The Political Consequences of Inequality:

Wage Dispersion and Voter Turnout as Determinants of Left Party Politics

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Abstract: Why is it that some countries have witnessed significant increases in inequality since the early 1970s while at the same time experiencing very little change in the way politics is conducted? And why is it that in other countries, where inequality has increased much less, the Left has become substantially more redistributive? The answer, we argue below, has to do with the interaction between inequality and working-class mobilization. We make two points in this paper. First, high levels of wage inequality move Left parties to the left. Second, while increasing inequality pushes the core constituencies of Left parties to the left, it also makes some individuals less likely to be involved in politics. We argue that Left parties will only respond to an increase in inequality when voter turnout is high enough to allow the increasingly disadvantaged left core constituency to be politically influential. We explore these claims through a comparative analysis of Left party programs in twelve OECD countries over the period 1974-2003.

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Drawing on data from the Comparative Manifesto Project (CMP), this paper explores the consequences of wage inequality and voter turnout for the programmatic positions of Left parties in twelve OECD countries over the period 1974-2003. We seek to contribute to the literature on party politics as well as the literature on the political economy of redistribution and to build bridges between these two often disconnected approaches. Recent papers by Adams, Haupt and Stoll (forthcoming) and by Nelson and Way (2007) similarly seek to explain changes in the positioning of Left parties over this time period and use CMP data to measure party positions. Both these papers engage arguments about globalization and economic insecurity from the comparative political economy literature, yet neither considers wage or income inequality as a potential determinant of the programmatic positions adopted by Left parties. This seems like a curious omission given that so much of the comparative political economy literature treats redistribution of income as the core issue of contention between parties of the Left and Right.

Virtually all of the recent comparative literature on the political economy of redistribution takes as its point of departure the Meltzer-Richard model, which posits that income inequality promotes redistribution via the preferences of the median voter (Meltzer and Richard 1981). It is commonplace to observe that, contrary to the Meltzer-Richard model, countries with more unequal distributions of market income typically redistribute less than countries with less unequal distributions of market income. Several recent contributions (e.g., Bradley *et al* 2003, Iversen and Soskice 2007) propose models in which the distribution of market income and redistributive policy are jointly determined by other variables, such as government partisanship, union power and electoral rules. Relative to this literature, our goal is to rescue the idea that income inequality is not only shaped by politics, but also shapes politics. We want to return to one of the main themes in politics (see Schattschneider 1960 or Dahl 1971) and explore how inequality affects democracy and representation.

We avoid some of the more problematic assumptions of the Meltzer-Richard model by focusing on the programmatic positions that parties adopt during election campaigns rather than the policy outputs associated with particular parties being in government. More importantly, we elaborate an alternative model of redistributive politics in which parties respond not only to the redistributive policy preferences of the median voter but also to the preferences of their core constituencies. As shown by Milanovic (2000), the median income earner is rarely a net beneficiary of tax-transfer systems in the OECD world. Hence we should not expect her to respond to rising inequality by demanding more redistribution. However, we should expect core constituencies of Left parties to respond in this manner if it is the case that their income is significantly lower than the income of the median voter (and there is every reason to expect that this is indeed the case). We argue further that the core constituencies of Left parties are likely to be particularly responsive to wage inequality, as distinct from other manifestations of income inequality.

As skeptical commentators on earlier drafts of this paper have been quick to point out, our claim that inequality generates pressures on Left parties to move to the Left seems to fly in the face of recent developments across the OECD world. The conventional view is that Left parties have moved to the Right while income inequality has increased in most if not all of the OECD countries since the 1980s. We imagine that "stylized facts" along these lines may be the reason why Adams, Haupt and Stoll (n.d.) and Nelson and Way (2007) do not consider wage or income inequality as a potential determinant of the programmatic positions adopted by Left parties. As Nelson and Way (2007) point out, however, the rightward shift of Left parties is far from uniform in terms of timing and extent. Moreover, the tendency for inequality to rise across the OECD world is not as pervasive as commonly supposed. This is particularly true for wage inequality.

In short, the empirical facts may be less damning to the argument that inequality moves Left parties to the Left than conventional wisdom suggests. Furthermore, the theoretical claims

that we develop in the following pages qualify the proposition that inequality moves Left parties to the Left in two crucial ways. The first qualification is that our argument pertains to the electoral positions of Left parties *relative to Center-Right parties* and recognizes that other forces have moved Left parties, along with other parties, in a rightward direction. Hence we estimate the effects of wage inequality on the programmatic positions of Left parties while controlling for the center of political gravity in any given country at a particular point in time. The second qualification is that the extent to which Left parties move to the Left in response to wage inequality depends on the extent to which low-income voters participate in politics. Empirically, we use aggregate voter turnout as a rough proxy for (relative) political mobilization of low-income voters.

Our theoretical framework thus seeks to explain why rising inequality sometimes moves Left parties to the Left, but does not always have this effect. Our results can be boiled down to the following important finding: when voter turnout is high (average or above average), wage inequality is associated with Left parties adopting positions that are farther to the Left of the center of political gravity. Robust to different model specifications, this finding pertains not only to variation in Left party positions across countries, but also to within-country variation over time. (Our analysis also demonstrates, and the significance of this point will become clear below, that there is no association whatsoever between wage inequality and the center of political gravity).

The bulk of the paper is organized into four sections. The first section develops the theoretical framework of our analysis and relates our core arguments to current debates in the literature on inequality and redistribution. The second section describes the dataset we have constructed to test the hypotheses generated by this framework and specifies how our variables are measured. The third section briefly addresses methodological issues while the fourth sections presents and discusses our empirical results, including the results of supplementary analyses

designed to check the robustness of our main results. We conclude with some final thoughts about the implications of our findings.

1. The argument

Our theoretical framework builds on what we consider to be a core insight of the Meltzer-Richard model while seeking to go beyond some of its obvious limitations. To recapitulate very briefly, the Meltzer-Richard model assumes that redistribution takes the form of a universal flat-rate benefit received by all citizens and financed by a linear income tax (Meltzer and Richard 1981, also Romer 1975). At 100% taxation, all citizens are brought to the mean income. All individuals with market incomes below the mean income would favor 100% taxation if it were not for the fact that taxation entails a disincentive effect that reduces the mean income. As a result of this disincentive effect, there is a group of middle income earners for whom the deadweight costs of taxation exceed the value of the benefit provided by the government, even though their (market) income is below the mean income. Holding the deadweight costs of taxation constant, the Meltzer-Richard model treats the amount of redistribution preferred by the median voter as a function of the distance between her income and the mean income. Assuming that all income earners are citizens and exercise their right to vote, a mean-preserving increase of inequality makes the median voter more supportive of redistribution. Assuming further that electoral competition produces government policies that conform to the preferences of the median voter yields the prediction that more income inequality will be associated with more redistribution.

Many comparativists have pointed out that the cross-national association between inequality and redistribution among OECD countries is the opposite of what the Meltzer-Richard model predicts. According to Lindert (2004:15), "history reveals a 'Robin Hood paradox,' in which redistribution from rich to poor is least present when and where it seems to be most

needed." It deserves to be noted, however, that the pattern of within-country variation broadly conforms to the core prediction of the Meltzer-Richard model (see Kenworthy and Pontusson 2005). Controlling for country-specific effects, Milanovic (2000) shows that gross household income inequality is consistently associated with more redistribution through taxes and transfers for twenty-four democracies over the period 1973-95 (see also Mahler 2008 for empirical results in support of the Meltzer-Richard model).

