

Pedersen, Axel

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Luxembourg Income Study Working Paper Series

Working Paper No. 109

**The Welfare State and Inequality:
Still No Answers to the Big Questions**

Axel Pedersen

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(scanned copy)



**THE WELFARE STATE AND INEQUALITY:
STILL NO ANSWER TO THE BIG QUESTIONS**

BY

AXEL WEST PEDERSEN

EUROPEAN UNIVERSITY INSTITUTE, FLORENCE

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1 INTRODUCTION

The most prominent welfare state theories - from the industrialization thesis and marxist theory over the class-mobilization thesis to interest group theory - all involve claims, not only about the nature and determinants of variation in welfare state institutions, but also about their eventual impact on social stratification and distributional patterns in modern society (see Pampel & Williamson 1989). Until recently, however, the bulk of empirical research within the comparative tradition has stopped short of a satisfactory analysis of the link between policies and outcomes (Castles & Mitchell 1991). The emphasis has been on explaining variation in welfare state output and institutions - operationalized as the scope of social policy expenditure or the coverage, generosity and comprehensiveness of social rights (see Myles [1984] 1989, Palme 1990, Kangas 1991) - rather than explicitly confronting the question about the effect of this variation on distributional patterns.

This picture is, however, rapidly changing. There are both theoretical and practical reasons for a strong, renewed interest in outcomes. The traditional optimistic view of the Welfare State's capacity to alleviate poverty and further aims of economic equality has been challenged both by radical and neo-liberal critics, who maintain that Welfare State interventions are either highly ineffective, futile or even counterproductive in terms of minimizing the degree of economic inequality (Tullock 1983, Le Grand 1982, Goodin and Le Grand 1987, Murray 1984, Pampel and Williamson 1989). Thus, the following questions have (again) come to the forefront of comparative welfare state research: Do the institutions of the Welfare State achieve a substantial reduction of poverty and greater equality in the distribution of economic well-being? Does variation in the scope and character of national social policy and tax regimes make a difference to the incidence of poverty and the degree of economic inequality found in contemporary society?

If we exclude a few extremist contributions, there is a fairly broad consensus about an affirmative answer to the first of these questions in the literature. But the second question is the focus of continuous controversies. It is certainly by far the most interesting from a policy perspective given that a complete roll-back of the Welfare State is utterly unrealistic. In many countries the balance between social policy instruments - social insurance, means-tested assistance, universalistic entitlements, and the regulation/stimulation of private welfare - is being reconsidered. Even though this typically happens in a context where concerns for budget deficits and general economic performance loom high on the list of political priorities, the potential consequences for the final income distribution has not become completely irrelevant (Mitchell 1991). The question about distributional outcomes also links up with the current theoretical debate about the extent and nature of Welfare State variation (see Esping-Andersen 1990, Castles

and Mitchell 1991, Palme 1990, Ringen 1991, Rose and Shiratory 1985). As Castles and Mitchell (1991) have argued, if contemporary Welfare States come in distinct models, we would expect that they also differ systematically in terms of their contribution to the level of economic stratification. This does not mean that the question about Welfare State divergence or convergence simply reduces to a question about distributional outcomes. It is perfectly possible that contemporary welfare states exhibit important differences in their institutional characteristics that turn out not to bear upon their capacity for economic redistribution. It would, however, significantly limit the practical and theoretical significance of those differences.

There is also an important practical reason for the renewed interest in investigating final outcomes rather than determinants of welfare state institutions per se: The data necessary for comparative research into the question of distributional outcomes have only recently begun to materialize. The single most important factor here is the establishment and ongoing development of the Luxembourg Income Study data-bank (LIS) which is providing the international research community with comparable micro-data sets based on national income surveys from a number of countries¹.

Over the last few years a number of studies have exploited the LIS data in a head on battle with some of the big questions of comparative welfare state research: whether the Welfare State, defined as the combined systems of direct taxation and social transfers, promotes more equality in the distribution of income, and whether some welfare states are more "effective" in this respect than others (Mitchell 1991; Ringen 1987; Ringen and Uusitalo 1992; Fritzell 1991)². Among these the study by Mitchell (1991) is clearly the most ambitious and comprehensive attempt to assess the distributional impact of entire welfare states. Basing her findings on data from a sample of ten OECD-countries Mitchell concludes that observed cross-national differences in economic inequality (and poverty) is by and large a result of variation in the redistributive effectiveness of welfare state interventions. In other words: the Welfare State makes a considerable difference and some welfare states are more effective than others. While Ringen (1987) and Fritzell (1991) find that the Welfare State's redistributive impact depends heavily on the scope of social transfers and taxes, Mitchell's hypothesis is that efficiency aspects are (potentially) as important as the sheer size of the operation³.

¹ See Smeeding et al. 1990 for a presentation of the data-base and a number of studies in comparative income distribution.

² Throughout this paper the Welfare State will be defined in this extremely narrow sense, ignoring aspects like educational policies, health and social services, regulative interventions and the role of the state as an employer.

³ Apparently the use of means-testing tax-progressivity and other targeting measures could be responsible for high efficiency.

The aim of this paper is to focus on a central methodological problem raised by this kind of macro-oriented redistributive analyses: the problem of finding a proper counterfactual to the income distribution presently observed. All the studies cited above are based on what I shall call the standard approach to distributional analysis. The Achilles heel of the standard approach is that it builds on the assumption that taxes and social transfers have no significant feed-back effects on the distribution of market incomes (earnings, capital income and private transfers). The belief that such (unintended) second order effects are substantial and negative - that the Welfare State indirectly produces as much inequality and poverty as it relieves - forms a core theme in contemporary neo-liberal critique⁴. Thus, the question about how the Welfare State might influence the distribution of "market" incomes is an important theoretical as well as methodological issue. If it could be convincingly argued that the overall effect was insignificant at least at the macro-level, it would be reassuring from a methodological point of view and at the same time lend welcome support to academic and political defenders of the Welfare State itself.

In the next section I shall review in more detail the strengths and weaknesses of the standard approach to distributive analysis and compare it to its main competitors: the comparative and the time-series approach. Here I argue that there are strong a-priori grounds for rejecting the standard approach as a valid procedure for measuring and comparing the redistributive effect of entire welfare states.

The following sections of the paper are devoted to a critical discussion of central aspects of the study by Mitchell (1991). Mitchell's study stands out not only because of its scope and ambition but also because it claims to provide empirical evidence as to the insignificance of systematic second order effects in the macro context and hence to have confirmed the validity of the standard approach.

I shall argue, however, that Mitchell's argument is unsatisfactory on this specific but nevertheless extremely important point. As a first step I have reconstructed the implicit causal model that seems to guide her analysis. After considering some troubling features about the Swedish case, I propose that the results obtained by Mitchell hinge on a constrained and unrealistic specification of the causal links between the societal context in which the Welfare State operates, the nature of redistributive interventions, and the final distributional outcome. A basic implicit assumption is that Welfare State variation is completely exogenous. Once this assumption is relaxed, as I suggest in an alternative specification of the model, the empirical support for the claim that feed-back effects are insignificant evaporates.

⁴ Interestingly enough one can find a close parallel in radical (feminist) critiques, where the Welfare State is claimed to put recipients of social transfers in a dependent (powerless) position - see Johnson 1989 for further references.

