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## The material consequences of welfare states: Benefit generosity and absolute poverty in 16 OECD countries

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# **Luxembourg Income Study Working Paper Series**

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**The Material Consequences of Welfare States: Benefit  
Generosity and Absolute Poverty in 16 OECD Countries**

**Lyle Scruggs and James Allan**

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**The Material Consequences of Welfare States: Benefit Generosity and Absolute Poverty in  
16 OECD countries**

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## **Abstract**

Several recent studies have focused attention on the relationship between welfare states and poverty. This work has looked primarily at relative poverty, employing concepts of welfare state generosity that are problematic. This has made it difficult to evaluate claims that equality has come at the expense of economic growth. In this paper we examine more directly the relationship between welfare state generosity in three social insurance programs—unemployment, sickness and pensions—and poverty levels in advanced industrial democracies in the last quarter of the twentieth century. Our results strongly suggest that more generous entitlements to key social insurance programs are associated not only with lower *relative* poverty, but also lower *absolute* poverty. This supports the contention that promoting relative economic equality can improve the absolute material well-being of the poor. However, we find no evidence to suggest that relatively more generous unemployment benefits systematically reduce poverty.

## Introduction

In recent years much has been written about the determinants of change in national welfare states as scholars have sought to explain recent patterns of welfare state retrenchment and reform. Particular attention has been focused on the impact of partisanship and globalization, and the appropriateness of different measures of welfare state “effort” (Green Pedersen, 2004; Korpi and Palme, 2003; Huber and Stephens, 2001; Swank, 2002; Allan, 2003; Allan and Scruggs, 2004; Castles, 2002). While this debate will undoubtedly continue, other studies have (re-) turned to treating features of the welfare state as independent variables, focusing on the impact of welfare states on distributive outcomes (Bradley et al. 2003; Kenworthy 1999, 2004; Goodin, et al. 1999; Moller et al. 2003; Smeeding and Rainwater 2002; Smeeding Rainwater and Burtless 2001). Given that poverty alleviation is a central goal of social programs in advanced industrial democracies, it should be of little surprise that it features so heavily in studies of the distributive effects of social policy.

While a variety of indicators of welfare programs have been employed to explain cross-national variations in poverty rates over the last three decades, two main lacunae persist in this literature. First, we continue to lack good indicators of welfare state entitlement generosity. Second, research has focused almost exclusively on relative poverty rates. In this paper, we address both of these gaps. We construct a sample of absolute poverty rates using disposable income surveys from the Luxembourg Income Study (LIS) with detailed social program data from our Comparative Welfare State Entitlements data set to examine the effects of the generosity of public unemployment, sickness and pension insurance benefits on absolute poverty rates in sixteen advanced industrial economies.

Our results suggest that more generous entitlements are associated not only with lower

relative poverty, but also lower absolute poverty. Our entitlements data are conceptually more proximate and statistically more robust predictors of absolute poverty rates than are the main “welfare state” correlates offered in the literature, namely left partisanship and public spending. While our results do not refute the idea that spending or partisanship matters, they do offer a more direct policy mechanism by which to affect poverty rates.

The outline of the article is as follows. We begin with a brief review of the recent literature on the effects of the welfare state on distributive outcomes. Before testing our hypotheses about the role of program generosity on poverty levels, we examine trends in relative and absolute poverty rates during the last two decades. We then offer a justification for adding our generosity measure to the analysis. Then, after outlining our empirical model, we discuss our results and their implications.

### **Explaining Poverty and Inequality**

One of the major goals of social policy in all developed democracies is the alleviation of poverty. Of course many systems of social protection aim to do much more than this, and strategies for addressing poverty vary considerably among countries. Indeed, recent scholarship on welfare state reform often argues, at least implicitly, that past policies for addressing poverty may no longer have the same effect (Lindbeck 2001; Esping-Andersen, 2002).

Analysis of poverty in advanced industrial societies has benefited greatly from the availability of comparative micro-level data from the Luxembourg Income Study (LIS). While far from perfect, these data provide useful comparative surveys on the distribution of income in many advanced capitalist democracies (e.g., Kim, 2000; Smeeding, Rainwater and Burtless, 2001). Numerous studies utilizing LIS data shed light on the determinants of poverty and

inequality reduction. For example, from a power resources perspective, Bradley et al.'s (2003) analysis of pre- and post-tax and transfer inequality highlights the critical role played by labor organizations and left party governments. In a similar vein, Moller et al. (2003) and Brady (2003) discuss the importance of left parties and other political-institutional factors, like the number of constitutional veto points (though the latter study does conclude that the partisanship effects are channeled through welfare state institutions). Examining more directly the relationship between poverty and welfare state structure and effort, Kenworthy (1999, 2004) presents evidence that social policy does affect the level of *absolute* poverty.

There is generally broad agreement that social policies ameliorate poverty in advanced industrial societies. However, serious gaps remain when it comes to assessing the dynamic impact of social policy on the living standards of the poor, and defining the “generosity” of social policy. Most empirical studies continue to rely heavily on aggregate social expenditure as a measure of welfare state commitment in spite of the widespread recognition that spending data often give a misleading picture of such commitment. Increased aggregate spending can coexist with lower individual entitlements, and programs that “decommodify” labor may alter behavioral incentives of non-recipients of state spending (e.g., via wage demands). Indeed, generosity in the terms of benefit receipt at the micro-level, not program spending as such, is what many critics of welfare state programs contest.<sup>1</sup> In our analysis we address this issue by employing data on welfare state program generosity for 16 countries based on the Comparative Welfare State Entitlements data set.

