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## Median voter and power resources revisited: A composite model of inequality

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# LIS

## Working Paper Series

No. 584

### Median Voter and Power Resources Revisited: A Composite Model of Inequality

Mathew Y. H. Wong

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A Composite Model of Inequality**

Feb 2013

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**Abstract**

This paper explains redistribution and income inequality by revisiting traditional approaches. First, despite the popularity of two dominant theories, the median voter hypothesis (the Meltzer-Richard model) and power resources theory, they are thought to have contrasting predictions and have seldom been incorporated under a single framework. We develop a composite model of inequality by accommodating their core arguments. This study also analyzes stages of inequality formation, such as market wage inequality and redistribution, and adds in a dynamic component to the model, completing the cycle of inequality. The model is supported empirically with data from 18 OECD countries from 1970 to 2006. We demonstrate the joint relevance and significance of the two theories, showing that they are not necessarily mutually exclusive.

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\* I would like to thank Hugh Ward for comments and suggestions on previous drafts of this paper.

This paper endeavors to explain income inequality by looking at wage distribution and the extent of redistribution, measured as reduction in inequality, which are the two factors accounting for disposable (net) income inequality.<sup>1</sup> To do that, we incorporate power resources theory and median voter hypothesis under a single framework. The intuition behind choosing these two theories, besides their obvious significance in the literature, is based on their inherently political nature and pertinence to the democratic status of a regime. The decisive voter in the median voter hypothesis is only meaningful (for the purpose here) in a democratic setting. Democracy also lowers the cost of participation for labor, and the freedom of association further enables workers to cumulate power resources (Schumpeter 1942; Rodrik 1998). It is apparent that both theories hinge on the ever-changing political climate, unlike other relatively static socioeconomic or structural explanations of redistribution and inequality.

There is another important reason to combine the two approaches. When a particular theory is focused over the other, one makes the implicit assumption that the two theories operate somewhat independently. However, as we shall see below, not only do the two theories overlap, but they are also causally related. Tests on the median voter hypothesis always focus on its direct effect on redistribution. It is seldom noted or tested that the position of the median voter can affect leftist electoral performance, which in turn affects redistribution. Thus, the direct and indirect effect of the median voter cannot be accurately estimated without simultaneously taking power resources into consideration; and vice versa.

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<sup>1</sup> This two-stage strategy to analyze the distributive process is essentially the same as that of Bradley et al. (2003), among others. Using different indicators, they likewise look at pre-government inequality and government redistribution, while ultimately interested in disposable income inequality.

There is nothing new about studying the various stages of inequality formation (wage inequality, redistribution) with either the median voter hypothesis or power resources theory. It is also not uncommon to see debates about the superiority of one theory over the other (e.g., Huber and Stephens 2012: 35-37). What we want to demonstrate here is that the two theories are not mutually exclusive: they can be accommodated under a single causal framework with their respective arguments intact. The resulting composite model will be able to compare theoretical predictions with empirical patterns and establish that both theories are equally applicable in explaining inequality formation.

The remainder of the paper is organized as follows. First, we will review the extant literature on the two major theories, including previous attempts in the literature to connect them. We will then introduce the suggested framework and introduce the hypotheses for testing it. It is followed by a discussion on the variables and methodology used. After presenting empirical results to support the model, we will conclude the research by discussing the findings and their implications.

### **Power Resources Theory**

Power resources theory is one of the most dominant theories in the study of welfare states (Stephens 1979; Korpi 1983; Hicks 1999; Huber and Stephens 2001; Brady 2009).<sup>2</sup> Unlike pluralist accounts of democracy, it begins with the assumption that political power is unevenly distributed in favor of capital and wealth. To fight against the status quo of business domination, working class and the poor must be mobilized to struggle for a more egalitarian distributive outcome. This could be done

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<sup>2</sup> Readers can refer to Bradley et al. (2003, fn. 14) for a list of earlier works on power resources theory. See also Korpi and Palme (2003, fn. 3).

through the influence of labor unions on market regulations and labor protection, and increasing the extent of redistribution through the control of government by leftist parties (Bradley et al. 2003). Korpi (2006) notes that this process is not necessarily zero-sum as perceived by some.

Based on the class analytical perspective, the size, organization and participation of the working class are long recognized as crucial factors in this theory (Hicks 1999). It stresses the role of unions and left parties as vehicles of working class mobilization (Przeworski 1985; Stephens 1979). Earlier studies, including Cameron (1978) and Stephens (1979), already reported the impact of left wing party strength on welfare efforts. Literature concerning the impact of globalization also holds these domestic political factors in high regard (e.g., Garrett 1998; Swank 2002). Measures of power resources include strength of social democracy, share of cabinet portfolios or legislature seats held by leftist parties, strength of unions such as density and centralization and so on. Pontusson and Kwon (2006) observe a slow transition by theorists to shift their focus from unions to parties. For example, Brady (2009) disregards non-institutional actors and plays down the importance of “dissensus politics” such as strikes and protests, which, in his opinion, is “romanticized” among leftists (2009: 11). In this research, left parties and unions will be considered as the major power resources. This is reinforced by the fact that in the absence of strong left parties, countries like Australia were not able to develop a comprehensive welfare state despite having strong labor movements (Huber and Stephens 2001).

