates defined as percentage of working-age population living in households with pre-fisc income below 50% of median pre-fisc household income. The poverty data refer to country-specific time periods, as in Table 1. For Germany, top 1% income shares include capital gains, for other countries they do not. Periodization: 1989 to 1994, 1994 to 2007 and 2007 to most recent observation, with the year of the most recent observation noted in the last column.

Sources: LIS and EU-SILC microdata for poverty rates and World Wealth and Income Database (http://www.wid.world, accessed June 8, 2016) for top income shares.

Table 3: Change in unemployment as a determinant of change in inequality and poverty, 1990-2013.

	Δ pre-fisc Gini		**Δ pre-fisc poverty rate**	
	(1)	(2)	(3)	(4)
Pre-fisc Gini level $_{t-1}$	-0.522***	-0.523***		
	(0.098)	(0.075)		
Pre-fisc poverty level $_{t-1}$			-0.604***	-0.627***
			(0.095)	(0.075)
Δ Unemployment rate	0.367***	0.413***	0.338***	0.385***
	(0.069)	(0.053)	(0.076)	(0.045)
Number of observations	75	103	75	103
Number of countries	11	19	11	19
R^2 (within)	0.57	0.63	0.56	0.61

Note: * p < 0.1; ** p < 0.05; *** p < 0.01 (two-sided tests). Fixed-effects regressions with country-clustered standard errors in parentheses. Unemployment rates (from Armingeon *et al*. 2016) are averages between two survey observations; change in unemployment measured as first difference between two survey averages. See also note 9.

Table 4: The ratio of the unemployment rate for workers with less than upper secondary education to the national unemployment rate.

	level earliest (year)	change from 1992 to 1995	change from 1995 to 2007	change from 2007 to 2013	level latest (2013)
Nordic:					
Denmark	1.19 (1992)	+0.44	-0.29	+0.17	1.51
Finland	1.23 (1995)		+0.39	+0.20	1.82
Norway	1.33 (1996)		+0.61	+0.14	2.08
Sweden	1.34 (1995)		+0.26	+0.67	2.27
Continental:					
France	1.35 (1993)	+0.01	+0.14	+0.15	1.65
Germany	1.55 (1992)	+0.15	+0.47	+0.29	2.46
Netherlands	1.45 (1996)		+0.03	-0.03	1.45
Anglo:					
Australia	1.41 (1997)		+0.14	+0.07	1.62
Canada	1.78 (2000)		+0.09	-0.02	1.85
UK	1.26 (1992)	+0.02	+0.34	+0.31	1.93
USA	1.25 (1997)		+0.11	-0.08	1.28
average	*1.37*	*+0.16*	*+0.21*	*+0.17*	*1.84*

Definition: Unemployment rate for ISCED 2011 levels 0-2 (less than upper secondary education completed) divided by the unemployment rate for all ISCED 2011 levels, workers aged 25 to 64.

Sources: Eurostat (http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_urgaed&lang=en, accessed October 27, 2016); data for Australia, Canada and USA from OECD Education at a glance (http://dx.doi.org/10.1787/889e8641-en, accessed October 26, 2016).

Table 5: Change in unemployment as a determinant of change in inequality and poverty by sub-period, 1990-2013.

	Δ pre-fisc Gini		**Δ pre-fisc poverty rate**	
	(1)	(2)	(3)	(4)
Pre-fisc Gini level $_{t-1}$	-0.530***	-0.535***		
	(0.096)	(0.083)		
Pre-fisc poverty level $_{t-1}$			-0.617***	-0.639***
			(0.098)	(0.086)
Δ Unemployment rate	0.468***	0.451***	0.402***	0.397***
* period 1990-1995	(0.055)	(0.058)	(0.092)	(0.094)
Δ Unemployment rate	0.070	0.307**	0.209	0.297**
* period 1996-2007	(0.192)	(0.135)	(0.218)	(0.130)
Δ Unemployment rate	0.441*	0.473***	0.262	0.449***
* period 2008-2013	(0.226)	(0.132)	(0.303)	(0.090)
Number of observations	75	103	75	103
Number of countries	11	19	11	19
R^2 (within)	0.59	0.63	0.56	0.62

Note: See Table 3.