### *Absolute vs. Relative Poverty*

Virtually all studies of the determinants of national poverty, and most comparative

descriptions of poverty rates in the LIS countries use the concept of relative poverty. Relative poverty means that the threshold of poverty is defined on the basis of the country's own median (sometimes mean) income. The relativist approach to poverty goes back at least to Adam Smith, and is based on the idea that social norms define individual deprivation (Sen, 1983; Townsend, 1979):

By necessities I understand ... what ever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without.... Custom ... has rendered leather shoes a necessary of life in England. The poorest creditable person of either sex would be ashamed to appear in public without them. (Smith 1776, quoted in Sen 1983, p. 159)

Emphasizing relative poverty can go too far, however. This was Sen's point in restating the absolutist approach. Comparing countries' wealth or well-being on the basis of their own median ignores overall welfare differences across countries. Few would want to claim that the greater equality of income in a very poor country is "better" than higher relative poverty in a very rich country. Take two countries with identical relative poverty. In A, the incomes of the bottom 30% rise by 20% over a relatively short period (say a decade or two), while the incomes of the top 70% rise by 30%. In B, incomes and income shares remain stagnant. B now has lower relative poverty, but the poor in A are much wealthier in B.<sup>2</sup> Increased relative poverty may have costs that reduce or even overwhelm any absolute gains in wealth. However, it is hard to make a case that it is usually thus.

The idea that the pursuit of *relative* equality undermines *absolute* well-being is a central theme of many welfare state critics (Lindbeck 1995, 2001; Murray 1984). Calls for institutional reforms in egalitarian welfare states often contend (if not always explicitly) that poverty



reduction programs stifle aggregate growth and potentially higher absolute incomes among the poor (Lindbeck 1995).

Systematic comparative evidence of this charge—or more specifically, whether traditional welfare generosity has hindered reductions in *absolute* poverty—does not exist. Existing studies tend to find no effect of social spending on growth or the like (e.g., Lindert 2004), but that is a different question. As Lane Kenworthy recently noted:

To a large extent proponents of these two views talk past each other.

Welfare State supporters typically focus on *relative* poverty. Welfare critics, on the other hand, focus principally on absolute poverty. Across affluent countries, welfare state generosity is very strongly associated with low relative poverty. But there has been very little cross-national research addressing the possibility that redistribution may harm the poor in an absolute sense. (Kenworthy 2004, p. 9.)

Our empirical analysis considers both absolute *and* relative poverty rates over the last two decades. However, since wider attention has already been focused on relative poverty, we will concentrate our discussion on absolute poverty. Table 1 provides rates of relative and absolute poverty for the mid 1980s and the latest available year. All poverty rates were computed from the LIS data files and follow approaches for computing poverty rates used by leading poverty measurement experts (e.g., Smeeding and Rainwater 2002; Smeeding Rainwater and Burtless 2001). The poverty line was set at 40% of median equivalent income, approximately the official United States' poverty line.<sup>3</sup>

One complication of computing an *absolute* poverty measure is that it requires converting national currencies to a common standard of value. We again follow approaches adopted by

those working with LIS data, using the United States as the base country and 1986 as the base year.<sup>4</sup> We started by computing the 1986 household equivalent 40-percent-of median poverty threshold for the United States (as one would for computing relative poverty). This threshold was indexed for US inflation to obtain annual “absolute” poverty thresholds for all years in the United States. These threshold amounts were then converted to the currencies of the other countries using the OECD’s current purchasing power parity values for the country-year in question. Poverty rates are computed as the percentage of (equivalent) individuals with disposable income below the threshold.<sup>5</sup>

It is worth pointing out that the income concepts in the LIS refer only to disposable income—net of capital, income and payroll taxes and cash transfers and quasi-cash transfers. This means that in-kind goods and services like education, housing, or health care are excluded, as are consumption taxes like sales taxes or VAT. Estimates of the contribution of these excluded categories to the distribution of final consumption are not available.<sup>6</sup>

#### *TABLE 1 ABOUT HERE*

#### *Relative Poverty Trends*

Relative poverty rates in continental Europe average less than 4%, while they are about 7% in Australia, Canada, Ireland, the United Kingdom and the United States.<sup>7</sup> Relative poverty increased after the mid-1980s in about half of the countries examined here, most markedly in the Netherlands (though this may be due to differences in the income survey used). Relative poverty also increased appreciably in the United Kingdom and Italy. Denmark, Finland, Norway, Spain, Switzerland, Sweden, and the United States all experienced stable or declining relative poverty between the mid- 1980s and late-1990s. During that period, Anglo-American countries and continental Europe *diverge*. For example, whereas in the mid 1980s, southern European

countries had higher relative poverty than the UK and Australia, by the mid to late 1990s, only Italy has poverty rates higher than the Anglo-American countries.

### *Absolute Poverty Trends*

According to Table 1, Australia is the only country that experienced an increase in absolute poverty since the mid 1980s. (New Zealand, for which comparable data is not available, would probably also fit in this category.) Absolute poverty rates fell most dramatically in Ireland and the Netherlands, but also declined noticeably in all other countries. Even in the United States, where absolute poverty rates were stagnant from the late 1970s to the early 1990s, the economic boom of the 1990s considerably reduced poverty rates by the end of the decade.

Absolute poverty rates in Europe tend to be much higher than relative poverty rates. This is perhaps not surprising since European countries all have average incomes that are much lower than those of the United States. However, most continental European countries have seen dramatic reductions in absolute poverty since the 1980s, despite little reduction in their absolute income per person gap with the United States. Despite average incomes that are only 75 to 85% of its income per capita (and despite the fall in absolute poverty there during the 1990s), *the United States had a higher absolute poverty rate in the late 1990s than most of Europe*. If we compare this to the absolute poverty rates in the 1970s, for the handful of countries for which we have data, only West Germany had an absolute poverty rate lower than the United States. Other countries – Canada, France, Norway, and Sweden – had higher absolute poverty rates. By the late 1990s, all four had smaller ones.