Ignoring contradictory evidence, several prominent recent contributions focus on explaining the "Robin Hood paradox," i.e., why it is that countries with more compressed distributions of market incomes, at least wages, tend to have larger and more redistributive welfare states. Moene and Wallerstein (2001, 2003) propose that demand for insurance rises with income to turn the Meltzer-Richard model on its head. They argue that a mean-preserving increase of inequality implies a decline in the income of the median voter and, as a result, a decline in her demand for social insurance. In a different vein, Bradley *et al* (2003) resolve the Robin Hood paradox by arguing that wage compression and redistributive social spending are both caused by strong unions and Left parties. Iversen and Soskice (2007) offer yet another solution, arguing that coordinated market economies and political systems based on proportional representation jointly give rise to compression of wage differentials as well as redistributive welfare states.

Relative to the aforementioned contributions, we want to reaffirm the idea that the distribution of income has important implications for the politics of redistribution. In so doing, we build on Meltzer and Richard's conceptualization of voters' preferences for redistribution as a function of the distance between their income and the mean income (and also their conceptualization of parties as strategic actors responding to voter preferences). However, we depart from the Meltzer-Richard model in a number of other respects. To begin with, we restrict the scope of our theory and empirical analysis by focusing on the role of inequality in determining the programmatic positions adopted by parties. Thus we bracket the complicated

question of the extent to which electoral politics determine government policy, let alone distributive outcomes.

Most importantly, we depart from the Downsian framework of the Meltzer-Richard model by positing that parties have core constituencies and enduring ideological commitments. In making this move, we draw on an extensive literature in comparative political economy that identifies partisan effects on macro-economic policy and social spending (e.g., Hibbs 1987, Garrett 1998).[i] We also draw on the literature on political behavior and electoral competition that suggests that it is more accurate to conceive of parties as organizations with well-developed ties to particular social groups. In Powell's (1982:116) words, the existence of a relationship between "strong, continuing expectations about parties and the interests of social groups not only creates easily identifiable choices for citizens, it also makes it easier for parties to seek out their probable supporters and mobilize them at election time." In our argument, core constituencies are social groups that are privileged by parties (in terms of history, ideology, institutional ties, etc). Organizations representing these groups often play a critical role in party efforts to mobilize voters and enjoy some form of institutionalized voice in internal party decision-making. Such organizations are also a source of party members and activists.

We do not mean to suggest that parties are oblivious to the preferences of the median voter. Following Strom (1990), among others, we assume that parties are motivated by winning elections and, at the same time, by serving the interests of their core constituencies. These objectives are inextricably linked, though they may well pull parties in opposite directions at any given juncture. On the one hand, parties that never win elections or influence government are of little use to their core constituencies. On the other hand, the enthusiasm of party activists and the support of interest organizations matter greatly to voter mobilization. The bottom line here is that parties are constantly engaged in balancing the preferences of core voters against the preferences of swing voters (cf. Aldrich 1995).

The empirical analysis presented in this paper focuses on Left parties' responses to wage inequality. Our theoretical framework is meant to apply to parties of the Right as well as the Left, but restricting the analysis to Left parties simplifies matters because a dominant Left party can readily be identified for each of the twelve countries over the entire period we study.[ii] Moreover, the social bases of these parties are broadly similar. In our view, it is quite reasonable to postulate that the core constituency of Left parties consists of wage-earners with a relatively stable attachment to the labor market or, in other words, "labor market insiders" (Rueda 2005, 2007). We argue further that the core constituency of Left parties consists primarily of wage-earners in the lower half of the wage distribution. To varying degrees, Left parties have succeeded in mobilizing particular categories of better-paid wage earners, but it seems reasonable to assume that the income of the median Left voter invariably falls below the income of the median voter in the electorate as a whole.

We expect core Left voters to care about the distribution of wages among full-time employees by virtue of the fact that they derive the lion's share of their income from employment. Because the majority of core Left voters stand to benefit from any and all broad-based redistribution schemes, we expect them to demand more redistribution in response to rising wage inequality. As wage inequality grows, their core constituency gets further from the mean income and Left parties come under pressure to push harder for redistribution by adopting more leftist programmatic positions. However, Left parties must also take into account the ideological position of the electorate and pressure from core constituencies may well be offset by the center of political gravity moving to the Right (for reasons that may or may not have to do with the rise of wage inequality). To capture this process, we estimate the effects of wage inequality on the positions of Left parties while controlling for the political center of gravity in a given country at a particular point in time. Our hypothesis is not that wage inequality is associated with Left parties adopting more leftist positions in an absolute sense, but rather that it is associated with Left parties adopting more leftist positions *relative to the center of gravity in electoral politics*.

Our theoretical framework posits further that the extent to which income inequality is associated with political inequality conditions core voter preferences and Left party responses to these preferences. The issue of income skew in voter turnout is central to the existing literature on the limitations of the Meltzer-Richard model. As Meltzer and Richard (1980) themselves recognize, their prediction that inequality will be associated with more redistribution rests on the unrealistic assumption that all income earners vote. Under any other circumstance, testing the Meltzer-Richard model would require us to distinguish between the median voter and the median income (Nelson 1999, Barnes 2007). If political inequality rises with income inequality,[iii] increasing income inequality will not necessarily translate into a greater distance between the median voter and the mean income. Because Left parties draw their electoral support disproportionately from the lower half of the income distribution, we might expect higher turnout among low-income citizens to be particularly significant in shaping their programmatic responses to (rising) inequality.

Like many other works in comparative political economy, our empirical analysis uses aggregate voter turnout as a proxy for income skew in voting or, in other words, the political mobilization of low-income voters relative to middle- and high-income ones. Needless to say perhaps, differences in voter turnout by income are bound to disappear as aggregate turnout approaches 100%. As Mahler (2008) demonstrates, income skew in voting and aggregate voter turnout are indeed closely correlated on a cross-national basis.[iv] Aggregate voter turnout is, of course, only a rough proxy for relative turnout by income, but it has the advantage of being readily available, and comparable, across elections in each country included in our analysis.

Setting measurement issues aside, we want to emphasize that voter turnout represents but one dimension of (unequal) political participation. For one thing, data on voter turnout fail to take into account that many people at the bottom of the income distribution are immigrants and hence lack the right to vote. The extent to which this is true varies across time as well as across countries.[v] In a somewhat different vein, it is commonplace in the comparative political economy

literature to conceive of unionization as a measure of (relative) political mobilization of low-income groups. One version of this argument holds that unions make low-income voters more supportive of redistribution by providing them with more accurate information about the distribution of income. To the extent that this is true, we would expect Left parties to be more responsive to the policy preferences of low-wage workers. For the purposes of this paper, however, we focus on the role voter turnout as a variable that conditions the association between (wage) inequality and programmatic positions adopted by Left parties.[vi]

With the notable exceptions of Mahler (2008), most of the existing empirical literature fails to find significant effects of aggregate voter turnout on direct measures of redistribution or other policy outputs that might be assumed to have redistributive effects. Following Franzese (2002:ch.2), our analysis departs from the standard set-up of this literature by interacting voter turnout with wage inequality. Related to our theoretical claims, Franzese argues that political participation affects a government's redistributive response to inequality. Our analysis differs from Franzese's in two fundamental respects. First, Franzese, like most other comparative political economists, provides a median voter argument. Using Meltzer-Richard as his starting point, he argues that higher political participation means wealthier median voters relative to the mean income (2002: 72). Second, Franzese is interested in explaining policy and does not include a partisan dimension to his conception of how governments react to increasing voter turnout. Our argument, on the other hand, focuses on core constituencies and seeks to explain the programmatic choices of Left parties.