Table 6: Determinants of changes in transfer redistribution.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Transfer redistribution level $_{t-1}$	-0.567***	-0.626***	-0.565***	-0.790***	-0.845***	-0.804***	-0.843***
	(0.104)	(0.094)	(0.052)	(0.133)	(0.113)	(0.134)	(0.125)
Δ Unemployment rate	0.758***		0.786***	0.670***		-0.217	2.800***
	(0.152)		(0.141)	(0.119)		(1.003)	(0.323)
Concentration of unemployment			-3.878*	-0.986	-0.572	-0.984	-1.780
			(1.942)	(1.782)	(1.479)	(1.713)	(1.121)
UI generosity				2.248***	2.040***	2.205***	2.205***
				(0.502)	(0.515)	(0.487)	(0.463)
UI generosity * Δ Unemployment rate						0.084	
						(0.094)	
Concentration * Δ Unemployment rate							-1.546***
							(0.238)
Δ Unemployment rate * period 1990-1995		1.006***			0.954***		
		(0.127)			(0.096)		
Δ Unemployment rate * period 1996-2007		0.486			0.311		
		(0.348)			(0.384)		
Δ Unemployment rate * period 2008-2013		-0.020			0.230		
		(0.640)			(0.513)		
Number of observations	75	75	61	61	61	61	61
Number of countries	11	11	11	11	11	11	11
R^2 (within)	0.54	0.58	0.60	0.74	0.76	0.74	0.78

Note: * p < 0.1; ** p < 0.05; *** p < 0.01 (two-sided tests). Fixed-effects regressions with country-clustered standard errors in parentheses. Operationalization: see Tables 1, 4 and 6. Unemployment change, concentration and generosity measured as averages between two survey observations. Number of observations by time period (Models 2 and 5): N=20 (1990-95), N=34 (1996-2007), N=21 (2008-13).

Table 7: Unemployment insurance generosity (Scruggs index), 1990-2011.

	level 1990	change 1990 to 1995	change 1995 to 2007	change 2007 to 2011	level 2011
Nordic:					
Denmark	11.3	+1.8	-3.8	+0.2	9.5
Finland	9.0	+1.4	-1.6	+0.6	9.4
Norway	13.1	+0.9	+0.2	-0.3	13.9
Sweden	12.2	0.0	-3.6	-0.5	8.1
Continental:					
France	12.4	-2.0	+0.9	-0.2	11.1
Germany	11.7	-0.3	-1.1	-0.3	10.0
Netherlands	11.6	-0.9	+1.1	-0.1	11.7
Anglo:					
Australia	7.6	+0.1	-0.5	0.0	7.2
Canada	9.1	-0.8	-0.2	-0.1	8.0
UK	8.3	-0.1	+0.5	-0.4	8.3
USA	10.0	+0.1	+0.1	+0.4	10.6
average	*10.6*	*+0.0*	*-0.7*	*-0.1*	*9.8*

Source: Comparative Welfare Entitlements Dataset (http://cwed2.org, accessed May 25, 2016).

Table 8: Percentage-point change in middle-income survey respondents agreeing that government should do more to redistribute from rich to poor ("agree" and "strongly agree").

	ISSP data		**ESS data**	
	early 1990s to mid-1990s	late 1990s to early 2000s	2002 to 2008	2008 to 2012
Nordic:				
Denmark		-17.4 (*00-04*)	-2.6	-1.5
Finland		-3.9 (*00-04*)	-1.7	-1.3
Norway	+25.2 (*90-96*)	-4.9 (*96-00*)	-12.7	-4.0
Sweden		-6.0 (*96-02*)	-3.7	
Continental:				
France				-4.4
Germany	+5.9 (*90-96*)	-32.9 (*96-00*)	+10.2	+9.1
Netherlands			-3.2	+2.8
Anglo:				
Australia	+27.7 (*90-96*)	-18.0 (*96-99*)		
Canada	+4.0 (*92-96*)	-11.0 (*96-00*)		
UK	+11.5 (*90-96*)	-12.8 (*96-02*)	-5.7	+5.4
USA	+26.3 (*90-96*)	-24.0 (*96-02*)		