Viewed over time, European performance has arguably been quite dramatic compared to the United States. If we look at the five countries (other than the United States) for which we have poverty data back to the mid 1970s or earlier—Canada, France, (West) Germany, Norway

and Sweden—only Germany had a lower absolute poverty rate. By the late 1990s, all five had lower absolute poverty rates. Looking at the trends since the mid 1980s, where data is available for more countries, about half of the countries (eight) in our sample have lower rates of absolute poverty than the US. By the late 1990s absolute poverty rates in these eight countries, and the Netherlands and Sweden, were lower than those in the United States.

Is there any evidence to suggest that social welfare policies limit reductions in absolute poverty by limiting economic growth? Absolute poverty rates declined briskly in the United States during the 1990s alongside the longest economic expansion in history. In Ireland, the Netherlands, and the United Kingdom, economic reforms produced increasing relative poverty, but faster economic growth and large declines in absolute poverty.

While these cases are consistent with the idea that improving relative and absolute poverty may trade-off, this requires a selective reading of the evidence. First, only a few countries grew more on a per capita basis than did the United States, but almost all reduced absolute poverty. Second, the economic boom in the United States did reduce poverty in the 1990s, but was unprecedented and, from the vantage point of 2005, proved to be unsustainable. Absolute poverty reversed trend and has increased in each year from 2000-2003 (the latest year of available poverty data). Long-term imbalances (current account, fiscal, and household) will likely erode US consumer purchasing power across the income distribution.<sup>8</sup>

A second reason not to jump to the conclusion that liberalization is responsible for absolute poverty reductions is that several reforming countries, most notably Ireland, relied heavily on de facto neo-corporatist wage restraint and incomes policies (Baccaro and Simoni, 2004). The space for such policies was further facilitated (in the Spanish and Irish cases at least) by “pent-up catch-up.” For different reasons, these countries missed the golden age of European

growth between the 1950s and 1970s. In some part their success is the result of being integrated into Europe *and* economically backward in the 1980s.

Third, advocates of reform selectively ignore examples where the rising tide has failed to lift all boats, or in which the tide failed to rise at all. For example, Australia's growth performance has been much touted, yet it is the only country in our data set where absolute poverty *increased*. New Zealand's liberalization experience during the 1980s has almost certainly produced an even larger surge in absolute inequality. Though *relative* inequality increased slightly, overall purchasing power parity fell by about 50%, and growth was stagnant (Easton 2002). There are also cases, like Sweden, France and Germany, where mediocre economic performance has still resulted in considerable absolute poverty reductions in this period.

Ultimately, a balanced examination of the performance of OECD countries from the mid 1980s to the millennium suggests almost no systematic evidence justifying wholesale social policy liberalization for the sake of absolute poverty reduction. Table 2 provides a breakdown of countries based on their overall growth and poverty reduction performance. The presence of multiple cases in each cell provides *prima facie* evidence that growth is hardly a panacea for absolute poverty reduction in the OECD.<sup>9</sup>

#### TABLE 2 ABOUT HERE

#### *Does economic development or social policy reduce poverty?*

Table 2 can support just about any position. One dimension that is obviously missing is the generosity of the welfare state. At first glance, the countries falling in each of the four cells do not cluster neatly into prevailing typologies of social policy regimes (e.g., varieties of

capitalism, worlds of welfare, families of nations, Christian versus social versus liberal democracy, etc.) Of course, this is a rather crude dichotomous grouping of countries. There are a number of factors that, if controlled for, might shed more light on these different outcomes. It is to these issues that we now turn.

### **Welfare State Generosity**

Comparative political economists typically use total government spending or transfers as an indicator of the generosity of social policy. Such indicators are fairly poor measures of the individual incentives provided by welfare state protection. By itself, spending says little about the generosity of benefits to individual recipients. Most researchers recognize limitations of this aggregate spending data and some have turned to more disaggregated program spending data (e.g., Castles, 2002). While such data provide a more detailed account of variations in social policy across countries, they still fail to identify major features of the structure and terms of social insurance programs.

Ideally, researchers would use welfare policy data that measure the specific provisions of key welfare programs in order to determine the generosity of the welfare state, and how those program features change across time and space (Castles 1998, 2002; Green Pedersen and Haverland, 2002; Hicks, 1999; Kitschelt, 2001). The measures of welfare state generosity we offer here provide this data for eighteen countries over three decades, combining key program characteristics of major welfare state programs including post-tax replacement rates. Since this element of welfare state generosity is what most researchers seem to have in mind, it will serve as the main independent variable identifying the generosity of social policy.

### *Measuring Generosity*

We operationalize welfare state generosity using three major public social insurance programs: pensions, unemployment insurance and sickness benefits.<sup>10</sup> All three types of insurance are provided in all countries under consideration with the exception of sickness benefits in the United States. In all countries, the vast majority of workers (usually 80-100%) are insured by such programs, and rely on these benefits as an important (if not exclusive) source of income in the event of unemployment, illness or old age.

#### *TABLE 3 ABOUT HERE*

The dimensions of each program are provided in Table 3, and are computed for each year for which we have poverty data, based on the cross-national distribution in a benchmark year, 1980.<sup>11</sup> The process for creating the benchmark distribution is as follows. For sickness and unemployment insurance programs, net replacement rates are based on the benefit payable to an unmarried person earning the average production worker wage (less taxes) compared with the post-tax average production worker (APW) income. For pensions, the numerator is the net pension benefit to someone with no earnings history (social pension) and the net benefit to someone earning the APW for each year from age 21. For sickness and unemployment insurance, we also coded the number of waiting days, the period of insurance coverage needed to qualify for a standard length of benefits, the duration of the benefit, and the portion of the work force insured. For pensions, we coded the number of working years to qualify for the standard pension, the percentage of total pension contributions paid by the employee, and the pension coverage (defined as the proportion of those over the official retirement age who are in receipt of a pension).