To summarize, our partisan alternative to the Meltzer-Richard model incorporates inequality of political participation and avoids the assumption that voting alone determines government policy. Our emphasis on partisanship and core constituencies also relates to another limitation of the Meltzer-Richard model, namely the assumption that the net benefits of redistribution fall incrementally with income across the entire distribution of market income. In the real world, redistribution appears to be lumpier or, at least, more targeted. According to

Milanovic (2000), income-earners in the 50th percentile of the gross income distribution are rarely net beneficiaries of existing tax-and-transfers systems. The income of voters who might be expected to respond to rising inequality by demanding more redistribution is likely to fall quite far below the median income. Our argument about voter turnout is essentially an argument about the conditions under which Left parties have an incentive to cater to these voters.

2. Variables, measurements and data

Party positions

The main results presented below are based on estimating various models with mainstream Left parties' programmatic positioning on the Left-Right dimension as the dependent variable. The Comparative Manifesto Project (CMP) provides data on party platforms in Western democracies from the late 1940s through the early 2000s, but the availability of inequality data restricts our analysis to twelve countries over the period 1974-2003. Our unit of analysis is "country election years."[vii]

The CMP identifies 54 policy areas and reports the percentage of "quasi sentences" of election manifestos that fall into each of these areas. Ranging between -100 (extreme Left) and +100 (extreme Right), the Left-Right index in our analysis was developed by Laver and Budge (1992) and has been employed by numerous authors (e.g., Budge *et al* 2001 and Klingemann *et al* 2006). Laver and Budge (1992) use factor analysis to identify two groups of thirteen categories that load at the opposite ends of an underlying dimension and calculate Left-Right scores for individual parties by summing across the percentages of manifesto statements that fall into each of the opposing groups and subtracting the percentage of Left statements from the percentage of Right statements.[viii] The reader should keep in mind that higher Left-Right scores mean that Left parties hold more "rightist" positions.

It is commonly alleged that the CMP data tells us more about the salience of particular issues than about party positions on these issues. As Benoit and Laver (2006) point out, however, virtually all of the CMP coding categories are in fact explicitly or implicitly positional (cf. also McDonald and Mendes 2001). For Benoit and Laver, the more important limitations of CMP-derived Left-Right scores have to do with the absence of any estimates of measurement error and the fact that they fail to capture variation in the meaning of the Left-Right divide across countries and over time. With regard to the latter issue, Benoit and Laver emphasize that the Left-Right dimension was inductively derived from an analysis of party manifestos between 1945 and 1985 (and therefore does not include, for example, party positions on environmental issues).

This paper's analysis depends on being able to track changes in party positions over time. The expert surveys that Benoit and Laver favor as an alternative to the CMP approach provide, at best, two observations of party positions per country. The absence of any estimates of measurement error in the CMP data is simply a price that we must pay to obtain a more time-sensitive set of Left-Right scores. As for the meaning of the Left-Right divide in politics changing over time, this is arguably not such a serious problem since our theoretical framework pertains to the representation of voter preferences for redistribution. For us, the problem with the CMP Left-Right dimension is that it contains too many policy items rather than too few. A Left-Right index focusing more strictly on policies with a redistributive impact would be desirable, but the so-called "welfare dimension" in the CMP dataset does not fit the bill. There are many political forces in Europe, most notably Christian Democrats, that favor social protection without favoring redistribution (Esping-Andersen 1990).

Several studies (e.g., Powell 2000) have shown that the standard CMP Left-Right scores provide a reasonably good summary of what parties stand for in elections and that the Left-Right dimension is in fact a meaningful factor for voters. There is also evidence in the existing literature suggesting that these scores can be used to predict what parties actually do when they come to power (e.g., Budge and Hofferbert 1990). Furthermore, the CMP's Left-Right index

correlates reasonably well with various party classification schemes based on expert surveys (see Gabel and Huber 2000, McDonald and Kim n.d.).

The fact that the Left-Right dimension, as measured here, encompasses issues that do not pertain directly to redistribution militates against finding effects of inequality on party positions. There is certainly no reason to believe that measuring the positions of Left parties in this manner biases the exercise in favor of our theoretical expectations. It should also be noted that there is a great deal of election-to-election volatility in Left-Right scores (for the same party) in the CMP data. This volatility reflects not only measurement error, but also, we believe, strategic signaling by parties. For instance, a Left party that has decided to move to the center may exaggerate the extent of its move to offset its reputation. Smoothing party scores over several elections might yield more accurate measures of party positions (McDonald and Mendes 2001), but it would also introduce an obvious endogeneity problem into our analysis. To avoid invoking inequality in year *t* as an explanation of party positions in some previous year, we stick with single-year (current) observations of party positions. Again, this approach is likely to generate noise that militates against finding statistically significant effects of inequality.

While Left party positions change from one election to the next, the parties to which our dependent variable refers to do not change over time. In every one of our twelve countries, the same party won the largest share of the "Left vote" in all the elections included in our analysis. Specifically, the term "Left parties" here refers to the labor parties of Australia, Britain, the Netherlands and Norway, the social democratic parties of Denmark, Finland, Germany and Sweden, the socialist parties of Belgium and France, the "post-communist" party of Italy (PCI/PDS) and the American Democratic Party.[ix]

The center of political gravity

By all accounts, the center of gravity in party politics varies across countries and over time. For instance, the position of the most right-wing of the five main parties contesting the

Dutch general election of 1998 was, according to the Comparative Manifesto Project, more leftist than the position of Bill Clinton in the presidential election campaign of 1996. While the Netherlands is more egalitarian than the U.S., we do not believe that contemporary differences in the distribution of income explain why the center of gravity in Dutch politics is farther to the Left than the center of gravity in American politics. If there is a causal relationship between income distribution and the center of political gravity, it is at least as likely to run in the opposite direction.

Our theoretical framework generates predictions about the effects of inequality on relative party positions. To estimate these effects, we need to control for the center of political gravity. We do this by including a measure of the position of the "median voter" developed by Kim and Fording (1998, 2003) on the right-hand side of our regression equations. Using CMP data, Kim and Fording identify the mid-points between parties that have been ranked on the Left-Right dimension and assume that the policy preferences of those who voted for a particular party are evenly distributed across the interval between the two midpoints that separate this party from the parties to its immediate Right and immediate Left. Based on this assumption, they estimate the median ideological position of the electorate. Since this measure is based on policy positions articulated by parties and does not entail any direct evidence on voter opinions or preferences, we consider it to be a measure of the center of political gravity for parties rather than a measure of the position of the median voter.

We have rescaled Kim and Fording's measure so that it conforms to the standard CMP measure of party positions, ranging from -100 to +100, with higher numbers representing more rightist positions. The actual variable included in our regression models is the average value for the election year in question and the preceding four years. Following Kim and Fording, our five-year averages are based on linearly interpolated values for non-elections. This setup captures the idea that shifts in the center of political gravity are not simply an unanticipated outcome of elections. We assume that parties observe shifts in voter opinions and the policy positions of

their competitors between elections and take such shifts into account when they prepare their election programs. At the same time, we expect that parties take some time to respond to changes in the ideological position of the electorate (and in any of the other explanatory variables included in our models).