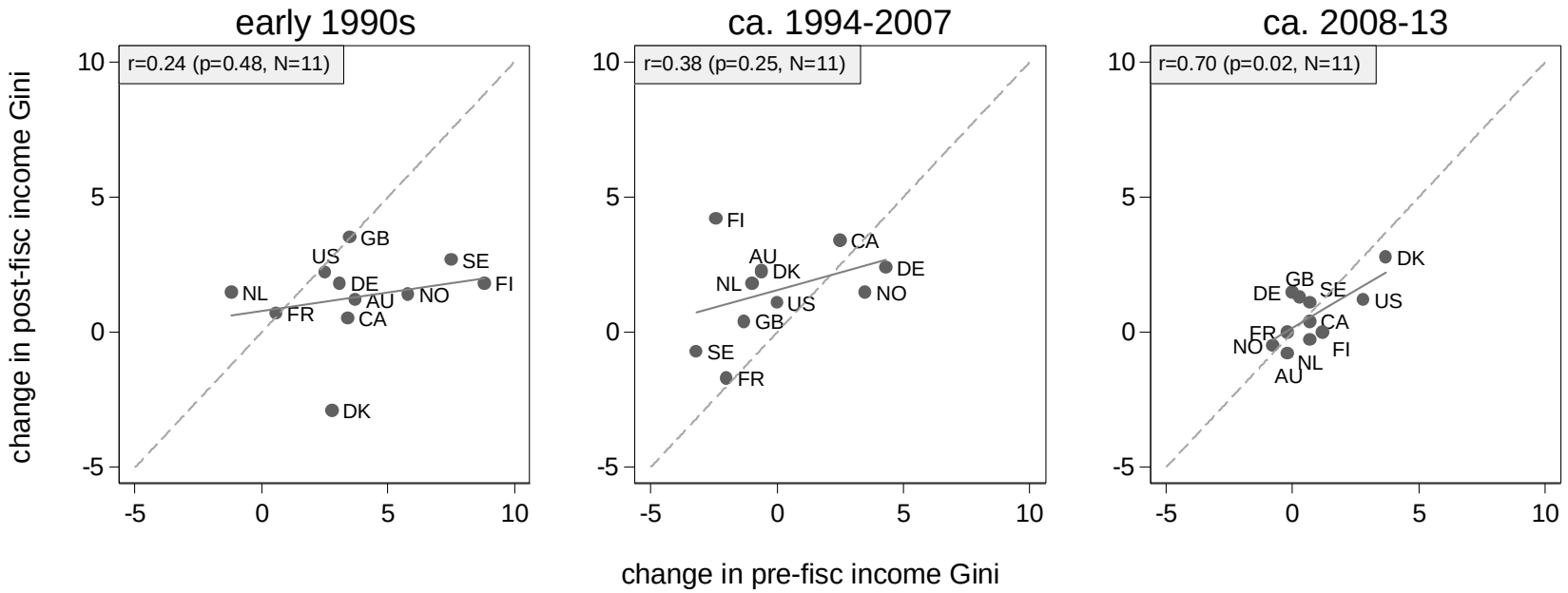
Note: "Middle-income" is defined as individuals with a self-reported post-fisc household income in the middle third of the income distribution. Respondents above the age of 65 are included in the sample.
Sources: ISSP calculations by Noam Lupu (Lupu and Pontusson 2011), ESS calculations by Jan Rosset (Rosset and Pontusson 2014).

Table 9: The crisis experience of Ireland and Southern Europe.

	change in unemployment 2008-13	change in concentration of unemployment 2008-13	change in pre-fisc Gini coefficient 2008-13	change in post-fisc Gini coefficient 2008-13	percentage of inequality increase offset by taxes and transfers
Greece	+19.7	+0.10	+5.2	+1.4	73%
Ireland	+6.7	+0.14	+3.8	+1.9	50%
Italy	+5.5	+0.06	+2.0	+1.4	30%
Portugal	+7.7	+0.05	+3.9	0.0	100%
Spain	+14.8	+0.02	+6.5	+3.2	51%
average	*+10.9*	*+0.07*	*+4.2*	*+1.6*	*61%*