Pierson (1996, 2001) suggests a “new politics of the welfare state” dismissing the importance of partisan ideology in the era of welfare state retrenchment (or the lack thereof). In the wake of the challenge, power resources theory proves to be resilient (except, partially, Huber and Stephens 2001). To name but a few, Hicks (1999), Korpi and Palme (2003) and Allan and Scruggs (2004) all show that partisan

politics remains a significant factor even during welfare retrenchment. Garrett (1998) argues that partisan effects will actually increase with globalization as it affects the parties' constituencies differently. Castles (2004) questions the "new politics" hypothesis by showing the continued relevance of leftist parties as well as the weaknesses of new welfare constituencies in resisting cutbacks, a central claim held by its advocates. Kwon and Pontusson (2010: 257) find the hypothesis of the decline of partisanship "theoretically ambiguous" in that the proposed factors could plausibly be interpreted as reasons for either partisan convergence or divergence (see also Allan and Scruggs 2004). Subsequent works covering the more recent period, like Brady (2009) and Pontusson and Rueda (2010), demonstrate the continued importance of power resources in distributional outcomes.

Power resources have an intimate relationship with corporatism, which is a pattern of tripartite bargaining at the peak level among labor, state and business (e.g., Korpi 1983). The role of corporatism on income distribution is very similar to that of power resources: with a high level of coordination between capital and labor, wage levels across the economy will be tied to one another, leading to a smaller difference in income. A branch of literature views power resources and corporatism as complementary (e.g., Garrett 1998). Beramendi and Cusack (2009) go as far as arguing that in the absence of wage bargaining coordination, left parties will not be associated with a more equal income distribution. This is contested by Rueda (2008), who finds a high level of corporatism an effective wage compressing mechanism by itself, thus constraining the corresponding impact of leftist policy and partisanship (see also, e.g., Pontusson et al. 2002). To account for these arguments, the conditional effect of corporatism will be investigated in the relevant tests below.

### **Median Voter Hypothesis (Meltzer-Richard Model)**

Following the tradition of Downsian spatial models, Meltzer and Richard (1981, 1983; see also Romer 1975) have developed one of the most popular public choice models of redistribution.<sup>3</sup> They argue that with median income always less than the mean income of the population, the median voter will vote for a tax rate that redistributes wealth from the rich to the poor. The degree of redistribution will be a function of the difference between the two income levels. At the heart of the model, according to Kelly and Enns (2010), is how inequality influences public preferences on redistribution.

This simple and elegant model, nevertheless, frustrates social scientists, as they are less successful in consistently finding empirical evidence for the model. In the first direct test of the theory using previously unavailable proper (pre-government inequality) data, Milanovic (2000) finds that the individual with median income is rarely a net beneficiary in tax and transfers system in OECD countries, despite confirming the relationship between pre-government inequality and size of redistribution (see also Kenworthy and Pontusson 2005; Mahler 2008).

However, even this latter interpretation of the theory is contested: studies often find less redistribution in more unequal countries (e.g., Perotti 1996; Moene and Wallerstein 2001), resulting in the “Robin-Hood paradox” (Lindert 2004). To explain this pattern, an alternative model, offered by Benabou (2000), argues that at certain levels of inequality, an increase in inequality will be negatively associated with public support for redistribution as more people are expected to lose from it. Kelly and Enns (2010) provide evidence suggesting that support for redistribution will indeed decrease with inequality, contrary to what the Meltzer-Richard model predicts.

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<sup>3</sup> Their model focuses on “government size”, which is assumed to be consisting of only redistribution.



To explain the anomaly, some underlying assumptions of the model are contested. Mueller (2003: 515) points out that the model assumes all redistribution goes from the rich to the poor, but his own data shows that transfer recipients come from across the income distribution, and in some cases the rich receives more. Ross (2006: 870) sees this as an attempt by governments to “channel benefits to the constituents they wish to favor.”<sup>4</sup> This is similar to the criticism by Huber and Stephens (2012) that the model unrealistically assumes that all citizens have equal amounts of power; an assumption abandoned in the power resources perspective. Lastly, as recognized by the authors, their model does not consider the effects of differential turnout (Meltzer and Richard 1983), and it is well established that the poor is much less likely to vote (for a summary, see Lijphart 1997).

A final problem of the hypothesis or spatial models in general is their applicability in multiparty systems. It assumes the direct translation of voter preference into policy, or the equally strong assumption of parties converging to the preferences of the median voter. In reality, policy is heavily mediated by political institutions, such as electoral systems and party representation (a scenario taken into account by the suggested model). For example, redistribution depends on whether the middle class will join forces with the rich or the poor, which is affected by electoral systems (Iversen and Soskice 2006, 2008). Nevertheless, spatial models might still be useful in multiparty scenarios. Schofield (1993) finds that the “political heart” determined by possible coalition outcomes are always in the center. Austen-Smith and Banks (1988) point out that there is incentive for parties to move to the middle position. Empirically, Ezrow (2008) shows that parties are not more extreme under

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<sup>4</sup> Note that these arguments do not contradict the fact that poor always gain from redistribution (e.g., Milanovic 2000; Osberg et al. 2004), which is crucial for the central argument of the paper.

proportional systems, or even with more parties. To assess the applicability of median voter model, we will include the effective number of parties in the tests below to control for the complication posed by party system.