Averaging across our twelve countries, Figure 1 tracks the evolution of the center of political gravity from 1974 to 2000. (Values for non-election years have been interpolated linearly, so that all twelve countries are included in these annual averages). Figure 1 clearly confirms the conventional view that the center of political gravity moved sharply to the Right in most OECD countries in the 1980s and 1990s.

[Figure 1]

The existing comparative political economy literature points to a number of plausible explanations for this shift to the Right. One line of argument holds that this shift reflects the "growth to limits" of redistributive welfare states. In the context of an OECD-wide deceleration of economic growth, tax fatigue became a prevalent feature of electoral dynamics in the 1980s and 1990s. Many voters as well as politicians seemed to have become convinced that redistributive policies had reached a point of diminishing returns. In a different vein, the rightward shift of party politics might be attributed to the erosion of the social foundations of traditional Left politics: the decline of the industrial working class, unions, and class voting. Finally, it also seems quite plausible to attribute this rightward shift to pressures associated with "globalization," i.e., the international integration of financial markets and the intensification of international competition in product markets.

In due course, we shall introduce some variables that speak to the aforementioned arguments, but the limited nature of our data does not allow us to evaluate the relative merits of these arguments in a systematic fashion. Again, our goal in this paper is not to explain the rightward shift illustrated by Figure 1, but rather to explore the effects of wage inequality on Left party positions while controlling for this shift. For our purposes, it is sufficient to establish (as

we do below) that the rightward shift of the center of gravity is unrelated to changes in wage inequality.

Inequality

For the reasons explained above, we are primarily interested in the effects of wage inequality on the programmatic positions adopted by Left parties. However, our main models include a second inequality measure that pertains to the distribution of disposable household income. (As we report below, dropping this variable does not significantly change our findings). There are two reasons for including disposable household income inequality in our analysis. First, we want to test the proposition that Left parties are more responsive to wage inequality than to other forms of inequality. This proposition follows from our conceptualization of the core constituencies of Left parties as consisting of wage earners with regular (full-time) jobs. Secondly, we want to control for the redistributive effects of existing tax systems and social programs. If welfare states already compensate for rising wage inequality, so that the distribution of disposable income remains unchanged, we would not expect a rise in wage inequality to generate pressure on Left parties to put more emphasis on redistribution in their election programs.

The OECD dataset on relative wages is the best available source of comparable cross-national observations of wage inequality. This dataset pertains to gross (pre-tax) earnings among full-time employees and allow us to calculate various decile ratios. Following much of the literature on inequality, the measure used here is the 90-10 ratio, i.e., the ratio of earnings of someone in the 90^{th} percentile (the bottom of the top 10% of the wage distribution) to the earnings of someone in the 10^{th} percentile (the top of the bottom 10%). For eight countries, the most recent version of this dataset (OECD 2004) contains more or less complete time series of annual observations from the mid-1970s (or late 1970s) to the early 2000s (or late 1990s).

However, a number of countries do not enter the OECD dataset until the 1980s, the early 1990s or even the late 1990s, and for some countries the time series ends at some point in the 1990s.

Our measure of disposable household income inequality is the Gini coefficient, commonly interpreted as the percentage of total income that would have to be redistributed in order to achieve perfect equality. Taken from the Luxembourg Income Study (LIS), this measure encompasses sources of income other than wages (most notably government transfers) and also takes into account the (re)distributive effects of taxation and income pooling within households. (Note that households headed by pensioners and others individuals without any wage income are included in the Gini measure used here). The LIS dataset is organized on the basis of five-year "waves," with observations in each wave pertaining to different years for different countries. For the early waves (mid-1970s and early 1980s), the LIS dataset covers only a small number of countries.

In constructing our own dataset, we have proceeded as follows. We include as a case any country-election-year for which we have at least one observation of both wage inequality and household disposable income inequality for the year in question or any of the preceding four years. When we have multiple observations of inequality over the five years, which is typically the case for wage inequality, we average these observations. To maximize the number of countries included in our analysis, we use wage inequality data from an earlier version of the OECD dataset (OECD 1999) for Belgium and Norway.[x] On the other hand, we decided to drop a handful of observations for Austria, Canada and Switzerland. For Switzerland, we could only generate a single election-year observation, and the post-1997 time series for Canada in OECD (2004) is strikingly more erratic than the time series for other countries.[xi] We eliminated Austria because it was the only remaining country with only two election-year observations.

As shown in Table 1, the upshot of these procedures is a dataset that includes twelve countries, for a total of 68 country-election-year observations. For Denmark and Norway, the dataset includes three observations. At the other end of the spectrum, the dataset includes nine

observations for Sweden, and eight observations for Australia and the UK. On average, we have 5.7 observations per country. While 58 of the observations of household inequality are single-year observations and 5 of these are contemporaneous with our observation of party positions, only 5 of our observations of wage inequality are single-observations (none contemporaneous) and fully 55 of these observations are based on averaging across four or five years.

[Table 1]

The data summarized in Table 1 clearly do not bear out the notion that rising inequality has been a common trend across OECD countries since the 1970s. From the earliest to the most recent observations included in our dataset, we observe increases in wage inequality in excess of 5% for only two countries: the Netherlands and the US. The remaining ten countries fall within the range of a 6% decline in wage inequality in Belgium and a 5% increase in Italy. As indicated in the last column, however, several countries underwent wage compression in the early part of the time period covered by our analysis, followed by a subsequent increase in wage inequality. This holds most obviously for Britain and Sweden and, to a lesser extent, for Germany and Australia as well. Still, there is no evidence at all of any increase in wage inequality in Belgium, France, Denmark or Norway.

Voter Turnout

To reiterate, our theoretical framework stipulates that the political mobilization of low-wage workers conditions Left party responses to wage inequality. We use aggregate voter turnout as a proxy for this variable on the assumption that higher aggregate turnout signifies smaller turnout differences by income. As with our other independent variables, we lag aggregate voter turnout by averaging observations over five years, including the election year in question. (For non-election years, our source on voter turnout records the turnout figure for the previous election).

[Table 2]

Table 2 summarizes our data on voter turnout from 1980 to 1990. We present average voter turnout for the entire period, as well as the figures for 1980 and 1990. The ranking of countries based on voter turnout turns out to be quite different from standard rankings by "working-class mobilization" in the existing comparative political economy literature (typically based on unionization rates). With some form of compulsory voting on the books, though not necessarily enforced, Australia, Belgium and Italy had the highest voter turnout rates of the countries included in our analysis at the beginning of the 1980s. Australia and Belgium remained distinguished by very high turnout rates at the end of the 1990s. With the mean for all countries being 79.63%, voter turnout in Sweden, Denmark and Germany was also consistently above average over the time period covered by our analysis. At the other end of the spectrum, the US stands out as the country with the lowest turnout by far.[xii] With respect to change over time, we observe significant declines of voter turnout and therefore, presumably, increases of turnout differences by income in all but three countries (Australia, Denmark and the US). These declines have been particularly dramatic in the Netherlands (15 percentage points), France (12 points), Finland (10 points), Sweden (9 points) and Italy (8 points).

Control variables

The regression models that we estimate include two additional variables (also measured as five-year averages): union density and the effective number of parties. Based on existing literature inspired by power resources theory, our expectation is that high levels of union density will pull Left parties towards the Left, relative to the center of political gravity. Our expectations for the effective number of parties relate to party system dynamics. Specifically, multi-party competition has been found to affect political polarization and hence to be associated with Left parties holding more leftist positions (Cox 1990).