To support this assertion I have reanalyzed the data including union density as a potential determinant of welfare state variation. The resulting path-analysis demonstrates that the data is fully compatible with the existence of strong inequality enhancing feed-backs on the distribution of market incomes. But, of course, the inequality reducing first order effects are generally by far the strongest. The neo-liberals are obviously right that we cannot ignore the fact that social transfers influence the distribution of market incomes, but it does not necessarily follow that redistributive efforts are either futile or counterproductive (Hirschman 1991). To paraphrase O'Higgins (1980:44), the state of the art in comparative research warrants an agnostic but not an atheist view of the beneficial distributive effects of the Welfare State.

The paper concludes with a brief discussion of the implications for large scale distributional analysis.

2 DISTRIBUTIONAL ANALYSIS AND THE PROBLEM OF THE COUNTERFACTUAL

Both when the question about the distributional outcomes is inspired by purely theoretical or academic interests and when it is motivated by policy concerns, one is generally interested in the impact of welfare policies under the *ceteris paribus* condition. That is, we want to single out the specific contribution by the present tax and transfer regime from any other factors that might have influenced the final distribution of disposable income. This ideal ambition, however, can never be fully satisfied in actual empirical analyses.

The assessment of the distributional (or redistributive) impact of a specific policy or set of policies always involves a comparison of the actual state of affairs with a hypothetical or counterfactual distribution that would obtain under a different policy regime or perhaps without any policy intervention (Layard 1977). Therefore, the fundamental methodological problem of all distributional analysis is to construct and evaluate a counterfactual distribution that cannot be observed directly: What would have happened in the absence of policy intervention or if a different type of policy had been implemented?

The actual distribution of disposable or final income under the prevailing system of transfers and taxes should be compared to the potential distribution of the same income concepts under a system where transfers and taxes are different and everything else is equal. (Ringen 1987, p. 178)

The standard approach, the comparative approach, and the time-series approach offer three alternative solutions to the problem of providing the relevant counterfactual distribution⁵. I will concentrate here on discussing the first, but include a few comments about the two alternative approaches⁶.

The **standard approach** simply compares the actual distribution of total incomes with the distribution of incomes net of the specific public transfer in question or "before" taxes paid. It is widely used to study the actual progressivity of direct taxation, and here it is referred to as the "first order incidence method". In the more aggregate case, where the ambition is to evaluate the distributional impact of the total tax- and transfer system the standard approach works through an analysis of the distribution of different income components and income concepts. The inequality found in the final distribution of "disposable income" is contrasted with the inequality of "market incomes", that is the distribution of income "before" taxes paid and transfers received. The assumption is that this would actually have been the distribution of incomes in the (hypothetical) situation with no transfers and taxes.

The **comparative approach**, instead, assumes that the final distribution of income in countries with a different policy regime can be used as an approximation to the situation that would have obtained if a similar policy (or set of policies) had been implemented in the original country. Thus, in the comparative approach the final distribution of disposable income is compared directly between countries. Of course, the income transfer system is not the only variable that might influence the final income distribution. Societal factors such as the degree of economic development, unemployment rates, the distribution of human capital, the character of labor market institutions, demographic structures etc. can all be supposed to directly influence the degree of economic inequality, and they must somehow be controlled for in order to make the comparative approach a viable strategy. A measure of control can be achieved through multivariate analysis where variables that are supposed to reflect the character of transfer instruments are entered together with competing explanatory variables (see Pampel and Williamson 1989). Thus, the comparative approach is based on the logic of causal analysis where the relevant welfare

⁵ The distinction between the standard approach on the one hand and the comparative and time-series approaches on the other corresponds to Uusitalo's (1985) distinction between studies focusing on *welfare efforts* as opposed to studies focusing directly on *welfare outcomes*.

⁶ The discussion is limited to approaches focusing on the distribution and redistribution of *yearly* income. It should be recognized that an exclusive focus on the distribution of yearly income across all age-groups is objectionable, since it will confuse fluctuations in income streams over the lifecycle with intra- and inter-generational aspects of distribution and redistribution (Ankrom 1990) - see also Layard (1977) and Burkhauser and Warlick (1982) for early contributions on this topic.

state variation and its relationship to other influential factors must be specified in advance⁷. The main obstacle for this approach is that the number of country cases available for analysis is far too small to permit a satisfactory control for all the relevant variables.

The time-series approach resembles the comparative approach except for the fact that the situation at different time periods constitute the units of analysis and provide the counterfactual information. As more relevant time-series data become available this approach has gained in popularity (see for instance Hibbs and Dennis 1986, Moffit 1992, Gustafsson and Klevmarken 1993). A serious limitation of the time-series approach, is that welfare state institutions tend to change too little or too slowly to allow for more than analyses of the impact of marginal changes.

The great practical appeal of the standard approach as compared to the two alternative strategies, is that it allows a direct assessment of redistributive effectiveness for each country case. As it is based on the logic of accounting rather than causal analysis, the degree of redistribution can be measured independently of and prior to an analysis of the causes for variation along this dimension among different types of welfare states and without necessarily controlling for other factors⁸.

The main problem with the standard approach is that taxation and social transfers cannot be expected to leave the distribution of market incomes unaffected: redistributive policies are likely to influence people's economic behavior and possibly also price relationships including wage-differentials, so that the distribution of incomes "net-of-transfers" will differ from the final income distribution that would have obtained in the absence of these policies. Behavioral responses to taxation and social transfers have been intensively studied in terms of their implication for economic efficiency, labor supply and saving behavior, but few strong and uncontroversial generalizations have emerged from this literature. While there is agreement that taxation and social transfers do affect labor supply, the size of the effect and sometimes even its direction is found to vary⁹.

The consequences of second order effects for economic inequality is a much less studied and theoretically even more indeterminate question (Danziger et al. 1981). In principle the

⁷ In most empirical studies of this sort welfare state variation is simply operationalized in terms of the relative size of social expenditure, a less than satisfactory solution (see Esping-Andersen 1990 and Castles and Mitchell 1991).

⁸ This feature is exploited by Mitchell (1991). She carries out the analysis of cross-national variation in redistributive effectiveness before embarking on a discussion of how the findings might be related to (or directly reveal) variation in institutional characteristics of social policy interventions.

⁹ A review of some of the theoretical as well as the empirical literature can be found in Atkinson (1993).

distribution of market incomes might become more equal as well as more unequal as a consequence of redistributive interventions depending on who's behavior is affected (the rich or the poor) and in which direction (more or less pre-transfer income). Presumably, this will in turn depend on the precise nature of tax and transfer instruments, the institutional context as well as the shape of individual (or family) preferences.

In the standard approach the existence of such second order effects is simply assumed away. For analyses in certain policy areas this simplifying assumption can be justified. Sometimes there are good reasons to believe that (changes in) specific policies are only met with minor changes in behavior, so that the income distribution net of this particular transfer or tax can serve as a reasonable approximation to the "real" counterfactual distribution. According to the available evidence, this seems in many cases to apply to income taxation of male bread-winners and it can be reasonable expected to pertain to categorical social benefits like family allowances - provided that they are distributed universally (without a means-test) and they are not extremely generous.