### **Bridging the Two Theories**

From the review above, it is evident that the two theories were developed independently, or even stand in stark opposition (Kwon and Pontusson 2010). Huber and Stephens (2012) conclude that the two theories make the opposite predictions regarding inequality and redistribution. In the Meltzer-Richard rational choice framework, a greater extent of redistribution is favored by the median voter the greater “inequality” is, i.e., the distance between the median and mean income. On the other hand, power resources theory predicts the opposite outcome based on the balance of class power. Strong unions and strong left parties will simultaneously result in low “inequality” and more redistribution (Huber and Stephens 2012: 35).

The main reason for this contrast arises from the conception of “inequality”. As we shall see below, once we break this concept down into “market distribution”, “redistribution” and “net inequality”, it is not impossible that the two theories can sit side-by-side without discounting their respective validity. To start with, there is no inherent theoretical reason why they cannot be jointly analyzed. The theories are not necessarily mutually exclusive: parties can be both office- and policy-seeking (Kwon and Pontusson 2010; Wittman 1983). Parties are capable of winning elections by embracing the position of the median voter while also protecting the interest of their core constituencies. In addition, both theories originate from the simple left-right conception of politics. As Brady (2009: 98) points out, “underlying for power resources theory is a materialist interest-based rational choice explanation,” (Korpi

1985) where workers and the poor will act in accordance with their rational economic interest, not unlike the assumption median voter hypothesis places on voters. To bridge the two theories, this paper aims to include, from the median voter model, the link from market distribution to redistribution via the median voter; from power resources theory, the strength of left power on pushing for redistribution and inequality; and finally, whether the median voter actually votes for left parties, which is links the theories.

The pathway through which the median voter affects redistributive process via leftist political organizations is seldom explored. As noted, the median voter model rather unrealistically assumes that voters get what they vote for; or an increase in distributional inequality will necessarily translate into support for redistribution. We address this by inserting left parties as another actor in our model, alongside the median voter.

There are previous attempts to bridge the two theories. Kenworthy and Pontusson (2005) use voter turnout as an issue on which the two theories converge, but otherwise do not take partisanship into account (see also Mahler 2008). Pontusson and Rueda (2010) argue that parties of the left will respond to higher inequality under high voter turnout. Voter turnout determines the position of the median voter, and Korpi (1983) argues that turnout captures the capacity of unions and parties to mobilize. However, accounting for voter turnout is quite far from addressing the core arguments of the respective theories, let alone incorporating them into a coherent framework. Similar comments can be said about Cusack (1997), who studies spending decisions of partisan government along the lines of spatial models.

### **Towards a Composite Model of Inequality**

To highlight the difficulty in creating the model, a naïve attempt to bridge the two theories is shown in Figure 1. In a straightforward manner, it tries to incorporate their core arguments: power resources affect wage distribution and redistribution; distribution inequality determines the position of the median voter, which in turn affects the size of redistribution. However, a major flaw in combining the two theories this way is the neglect of the fact that leftist political parties come to power precisely through elections, the result of which is supposed to be determined, or at least heavily influenced, by the median voter. Intuitive though it seems, the literature does not provide an answer on whether the further left the median voter (or a greater wage disparity) will lead to more votes for left parties. An exception is Rodriguez (1999), who finds no such evidence in the US.

(Figure 1 about here)

To build this missing link, the simple model in Figure 1 is not sufficient. The argument is circular as (i) the median voter is determined by initial market distribution, and affects redistribution directly or through leftist representation; and at the same time, (ii) leftist parties also push for distribution equality, potentially changing the position of the median voter (i.e.,  $D \rightarrow MV \rightarrow PR \rightarrow D$  in Figure 1). Therefore, a temporal component is required in the model to accommodate these restrictions.

(Figure 2 about here)

The proposed model is shown in Figure 2. It explains inequality by breaking the process down into stages of redistribution with a dynamic component. At the start of

the cycle, market (controlling for policies from the previous government and other factors) generates a given income distribution, which determines the position of the median voter. She then votes for the proportion of votes left parties get (H1) and/or directly affects the level of redistribution (H2). Left parties (and power resources in general) in turn also affect redistribution (H2). Jointly, the initial wage distribution and level of redistribution combines to generate the final inequality level for the period. Of course, few voters get to vote on redistribution directly. What the median voter argument captures in our framework is any effect besides left parties acting on their own accord. It could be that the government in power (left-wing or otherwise) converges onto the median voter position; or that the worsening income disparity leads to a greater popular demand for redistribution. Lastly, by implementing policies in the current period, left governments influence distribution inequality of the next period, completing the cycle by determining the position of the future median voter (H3). To provide empirical support for the model, we operationalize the above arguments into the following hypotheses for testing:

H1: The vote share obtained by left parties will increase with the distance between the mean and median income.

H2: The extent of redistribution will increase with the distance between the mean and median income, and also with greater power resources.

H3: An increase in power resources in period  $t$  will decrease the distance between the mean and median income at  $t+1$ .

### **Research Design and Data**

This paper adopts a time-series cross-sectional design, with country-year as the

unit of analysis. This research includes 18 OECD countries commonly seen in welfare state studies (list of countries in Appendix). Subject to data availability, we include observations from 1970 to 2006. All models are run with the Prais-Winsten AR(1) estimation with robust standard errors. Country dummies can take away any unit heterogeneity, unobserved background factors as well as relatively static political institutions.<sup>5</sup> Time (year) dummies, on the other hand, can control for transnational influences such as international economic cycles. Both sets of fixed effects are included in all regressions below, putting any hypothesis to a hard test. Next, we discuss variables used in this research; descriptive statistics can be found in Appendix.