We created an aggregate generosity score for each program—unemployment, sickness

and pension—using a modified form of the procedure used in Esping-Andersen’s (1990) “decommodification index.” First, for each program characteristic except insurance coverage, we standardized the scores in 1980, after eliminating a few large outliers. To the standardized scores for the program *replacement rates*, we add 2, so that the standardized scores range between zero and four. (Thus, a country with an average replacement rate in 1980 is scored 2, the country with the highest replacement rate is scored 4, and the country with the lowest is scored 0.) For the other characteristics (again, except coverage) we coded countries 1, 2, or 3: 1 if the score was greater than one standard deviation below the mean, 2 if it was within one standard deviation of the mean, and 3 if it was greater than 1 standard deviation above the mean. In all cases, coding accords the more generous condition—e.g., shorter wait, longer duration, or shorter qualifying period—a higher score. Using the means and standard deviations for each characteristic in 1980, we computed scores for all other years using the same rule.

The benefit generosity score for each program is the sum of the four characteristic scores for each program multiplied by the coverage rate for that program. However, to reflect its greater presumptive importance, we doubled the replacement rate scores when computing the unemployment and sickness benefit scores. Thus, for the unemployment and sickness benefit score is equal to (with score ranges in parentheses)

$$[2 * \text{Replacement rate score (0-8)} + \text{Benefit Duration Score (1-3)} + \text{Benefit Qualification Period Score (1-3)} + \text{Waiting period score (1-3)}] * \text{insurance coverage ratio (in labor force)}.$$

The corresponding formula for pensions is:



[ 2\*Minimum pension replacement rate score (0-8) + 2\*Standard pension replacement rate score (0-8) + Qualifying years for standard pension (1-3) + Employee/employer funding obligation (1-3)] \* pension take-up ratio (among retirement age)

These scores are similar to what Esping-Andersen (1990) calls a decommodification index. We refer to them as indicators of “program generosity” rather than indicators of “program decommodification” because we believe that the former term is a more accurate description than the latter. The main conceptual difference between our scores and his is that our measures vary over time.<sup>12</sup> Table 4 provides the benefit generosity scores for 1985 and 2000 for each country for which we have poverty data.

#### *TABLE 4 ABOUT HERE*

### **Hypotheses**

For all three social insurance programs, we anticipate that the level of benefit generosity will have a negative impact on the *level* of poverty. We also analyze the impact of two other common political-economic explanations for national poverty rates: political partisanship (cumulative left government seats) and government spending (total spending and transfer spending). We expect left-party government dominance and higher government spending to have a negative effect on poverty rates in the same manner specified for benefit generosity. In the discussion of our statistical results, we elaborate on how specifying the degree of welfare state generosity improves our understanding of comparative poverty rates.

To evaluate the role of growth as a driver of absolute poverty reduction, we focus on the level of and *changes* in per capita GDP. We expect the level of income per capita to be negatively correlated with the poverty rate since the cost of paying for an *absolute* poverty wage

or benefit is lower when average income is higher. We expect higher growth rates (averaged over the previous five years) to reduce absolute poverty levels. Poorer segments of the population *need* not reap the benefits from growth, and may do worse in real terms.

Following several recent papers analyzing the determinants of income inequality and redistribution among OECD countries, we include several additional control variables when estimating the relative effects of social policy and economic expansion on poverty rates (Kenworthy, 1999). They are pre-tax and pre-transfer poverty, union density, and constitutional veto points.<sup>13</sup> Market poverty is the poverty rate before taxes and transfers. This figure is computed from LIS data.<sup>14</sup> Union density captures an important indicator of working-class mobilization, and is associated with a more generous welfare state in a number of other studies. Numerous constitutional veto points – “points in the political process at which legislation can be blocked” (Bradley et al. 2003, p.199) – may impinge upon efforts to pass poverty-reducing legislation, or frustrate efforts to retrench welfare state programs. We employ the measure in Huber, Ragin and Stephens’ “Comparative Welfare States Data Set” (2004), where higher values indicate the presence of more veto points. Though our goals are not to test the impact of these variables, the literature leads us to expect pre-tax poverty rates to increase post-tax poverty, and greater union density and more veto points to reduce it.

We also introduce controls for socialist and liberal welfare regime type based on Esping-Andersen assessments (1990, 1994). They are included to control for the possibility that more general regime characteristics, rather than the social insurance benefits we isolate, account for variation in national poverty rates. (The conservative regime type serves as the reference group and is accounted for in the intercept term.) We place the Nordic countries in the socialist group, the English-speaking countries and Switzerland in the liberal group, and all others in the

conservative group.

To reiterate, the basic statistical model is as follows:

$$\text{Poverty}_t = \text{Market Poverty}_t + \text{Income}_{t-1} + \text{Growth Rate} + \text{Union Density}_{t-1} + \\ \text{Unemployment Benefit}_{t-1} + \text{Sickness Benefit}_{t-1} + \text{Pension Benefit}_{t-1} + \text{Partisanship}_{t-1} + \\ \text{Veto Points}_{t-1} + \text{Spending}_{t-1} + \text{Socialist Regime dummy} + \text{Liberal Regime dummy}$$

where  $t$  is LIS survey year. Right-hand-side level variables were lagged to reduce possibility of simultaneity bias, though having them enter without the lag does not substantively affect the results.

We estimate coefficients with OLS, and standard errors with the cluster procedure described in Bradley et al. (2003).<sup>15</sup> We use the cluster procedure to obtain corrected standard errors for several reasons: the data set has short, unbalanced panels; there are irregular gaps in the individual country series (prohibiting the estimation of panel corrected standard errors or other more conventional means of dealing with errors in pooled cross-sectional panel data); errors might be temporally correlated within panels; and errors may have different means across panels. Table 5 provides the summary statistics for the variables used in the regression models.