When the overall impact of social transfers and the tax system is under consideration, this assumption becomes highly questionable if not completely undefendable. Despite the scattered empirical evidence and theoretical indeterminacy, there seems to be general agreement in the literature that social transfers tend to have substantial negative second order effects; that is, they lead to wider inequalities in the distribution of market incomes than would have been the case in the absence of intervention (see for instance O'Higgins 1980, Uusitalo 1985, and Ringen 1987). In theory *taxation* could both enhance and decrease labor supply depending on the relative strength of income and substitution effects (and demand-side rigidities). In the case of *social transfers*, however, both income and substitution effects (due to eligibility criteria and means-testing) point towards reduced private incomes among the recipients (see Danziger et al. 1981)¹⁰. Moreover, in the absence of state intervention some social risks are likely to be at least partly covered by private arrangements and institutions.

To the extent that inequality increasing second order effects are at work in real life the standard approach will systematically overestimate the actual degree of redistribution:

Thus, true pre-transfer income is likely to be less unequally distributed than measured pretransfer income. Pre-post comparisons, therefore, are likely to provide upper-bound estimates of redistributive effects. (Danziger et al 1981).

¹⁰ Social insurance schemes might also provide incentives to work in periods where individuals built up their claims to benefits (Gustafsson and Klevmarken 1993).

The scope of such effects and the way they might vary across program areas, program features and the societal context is not very well covered in the research literature. There is reason to believe, however, that behavioral responses are particularly important in the area of retirement and old age pensions. Since the state provides income support on a large scale to the elderly in all OECD-countries, it is difficult to conceive of a situation without public pensions. Still, it can safely be assumed that the income position and income distribution among elderly households would be very different from the distribution of "market income" which is presently found among this section of the population. In particular this would apply in countries with highly generous public pension systems and a corresponding modest role for private sources of income provision in old age (see Kangas and Palme 1992). It is a well-established finding based on time-series data that public pensions effectively induce elderly people to withdraw from the labor market (see Hurd 1990 for a summary of relevant studies in the US) and that expansions of public pension provision tend to crowd out alternative sources of income (private pensions, individual savings and intra-family transfers) (Munnell 1982). The presence of behavioral responses to public pension systems is a rather trivial fact, and often they are politically intended (one has only to think of early retirement schemes). The intention might be to relieve the elderly from the need to sell their (low valued) labor power and reduce their dependency on private income sources as well as to achieve a certain level and distribution of disposable income.

This does not mean to say, of course, that final income inequality among the elderly would not be much greater in the absence of public pension systems, that public pension systems do not in the final analysis contribute to a more equal distribution of income. The point is that the existence of behavioral responses, which simply cannot be denied in the case of old age pensions, would seem to invalidate the standard approach to distributional analysis - not only in this specific area, but also in the more general context where the distributional impact of entire welfare states is at issue. After all, the elderly form a very large part of the welfare state clientele and pensions constitute the single heaviest post on the social budgets throughout the OECD area.

Most practitioners of the standard approach openly recognize this problem, and a number of different ways to cope (or just live) with it have been suggested. One is to exclude sub-populations where the problem of behavioral and institutional responses can be assumed to be most serious - for instance the elderly (see Fritzell 1993). Another strategy is simply to employ the approach but pragmatically renounce any claim to have uncovered the true *ceteris paribus* effect of the Welfare State (see Lindbeck 1983, Uusitalo 1985). A further possibility is to estimate behavioral responses from econometric analyses of micro-data and use the estimated parameters to simulate the 'real' counterfactual distribution (Lambert 1989). However, this can hardly be done satisfactorily without restricting the analysis to

certain program areas or (parts of) the income tax schedule, and at the very best it is only possible to make reliable estimates of responses to fairly marginal changes in existing programs on the basis of cross-sectional data (Atkinson 1993). Although each of these solutions are legitimate, they all imply that, one way or the other, the level of ambition is radically reduced.

But some authors maintain that there is a way for this approach to handle even the big question about the redistributive effectiveness of entire welfare states. The solution is to put the standard approach into a comparative or time-series framework: the difference in inequality between pre- and post-transfer distributions is compared between a number of countries (or time periods). The idea is that observed variation between countries (or across time) could be a valid measure of differences in distributive effectiveness, even if the absolute degree of redistribution is in doubt. In other words, although we cannot know for sure to what extent the Welfare State is effective in reducing inequality, we might still be able to tell whether some welfare states are more effective (or less ineffective) than others:

(..) it may be hoped that the importance of the counterfactual problem is less in the analysis of differences in measured redistribution between several countries than in the analysis of redistribution in single countries. (Ringen 1987, p. 181)

As the main theoretical and practical interest concerns the relative performance of different types of welfare state interventions, much could still be said, if it was possible to substantiate this hope - either by theoretical reasoning or by empirical evidence.

However, to put the standard approach into a (quasi-) comparative framework only avoids the counterfactual problem if the scope of negative second order effects does not show systematic variation between welfare states. Otherwise these effects must be assumed to disturb cross-country (or cross-time) comparisons in the same way as they prevent a valid estimation of absolute levels of redistribution in each country case. The necessary assumption is that any second order effects are either constant across space (and time) or at least not systematically related to variation in the scope and character of distributive interventions.

It is hard to think of any a-priori argument why this should be the case; that is, why the scope of negative feed-back effects should **not** be systematically related to variation in the character of welfare state institutions. It seems reasonable to assume, for instance, that negative second order effects will tend to be stronger the more generous the system of income transfers (an income effect), the more extensive the use of means testing, and the

more eligibility rules are conditional upon withdrawal from the labor market (substitution effects). Or to put it differently: we might expect that inequality increasing second order effects are relatively modest in the context of universal flat-rate entitlements (especially if they are meager) and more substantial in the case of both generous social insurance programs and means-tested benefits¹¹. Unfortunately, variation along these dimensions is at the heart of the practical and theoretical interest for research into the equality promoting capacity of the Welfare State.

It should be noted that issue of second order effects is not the only problem with the standard approach, when used in a comparative perspective. There is an additional reason why the difference between pre- and post transfer inequality should be questioned as a valid measure of variation in redistributive capacity among welfare states (across either time or space): The amount of redistribution for each unit of observation, as measured by the standard approach, cannot be attributed to nature of the redistributive instruments alone. It depends also on the prevailing pre-transfer distribution (see Lambert and Phähler 1992). Transfer instruments *interact* with pre-transfer distributions to produce a certain level of redistribution as measured by the standard approach. Thus, the exact same set of transfer instruments will generally produce a different level of redistribution if the pattern of pre-transfer inequality is changed¹². I shall briefly return to this problem in the concluding discussion, but in the meanwhile I shall proceed as if it did not exist.

To conclude: hard empirical evidence, which could support the solemn hope expressed by Ringen in the quotation above, is certainly needed in order to build a case for continued (unqualified) use of the standard approach in a cross-national or longitudinal framework. It is exactly this evidence that Mitchell (1991) claims to have provided as part of her comprehensive study of micro-data on income distribution for ten OECD-countries.

3 A RECONSTRUCTION OF MITCHELL'S ANALYSIS

In her book Mitchell uses two different indicators of the redistributive effectiveness of welfare states. The first is operationalized as the difference between the pre- and post-transfer Gini-coefficients divided by the pre-transfer Gini, and it is supposed to measure the proportional reduction in inequality resulting from the distribution of direct taxes and social transfers. This indicator is, of course, a reflection of the standard approach to

¹¹ Remember that the total distributional impact also depends on the first order effects.