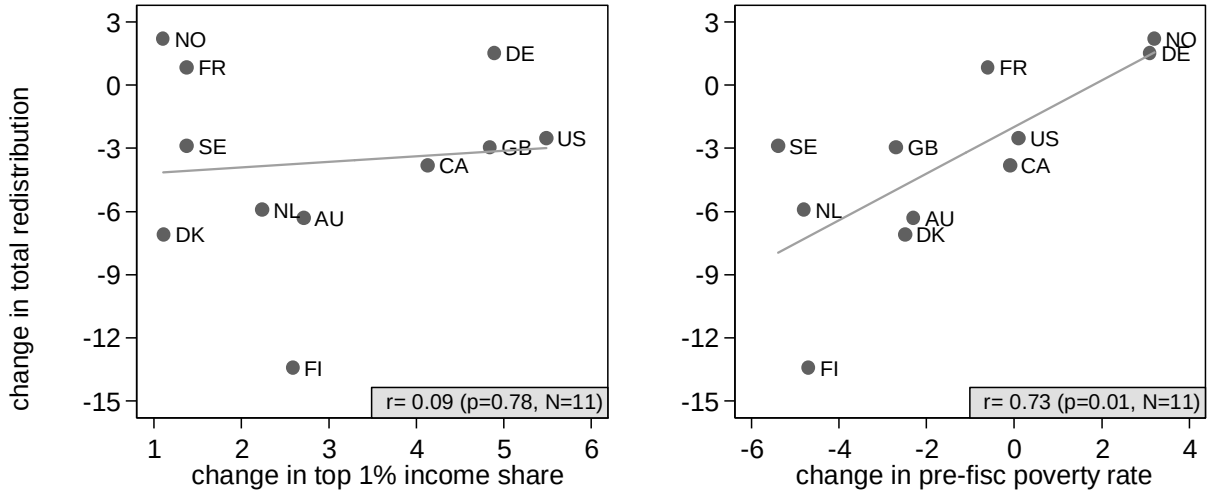
Sources: EU-SILC microdata; unemployment from Armingeon et al. (2016); concentration of unemployment see Table 5.

Figure 1: Changes in post-fisc inequality plotted against changes in pre-fisc inequality.



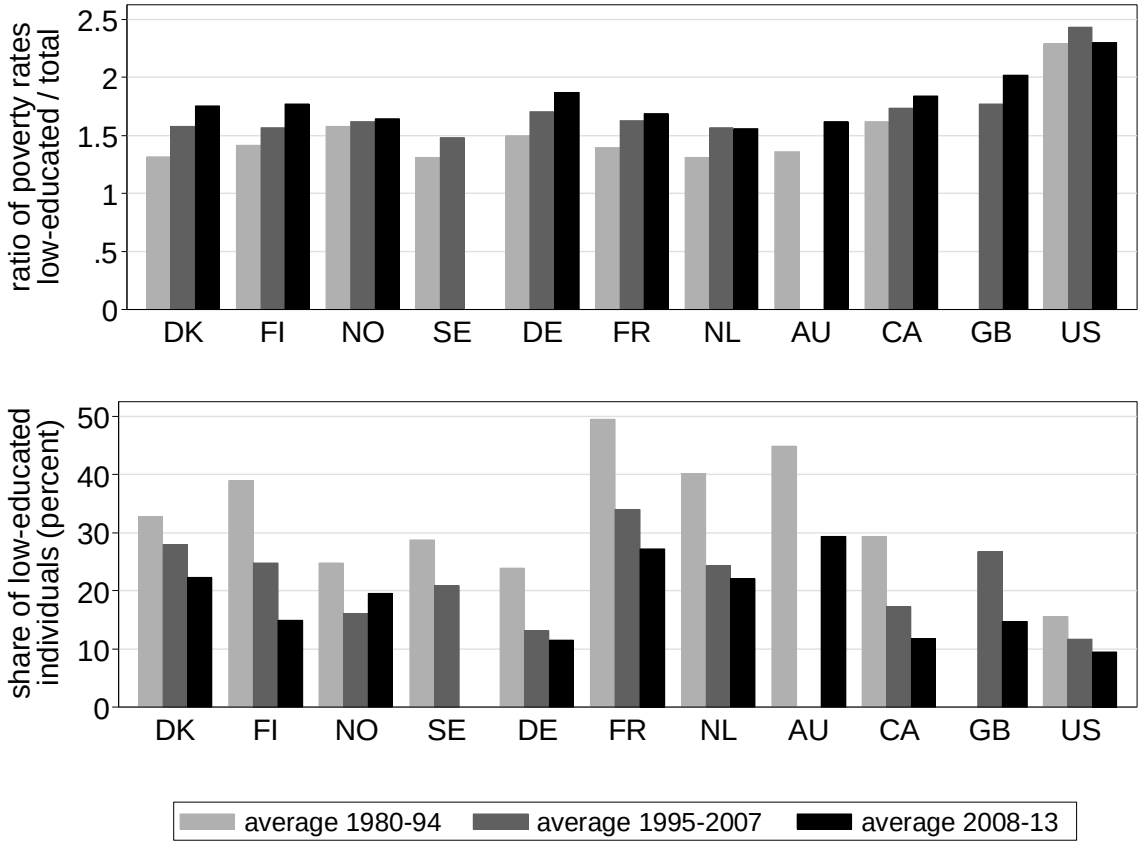
Source: LIS microdata. Dashed line: 45-degree line (equal changes in pre-fisc and post-fisc inequality). Solid line: linear prediction.