3. Methodological issues

As indicated above, our dataset combine time-series and cross-sectional variation. To analyze our data, we estimate two different models. First, we run the following model:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \ldots + \beta_n X_{nit} + N_i + \varepsilon_{it}$$

where β_0 represents a general intercept, X_1 to X_n are the explanatory variables, β_1 to β_n are the slopes of the explanatory variables, N_i are country fixed effects, and ε_{it} denotes the errors. Secondly, we also estimate:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \ldots + \beta_n X_{nit} + \varepsilon_{it}$$

which represents a standard generalized least squares random-effects model in which the country fixed effects are excluded.

Random and fixed effects differ in their assumptions about the share of the variance to be exploited in order to identify the models, as well as their assumptions about the structure of the error term. Fixed effects deal with country-specific omitted variables by introducing a unit dummy per cross-sectional unit. This make a good deal of sense for comparative political economy since there are bound to be a country-specific factors that matter to the outcomes of interest but cannot be introduced into the model (specific historical circumstances, difficult to capture institutional developments, etc). In dealing with these country-specific factors, however, fixed-effects specifications focus on the within-unit share of the variance in the data (in our case, over-time patterns of association among our variables).

By considering the within and the between unit components of the variance at once, random effects do not condition on the sample. The drawback of random effects lies in its assumptions about the structure of the error term. Somewhat implausibly, random effects assume independence between the error terms of the units and other independent variables, while allowing for the existence of correlation within the same unit over time. By estimating both types of models, we seek to avoid the potential pitfalls of each.

A modified Wald test for panel-specific heteroscedasticity revealed a significant amount of heteroscedasticity in our data. All our results therefore report robust variance estimates that adjust for within-country correlation (the Huber/White/sandwich estimate of variance).[xiii]

One additional methodological issue must be noted briefly. Our dependent variable is the position of the main Left party in the present election and, as indicated above, the position of the main Left party is also part of the center of gravity, one of our right-hand-side variables. Recognizing the endogeneity involved here,[xiv] we do not want to claim that the center of gravity "causes" Left parties to shift their programmatic positions. Again, including the center of gravity in our model serves to make our measure of Left party positions relative. In effect, our specification is the equivalent of having the distance between the Left party's position and the center of gravity as the dependent variable. The latter setup yields results that are essentially the same as the ones we report below. We prefer the model adopted here because it allows us to observe changes in the center of gravity and changes in the positions of Left parties separately.

4. Empirical results

Main results

Table 3 reports the results of estimating four models. The first model is a random-effects model while the second model is a fixed-effects model. The third and fourth columns report the results that we obtain when we include the interaction between wage inequality and voter turnout, with random effects (model 3) and fixed effects (model 4) respectively.

[Table 3]

In all four models, we observe a very strong association between the center of political gravity and the programmatic position of Left parties. This should not come as a surprise since the positions adopted by Left parties help define the center of gravity. Our results suggest, quite intuitively, that Left parties move to the Right when other parties move to the Right and when

parties to the Right gain electoral support.[xv] As for our other control variables, neither the effective number of parties nor the distribution of disposable income is in any significant way associated with the programmatic position of Left parties.[xvi] Interestingly, union density becomes significant when we include fixed effects in our model specifications. It does not appear to be the case that Left parties are farther to the Left in more unionized countries, but declining union density does appear to be associated with Left parties moving in a rightward direction.

Turning now to our main variables of theoretical interest, wage inequality is associated with more leftist Left parties at better than the 90% confidence level in model 1. However, this association becomes entirely insignificant once we introduce fixed effects. The coefficient for voter turnout is also negative, indicating that higher turnout is associated with more leftist Left parties, but this coefficient fails to clear conventional thresholds of statistical significance in both the random- and fixed-effects models. Interacting wage inequality and voter turnout clarifies a lot with respect to the effects of wage inequality and voter turnout. Based on the results of estimating models 3 and 4 in Table 3, Table 4 reports the conditional coefficients of wage inequality at different levels of voter turnout and conveys more clearly that these results represent strong confirmation of our core argument.

[Table 4]

In both models, wage inequality is associated with Left parties holding more leftist positions at average voter turnout and this association is significant at better than the 95% level of confidence. As voter turnout rises above the mean, both the size and the statistical significance of the coefficient for wage inequality increases substantially. As voter turnout falls below the mean level, on the other hand, the effect of wage inequality on the programmatic positions of Left parties disappears. (At very low, American, levels of turnout, the sign of the coefficient actually becomes positive with fixed effects, though the coefficient is far from significant).

To reiterate, our explanation of the findings presented in Tables 3 and 4 are premised on two claims: first, higher wage inequality makes low-wage workers want more redistribution and,

secondly, higher voter turnout means that political participation is more equal across the income distribution. We argue further that as low-wage workers participate more in politics (relative to other income groups), the incentive for Left parties to cater to their policy preferences increase. Our results indicate that this argument sheds light not only on cross-national variation in Left party positions, but also on within-country variation over time.

Although the results in Tables 3 and 4 illustrate the significance of our findings, a substantive interpretation of the effects of wage inequality is not completely straightforward. The calculations in Table 3, however, can be used to produce estimates of noticeable substantive effects. Let's focus on the political consequences of inequality over time first. Take the case of Great Britain, in 1979 the 5-year average of wage inequality equalled 2.942 while voter turnout (again as a 5-year average) stood at 73.58%. In 2001, however, the 5-year average of wage inequality had increased more than 17% to 3.45 while the average for voter turnout had in fact decreased to 69.16%. While the strong increase in wage inequality would make us expect a significant reaction from the British Labour Party, the decrease in working-class mobilization has been shown to strongly dampen any movement to the left. Column (4) in Table 3 suggests that, all else being equal, the dramatic increase in wage inequality and the decrease in voter turnout combined to promote a move to the left equal to barely 5 points in the Left-Right index. However, the same increase in wage inequality had it not been combined with a decrease in working-class mobilization (i.e., no change at all in voter turnout) would have contributed to a move to the left by the Labour Party equal to almost 8 points in the Left-Right index. This number is all the more meaningful when we consider that the position of the Labour Party in 1979 was -26.6 in the Left-Right index.

What about cross-sectional variation? Take now the case of the US, in 1996 the average of wage inequality equalled 4.504 while the voter turnout average stood at 45.4%. In 2000, wage inequality had slightly increased to 4.592 but working-class mobilization had also slightly increased to an average voter turnout of 48.2%. This time, Column (3) in Table 3 suggests that,

all else being equal, the increase in wage inequality and the increase in voter turnout combined to promote a move to the left equal to a little less than 2 points in the Left-Right index. The question we are interested in asking, however, is what would have been the result of this relatively small change in inequality had it been combined with a more significant increase in working-class mobilization. What would have been the political consequences if, instead of only increasing from 45.4% to 48.2%, voter turnout in the US had become in 2000 the average for our sample? We know from Appendix 2 that voter turnout has an average of 78.7% for all countries and elections in our analysis. If voter turnout had increased to 78.7% in 2000, the same increase in wage inequality would have contributed to a move to the left by the Democratic Party equal to a much more significant 18 points in the Left-Right index. Since the position of the Democratic Party in 1996 was 8.78 in the Left-Right index, this increase in working class mobilization would have taken it to -9.22 (a value comparable to the Social Democratic parties of Sweden in 1976, Belgium in 1999, and France in 1986 and considerably larger than the -3.6 position the Democratic Party did in fact choose in 2000).