¹² This is in itself strong reason to question the widespread praxis of "simulating" counterfactual outcomes by combining measured redistribution from one country (or time period) with the pre-transfer distribution found in another country (or time period) (see for instance Fritzell, 1993).

distributional analysis. As an alternative or supplementary measure of effectiveness, she suggests the degree of inequality found in the final distribution of incomes, which is clearly in the spirit of a comparative approach. If it is supposed to capture the *ceteris paribus* effect of the income redistribution taking place through taxes and social transfers, the implied assumption is that the character of social security and tax systems are the only factors which significantly influence the pattern of cross-national variation in income inequality.

Mitchell is well aware of the methodological objections that can be raised against each of these two measures, and the fact that they rest on falsifiable assumptions:

It is possible, however, that market incomes might react to the transfer system so as to nullify its effect. (...) We need, therefore, to establish empirically whether redistributive instruments are actually effective in lowering inequality. (Mitchell 1991:122)

She therefore presents an empirical analysis which is supposed to test the solidity of both these assumptions: Are there any signs of inequality increasing feedback effects from extensive efforts to redistribute through the Welfare State on the pre-transfer distribution of income found in each country? To what extent is the observed cross-national variation in final income inequality the result of differences in redistributive effectiveness of the Welfare States involved?

Table 1: Correlation matrix based on ten country cases:

	Market income (M)	Redistribution (R)	Disposable income (D)
Market income (M)	1	0.12	0.35
Redistribution (R)	-	1	-0.88
Disposable income (D)	-	-	1

Source: Mitchell 1991

The analysis is based on her ten-country sample¹³ and it involves an investigation of the bivariate correlations (cross-nationally) between three variables: The gini-coefficient for the distribution of market incomes (M), the corresponding gini-coefficient for the distribution of disposable incomes (D), and finally the percentage reduction in gini-inequality when moving from pre- to post-transfer incomes (R)¹⁴. The results are shown in Table 1.

Mitchell interprets these results in the following way: if any serious feed-back mechanism from transfer and tax-systems to the distribution of market incomes had been at work, she assumes that it would have shown up as a bivariate relationship between R and M.

We find first that there is no relationship at all between the level of inequality in market incomes and the degree of redistribution. This suggests that, in aggregate, market incomes do not adjust in any systematic and significant way to nullify attempts at redistribution. (Mitchell 1991:123)

Similarly, the fairly weak (and far from statistically significant) relationship between pre- and post-transfer gini-coefficients is taken as a confirmation of the suspicion that broader societal factors only exercise a moderate influence on cross-national variation in final income distribution: "This result indicates that redistribution can in practice sever the relationship between market distribution of income and the final distribution of disposable income" (Mitchell 1991:123).

The one and only bivariate relationship between these variables which is strong and highly significant is the negative correlation found between proportional inequality reduction and the post-transfer level of income inequality:

In other words, countries such as Sweden which redistribute strongly through their transfer systems are in practice effective at reducing the level of inequality in disposable incomes (Mitchell:123).

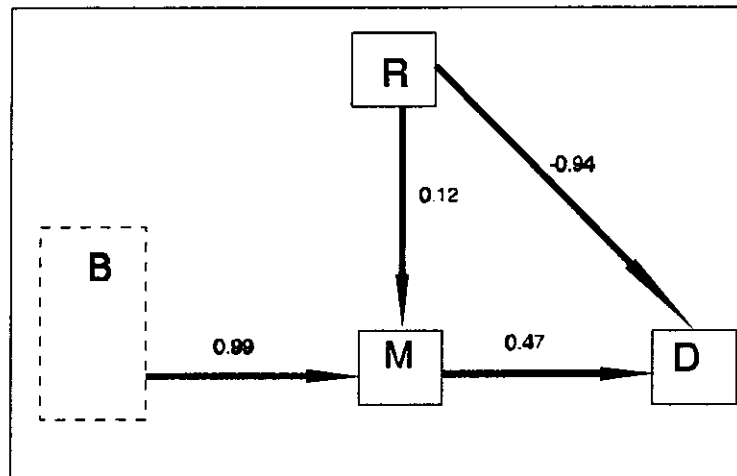
Mitchell does not make explicit exactly what kind of causal model she has in mind when interpreting these bivariate correlation coefficients. From the rather sparse verbal argument I assume that the implicit model looks somewhat like the one illustrated in Graph 1.

¹³ The sample includes Australia, Canada, France, Germany, Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and The United States. The data refer to years around 1980.

¹⁴ Thus to be precise, R is defined as $(M-D)/M$. The scores for all ten countries on these three variables are reproduced in the appendix to this paper.

The model consists of three main variables and two structural equations. The degree of inequality in the distribution of disposable income is taken to depend on the pre-transfer distribution and the redistributive efforts of the Welfare state. The model also takes account of the possibility that redistributive efforts could influence the distribution of pre-transfer incomes.

In the graph I have included a variable called the Background Distributional Structure (B), although Mitchell does not directly refer to such a concept. B is simply a residual category supposed to capture the joint impact of all other factors which can be assumed to influence the distribution of Market Incomes independently of R. It should therefore be conceived of as a vector of variables measuring such features as the industrial structure, educational systems, labor market institutions, demographic structures, public sector employment, unemployment rates etc. The inclusion of B in Graph 1 does not make any difference to the estimation and interpretation of Mitchell's model. The reason for its inclusion will become apparent below.



Graph 1: Causal model with estimated path-coefficients.

It is now possible to calculate the size of all the direct causal links (path coefficients) that the model allows between the four variables, on the basis of the three bivariate correlations reported by Mitchell (see Asher 1983, Heise 1975)¹⁵. In Graph 1 I have added the set of standardized regression coefficients (Beta), which is consistent with the

¹⁵ The basic idea is that any zero-order correlation between two variables in a recursive system of equations can be decomposed into three components: a direct effect (the direct path between the two variables), indirect effect(s) that are transmitted through intervening variables, and spurious effects caused by background factors that influence both the variables of interest. Throughout the paper I have chosen a regression approach, and thus report Beta coefficients for each path.

causal model and the reported data¹⁶. A Beta of 0.12 for the direct effect of Welfare State Redistribution on the pre-transfer level of inequality simply equals the square root of the R-square for the bivariate relationship between these variables as reported by Mitchell. However, the direct effects of Market Incomes and Redistribution on the final distribution of Disposable Incomes are both somewhat stronger than each of the bivariate correlations would indicate. This is so because of the - admittedly very weak - association found in the sample between R and M and because R is negatively related while M is positively related to D. Finally a Beta of 0.99 for the path from the Background Distributional Structure to the distribution of Market Incomes follows from the definition of B which is supposed to explain all the variation in M that is unexplained by R¹⁷. The most important conclusions to be drawn from these estimations are conveyed in the three (combined) paths presented in Table 2:

Table 2: Mitchell's model, summary of results. Expressed as the (combined) causal effect on the pre-transfer gini (M) or the post-transfer gini (D).