Figure 2: Changes in redistribution plotted against changes at the top and the bottom of the income distribution, ca. 1994-2007.



Sources: See Tables 1-2.

Figure 3: Ratio of pre-fisc poverty rates among low-educated individuals and total population (upper panel) and percentage share of low-educated individuals (lower panel), 1980-2013.



Notes: Own calculations based on LIS microdata. Low education = less than upper secondary education completed (ISCED 2011 levels 0-2). Poverty line at 50% of median pre-fisc household income (across all education groups). Poverty rates are defined as the share of working-age household heads and partners/spouses living in households with an equivalized household income below the poverty line.

APPENDIX

	average annual growth of real GDP per capita			Δ unemployment	
	1990-1993	1994-2007	2008-11	1990-93	2008-11
Nordic:					
Denmark	+0.9	+2.1	-1.0	+2.4	+4.2
Finland	-2.8	+3.7	-1.0	+13.1	+1.4
Norway	+2.3	+2.5	-1.2	+0.8	+0.8
Sweden	-1.6	+3.0	-0.1	+7.4	+1.6
Continental:					
France	+0.7	+1.7	-0.2	+2.2	+1.8
Germany	+1.7	+1.7	+1.0	+3.0	-1.6
Netherlands	+1.6	+2.5	-0.2	+0.4	+1.3
Anglo:					
Australia	+0.9	+2.4	+0.7	+3.9	+0.8
Canada	-0.9	+2.2	-0.1	+3.2	+1.3
UK	+0.3	+2.5	-1.2	+3.3	+2.5
USA	+0.7	+2.2	-0.6	+1.3	+3.1
Average	*+0.4*	*+2.4*	*-0.3*	*+3.7*	*+1.6*
excl. Finland				*+2.8*	
excl. Germany					*+1.9*

Source: AMECO Database.

NOTES

[1] Emphasizing negative externalities of inequality for the affluent (in the first instance crime), Rueda and Stegmueller (2016a) stake out a middle ground between the two camps. For our purposes, the problem with their analysis is that it does not seem to shed any light on why it is that rising inequality has not been accompanied by more redistribution.

[2] Many studies show that cyclical unemployment disproportionally affects low-skilled workers (e.g., Nickell and Bell 1995; Pollmann-Schult 2005; McIntosh 2008). The standard explanation in labor economics is that the costs of dismissing and re-hiring more skilled workers, especially workers with firm-specific skills, are higher than the costs of dismissing and re-hiring low-skilled workers. See OECD (2013: ch.1) for a detailed study of the incidence of unemployment by skill levels during the Great Recession.

[3] See Jenkins *et al*. (2013) and OECD (2015: ch.3) on the immediate impact of the Great Recession on post-fisc inequality among all households; and OECD (2011) on trends in income inequality among all households over the twenty years preceding the Great Recession.

[4] In the terminology of LIS, the former measure pertains to "market income" and the latter to "disposable income." We use the terms "pre-fisc" and "post-fisc" for convenience, but also to signal that the distribution of income before taxes and transfers is not simply a "market phenomenon." The inequality and poverty estimates behind the figures presented in Tables 1-2 were calculated based on LIS (2016) and EU-SILC microdata. Household income data have been adjusted using the square root of the number of household members as the equivalence scale, top-coded at 10 times the median non-equivalized income and bottom-coded at 1 percent of equivalized mean income. The aggregate indicators based on equivalized household income are restricted to household members aged between 18 and 64 using adult weights. Our LIS-based estimates of Gini coefficients correspond very closely to the Gini coefficients recorded in the "Comparative Welfare States Data Set" (forthcoming version, calculated in July 2016). For 32 overlapping country-years, the correlation between our LIS-based and SILC-based estimates of pre-fisc Gini coefficients is .94 (p=.000) while the correlation between LIS-based and SILC-based estimates of post-fisc Gini coefficients is .95 (p=.000).