Robustness checks

As we have seen, our main results hold up whether or not we include fixed effects in the specification of the statistical model. Let us briefly address a few other issues pertaining to the robustness of the results reported above. To begin with, the inclusion of a measure of disposable household income inequality may potentially distort our estimates of the effects of wage inequality, given that wage inequality is a component of disposable income inequality. Space does not allow us to present the results here, but when we re-estimate our interaction models without disposable income inequality as an independent variable we obtain effects of wage inequality and of interacting wage inequality with voter turnout that are almost identical to those presented in Tables 3 and 4.[xvii]

Another potential concern is that our main models may omit variables that affect the relationships among the variables of theoretical interest. Concerns about missing variables are always difficult to allay and the onus must be on the skeptic to articulate what the missing variable that would change estimated effects might be. Suffice it to note here that we have re-estimated models 3 and 4 controlling for trade openness, size of government and economic growth. In these alternative models (which address some of the theoretical alternatives explained in previous sections), none of the additional control variables are associated with Left party positions in a significant way. More importantly, their inclusion does not alter our findings about the effects of wage inequality at different levels of voter turnout. The negative effects of wage inequality and the interaction of wage inequality and turnout are actually larger and more significant when we control for trade openness, size of government and economic growth.

Yet another potential concern is that our results might be heavily influenced by a few observations or, more specifically, by the idiosyncrasies of Left politics in one of the countries included in our analysis. The latter issue is particularly germane given that our dataset is quite unbalanced, i.e., it includes many more election-year observations for some countries than for others. Table 5 tackles this issue by reporting estimates for wage inequality conditional on voter turnout obtained by re-estimating our baseline interaction models (models 3 and 4, Table 3) while deleting one country at a time. The results clearly confirm our main findings. At different levels of voter turnout, the coefficients for wage inequality fall within a fairly limited range, entirely consistent with our previous core argument. The significance levels are also consistent with our previous findings. With voter turnout set at 95%, the significance of the finding that wage inequality is associated with more leftist Left parties is robust to the exclusion of any one of the eleven countries included in our analysis. At the other end of the spectrum, with voter turnout set at 45%, this procedure yields only one significant coefficient (deleting Britain in the fixed effects specification), but in this case the sign of the coefficient is positive, so the finding is consistent with our argument. With turnout set at the sample mean, the significance of the effect of wage

inequality falls below 90% in three instances (exclusion of Belgium from either model and exclusion of Italy from the random-effects model).[xviii] Overall, the finding that wage inequality is associated with more leftist Left parties at high levels of voter turnout appears to be very robust.

[Table 5]

Determinants of the center of political gravity

Our argument is that wage inequality moves Left parties to the left by changing the preferences of their core constituencies when low-wage workers are politically mobilized. The results presented above seem to support this argument, but they might also be consistent with the Meltzer-Richard model. It could be the case that higher levels of inequality make the median voter want more redistribution, which in turn might move Left parties to the Left. As we have seen, the center of political gravity actually shifted to the Right in many countries over the period covered by our analysis. Proponents of the Meltzer-Richard model might argue that voter turnout conditions the effects of wage inequality on the electoral center of political gravity in the same manner that it affects the preferences of core constituencies of the Left in our model.

To explore this alternative interpretation, we estimate random- and fixed-effects models with the center of political gravity as the dependent variable and a term for the interaction of wage inequality and voter turnout. Presented in Tables 6 and 7, the results are clear-cut: there is no significant association between wage inequality and the center of political gravity at any level of voter turnout. Furthermore, we do not find any consistent association between voter turnout and the center of gravity. The only variable included in these models that appears to be associated with the center of political gravity is disposable income inequality. This association may well be a case of reverse causality, for government policies directly affect the distribution of disposable household income and can safely be assumed to be less redistributive if all parties lean more to the Right. For our present purposes, the important point about the results presented in Tables 6 and 7 is that they lend credibility to our claim that wage inequality matters more to the

redistributive preferences of core Left voters than to the median voter or the core voters of Center-Right parties (cf. ANONONYMOUS 2008).

[Tables 6 and 7]

4. Conclusion

We started this paper by asking why it was the case that in countries that have experienced high and increasing inequality (like the US) the political response by the Left has been so muted while in countries where inequality is lower and has increased much less (like Sweden or the Netherlands) the Left is much more redistributive. In our theoretical framework, the political mobilization of low-wage workers is the key factor in explaining whether or not wage inequality affects the programmatic positions of Left parties. Using aggregate voter turnout as a proxy for the political mobilization of low-wage workers, we hypothesized that Left parties' responsiveness to wage inequality rises with turnout. With data from twelve OECD countries and deploying a number of alternative models, our analysis has provided strong support for this argument not only when looking at variation in Left party positions across countries, but also at within-country variation over time.

It is possible to look at our findings with a certain sense of pessimism. As shown abobve, many OECD countries have experienced declines in voter turnout since the early 1970s. Our argument implies that increasing levels of inequality are bound to affect Left parties less and less under these conditions. In this sense, low-wage workers seem to be caught in a vicious circle. Increasing inequality makes their preferences for redistribution stronger but decreasing mobilization makes their demands less relevant to Left parties, which in turn makes these parties less redistributive when they get to power and so inequality grows further. A more optimistic perspective is possible. Although we treat it as such in the previous analysis, low-income mobilization is not entirely exogenous to the behavior of Left parties. It is up to Left politicians,

after all, to dedicate resources to increasing the political participation of low-income voters. As argued by Anderson and Beramendi (2007: 3), voter turnout should be understood as the product of "people's incentives to vote *as well as* parties' incentives to mobilize specific groups of voters." Although the effectiveness of efforts by Left parties to mobilize low-wage workers is far from automatic, increasing political participation surely is a way to escape the vicious circle described above. It is therefore in the hands of Left parties, at least partly, to promote the participation of those most vulnerable to increases in inequality and, in the process, to make politics more responsive to their demands.

ENDNOTES

[i] Most existing alternatives to the Meltzer-Richard model (e.g., Moene and Wallerstein 2001, Iversen and Soskice 2001) share or, at least, do not challenge the assumption that the median voter determines government policy. Lee and Roemer (2005) represent a notable exception, which informs our own discussion.

[ii] See ANONYMOUS (2008) for further theoretical discussion and some empirical analysis of the effects of different forms of income inequality on the programmatic positions of mainstream Right parties.

[iii] It has generally been recognized that low income is associated with less participation in politics (see, for example, Verba, Schlozman, and Brady 1995 and Leighley 1995).

[iv] Drawing the Comparative Study of Electoral Systems dataset, Mahler (2008) reports Gini coefficients of voting by income decile for 13 OECD countries in the late 1990s. The correlation between these Gini coefficients and aggregate voter turnout is .81.

[v] See McCarty, Poole and Rosenthal (2006:ch.4) on variation over time in the American case.

[vi] It should be noted that we obtain very similar results to those reported below if we instead interact wage inequality with union density (results available upon request) or if we interact wage inequality with a composite index of voter turnout and union density (see ANONYMOUS 2008).

[vii] The countries included in our analysis are Australia, Belgium, Britain, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Sweden and the US. As we explain below, the number of elections included in our analysis varies by country, for reasons that also have to do with the availability of inequality data. See Appendix 1 for our data sources and Appendix 2 for summary statistics on all the variables included in our analysis.