#### *TABLE 5 ABOUT HERE*

Previous work suggests that left government, union density, government spending, and the welfare regimes dummies are all intercorrelated, and all three are also correlated with our welfare state generosity scores.<sup>16</sup> Including these variables in the model reduces the efficiency of estimates for generosity in the full model, and can be expected to lower coefficients for all four variables (since they are all positively correlated with each other and negatively correlated

with poverty). However, since collinearity does not bias point estimates, and the purpose of statistical estimation is not only the statistical significance of estimate, but also substantive significance, it is important to consider the effects after controlling for these competing but correlated explanations.

## Results and Discussion

We present estimates for four different classes of the general model, each using a different measure of poverty as the dependent variable. All are reported in Table 6. The first set of results provides estimates for relative poverty among all households. The second set provides estimates absolute poverty among all households. The remaining two sets of results report estimates for absolute poverty in households headed by someone under 65 and someone over 65, respectively.<sup>17</sup> In each group, the first model estimated is a baseline model that includes all variables except our indicators of benefit generosity, government partisanship and spending. The second model in each group provides the estimate including all independent variables. The third and fourth models in each group attempt to ascertain the “value added” from using our measures of benefit generosity compared with the conventional indicators: partisanship and spending.

### *Controls*

As expected, higher market poverty is consistently associated with higher net poverty: for each point of absolute market poverty, net poverty is .4 to .5 points higher. The effect of market poverty on net *relative* poverty is considerably smaller, however. (This is true in standardized units as well.) Higher union density is generally estimated to reduce poverty, but the effect is small and not statistically different from zero. More veto points are estimated to increase relative poverty, but to *reduce* absolute poverty among the elderly. The veto point estimates, upon

further analysis, appear to be heavily influenced by the presence of the United States in the sample, and are thus not very robust.

### *Benefit Generosity*

For all four measures of poverty used as dependent variables, we included estimates for all three generosity scores. The reason for doing so is straightforward when the dependent variable is poverty in all households. For the working age household poverty rates, we include all scores because we expected that more generous public pension benefits systems would *increase* absolute poverty in the working age population due to higher taxes levied to pay for what are universally pay-as-you-go pensions. For the over 65 group, we included all generosity scores under the assumption that labor market programs might reduce poverty for those above retirement age (or receiving pensions) but in work. Those above retirement age but working are expected to be a particularly high risk for poverty, since inadequate pension income is an important factor in continued labor market participation by older individuals.

Our results are broadly consistent with our expectations, but do contain some surprising findings. More generous sickness benefits are consistently associated with lower poverty rates, both in relative and absolute terms. The estimates are statistically and substantively significant for all four measures of poverty with the effects on absolute poverty being somewhat larger (based on unreported standardized coefficients) than those for relative poverty. More generous pension benefits are also associated with lower absolute poverty in the overall population, and, not surprisingly, among households headed by persons over 65.

Contrary to our expectations, unemployment benefit generosity has no statistically discernable effect on poverty rates (relative or absolute). In fact, the estimated coefficient is

*positive* for all of the absolute poverty models, and is trivially small for the relative poverty measure. Also contrary to expectation, pension benefit generosity is associated with *higher* relative poverty, and lower (though statistically insignificant) absolute poverty among working age households. It is important to note, however, that further analysis suggests that these counter-intuitive results are not particularly robust to slight changes in the specification of the model.<sup>18</sup> Given the degree of correlation between some of the independent variables, it is not surprising that some estimates are so sensitive to what is included on right-hand side of the model.

#### TABLE 6 ABOUT HERE

##### *Left Power, Spending and Welfare State Generosity*

What do the results say about recent findings regarding the impact of class power and social spending on welfare state outcomes (Kenworthy, 1999; Bradley et al., 2003; Brady, 2003)? From the results in Table 6, it should be clear that the generosity measures “dominate” the more commonly used and less direct measures with which they are correlated. Comparing results of the full models (column 2 for each dependent variable) with results that include generosity measures (column 3) or spending and left partisanship (column 4), the effects of generosity are more stable (size of coefficient) and precise (p-value). Furthermore, comparing the variance explained, models that include generosity only outperform those that include only spending and left government. Alternative measures of goodness of fit suggest that including spending and partisanship in the model (with generosity scores) adds little or no additional power.

One might argue that generosity as we have measured it says little about relative redistribution. For example, Castles (1994) argues that Antipodean welfare states’ universal flat

rate (means-tested) benefits are more redistributive from higher to lower income groups. A “perfect” redistribution profile might be that transfers only come from the best off and go only to the least well-off, something that universal welfare states do not do.<sup>19</sup> Korpi and Palme (1998), however, find empirically that a universal social insurance model is more effective for reducing poverty over the long run for a variety of reasons. It is, of course, noteworthy that our generosity measures correlate with welfare “regime type” (and hence provision of service benefits like health, child care and education), yet remain significant predictors of outcomes after controlling for regime type.

### *Growth and Poverty*

What about income and growth effects on poverty rates? Is there any statistical evidence that growth rates reduce poverty controlling for other factors (like benefit generosity)?<sup>20</sup> In all of our results, estimates for growth rates are not statistically significant, save for absolute poverty among those over 65 where the effect is the contrary to expectations. For all four measures of poverty, controlling for the size or generosity of the state lowers the coefficient for economic growth.

### **Conclusion**

While our results are broadly consistent with previous research that points to a relationship between welfare states, left institutions, and poverty reduction, our research more clearly specifies the nature of these relationships in four ways.

First, our results examine absolute poverty levels. Much is made of the long-standing differences in relative poverty among most European countries and the United States.