### ***Power Resources***

As noted, the political strength of the left is a major power resource. Left party vote and parliamentary seat shares from Swank (2007) are used.<sup>6</sup> The vote share obtained by left parties as the percentage of total votes casted is the dependent variable in H1; the left party share of legislature seats is used to capture left party strength in H2 and H3. This is done to bypass the problem of proportionality of electoral systems.

Union density is another key indicator of power resources approach besides party representation. It signifies the strength of worker organization and is effective in determining wage and redistributive levels. It is measured as net union membership as a proportion of wage earners in employment (Visser 2011). As a power resource, it is expected to have a positive impact on redistribution.

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<sup>5</sup> Results are largely unchanged when we control for electoral systems and presidential/parliamentary systems.

<sup>6</sup> In the original dataset, no leftist party is coded for the US. Democratic Party is recoded here as a left party. Similar results can be replicated by excluding the US.

Following Beramendi and Cusack (2009), the level of wage coordination is used as the measure of corporatism in this paper. We use the measure from Visser (2011), operationalized as a 5-point index of wage bargaining coordination, ranging from fragmented, company-level (1) to economy-wide bargaining (5). While Wallerstein (1999) regards it as the most important determinant of wage dispersion, it also strongly conditions the effect of left parties (Beramendi and Cusack 2009; Rueda 2008). To test the conditional effect, an interaction term between left party seat share and corporatism will also be included.

### ***Median Voter – Mean-to-median Income Ratio***

To capture the position of the median voter, the oft-used Kim and Fording (1998, 2003) measure derived from electoral results and manifesto coding is not suitable for our purposes as electoral result is also one of the dependent variables in the model. Instead, we directly measure the mean-to-median ratio (hereafter MMR) of income with microdata from the Luxembourg Income Study (LIS) (2011). It is the mean-to-median ratio of household factor income adjusted for the household size with equivalence scale.<sup>7</sup> Gaps in between LIS surveys are linearly interpolated. It is an independent variable in H1 and H2; and the dependent variable in H3 with a 3-year lead to allow for the time from left government to a change in market wage structure.

### ***Redistribution***

Most indicators of redistribution capture the amount of input, for example, the size of social spending. However, they are limited by the progressiveness of the

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<sup>7</sup> It is noted that there is a difference between factor income and wage in the handling of self-employment and property income (OECD 2008: 99). The distinction is not important for the purpose here.

system and how the resources are spent. It is also problematic as it fails to account for changes in societal welfare needs (Clayton and Pontusson 1998). Here, we measure redistribution by its direct outcome. With LIS data, Mahler and Jesuit (2008) provide the degree of relative (proportional) redistribution by comparing the level of inequality reduction (in gini) before and after tax and transfers.<sup>8</sup> A higher figure represents a greater reduction of inequality, i.e., more redistribution.<sup>9</sup> The interpolated series is used here as the dependent variable in H2.

### ***Control Variables***

Different sets of control variables are included for testing the relevant hypotheses. Unless otherwise stated, all of the variables below are available from the OECD electronic database (2011). The effective number of parties at the parliamentary level (ENPP) captures the party system and the division among leftist parties that cannot be reflected in aggregate measures. Data is taken from Gallagher (2010). For reasons discussed above, ENPP is included as a control in all tests. The measure is lagged by one year in H1 as ENPP is determined after the election.

Economic growth and the level of economic development, both in terms of GDP (in current USD), are likewise controlled for in all tests. It is plausible that the economy might affect redistribution, wage and electoral outcome. Government expenditure as a share of GDP is also a common control. With data from World Development Indicators (World Bank 2011), it captures the size of the public sector

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<sup>8</sup> It is generally agreed that although the progressiveness of redistribution varies by country, inequality is always reduced by it (Iversen and Soskice 2006; Bradley et al. 2003; see also fn. 7).

<sup>9</sup> Kenworthy and Pontusson (2005, see fn. 34 in particular) argue that the use of relative measure of inequality is problematic. The results are found to be robust to the absolute measure, also available from Mahler and Jesuit (2008).



and might affect the support of left parties. The amount of government input is also an obvious, though rough, determinant of redistribution. Standardized unemployment rate is another important determinant of wage and redistribution. It also captures the efficacy of labor, the main power resource (Korpi 2003). All of these four indicators are included in all tests below.

Next, we introduce controls specific for individual hypothesis. The variable of interest in H1 is the performances of left parties in election. To begin with, voter turnout is of particular interest in addition to the arguments presented above in intersecting the two main theories. As the poorer population is disproportionately less likely to vote (Lijphart 1997), the income distribution of voters should be more skewed than that of the population. Taking turnout into account can more realistically translate the income distribution of the population into that of the voters' (Mahler 2008). Voter turnout data in legislative elections from the International Institute for Democracy and Electoral Assistance (IDEA 2011) is used. It is interpolated for years in between elections. Lastly, manufacturing employment as a share of total employment controls for the size of the working class, the core supporters of left-leaning parties.