[viii] See Armstrong and Bakker (2006) for a review of alternative methods for extracting a Left-Right dimension from CMP data. As Armstrong and Bakker point out, the measures generated by these techniques are highly correlated with the conventional CMP Left-Right index.

[ix] For Belgium, our measure of the position of the main Left party is the average of the (separate) scores for French- and Flemish-speaking socialist parties.

[x] Belgium and Norway are among the three countries with the most compressed wage distributions in both datasets. Note that our main results are robust to the exclusion of either country (see Table 5).

[xi] Splicing Canadian data from the two OECD datasets is a most dubious proposition. In OECD (1999), Canada stands out as the OECD country with the highest level of wage inequality in the late 1980s, with a 90-10 ratio of 4.40 in 1990 (as compared to 4.33 for the US). When Canada enters the new dataset (OECD 2004) in 1997, its 90-10 ratio is much lower, 3.63 (as compared to 4.62 for the US).

[xii] Our turnout data for the US include mid-term elections. Using five-year averages eliminates the year-to-year volatility that this entails. The overall effect is to lower US turnout relative to other countries. Arguably, this is a more accurate representation of the relative lack of low-income political mobilization in the US, but note also that our main results are robust to the exclusion of the US (see Table 5).

[xiii] The nature of our data makes it impossible for us to test or correct for contemporaneous correlation and serial autocorrelation in a systematic fashion. We simply have too few observations and too unbalanced a set of panels. Since so few of our cross-sectional observations coincide in the same time period, however, the existence of contemporaneous correlation is unlikely. A similar logic applies to serial autocorrelation: we have too few observations when lagged residuals coincide with a full set of variables, but, as a result, a serial autocorrelation problem is also very unlikely.

[xiv] This endogeneity is limited. The influence of the position of the main Left party on the center of gravity varies depending on the number parties and the vote share of the main Left party. Note also that our measure of the center of gravity is a five-year average that is influenced by party positions and vote shares in at least one prior election.

[xv] Whether this is more or less true for parties of the Left is a question that we cannot address here. Adams, Haupt and Stoll (forthcoming) argue that Left parties are more beholden to their core constituencies and less responsive to shifts in public opinion than Center-Right parties. On the other hand, there can be little doubt that the Right had political/ideological momentum in most countries in the 1980s and 1990s, with Left parties having to make significant programmatic adjustments.

[xvi] See ANONYMOUS (2008) for further discussion of the finding that Left parties are unresponsive to disposable household income inequality so long as we control for wage inequality.

[xvii] Results available from the authors.

[xviii] Two of these three coefficients come very close to clearing conventional thresholds of statistical significance. For the fixed-effects model without Belgium, the p-value is .113 and for the random-effects model without Italy the p-value is .112.

Figure 1: Cross-national Average for Center of Gravity, 1974-2000.

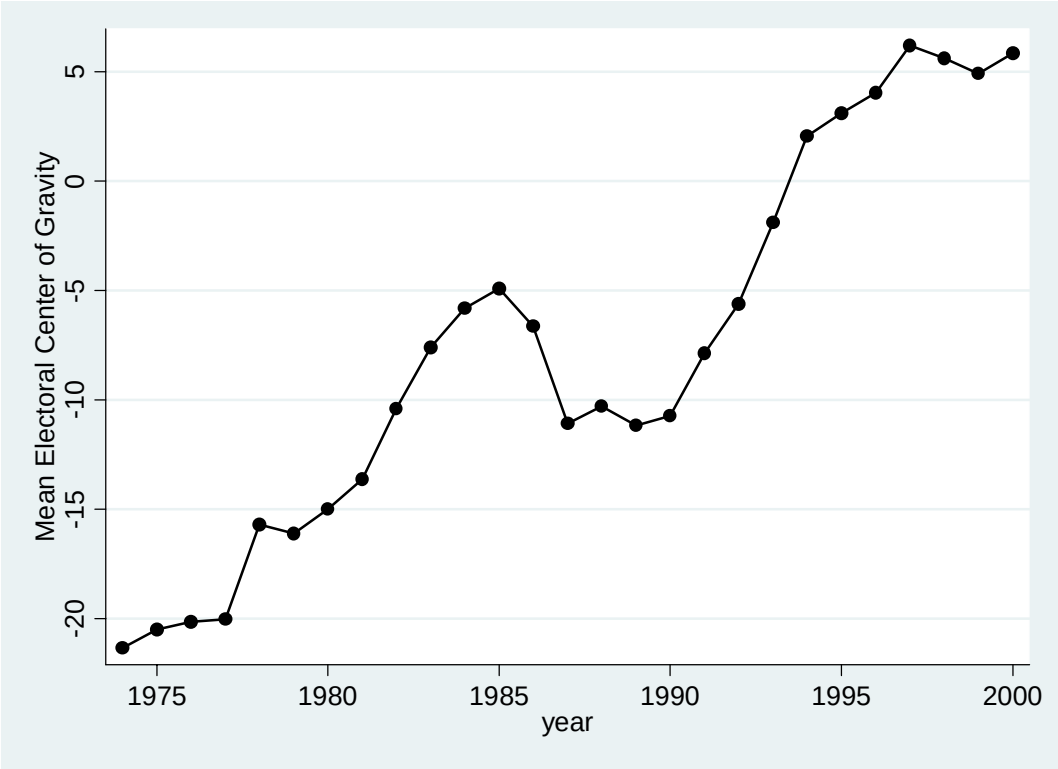

TABLE 1

Elections years included and wage inequality statistics by country

	election years	wage inequality		
		most recent observation	change since earliest obs.	Change since min/max obs.
Australia	83, 84, 87, 90, 93, 96, 98, 01	2.998	+1.8%	+6.0%
Belgium	87, 91, 95, 99	1.96	-6.1%	-6.1%
Britain	74 (Feb), 74 (Oct), 79, 83, 87, 92, 97, 01	3.45	+1.2%	+17.3%
Denmark	88, 90, 94	2.155	-1.7%	-1.7%
Finland	87, 91, 95, 99, 03	2.417	+2.5%	+2.5%
France	81, 86, 88, 93, 97, 02	3.106	-5.1%	-5.1%
Germany	87, 90, 94, 98, 02	3.036	+4.9%	+9.4%
Italy	87, 92, 94, 96	2.372	+5.0%	+5.0%
Netherlands	86, 89, 94, 98, 02, 03	2.92	+18.5%	+18.5%
Norway	93, 97, 01	1.99	-1.5%	-1.5%
Sweden	76, 79, 82, 85, 88, 91, 94, 98, 02	2.28	+2.5%	+12.6%
USA	76, 80, 84, 88, 92, 96, 00	4.592	+24.3%	+24.3%

Notes: The figures are based on averaging observations for up to five years (as described in the text). The last column reports the (percentage) change from the minimum to the most recent observation unless the most recent observation is also the minimum observation; in the latter cases, change is measured as the change from the maximum observation to the most recent observation.

TABLE 2

Voter Turnout 1980-2000

	average	1980	2000
Australia	94.9	94.4	95.2
Belgium	92.9	94.8	90.6
Italy	87.8	91.1	82.9
Sweden	87.6	90.7	81.4
Denmark	84.9	85.6	86.0
Germany	83.0	88.6	82.2
Norway	80.7	82.9	78.0
Netherlands	80.6	88.0	73.0
UK	74.9	76.3	71.6
Finland	72.5	75.3	65.3
France	70.9	83.3	71.5
USA	44.9	50.0	50.7

Note: For the US, the average includes mid-term congressional elections while 1980 and 2000 figures refer to presidential elections.