Inequality increasing feed-back effect on M	$pM.R$	= 0.12
Net inequality reducing effect of the WS on D	$pD.R + pM.R * pD.M$	= -0.88
Combined impact of other factors on D	$pM.B * pD.M$	= 0.47

Here it is once again confirmed that the estimated negative feed-back effects are minuscule, the net redistributive effect of the Welfare State is very substantial and finally that the influence of other social factors on the final outcome is modest. There are no serious discrepancies between the more detailed analysis presented here and the verbal conclusions drawn by Mitchell, except perhaps for the observation that the association between societal background factors (B) and the distribution of Disposable Incomes is somewhat stronger than that implied by the bivariate correlation between M and D. It should be kept in mind, however, that the analysis is based on ten units only, which makes statistical inference extremely shaky. The finding of a very weak association between welfare state Redistribution and the distribution of Market Income is insufficient evidence to exclude, with any degree of statistical certainty, the possibility that a moderate positive

¹⁶ The short hand notation for the path coefficient reflecting the direct causal impact of X on Y used here is: $pY.X$.

¹⁷ Thus $pM.B$ is the square root of $(1 - pM.R^2)$.

correlation does exist in real life¹⁸.

Still, if no attempt is made to generalize beyond the sample and we take for granted the basic assumptions on which the analysis rests, Mitchell's conclusions are difficult to dispute and they have wide reaching implications for comparative welfare state research:

The results presented here show that the social security and taxation systems in the LIS countries achieve reductions in inequality without causing systematic adjustments to market incomes. (Mitchell 1991:132)

This is an optimistic conclusion on behalf of both the Welfare State itself and outcome oriented comparative research. We seem to be in the best of all worlds viewed from the standpoint of comparative research aiming to unravel the distributional impact of entire welfare states. If negative feed back mechanisms of public transfer and tax systems play no systematic and significant role at the macro level, the standard measure of redistributive effectiveness (proportional difference in pre- and post-transfer inequality) is completely valid for macro-analyses. What is more, since the final distribution of disposable income is largely determined by welfare state redistribution rather than the pre-transfer level of inequality, also the absolute level of post-transfer inequality will be a good indicator of welfare state effectiveness. The standard and the comparative approaches to distributional analysis can be expected to produce similar results, and even more importantly, they both seem to hit the target!

4 A SKEPTICAL APPETIZER - THE CASE OF SWEDEN

A simple observation can help to raise doubts about the validity of these findings and the conclusions drawn. According to the figures presented and used by Mitchell, Sweden is characterized by a relatively high degree of pre-transfer income inequality. Among the ten welfare states included in the study, only the US, France and the Netherlands have higher Gini-coefficients for the distribution of market incomes than Sweden. Similarly the Swedish data show comparatively high poverty rates if we look at the pre-transfer distribution. Nevertheless, Sweden has by far the most egalitarian distribution of final incomes. Apparently the accomplishment of the Swedish welfare state is astounding. On the background of a relatively unfavorable pre-transfer distribution, social transfers and the

¹⁸ Normally, significance testing is a conservative guarantee against accepting one's favorite hypothesis of a non-zero relationship. When a substantive argument about the non-existence or weakness of a relationship is to be empirically tested a good conservative would only be satisfied if the confidence interval did not include substantially high (positive or negative) parameter values. In this case the two-tailed confidence interval on the conventional 95 percent level includes values for the Beta from -0.6 to 0.9.

tax system in Sweden bring about a uniquely egalitarian outcome. This implies that Sweden scores highest (by far) on both of Mitchell's two indicators of distributive effectiveness: proportional change in the inequality index from pre- to post-transfer incomes and the absolute level of inequality in the final distribution of disposable incomes.

Sweden's position as a clear number one in terms of a low degree of inequality in disposable incomes is indisputable on the basis of the LIS data, and there is no reason to doubt their validity in this respect. However, it is hard to believe in the finding of a relatively high level of pre-transfer inequality in the Swedish data, unless it can be explained as an artifact caused by behavioral responses to an extraordinarily comprehensive and generous welfare state.

From other data-sources we know that the general wage dispersion in Sweden is extremely low (both the inter and intra industrial dispersion) (see Hibbs 1991; Edling 1991). The same accounts for the distribution of earnings among prime age males (Green et al. 1992). Contrary to most other countries in the sample, Sweden had practically no open unemployment around 1980, still another important fact that must have favorable consequences in terms of economic equality (see Blank and Blinder 1986). In addition, the modest proportion of the economically active population employed in agriculture and the extremely high proportion employed in the public sector both point in the direction of comparatively low levels of inequality. The consequences of the extremely high level of female labor force participation in Sweden could be more ambiguous. However, according to a recent comparative study the income earned by working wives has a comparatively strong equalizing impact on the distribution of total household incomes among couples in Sweden (Canian & Scoeni 1992)¹⁹.

To sum up, there is every reason to believe that the Swedish transfer and tax systems operate in a societal context that is fairly conducive to economic equality, compared to the conditions found in most (if not all) other OECD-countries. Even so, it turns out that the distribution of market incomes is rather unequal in Sweden. It is hard to escape the conclusion that the wide opportunities for public income support offered by the Swedish welfare state significantly influence individual labor market behavior and the scope of private transfers and savings in a way that increases pre-transfer inequality. It is important to stress that this is neither very surprising nor is it necessarily a sign of failure on the part of Swedish welfare policies. As briefly mentioned in Section 2 above, all sufficiently generous public pension systems must be assumed to partly replace private sources of

¹⁹ The picture might change somewhat if one-person households had been included, since their relative position is likely deteriorate as the two-earner model becomes dominant among couples.

income provision and constrain labor market participation among the elderly, and what is more, some of these effects can be both politically intended and fully desirable.

Gustafsson and Klevmarcken (1993) have recently made a comprehensive survey of empirical studies into the incentive effects of and behavioral responses to the Swedish tax and transfer systems. They conclude that intensive research efforts have failed to produce convincing evidence of an unambiguous negative effect on labor supply by the Swedish system of income taxation. Whether this failure should be attributed to methodological shortcomings or simply to the state of facts remains an open question. However, the authors point to a number of transfer programs where the evidence clearly seems to indicate substantial behavioral responses: sickness benefits, parental leave and early retirement schemes. It is also suggested that generous family related programs help to account for the high female labor force participation in Sweden as well as for the high propensity among those employed to be temporarily absent from work. However, the survey does not include research into the effect of old age pension schemes, and it does not directly consider the potential consequences for the distribution of pre-transfer incomes in Sweden. Therefore, it is of limited value for the purpose of evaluating the claim that inequality enhancing second order effects are comparatively strong in the case of Sweden.

Some indication in that direction can be obtained from a comparative study of developments in income inequality and redistribution in Finland and Sweden over the two decades from the mid-sixties to the mid-eighties (Gustafsson and Uusitalo 1991). The authors note that inequality in pre-transfer income has been growing steadily in Sweden over this whole period and has become substantially higher than in Finland. They also note that we could have expected a quite different picture since material published by the OECD suggest that "the distribution of earnings between full-time adult employees is much more equal in Sweden than in Finland" (Gustafsson and Uusitalo 1991:90). In order to make some sense of these apparently contradictory facts they suggest the following explanation:

It is likely that this is at least partly due to the older age structure in Sweden and to the more generous benefit levels which allow people to withdraw from work. (Gustafsson and Uusitalo 1991:90).

Although the authors do not make the point explicit, the latter part of their explanation for the relative high level of pre-transfer inequality in Sweden clearly refers to inequality increasing second order effects of public income transfers.