Turning to H2, we look for potential determinants of redistribution. The standard controls above (ENPP, unemployment, government spending, GDP, growth) are used. Total central government debt as a percentage of GDP captures the argument that indebted governments are more constrained in their actions with fewer resources at their disposal. We expect it to have a negative impact on redistribution. Lastly, the proportion of old-age population, above the age of 65, is expected to increase the extent of redistribution as it captures the demand side of redistribution in the form of old-age benefits and pensions.

Finally, H3 tests the effect of left government on wage distribution. Again, ENPP,

unemployment, government spending, GDP and growth are included. Share of manufacturing employment from H1 is also used here. It captures the employment and wage structure as well as the effects of deindustrialization as workers lose their jobs in this sector and need to resort to low paying service sector (Esping-Andersen 1990). We also put in female labor participation rate as a percentage of total employment. A higher rate of female participation usually means a higher income disparity due to wage discrimination and an increase in the supply of less-skilled labor, although countervailing forces might be at work (Pontusson et al. 2002; Huber and Stephens 2012). A final control for H3 is the level of education attainment. We use the Barro-Lee (2010) data on the average year of total schooling. As a measure of human capital, it captures the skill and productivity of the population which might affect the distribution of market wages.

### **Empirical Results**

Empirical results largely support the hypotheses outlined above. In Table 1, we can see the positive association between the median voter and leftist electoral results. A larger mean-to-median income ratio, i.e., a greater distance between the mean and median income, leads to a greater vote share for left parties. MMR is positive and significant at the 5% level. The result is robust to the inclusion of ENPP in model 2. The same goes for controlling other indicators of leftist strength, namely, union density and corporatism. The magnitude and level of significance of MMR persist across the three models. This provides a strong confirmation of H1.

(Table 1 & 2 about here)

Results on testing H2 can be found in Table 2.<sup>10</sup> The original median voter model can be confirmed. Following the prediction of Meltzer and Richard (1981), a greater income disparity leads to a more redistribution. MMR remains positive and highly significant at the 1% level in model 4 and when tested alongside power resources variables in model 7. The power resources side of the argument is less clear-cut in this regard. In model 5, all three power resources measure, the share of left party seats, corporatism and union density, are not significant. As discussed above, corporatism might either constrain or facilitate the effect of left partisanship (Beramendi and Cusack 2009; Rueda 2008). An interaction term between share of left seats and corporatism is inserted in model 6. Upon doing so, corporatism becomes significant alongside the interaction term. Brambor et al. (2006) advises that significance should not be the primary concern in the interpretation of interaction models. A graph of marginal effect of left seats on redistribution is presented in Figure 3 with the estimates from model 6. The solid line represents the marginal effect while the broken lines show the 95% confidence intervals. An effect is statistically significant at the 5% level when the boundaries do not touch the horizontal axis. As we can see, a marginal increase in left party seat share significantly increases redistribution when corporatism is high (>3). This shows that the redistributive efforts of left parties are most effective only when there is a high level of coordination within the economy. Lastly, both the variables for power resources and MMR are tested together in model 7. All of the variables remain largely unchanged. This demonstrates the joint significance of the two major theories in determining redistribution. H2 can then be confirmed with the condition that the effect of left partisanship depends on corporatism.

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<sup>10</sup> Austria and Greece are excluded in H2 due to missing data.

(Figure 3 & Table 3 about here)

Finally, the cycle is complete with H3 on how power resources can affect future wage disparity (MMR lead by 3 years). As we can see from model 8 in Table 3, left partisanship is not significant in affecting the mean-median income ratio. Instead, union density, another power resource, has a significant (5%) negative effect in decreasing the ratio. Its magnitude and significance persists in model 9 as well as in model 11, when all other power resources indicators are included. On the other hand, the interaction effect between partisanship and corporatism is very weak as shown in model 10. Only the interaction is weakly significant at conventional levels, and a similar graph of marginal effect as Figure 3 confirms the insignificance of the relationship. In short, model 11 is a good reflection of the results in this section. While left partisanship and corporatism do not significantly affect future wage disparity, a higher union density significantly decreases it and thus leads to a more equitable income distribution. As union density is recognized as an important power resource, this result confirms H3.

Besides statistical significance, the above results are of substantive significance. Considering the estimates for H1 in model 1, a standard deviation increase in MMR (0.12) will translate into a 0.93% increase in left vote shares. Although this seems less impressive, bear in mind that MMR can affect redistribution directly and indirectly through the boosted left political strength (H2). A similar increase in MMR will directly increase redistribution by 0.8 (model 7). If, for example, the increase in vote leads to a 4% increase in seat shares (not impossible depending on the electoral system), it will roughly push up redistribution by 0.2 at the highest level of corporatism. To put this into context, redistribution has a mean of 36.24. Substantively,

a 1-point increase as a result of one standard deviation change in MMR should be considered rather significant.

## **Discussion**

In this section, we will discuss our results and try to account for their differences with existing studies. First, not a lot of research focuses on the link between income disparity and the electoral outcome as noted. This relationship cannot be taken for granted with Rodriguez (1999) finding no such evidence in the US. Our cross-national results confirmed the conventional belief that a greater mean-to-median ratio, or the further the position of the median voter to the left, the more votes left parties will get.