Source: Armingeon, Beyeler and Menegale (2004).

TABLE 3

Determinants of Left Party Positions

	(1)	(2)	(3)	(4)
Constant	22.249 (28.203) *.430*	21.287 (46.696) *.657*	-40.996 (52.487) *.435*	-97.069 (67.320) .177
Center of Gravity	.553 (.052) *.000*	.493 (.088) *.000*	.534 (.070) *.000*	.522 (.093) *.000*
Wage Inequality	-12.705 (7.212) *.078*	-8.069 (10.296) *.450*	7.316 (10.876) *.501*	33.503 (18.707) *.101*
Voter Turnout	-.165 (.114) *.148*	-.186 (.476) *.704*	.767 (.492) *.119*	1.654 (.870) *.084*
Wage Inequality*Turnout			-.280 (.126) *.027*	-.665 (.246) *.020*
Disposable Income Inequality	67.701 (81.795) *.408*	100.362 (106.598) *.367*	53.295 (92.257) *.563*	88.076 (116.962) *.467*
Union Density	-.008 (.088) *.930*	-.817 (.328) *.030*	-.059 (.070) *.397*	-.822 (.324) *.028*
Effective Number of Parties	-.410 (.910) *.653*	3.323 (2.340) *.183*	-.467 (1.110) *.674*	3.983 (2.397) *.125*
Fixed Effects	No	Yes	No	Yes
R^2	.435	.142	.460	.169
N	68	68	68	68

Notes: Results with fixed-effects are OLS, results with random-effects are GLS. Numbers are estimated coefficients; numbers in parentheses are robust variance standard errors that adjust for within-country correlation; numbers in italics are p-values from two-sided t-tests.

TABLE 4

Effects of Wage Inequality on Left Party Positions Conditional on Voter Turnout

Turnout	(3)	(4)
95%	-19.259 (6.918) *.005*	-29.632 (9.278) *.009*
85%	-16.461 (6.456) *.011*	-22.986 (7.913) *.014*
78.67% (sample mean)	-14.691 (6.279) *.019*	-18.779 (7.348) *.027*
60%	-9.468 (6.343) *.135*	-6.371 (7.530) *.416*
45%	-5.272 (6.997) *.451*	3.597 (9.451) *.711*
Fixed Effects	No	Yes

Notes: See Table 3.

TABLE 5

CONDITIONAL EFFECTS OF WAGE INEQUALITY ON LEFT POSITIONS WITH COUNTRIES DELETED

COUNTRY DELETED	45% TURNOUT		78.67% TURNOUT		90% TURNOUT		N
	REs	FEs	REs	FEs	REs	FEs	
Sweden	-8.55	3.63	-12.54**	-14.39*	-14.48**	-23.13**	59
Australia	-5.59	-2.22	-15.43**	-21.24**	-20.20**	-30.47**	60
Great Britain	-2.91	17.11**	-10.77**	-15.17**	-14.58**	-30.82**	60
USA	-15.17	.88	-17.10**	-19.17**	-18.03**	-28.89**	61
Netherlands	-4.11	2.19	-14.39**	-23.89**	-19.37**	-36.54**	62
France	-5.52	5.15	-14.20**	-20.87**	-18.41**	-33.50**	62
Finland	-2.48	1.19	-16.83**	-19.66*	-23.78**	-29.78**	63
Germany	-4.23	4.56	-14.02**	-17.23**	-18.77**	-27.80**	63
Belgium	8.70	3.37	-7.21	-20.05	-14.93**	-31.40*	64
Italy	-7.35	3.87	-18.02	-18.80**	-23.20**	-29.80**	64
Denmark	-4.75	4.16	-14.49**	-18.89**	-19.21***	-30.07**	65
Norway	-8.53	1.57	-17.45**	-19.71**	-21.78**	-30.03**	65

Notes: Conditional effects based on models 3 and 4 (Table 3); ** better than 95%, * better than 90%.

TABLE 6

DETERMINANTS OF THE CENTER OF GRAVITY

	(5)	(6)
Constant	-171.555 (62.042) *.006*	44.027 (107.843)) *.691*
Wage Inequality	12.929 (23.102) *.576*	-.590 (29.595) *.984*
Voter Turnout	.675 (1.253) *.590*	-1.614 (1.323) *.248*
Wage Inequality*Turnout	-.105 (.388) *.788*	-.019 (.493) *.970*
Disposable Income Inequality	348.151 (108.978) *.001*	294.127 (150.101) *.076*
Union Density	.135 (.272) *.620*	.234 (.787) *.772*
Effective Number of Parties	.456 (1.511) *.763*	-.706 (4.644)) *.882*
Fixed Effects	No	Yes
R^2 N	.349 66	.052 66

Notes: See Table 3.

TABLE 7

Effects of Wage Inequality on Center of Gravity Conditional on Voter Turnout

Turnout	(5)	(6)
95%	2.995 (19.030) *.875*	-2.368 (25.835) *.929*
85%	4.041 (15.876) *.799*	-2.180 (21.968) *.923*
78.67% (sample mean)	4.702 (14.070) *.738*	-2.062 (19.767) *.919*
60%	6.655 (10.429) *.523*	-1.713 (15.275) *.913*
45%	8.223 (10.642) *.440*	-1.432 (15.157) *.926*
Fixed Effects	No	Yes

Notes: See Table 3.

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Appendix 1

Data sources and specifications

Left party positions: data from Klingemann (2006), see text for explanation.

Center of political gravity: transformed Kim-Fording measure (see text for explanation), based on data downloaded from http://garnet.acns.fsu.edu/%7Ehkim/ (accessed 4/15/07).

Wage Inequality: 90-10 wage ratios from OECD (2004), supplemented by data from OECD (1999) for Belgium and Norway.

Disposable household income inequality: Gini coefficients, http://www.lisproject.org/keyfigures/ineqtable.htm (accessed 4/15/07).

Voter turnout: Armingeon, Beyeler and Menegale (2004), supplemented by internet sources for 2003.

Union density: Ebbinghaus and Visser (2000) except for Australia, Japan, the UK and the US: pre-1990 figures for these countries from Visser (1996) and post-1990 figures provided by Ebbinghaus. The following observations were extrapolated: all countries 2001, Switzerland 2002-2003, Sweden 2002, Finland 2002-2003, Netherlands 2002-2003, France 2002, and Germany 2002.

Effective number of parties: based on measure developed by Laakso and Taagapera (1979), data from Armingeon, Beyeler and Menegale (2004). Updated for 2003, based on CMP data in Klingemann *et al* (2006).

Appendix 2

Summary Statistics

VARIABLE	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
Main Left Party Position	-11.507	15.698	-48.5	29.26
Average Wage Inequality (90-10 ratio)	2.796	.635	1.96	4.592
Average Voter Turnout	78.673	13.971	43.78	95.7
Average Disposable Household Income Inequality (Gini Coefficient)	.271	.042	.197	.370
Average Center of Gravity Position	-2.684	20.514	-47.041	41.777
Average Union Density	43.915	23.622	8.9	86.6
Average Effective Number of Parties	4.333	1.760	2.020	9.776