Throughout the 1970s and 1980s, Americans could be reassured that the relatively poor in the United States often enjoyed higher absolute living standards compared to European countries. The analysis in this paper suggests that they should no longer be reassured. Since the late 1980s, most European countries have both lower relative and lower *absolute* poverty levels, measured in terms of the official US poverty line. Though there are pitfalls and uncertainty in comparing absolute living standards across countries, our results do suggest that more generous benefit policies in OECD countries tend to be associated with higher living standards, and, at least in terms of poverty levels, there is not a growth-equality tradeoff.

Second, our results suggest that generous welfare benefits play some non-trivial role in reducing poverty. Moreover, our results provide persuasive statistical evidence that the *structure* of social protection policy matters more for reducing poverty than government spending per se. Using programmatic entitlement data rather than expenditures provides a more theoretically meaningful characterization of welfare state generosity, since the measures more directly reflect the impact of social policies on recipients. The results in this paper provide support for using entitlements data when treating the welfare state as an independent variable (Allan, 2003; Allan and Scruggs, 2004).

The third and perhaps the most interesting result to emerge from this study is that more generous benefits for sickness and pensions are associated with large reductions in absolute poverty in advanced industrial societies. One might argue that our findings regarding sick pay are more novel, since the labor market program that occupies the most attention is unemployment insurance. While a more definitive answer will probably require more detailed examination, we would offer the following elaboration of the explanation that we provided earlier. For people with modest or low earnings, short-term illness can be a considerable poverty



risk. Illness may also increase the risk of job loss. In this latter respect, sick pay benefit generosity may simply be working through implicit job protections (implied by sickness insurance) rather than the terms of the benefit itself. In any case, we certainly believe that our results will prompt a closer investigation of the relationship between illness, employment and poverty.

Finally, our results clarify the relationship between left parties and poverty levels. We find that the estimated importance of left partisanship declines considerably once one controls for welfare state generosity. This result helps to directly identify the policy mechanisms used in countries dominated by left-party governments (but in principle open to all political regimes) by which absolute poverty can be reduced.

In the final analysis, then, this article not only supports the widely held view that social welfare policies reduce absolute poverty, but it also sheds more light on how they do so. As supporters of social welfare policies have shifted their focus in recent decades from expanding entitlements to protecting them in the face of demands for programmatic retrenchment, the implications for poverty rates within advanced industrial democracies are considerable.

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Notes:

<sup>1</sup> In this respect, our analysis is a stronger test of these criticisms than previous work.

<sup>2</sup> See Sen 1983 and Kenworthy 2004 for similar examples.

<sup>3</sup> “Equivalent income” refers to the fact that the computation of the poverty line takes into account the size of the individual’s household, under the assumption that there are “economies of scale” in household size. Disposable income within a household is assumed to be equally distributed among household members. We use a standard equivalence factor-- the square root of the household size-- meaning that, for example, the “equivalent poverty income” for a family of four would be set at twice that of a person living alone. Disposable income within a household is assumed to be equally distributed among household members.

<sup>4</sup> The choice of the US poverty line is somewhat arbitrary, but is widely used as a point of reference in other studies. The US does typically have the highest median income in the reference year and the currency conversion factors used are also indexed to the US.

<sup>5</sup> Purchase price parities (PPPs) were developed to adjust for differences in national price levels and permit the international comparison of GDP levels. They are not specifically tailored to permit direct comparisons of the consumption basket of the poor. However, PPP’s are much better for comparing across countries than the other widely available conversion: exchange rates. The latter are more heavily weighted to traded goods and services. Market exchange rates are much likely than PPPs to reflect differences in consumed by the poor.

<sup>6</sup> Rainwater, Smeeding and Burtless (2001) argue that public provision of such benefits in more egalitarian countries compared with the United States means that differences in income poverty understate differences in total consumption. They note a number of caveats, but neglect an

important countervailing factor: consumption taxes. Taxes on sales or VAT are higher in egalitarian countries, and thus reduce consumption (per unit of disposable income) in those countries compared with low sales tax countries.

<sup>7</sup> Figures using higher poverty thresholds (e.g., 50 % of median income) produce variation among countries similar to what we report here (Kenworthy 1999, Smeeding 1997).

<sup>8</sup> The dependence of poorer Americans on consumer imports suggests that a weaker dollar will raise the US poverty threshold vis-à-vis the Euro area. Thus, holding real wages and employment constant, European purchasing power will improve relative to the US. It is interesting to note that, all else equal, a wholesale decline in purchasing power in the United States would leave all worse off, but *relative* poverty could be unchanged (median income would drop).

<sup>9</sup> The correlation between poverty reduction and growth (measured relative to the US) from the data in Table 1 appears considerable at -.79 at first glance. However, it is driven entirely by Ireland's exceptional performance (which we noted is not unambiguously attributable to economic liberalization). Excluding Ireland, the correlation is an insignificant -.25.

<sup>10</sup> These three programs do not exhaust the list of programs that would be considered important in affecting poverty; however, they are widely considered to be important for protecting against major poverty risks: unemployment, illness and old age.

<sup>11</sup> 1980 is the benchmark year primarily because this is the year used by Esping-Andersen (1990). The range of years included in our full welfare entitlements data set is 1971-2002. The full data set also includes information for Japan and New Zealand

<sup>12</sup> Some substantive differences in our results and Esping-Andersen's are discussed in Scruggs and Allan (forthcoming).

<sup>13</sup> In unreported results we included several other controls suggested by the literature that might affect the poverty level: percentage of single parent families, the unemployment rate, capital market and trade openness, and the portion of the population over 65. Including these did not substantially affect the results for the variables we discuss.

<sup>14</sup> One problem with this measure is that “pre-fisc” income for several countries in the LIS data set (France Italy, and Belgium) is provided only “pre-transfer”, in other words net of taxes. This means that the stated poverty rate is much higher than a true “pre-fisc” rate.

<sup>15</sup> A discussion of the appropriateness of this procedure with similar data can be found in Bradley et al. (2003, pp. 214-5).