If we assume that this diagnosis of the Swedish case is correct, then both of Mitchell's indicators of effectiveness produce misleading results for Sweden. The "proportional

change" measure will to some extent exaggerate the real influence of the Swedish Welfare State in reducing inequality, since some of the inequality which is repaired by taxes and transfers must have been produced by the very same policies in the first place. Similarly Sweden's score on post-transfer inequality becomes questionable as a measure of welfare state effectiveness: at least part of the reason for Sweden's uniquely egalitarian distribution should be ascribed to factors other than the specific character of social transfers and taxes. Whether a correction for these biases would produce a different *ranking* of Sweden in terms of welfare state effectiveness, is of course doubtful, but that is not the point here. The point is that although the two indicators of effectiveness produce similar results for Sweden, there are reasons to suspect that they are both off the mark.

Before leaving this section I shall point to two more general indications, based on the LIS data, that the social security and taxation systems in the LIS countries do *not* achieve reductions in inequality without causing systematic adjustments to market incomes. Efforts at redistribution seem to affect at least two sub-aspects of the overall distribution of market incomes: 1) the proportion of all families reported with zero income from market sources and 2) the degree of inequality in market incomes found among elderly households.

Mitchell presents summary statistics on different income concepts for the ten countries in the sample including the proportion of families recorded with zero (or negative) market income (Mitchell 1991:24). This proportion varies from 3.4 percent in Switzerland to 23.4 percent in Germany²⁰. If the scope and progressivity of social transfers affect the distribution of market incomes it is likely to involve an increase in the proportion of income units that rely exclusively on public transfers. This seems at least partly to be confirmed by the data. There is a strong and highly significant correlation between Mitchell's redistribution index and the proportion of families reported with zero income from market sources (Pearson's $r=0.8$) among a sample of nine out of the ten countries²¹.

For reasons discussed in Section 2 above you would also expect that second order effects were more pronounced among the elderly. Therefore I have used the LIS files to produce estimates of pre- and post-transfer income inequality among elderly households²² for the

²⁰ The country scores are reported in the appendix.

²¹ Sweden is an extreme outlier in this respect, and the relationship disappears completely if Sweden is included. The reason probably lies with different propensities to capture (small) capital incomes between the Swedish and most other country samples. Almost 2/3 of Swedish households are reported to have some income from interests etc., while the corresponding figure in Germany is just above 6 percent.

²² Defined as households in which the household "head" is 60 years or more.

ten countries in Mitchell's sample²³. Among this section of the population there is extremely high levels of pre-transfer inequality (between 0.55 in Canada and 0.79 in France) and fairly modest levels of post-transfer inequality (between 0.18 in Sweden and 0.40 in Switzerland) compared to the population in general. On average the reduction in inequality is therefore very high ranging from 74 percent in Sweden to 39 percent in Switzerland. Following the logic suggested by Mitchell, a linear statistical relationship between the degree of inequality reduction on the one hand and the level of inequality of pre-transfer incomes on the other could indicate the presence of systematic second order effects. It turns out, in fact, that there is a moderate positive correlation (pearson's $r=0.47$) in the sample between the scope of redistribution and inequality in pre-transfer income among elderly households. In other words, there is a tendency in the material for countries that achieve a high degree of first order reduction in inequality among the elderly also to show relative high levels of pre-transfer inequality among this group.

5 AN ALTERNATIVE MODEL: ENDOGENIZING THE WELFARE STATE

The preceding discussion of the Swedish case is intended to cast some initial doubt on the validity of Mitchell's indicators of Welfare State effectiveness. But it does not in itself refute the basic finding reported by Mitchell: for the sample as a whole, the association between welfare state redistribution and inequality in market incomes is weak and very far from statistically significant. These results hold up even if Sweden is excluded from the analysis²⁴. The same can be said to hold for the indications of second order effects on certain aspects of the overall distribution of market income discussed above. Given the causal model implied by her analysis, Mitchell's main conclusion is still valid: Among the ten LIS-countries the level of inequality in market incomes is not systematically responding to cross-national variation in redistributive effort.

But, what if the model has been mis-specified? In Graph 2 I have suggested an alternative specification of the relationship between the central variables in a model linking the Welfare State, wider societal circumstances and the final distribution of disposable income. The model, that implicitly guided Mitchell's analysis rested on the strong assumption that the Background Distributional Structure and efforts to redistribute through the Welfare State are not systematically related; in other words that a high level of (gross) redistribution is just as likely in countries with inegalitarian social and economic structures

²³ Country scores are reported in the appendix.

²⁴ Sweden is, statistically speaking, a highly influential case in the correlation presented by Mitchell. Even so, the results do not change dramatically when Sweden is left out of the analysis.

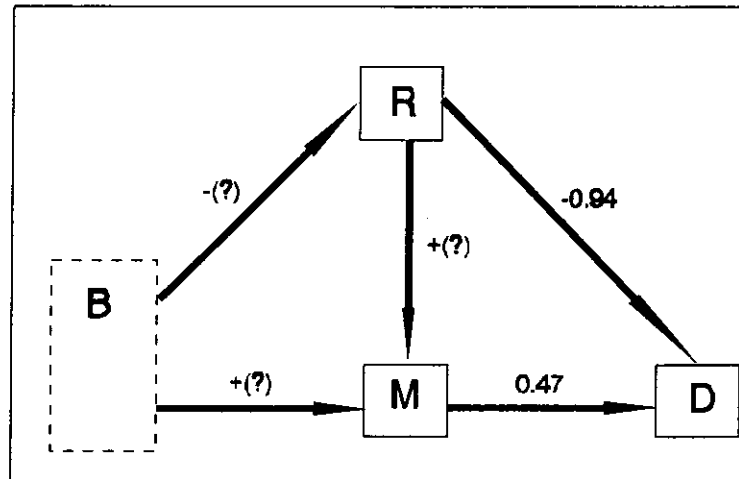
as in countries with more egalitarian predispositions. The Welfare State comes out of the blue, so to speak.

This assumption is dropped in the second model, which is identical with the first except for the addition of a causal link between the Background Distributional Structure and the amount and character of Welfare State Redistribution (see Graph 2). I expect this link to be negative: that high values on inequality producing factors in the Background Distributional Structure tend to be associated with low levels of Welfare State Redistribution.

One possible mechanism behind such a negative association could be that the general level of economic stratification is partly determining, or influencing the kind of social and tax policies adopted by different countries. The possibility has been suggested by A.B. Atkinson in a discussion of the prospects and pitfalls associated with the use of the LIS micro-data for comparative policy analysis: "As the public choice theorist will tell us, it may be that countries with relatively unequal distributions of gross income tend to elect governments which follow more conservative policies" (Atkinson 1989, pp. xxii). Atkinson's message is that one should be careful not to take covariation between policy features and distributional outcomes as evidence of a simple one-way causal relationship²⁵. While Atkinson's observations are inspired by public choice theory, classical sociological insights might point in the same direction: willingness to share social risks through comprehensive welfare state institutions (read:solidarity) is more likely to come forth in societies with generally egalitarian social and economic institutions.

Alternatively, one could simply imagine that a negative association between these variables is caused by important components in B. From the comparative literature we know that indices of welfare state effort and benefit generosity are positively correlated with factors like the strength and cohesion of national trade unions and corporatist systems of wage determination. These factors can also be assumed to be important equality promoting factors in the Background Distributional Structure. Strong trade unions and a tradition for centralized wage determination tend to restrict wage inequalities (Hibbs 1991).