Results from the second hypothesis warrant more discussion. In the first part of H2, we find that greater redistribution is associated with a more biased initial income distribution, confirming the predictions of the Meltzer-Richard (1981) model. This result, although theoretically grounded, goes against a series of other empirical works suggesting otherwise (Moene and Wallerstein 2001; Gouveia and Masia 1998; Kristov et al. 1992). This can be attributed to the wide variety of ways researchers operationalize the variables. Very few studies actually try to measure the mean-median income distance/ratio outlined in the original model. Instead, it is variously measured as wage distribution inequality (e.g., Iversen and Soskice 2006) or the ratio of wage levels (e.g., Moene and Wallerstein 2001; Lupu and Pontusson 2011). For the lack of quality data, it might also be approximated by the log of 5 times the middle quintile share of GDP (Kristov et al. 1992) or the ratio of GDP per capita (mean income proxy) to the wage of manufacturing worker (median wage) (Franzese 2002). In this study, we compute the mean-to-median income ratio from the high quality LIS database and test with it along the lines of the original model. As we shall

see, the same can be said about the measurement of redistribution.

The second part of H2 looks at the strength of power resources in explaining redistribution. There is a debate in the literature regarding the role of corporatism vis-à-vis left partisanship. For example, Beramendi and Cusack (2009) view corporatism as a crucial condition for leftist government to effectively suppress wage inequality. Others argue that the impact of partisanship is actually muted by corporatism (Rueda 2008; Pontusson et al. 2002). Our results support the former view: corporatism is a necessary condition for left parties to significantly increase redistribution. We argue that, however, the two views do not directly contradict each other. The difference lies in the measurement of redistribution as an input or outcome. The variable of interest for Rueda (2008) is “welfare generosity”, measured as the ratio of social transfers to GDP adjusted for proportion of working population. Curiously, he also finds that this “welfare generosity” does not affect inequality irrespective of the level of corporatism (Rueda 2008). Rather than input, Beramendi and Cusack (2009) focus on the effects on wage inequality and disposable inequality. Similarly, we break down the two concepts into wage disparity (mean-median ratio) and redistribution as the reduction of inequality. It is very likely that while left government is constrained by corporatism in increasing the amount of welfare input, the progressiveness of the welfare state as a whole (other than welfare input) can only be achieved by left partisanship under corporatism. This possibility is an interesting avenue for future research.

Our last hypothesis investigates the utility of power resources in explaining future wage dispersions. Here, the strength of left parties seems to be less relevant, regardless of whether corporatism is considered. This is in line with the finding that left partisanship has no significant impact on the lower half of wage distribution (e.g., Pontusson et al. 2002; Rueda 2008). On the other hand, the strongest impact in

decreasing the ratio of mean-to-median income comes from union density, another important power resources indicator. This resonates well with Wallerstein (1999), who argues that the density and centralization unions have a strong effect on wage distribution.

To conclude, this paper incorporates the median voter (Meltzer-Richard) hypothesis and the power resources theory into a single framework. Despite arguments about their incompatibility and contrasting predictions, we argue that they are causally linked as a greater income disparity leads to stronger left electoral performance. With statistical evidence, we show that they are jointly significant to redistribution and thus inequality formation, both statistically and substantively. This study carries profound implications for the literature as the proof that the two major approaches in the field are not necessarily mutually exclusive; on the contrary, the explanatory power of either approach can be greatly strengthened by adequately accounting for the other approach.

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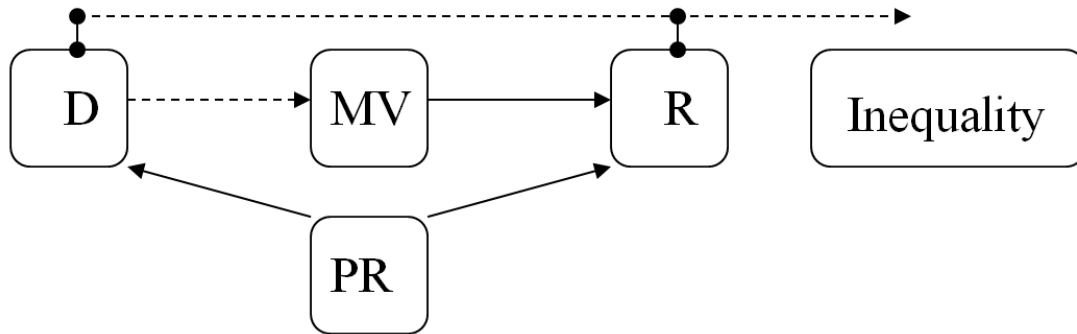
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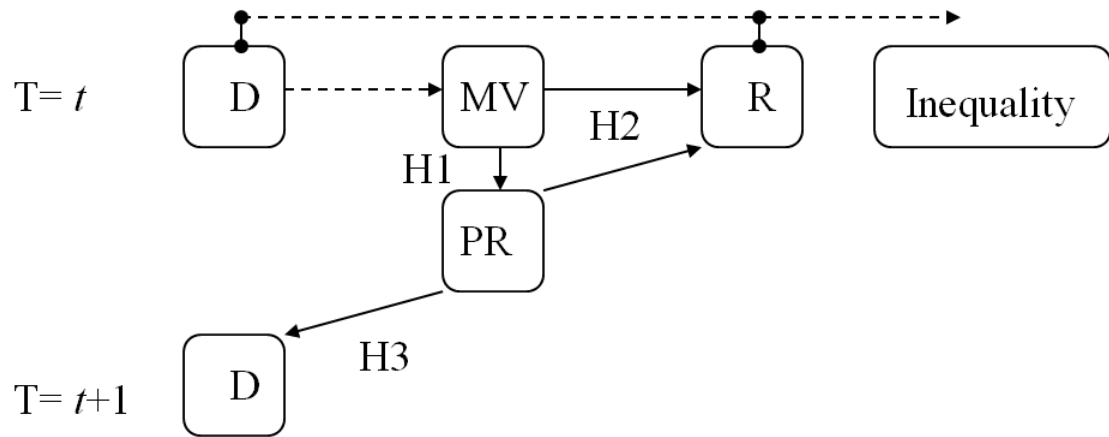
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**Figure 1. A Problematic Attempt to Link the Two Theories**