[5] While LIS is the source of all our data for the first and second periods, our data for the third period come from LIS in three instances (Australia, Canada and the US), otherwise from SILC. As indicated in the first panel of Table 1, the exact time periods to which the LIS data refer vary by country.

[6] It is important to keep in mind that the second period is longer than the first. In countries that continued to experience growing inequality, the growth of inequality slowed down in the second period. On average, the German pre-fisc income Gini coefficient increased by .62 per year from 1989 to 1994 and by .33 per year from 1994 to 2007.

[7] Note that the third period in Table 1 encompasses the fiscal stimulus phase of 2008-09 as well as the early stages of the fiscal consolidation undertaken by most OECD countries from 2010. The retreat from compensatory redistribution would be more pronounced if the analysis were restricted to 2010-13 (OECD 2015: ch.3).

[8] The correlation coefficients for changes in pre-fisc Gini coefficients and changes in pre-fisc poverty rates are .90 (N=87, p=.000) based on LIS estimates and .61 (N=140, p=.000) based on SILC estimates. For levels of the two variables, the correlation coefficients are .89 (N=106, p=.000) based on LIS and .82 (N=156, p=.000) based on SILC.

[9] In addition to the 11 countries included in Tables 1-2, the 19-country analysis includes Austria, Belgium, Greece, Ireland, Italy, Portugal, Spain and Switzerland. For both samples, the dependent variable is the change in pre-fisc inequality/poverty from one LIS survey wave to the next. We have added SILC-based estimates for 2004, 2007, 2010 and 2013 when a country is not part of the corresponding LIS wave. The regression models include country dummies as well as the level inequality/poverty in the initial year (relative to which change is measured). As these fixed-effects models capture changes within countries, the negative effect of initial of inequality/poverty does not necessarily imply convergence of inequality trends across countries.

[10] Out of the eleven countries, Australia alone did not experience a contraction of GDP in 2009. For the other countries, GDP contractions in 2009 ranged between a low of -2.9% (Norway) and a high of -8.7% (Finland). In the first half of the 1990s, there are only four instance of annual GDP contraction greater than 2%: Canada in 1991 (-3.3), Finland in 1991 (-6.4) and 1992 (-3.9) and Sweden in 1993 (-2.6).

[11] Income transfers account for the lion's share of overall redistribution in most OECD countries (see Pontusson 2005: Table 7.4). Over the period 1990-2013, the correlation between changes in transfer redistribution and changes in total redistribution for our eleven countries is .95 (N=75, p=.000).

[12] Scruggs' index takes into account the coverage of unemployment insurance and duration of insurance benefits as well as net replacement rates of unemployment insurance, but appears to be weighted towards the latter, and misses important changes in access to unemployment benefits. To illustrate, the coverage rate of unemployment insurance in Sweden fell from 84% in 2004 to 68% in 2008 and has since held steady according to Scruggs' data. As reported by the Swedish employment agency, however, the percentage of unemployed receiving insurance benefits fell

from 77 in 2004 to 58 in 2008 and 44 in 2012 (Arbetsförmedlingen 2013: 19). Measuring generosity as public spending on passive labor market programs in percent of GDP divided by the rate of unemployment, Rueda (2014, 2015) documents a strong OECD-wide tendency for generosity to decline. Substituting Rueda's measure for Scruggs' yields regression results that are very similar to the ones we report in Table 6 (available upon request). Since it does not include the rate of unemployment, the Scruggs measure is preferable for our purposes.

[13] Based on Model 7, the effect of a one percentage-point increase in unemployment are as follows: 0.820*** at low concentration (first decile), 0.449*** at median concentration, and -0.154 at high concentration (ninth decile). With only 61 observations, we run into serious collinearity issues if we add interactions with sub-period dummies alongside the interaction with concentration. Still, the point estimates for unemployment change generated by this exercise are noteworthy: 2.973 for 1990-95, 2.911 for 1996-2007 and 3.134 for 2008-13.

[14] According to the World Wealth and Income Database, the US top 1% share fell from an all-time high of 18.3% in 2007 to 16.7% in 2009, but surpassed the 2007 figure in 2012, and stood at 17.9% in 2014.