²⁵ Atkinson's point could point towards other types of respecification - for instance one could imagine a reciprocal relationship between redistribution (R) and Market Incomes (M) and a feed-back effect from outcomes (D) to policy (R) (see Hibbs and Dennis 1986 for a technical application and Esping-Andersen 1985 for a macro- sociological analysis where this latter type of effect plays a central role.



Graph 2: Respecified model with expected signs of coefficients.

In a purely macro-oriented analysis of a large number of countries Pampel and Williamson (1989) found that indicators of trade union strength had a direct effect on the distribution of disposable income even when a number of other factors, including public welfare spending, was controlled for²⁶. In other words: centralized wage determination and trade union strength can be supposed to depress the degree of income inequality through the process of wage formation etc., and at the same time improve the prospect for welfare state interventions through comprehensive social security and tax-systems.

Thus, both theoretical arguments inspired by rational choice theory and classical sociological reasoning as well as well-established empirical findings from the comparative political economy literature lead us to expect a negative correlation between the level of Background Inequality and the scope of Welfare State Redistribution.

The potential consequences of this minor change in the model are quite substantial. Once the possibility for a causal link between B and R is allowed into the model, the most important path coefficients ($p_{M.R}$ and $p_{M.B}$) can no longer be estimated on the basis of the three bivariate correlations reported by Mitchell. The strength of inequality increasing second order effects, the net redistributive effects of the Welfare State, and the combined impact of other societal factors all become indeterminate. In other words: the available empirical evidence is consistent with a set of relationships between the variables that could be completely different from that on which Mitchell's conclusions are built.

²⁶ In their analysis public welfare spending showed no direct effect on the degree of income inequality.

If there is in fact a non-trivial (overall) negative relationship between the Background Distributional Structure and Welfare State Redistribution, it follows that the causal effect of R on M is stronger than indicated by the bivariate correlation. The weak bivariate correlation found between R and M, must then be the joint product of two opposing tendencies: a positive direct effect of R on M which is almost totally concealed by a spurious negative component created by B. Under this interpretation the empirical evidence suddenly points in the direction of a substantial negative feed-back from Welfare State Redistribution on the distribution of Market Incomes. The substantive interpretation could run as follows:

Countries that are fairly egalitarian in their basic social structure tend to develop comprehensive welfare states. But big welfare states influence the distribution of market incomes so that it (in the aggregate) seems to resemble that found in countries with more inegalitarian social structures and smaller welfare states.

While in Mitchell's model the bivariate correlation between Redistributive Effort and the distribution of Disposable Income could be taken to represent the causal impact of R on D, this no longer obtains in the new model. In the less restrictive model, part of the bivariate correlation between R and D will reflect a spurious component created by B. If we stick to the assumption of a negative correlation between B and R, it follows that the real causal effect of R on D is weaker than implied by the bivariate correlation. The verbal interpretation is straightforward:

Powerful Welfare States are likely to operate in favorable societal circumstances, and these circumstances are in themselves partly responsible for the good performance shown by these country cases in terms of their relatively egalitarian outcomes.

The main argument so far can be summarized as follows: On the basis of a cross-sectional analysis involving ten country cases, Mitchell makes two basic claims: 1) That negative feed-back effects on the distribution of market incomes are either non-existing or not systematically linked with the scope of redistributive efforts through the Welfare State, and 2) that redistributive effort (read: policy) is the overwhelming determinant of cross-national differences in the degree of inequality in the final distribution of disposable income. These two claims have empirical support only if one a priori accepts a highly restrictive and implausible model of the relationship between socio-economic structure, welfare state policies and the final distribution of disposable income. As far as the empirical evidence goes, they are plainly false if highly redistributive (solidaristic) welfare states tend to materialize in countries where the Background Distributional Structure is

already fairly egalitarian.

6 A TENTATIVE REANALYSIS

Of course, the big drawback with the model suggested above is that it is impossible to estimate since the Background Distributional Structure cannot be observed and measured directly. Therefore, the preceding argument remains rather hypothetical.

Mainly for the sake of exposition I have tried to conduct a supplementary analysis adding Union Density (U) as a fourth variable to the model²⁷. As already discussed, the strength and cohesion of trade unions is one of the important factors which can be expected to form part of the Background Distributional Structure and at the same time to correlate positively with Welfare State effort. To include Union Density into the analysis can be considered a second best solution to an estimation of the ideal model, which would include all possible factors capable of directly influencing the distribution of market incomes across families or households.

Table 3. Bivariate correlations

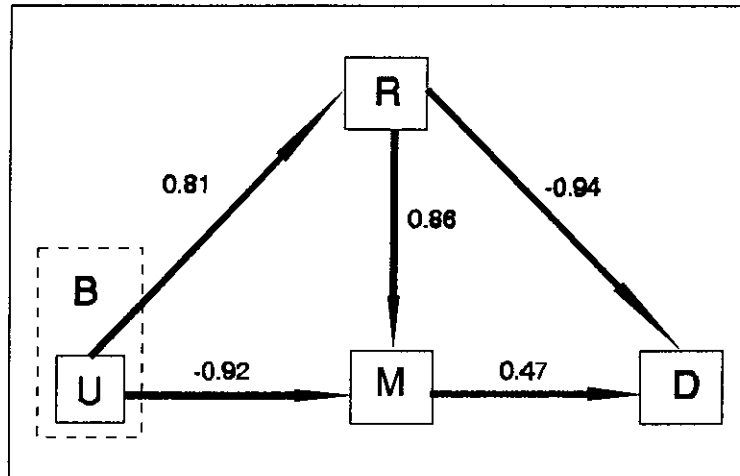
	Union Density	Market Income	Redistribution	Disposable Income
Union Density	1	-0.22	0.81	-0.86
Market Income	-	1	0.12	0.36
Redistribution	-	-	1	-0.88
Disposable Income	-	-	-	1

Source: Mitchell 1991. See appendix for the data used in the analysis.

The bivariate correlations between Union Density and the three original variables are shown in Table 3 and they roughly confirm the initial expectations. Given the fact that we only have ten cases and a multi-collinearity problem can be foreseen thanks to the high correlation (Pearson's $r = 0.8$) between Union Density and Redistributive Effort, the heuristic purpose of the following analysis should once again be stressed. With this in

²⁷ Country scores are reported in the appendix.

mind the new causal model and the corresponding path coefficients (Beta coefficients) are presented in Graph 3.



Graph 3: Causal model with estimated path-coefficients.

The changes in the path-coefficients compared with the ones resulting from the original model are quite dramatic. Again it might be helpful to summarize the substantively most important (combined) paths in Table 4 which closely parallels Table 2. Firstly the most important change triggered by the inclusion of Union Density is the appearance of a very strong inequality increasing feed-back effect from Redistributive Effort on the distribution of Market Income. The path coefficient takes the value of 0.86 compared to 0.12 in the first model. Secondly, after controlling for Union Density the total effect of Welfare State Redistribution on the inequality of disposable incomes is now somewhat more modest - estimated to -0.54 compared to -0.88 in the first model. Finally it should be noted that Union Density is estimated to have a non-trivial inequality reducing effect on the distribution of Disposable Incomes (-0.43). Together with the indirect effect via R the total effect of Union Density on post-transfer inequality is estimated to -0.86.