*Notes:* D = Wage distribution; MV = Median voter; PR = Power resources; R = Redistribution. Solid lines represent causal effects. Dotted ones represent deterministic relationships.

**Figure 2. A Composite Model of Inequality**



See notes from Figure 1 above.

**Table 1. Effect of Median Voter on Left Vote Shares (H1)**

Model	1	2	3
Dependent Variable	LeftVote	LeftVote	LeftVote
MMR	7.745** (3.480)	7.571** (3.442)	7.589** (3.624)
ENPP (lag 1 year)		-0.535 (0.446)	
Corporatism			-0.0280 (0.0801)
Union Density			0.0510 (0.145)
Turnout	-0.0107 (0.0293)	-0.0104 (0.0294)	-0.0112 (0.0292)
GDP	-5.91e-07* (3.07e-07)	-6.08e-07* (3.12e-07)	-6.07e-07* (3.13e-07)
Gov. Exp.	-0.0540 (0.206)	-0.0625 (0.205)	-0.0489 (0.204)
Growth	0.0969 (0.0732)	0.0971 (0.0733)	0.0988 (0.0719)
Unemployment	0.00128 (0.118)	0.00979 (0.118)	0.0150 (0.121)
Manufact. Employ	0.205 (0.371)	0.180 (0.366)	0.236 (0.372)
N, #Countries	401, 18	401, 18	401, 18
R-squared	0.804	0.806	0.804

*Notes:* \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Dependent variable is vote share obtained by left parties. Prais-Winsten AR(1) estimation with robust standard errors in parentheses. With country fixed effects, year fixed effects (1970-2006) and constant terms (not shown).

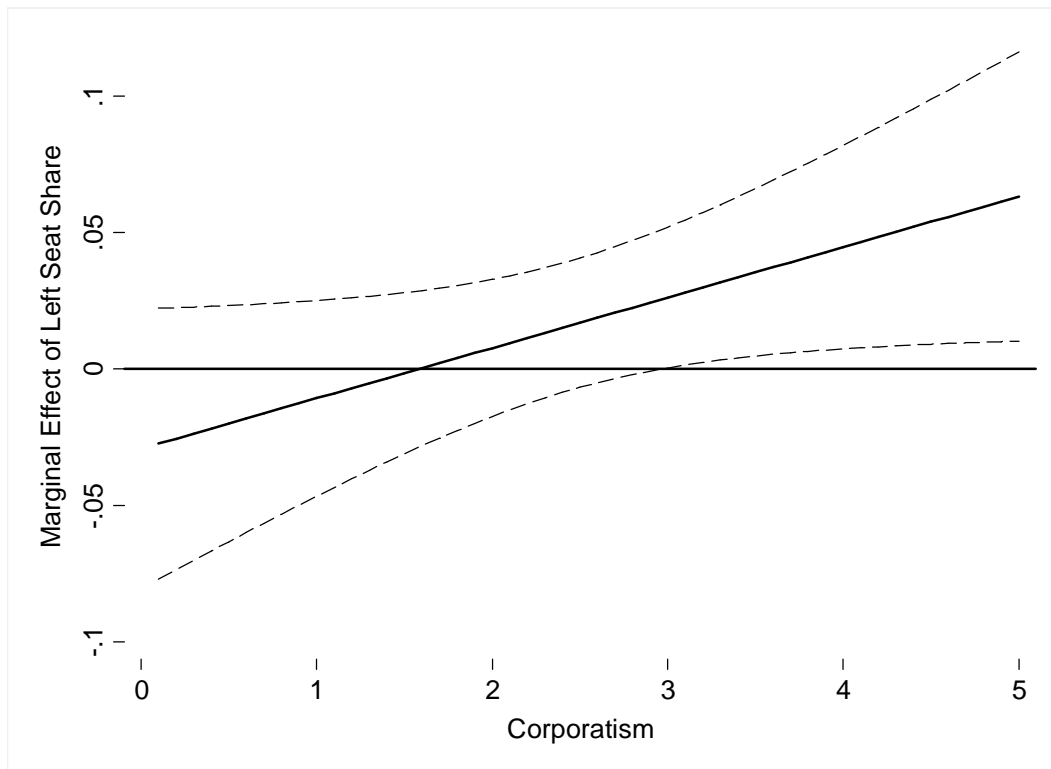
**Table 2. Effects of Median Voter and Power Resources on Redistribution (H2)**