<sup>16</sup> Variance inflation factor (VIF) statistics for these variables all tend to be quite high. In an effort to ensure that the estimates for the generosity scores were robust, we validated the results by estimating the models with various subsets of the collinear variables.

<sup>17</sup> Estimates of a number of other specifications for each class, as well as for poverty rates defined by a 50%-of-median threshold are available from the authors.

<sup>18</sup> For example, the coefficient for unemployment benefit generosity has the expected negative sign on absolute poverty if other indicators of welfare generosity (spending, pension and sickness benefit generosity, etc.) are dropped from the model.

<sup>19</sup> For example much spending is “untargeted” and comes from and goes to the upper reaches of the income distribution, with things like education and healthcare weighted more to the better off. Benefits are taxed, and taxes for benefits are less progressive than often assumed: Nordic countries have reasonably (though less so today) progressive national income tax, but high and flat local tax rates with relatively low flat-rate allowances, and payroll taxes are used to fund many universal “welfare” benefits.



<sup>20</sup> A direct test of the impact of benefit generosity programs on growth rates of per capita income suggest no significant impact. The coefficient signs are not stable, and any negative signed effects are very small, implying that the effect (if precisely estimated) would be perhaps several *hundredths* of a point lower.

Table 1: International Poverty Estimates for mid 1980s-most recent year available

Country	Survey years	Relative Poverty Rate			Absolute Poverty Rate*			GDP Ratio	
		Start	End	Change	Start	End	Change	1987	2000
Australia	85-94	5.4	6.6	1.2	14.3	16.4	2.1	0.78	0.76
Austria:	87-97	2.8	4	1.2	7.3	6.3	-1	0.81	0.83
Belgium	85-97	2	3.2	1.2	9.6	7.2	-2.4	0.76	0.76
Canada	87-00	6.9	6.5	-0.4	7.6	6.5	-1.1	0.87	0.81
Denmark	87-94	3.7	4.9	1.2	8.7	7.3	-1.4	0.84	0.82
Finland	87-00	2.5	2.1	-0.4	8.2	6.8	-1.4	0.78	0.74
France	84-94	6.3	3.3	-3	13.8	10	-3.8	0.75	0.74
Germany	84-00	2.9	4.2	1.3	11.3	7	-4.3	0.74	0.73
Ireland	87-00	3.7	8	4.3	39.5	15.4	-24.1	0.49	0.82
Italy	86-00	5.5	7.3	1.8	21.6	18.8	-2.8	0.74	0.72
Netherlands	87-99	1.7	4.5	2.8	22.3	7.4	-14.9	0.75	0.79
Norway	86-00	2.4	2.8	0.4	6.3	2.6	-3.7	0.82	1.05
Spain	80-90	6.7	5.2	-1.5				0.53	0.60
Sweden	87-00	4.2	3.6	-0.6	13.9	7.9	-6	0.83	0.78
Switzerland	82-92	4.1	4	-0.1	4.1	3.5	-0.6	1.03	0.88
UK	86-99	3.7	5.4	1.7	17.1	11.8	-5.3	0.71	0.74
US	86-00	12.2	10.7	-1.5	12.2	8.7	-3.5	1.00	1.00

\* ratio of per capita income to US using current PPPs OECD)

\* Absolute poverty based on 40% of US median in 1986 adjusted for inflation and PPP (see explanation in text)

Table 2: Economic Performance and Poverty Reduction, 1980s- 2000

		<b>Poverty Reduction</b>	
		(Absolute poverty reduced 20%+)	
		Considerable	Limited
<b>Economic Performance</b>	Good	Belgium, Ireland, Netherlands, Norway	Austria
	Poor	Denmark*, France, Germany, Sweden	Australia, Canada, Finland, Italy, Switzerland, UK, US

\* Official Danish LIS poverty data now ends in 1994. Its considerably improved PPPs, and high growth rate to the late 1990s and unofficial poverty data place it in this category

Table 3: Dimensions of the Decommodification Index

Core Program	Program Characteristic	Definition
Unemployment Insurance	Replacement rate	After-tax benefit for single, fully insured 40-year old individual earning average production worker (APW) wage divided by after tax wage of fully employed APW
	Qualifying period	Weeks of insurance/employment required to qualify for benefit
	Waiting days	Number of days before benefits start
	Duration of benefit	Weeks benefit is payable for fully insured 40 year old in unemployment
Sickness Benefit	Cash	
	Replacement rate	See definitions under unemployment insurance
	Qualifying period	
	Waiting days	
	Duration of benefit	
Retirement Pensions	Coverage ratio	
	Minimum replacement rate	After tax income replacement rate for retiree with no other income or work history
	Standard replacement rate	After tax replacement rate for person with a history of APW earnings in each of a 45 year working life, taken at normal retirement age.)
	Qualifying period	Years of insurance or contributions needed to qualify for standard pension defined above
	Contribution ratio	Employee contribution to pension/(Employee+Employer Contribution), taken at time pension is granted
	Coverage/take-up rate	Portion of population over retirement age receiving a public pension (incl public employees)

Table 4: Summary statistics

	Mean	SD	Min	Max
<i>Relative Poverty</i>				
Net Poverty	4.94	2.6	1.6	12.2
Market Poverty	17.43	4.85	5	28.6
<i>Absolute Poverty</i>				
Total Net Poverty	12.28	6.27	2.6	39.5
Total Market Poverty	27.16	7.65	12.6	44.1
Under 65 Net Poverty	11.1	5.96	3	38.6
Under 65 Market Poverty	67.9	12.58	33.7	91.1
Over 65 Net Poverty	19	11.83	0.8	50.6
Over 65 Market Poverty	19.59	7.54	5.8	41
<i>Benefit Generosity Scores</i>				
Unemployment Benefit	7.97	2.21	3.5	12.74
Sickness Benefit	8.81	4.04	0	14.59
Pension Benefit	12.66	2.34	5.4	17.46
<i>Other variables</i>				
Income per capita	19580	3679	10820	32128
Veto Points	3.13	2.24	1	8
Left Government	10.69	9.88	0	38.73
5 year growth rate	2.18	1.3	-2.21	5.34
Government Spending	45.36	7.87	28.4	64.8