Table 4. Summary of results from the estimation of the second model

Inequality increasing feed-back effect on M	$p_{M.R}$	= 0.86
Net inequality reducing effect of the WS on D	$p_{D.R} + p_{M.R} * p_{D.M}$	= -0.54
Independent effect of Union Density on D	$p_{M.U} * p_{D.M}$	= -0.43

However, the most crucial path coefficients, $p_{M.U}$ and $p_{M.R}$ are not statistically significant despite their high values. The reason lies with the small number of cases and the strong linear dependence between Union Density and Redistributive effort. Furthermore it should be kept in mind that even if the problems of statistical inference were ignored, we cannot know for sure whether the control for Union Density has brought us closer to the true effect of Welfare State Redistribution on the distribution of Market Incomes, since there might be a host of important variables (other elements in B) which are still omitted from the analysis²⁸.

Still, the case I want to make is not that the world necessarily looks like that presented in the graph and table above. The point is to show that the available data are not inconsistent with that kind of picture. The evidence points in the direction of a substantial negative feed-back from welfare state intervention, if we can assume that the factors making up the Background Distributional Structure are on the whole negatively related to Redistributive Effort. I do not find such an assumption unreasonable, but of course, it has not been empirically demonstrated.

The recognition of the potential existence of significant feed-back effects from social transfers does not run counter to the belief that comprehensive and redistributive welfare states, at the end of the day, contribute to a more egalitarian distribution of disposable income. In the example above, Welfare State Redistribution actually showed a clear inequality reducing impact even after negative feed-backs had been considered and a potential source of spurious correlation had been eliminated. While there is reason to be pessimistic about the value of the standard approach to distributional analysis in the macro context, it does not follow that we should be pessimistic about the achievements of the Welfare State itself.

7 CONCLUDING DISCUSSION

In the introduction to this paper I recognized the practical and theoretical motivation for moving towards studies of social and economic outcomes within the tradition of comparative welfare state research. From then on the argument has been almost entirely negative. I have tried to show that an unqualified use of the standard approach to distributional analysis cannot be expected to produce reliable estimates of the overall distributional impact of entire welfare states - neither for each country case nor in a

²⁸ As pointed out by Lieberman (1985), the application of statistical controls for some but not all important variables might lead to estimates that are further from the true parameters than the plain bivariate relationship.

comparative perspective. Common sense theorizing leads us to expect that the extent of behavioral responses will vary according to the scope and character of the redistributive instruments - that is according to variation in precisely those institutional factors the effect of which we are interested in unravelling. The available empirical evidence that could have contradicted and overridden common sense does not hold up to a critical examination.

This leaves us with the question whether the comparative or time-series approaches represent satisfactory alternatives, and how comparable micro-data like those offered by LIS might still prove valuable in an attempt to answer the big questions about the inequality reducing impact of welfare state institutions. As suggested in Section 2 there are two main problems with the comparative and time-series approaches. The first is primarily theoretical and it is concerned with the way welfare state variation should be defined and operationalized. The second problem is more technical/methodological and it centers on the need to have enough autonomous variation on the welfare state variable(s) to be able to distinguish its (their) effect from other potentially important factors. It is difficult to find solutions that satisfy both of these concerns simultaneously.

Most of the existing studies that have been based on the comparative and time-series approaches in this context, simply looked at the effect of variation in public social expenditure (see for instance Pampel & Williamson 1989). The arguments to be raised against this practice are too well known to be repeated here. The theoretically satisfactory solution is to develop typologies or indices that measure variation in **institutional properties** of existing social transfer and tax systems. The welfare state typology suggested by Esping-Andersen (1990) is a possible candidate, and so is the slightly modified version suggested by Castles and Mitchell (1991). Both of these typologies have been constructed with a view to the complex of socio-political factors that are supposed to have generated each of the three (or four?) welfare state models. The irony is, however, that the more these regime types are explicable in terms of their social and political environment, the less we will be able to empirically disentangle their independent contribution to distributional outcomes from the impact of the broader social configuration in which they are nested. The problem of a small N which haunts traditional cross-national analysis could be partly overcome by turning to a time-series or pooled time-series framework. But it will not help to bring out the possible impact of broad welfare state typologies simply because they do not show much variation over time - at least in the post war period.

The methodological requirement of having enough autonomous variation on the welfare state variable stands a better chance of being satisfied if one opts for empirically grounded indices of institutional variation (measured at an ordinal or interval level) rather than

typologies with only a few possible values. A number of quite sophisticated indices of "the quality of social rights" have been developed in the area of pensions and retirement income (see Deviney 1984, Myles 1989, Palme 1990). The indices suggested by Palme clearly show strong variation over time as well as space and are thus well suited as explanatory variables in pooled time-series analysis²⁹. The question remains, however, whether it is possible to develop meaningful indices that capture relevant variation in institutional characteristics across all functional areas of the Welfare State. Mitchell's measure of welfare state redistribution (the proportional difference between pre- and post-transfer Gini-coefficients) is not a valid candidate, although I must admit to have used it thus in this paper. It does not reflect attributes of the transfer instruments themselves, but is rather a function of the interaction between these instruments and the pre-transfer distribution³⁰. It is partly an outcome variable, and thus it cannot be used to explain outcomes.

Perhaps the ambition to answer the big question about the welfare state and economic inequality in one analytical/empirical operation should simply be abandoned, and the issue rather be disaggregated into smaller and more coherent fields of research. The final answer could then be approached by piecing together results from a range of specialized studies. Welfare state interventions in some functional areas can safely be investigated using the standard approach, while others clearly require a comparative approach (retirement and income provision for the elderly is the most obvious example). Analyses of micro-data could in some areas produce reliable estimates of second order effects, which could then be used to simulate the real counterfactual distribution. It is precisely in the context of disaggregated studies that cross-nationally comparable micro-data sets like the LIS data are most important. Without them disaggregated, comparative studies of welfare policy outcomes could not be carried out. A growing number of studies which are based on the LIS data³¹ demonstrate that this is a fruitful way forward and that we are beginning to obtain some of the pieces that can be used to fill the bigger picture.

²⁹ The indices suggested by Myles and Deviney are unsuited for longitudinal analyses.

³⁰ See discussion in Section 2 above.

³¹ The Working Paper series published by LIS gives a good overview of the ongoing research activity.

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APPENDIX

COUNTRY	M	D	R	U	Z	ME	DE	RE
Australia	.414	.287	31	50	10.2	.638	.298	53
Canada	.387	.293	24	26	7.4	.550	.232	41
France	.471	.307	35	25	14.9	.793	.353	56
Germany	.407	.252	38	35	23.4	.735	.279	62
Netherlands	.467	.293	37	36	21.2	.664	.271	59
Norway	.385	.234	39	46	11.9	.619	.254	59
Sweden	.417	.197	53	71	6.5	.676	.178	74
Switzerland	.414	.336	19	23	3.4	.651	.398	39
UK	.393	.264	33	44	8.3	.621	.262	58
US	.425	.317	25	27	7.4	.592	.352	41

M=The Gini-coefficient for the distribution of Market income

D=The Gini-coefficient for the distribution of Disposable income

R=The relative difference between the Gini-inequality of Market and Disposable Income

U=Union density in 1980 (source: The SSIB datafiles)

Z=Proportion of families with market incomes ≤ 0

ME=Gini for market income among the elderly (source:LIS files)

DE=Gini for disposable income among the elderly (source:LIS files)

RE=Inequality reduction among the elderly