Model	4	5	6	7
Dependent Variable	Redist.	Redist.	Redist.	Redist.
MMR	6.720*** (1.992)			6.666*** (2.131)
LeftSeat		0.0177 (0.0123)	-0.0293 (0.0262)	-0.0320 (0.0276)
Corporatism		-0.0476 (0.0602)	-0.951** (0.468)	-0.987** (0.496)
LeftSeat*Corporatism			0.0185* (0.00947)	0.0192* (0.0100)
Union Density		-0.0261 (0.0462)	-0.0264 (0.0465)	-0.0175 (0.0498)
ENPP	-0.218 (0.213)	-0.245 (0.221)	-0.214 (0.226)	-0.166 (0.220)
GDP	-2.41e-07 (2.74e-07)	-1.14e-07 (2.68e-07)	-1.66e-07 (2.74e-07)	-2.66e-07 (2.88e-07)
Gov. Exp.	0.191** (0.0866)	0.193** (0.0943)	0.207** (0.0953)	0.218** (0.0902)
Growth	-0.00160 (0.0322)	-0.000815 (0.0331)	-0.00591 (0.0339)	-0.00851 (0.0336)
Unemployment	0.0431 (0.0724)	0.0635 (0.0791)	0.0640 (0.0791)	0.0473 (0.0767)
Debt	0.0315* (0.0179)	0.0320* (0.0187)	0.0288 (0.0180)	0.0269 (0.0173)
Population 65+	-0.301 (0.476)	-0.292 (0.487)	-0.296 (0.483)	-0.294 (0.484)
N, #Countries	196, 16	196, 16	196, 16	196, 16
R-squared	0.944	0.948	0.948	0.945

*Notes:* \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Dependent variable is redistribution. Prais-Winsten AR(1) estimation with robust standard errors in parentheses. With country fixed effects, year fixed effects (1980-2004) and constant terms (not shown).



**Figure 3. Marginal Effect of Left Seat Share on Redistribution**



*Notes:* Graph of marginal effect of share of left party seats on redistribution as corporatism changes. The broken lines represent the 95% confidence interval for two-tailed tests. Plotted with the coefficient matrix and the variance-covariance matrix of model 6. See Brambor et al. (2006) for a description of the methods and the computer code used to generate the graph.

**Table 3. Effect of Power Resources on Income Distribution (H3)**

Model	8	9	10	11
Dependent Variable	MMR	MMR	MMR	MMR
LeftSeat	0.000287 (0.000352)	0.000251 (0.000358)	-0.000331 (0.000400)	-0.000353 (-0.0004)
Corporatism			-0.00804 (0.00635)	-0.00771 (0.00625)
LeftSeat*Corporatism			0.000248* (0.000132)	0.000243* (0.000131)
Union Density		-0.00259** (0.00120)		-0.00256** (0.00120)
ENPP	0.00628 (0.00450)	0.00677 (0.00455)	0.00625 (0.00465)	0.00672 (0.00471)
GDP	1.25e-08 (1.16e-08)	1.09e-08 (1.12e-08)	1.19e-08 (1.18e-08)	1.03e-08 (1.14e-08)
Gov. Exp.	0.00248 (0.00219)	0.00296 (0.00216)	0.00241 (0.00226)	0.00285 (0.00223)
Growth	-0.000538 (0.000927)	-0.000217 (0.000928)	-0.000778 (0.000934)	-0.000460 (0.000931)
Unemployment	-0.00325 (0.00225)	-0.00317 (0.00226)	-0.00304 (0.00223)	-0.00296 (0.00224)
Female Labor	-0.00208 (0.00184)	-0.00258 (0.00184)	-0.00226 (0.00184)	-0.00275 (0.00184)
Manufact. Employ	-0.00255 (0.00576)	-0.00129 (0.00586)	-0.00230 (0.00567)	-0.00108 (0.00576)
Avg. Year Edu.	-0.0229 (0.0154)	-0.0190 (0.0150)	-0.0228 (0.0151)	-0.0189 (0.0147)
N, #Countries	337, 18	337, 18	337, 18	337, 18
R-squared	0.921	0.924	0.921	0.924

*Notes:* \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Dependent variable is mean-median ratio lead by 3 years. Prais-Winsten AR(1) estimation with robust standard errors in parentheses. With country fixed effects, year fixed effects (1970-2004) and constant terms (not shown).

## Appendix

**18 Countries included:** Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom, and United States

### Descriptive Statistics

	Observations	Mean	Standard Deviation	Minimum	Maximum
LeftSeat	406	41.62	14.97	3	67.1
LeftVote	406	40.13	11.67	7	57.1
Corporatism	406	3.07	1.38	1	5
Union Density	406	39.90	21.92	7.7	87.4
MMR	406	1.19	0.12	1.01	1.77
Redistribution	235	36.24	8.94	21.7	52.1
Turnout	406	75.90	11.98	42.25	95.83
GDP	406	910285	1712414	34176.47	1.18E+07
Gov. Exp.	406	20.15	3.86	10.32	29.64
Growth	406	2.75	2.03	-6.00	10.92
Manufact. Employ	401	18.08	3.75	10.53	29.91
Unemployment	406	7.49	3.61	0.47	19.53
Female Labor	379	56.54	12.53	25.79	80.96
Debt	331	50.09	27.91	6.0	118.3
ENPP	406	3.55	1.49	1.69	9.05
Population 65+	406	14.18	2.29	8	19.5
Avg. Year Edu.	391	9.66	1.51	5.92	12.87