Table 5: Representative Data for Benefit Generosity Indices

Country	Unemployment Benefit		Sickness Benefit	1985	2000	Pension Benefit	1985	2000
	1985	2000						
Australia	3.5	3.6	3.8	3.7	5.8	5.8		
Austria:	6.5	6.5	10	10	13.2	15.1		
Belgium	11.2	12.5	11.4	9.5	12.6	14.3		
Canada	7.4	7.5	6.9	7	12.4	13.5		
Denmark	9.6	10.3	12.5	10.7	14.7	14.2		
Finland	6.8	8.1	11.7	10.6	16.2	12.7		
France	7	7	9.5	8.8	14.8	13.9		
Germany	7.5	7.1	13.2	12.6	11.3	10.8		
Ireland	6.6	8.2	5.7	7.3	12.6	9.8		
Italy	5	8.4	7.6	7.6	13.7	15.2		
Netherlands	12.2	10.9	11.2	11.1	15.4	14.6		
Norway	10.4	10.8	13.6	13.6	15.3	14.6		
Sweden	10.1	10.3	14	12.6	17.2	13.3		
Switzerland	10.6	9.5	12.3	3	12	11		
UK	5.4	5.4	5	6.7	11.7	11.1		
US	8.7	9	0	0	12.2	11.9		
Mean	8.0	8.4	9.3	8.4	13.2	12.6		
Std Dev.	2.5	2.3	4.1	3.8	2.6	2.5		

Table 6: Regression Estimates for Determinants of Poverty in 15 OECD Countries

	Relative Poverty (All Households)				Absolute Poverty (All Households)				Absolute Poverty (Working Age)				Absolute Poverty (over 65)			
Market poverty	.10	.10+	.09+	.15+	.49**	.48**	.40**	.56**	.54**	.45**	.44**	.54**	.17+	.28*	.22**	.29*
	.07	.05	.04	.08	.16	.13	.10	.16	.15	.15	.14	.15	.08	.11	.06	.11
Income p.c.	.17+	.06	.04	0.20*	-.71*	-.68*	-.83**	-.57*	-.48*	-.54*	-.59*	-.42+	-1.98**	-1.72**	-1.99**	-1.60*
	.09	.04	.04	.08	.23	.24	.23	.24	.20	.22	.20	.22	.55	.53	.45	.61
Union Density	-.02	-.007	.0005	-.02	-.10	-.08	-.09	-.05	-.09	-.08	-.08	-.06	-.04	-.01	-.06	.06
	.02	.015	.01	.02	.08	.08	.07	.09	.08	.08	.08	.10	.08	.07	.07	.08
Veto Points	.47	.56**	.54**	.45	-.15	-.073*	-.60*	-.54	-.01	-.46	-.40	-.24	-.46	-1.77**	-1.26*	-1.70+
	.29	.12	.10	.28	.48	.27	.27	.40	.46	.37	.36	.46	.83	.60	.50	.85
Liberal Regime	1.04	-.23	-.53	1.26	5.34*	.18	.36	2.82	3.33	.39	.27	2.23	9.29+	-3.98	-2.53	3.56
Dummy	1.22	.84	.77	1.32	1.85	2.27	2.26	2.39	1.90	2.60	2.39	2.58	4.38	3.30	3.26	5.08
Socialist Regime	-.20	.54	-.11	1.12	3.77	6.70+	4.63	5.42	2.73	3.89	2.87	3.36	4.95	11.84*	11.43**	5.398
Dummy	1.38	.76	.66	1.18	3.44	3.41	3.08	3.75	3.65	3.66	3.48	3.81	4.78	4.81	3.60	5.46
Growth rate	.15	.22	.12	.30*	.33	-.003	.068	-.13	.075	-.096	-.131	-.133	1.74*	.63	1.25+	.23
	.11	.15	.012	.13	.47	.40	.42	.44	.418	.401	.384	.420	.714	.54	.651	.74
Government		.05		.08		-.037		-.23		.03		-.09		-.31		-.72+
Spending		.04		.05		.084		.16		.08		.13		.23		.40
Political Partisanship		-.03		-.012+		-.17+		-.023*		-.07		-.11		-.20		-.31
		.03		.06		.09		.10		.09		.10		.18		.23
Unemployment		-.005	.000			.42	.40			.35	.36			.31	.36	
Benefit Score		.07	.07			.45	.45			.49	.50			.47	.42	
Sickness Benefit		-.41**	-.043**			-.077**	-.094**			-.063*	-.068*			-.181**	-.198**	
Score		.06	.074			.22	.24			.25	.27			.35	.36	
Pension Benefit		.22**	.29**			-.060*	-.043+			-.33	-.23			-.151**	-.166**	
Score		.06	.05			.26	.24			.29	.27			.47	.43	
Intercept	-1.48	-1.20	.74	-5.71*	13.7	31.4**	32.4**	22.6*	11.3	22.8**	24.0**	15.8+	40.8**	85.2**	79.3**	65.9**
	1.10	1.90	1.37	2.53	8.9	6.1	5.6	8.2	7.6	6.9	6.6	7.6	12.5	12.2	8.8	20.6
Observations	82	82	82	82	81	81	81	81	81	81	81	81	81	81	81	81
R-squared	0.65	0.85	0.84	0.72	0.63	0.74	0.72	0.68	0.66	0.71	0.70	0.67	0.58	0.75	0.74	0.63

Robust standard errors are italicized

+ significant at 10%; \* significant at 5%; \*\* significant at 1%