
Can Inequality Be Reformed?

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Abstract: Three limitations in “standard method” measurement of income redistribution are considered: that redistribution is seen as a matter of global rather than marginal effects, that structural effects on the distribution of factor income are not accounted for, and that cross-section and life-cycle effects are conflated. Evidence from recent research is introduced. It is argued that “standard method” results are reasonably robust in spite of limitations in the methodology. A positive association in advanced industrial countries between tax/transfer policy and income inequality is argued to be a firmly established conclusion. This suggests both that if government wants to modify income inequality it has a tool for so doing in tax and transfer policy, and that if it should want to reshape transfers or taxes for other reasons it must expect there to be distributional consequences.

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Comparative research on income distribution in advanced industrial societies over the last ten to fifteen years has produced at least two findings which can now be characterised as firmly established. The first is that there are considerable *differences* between nations in the distribution of income. This has been demonstrated above all in the Luxembourg Income Study [Smeeding et al. 1990]. Before the co-ordinated LIS estimates there was uncertainty about this and the tendency was to emphasise similarity more than difference. It has also been shown in more limited comparisons, for example of the Nordic countries [Ringen 1986, 1991; Gustafsson and Uusitalo 1990a, 1990b; Ringen and Uusitalo 1992] and of Australia and New Zealand [Saunders, Stott and Hobbs 1991]. The second finding is that there have been considerable and systematic *shifts* within countries in income inequality over relatively short periods of time. Here I refer to studies by Jenkins [1991], Coulter et al. [1993], Atkinson [1993], and Goodman and Webb [1994] for Britain, to the works cited above for Finland, Sweden, Australia and New Zealand, to Ringen [1993] on the composition of household income in Norway, to Fritzell [1993] for a five-country comparison, and to “official” poverty estimates in Britain and the United States. Previously, the tendency was to regard income inequality as relatively stable over time and such changes as were observed as mainly fluctuations around a stable underlying trend. Through these findings, income inequality has become established as a sensitive indicator of social life.

Whereas established conclusions have been reached on the descriptive facts, there is less agreement about what the relevant underlying pressures are, in particular: to what degree are transfer and tax policies a factor in accounting for variations in income inequality?

The question is of obvious policy relevance, but there is also a more general relevance. There are strong theories, in particular in sociological writing, of an inherent

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tendency to social stability through mechanisms in which society “strikes back” against attempts to impose an arbitrary order on it. One such mechanism may be the ability of those in privilege to confound attempts to undermine their relative advantage. It is suggested that social inequality sits too deep in the fabric of society to be reachable by cautious after-the-fact redistributive measures [cf. eg. Goldthorpe et al. 1980]. The implication is that the choice for society is between drastic market regulations or *laissez-faire*, with no middle ground for reformist and piecemeal strategies.

I am not concerned here with the question of what the distribution of income should be. Nor do I consider such major controversies as equality vs. liberty vs. efficiency. I am concerned only with the power of transfer and tax policies for influencing income inequality, if society should want to move towards more equality than is generated in the market. This needs to be known for considerations of what government *can* do, but knowing this is not necessarily of much consequence for considerations of what government *should* do. It is the potential I am concerned with, and the paper does not offer a comprehensive review of actual country experiences.

A recent review of this kind is available in [Atkinson et al. 1995]. Obviously, it is the normative distribution between persons or households that is considered, and not macro-distributions, for example between labour and capital.

Redistribution

A large body of research has concluded with great consistency in support of the *redistribution thesis*, namely that transfers and taxes in advanced industrial economies tend to have the effect of modifying the distribution of income in the direction of equality. [For a survey of evidence, see Ringen 1987.] However, despite the quantity of supporting evidence, this thesis has not become unreservedly accepted. The reason is that objections can be raised about the solidity of the underlying research.

The available evidence has for the most part been based on “standard method” research in which pre- and post-tax/transfer income distributions at one point in time are compared and the difference is taken as a measure of the redistributive effect of transfers and taxes. This method has many merits. It reflects real flows of market income, and of transfers and taxes, and establishes correctly the distribution of post tax/transfer income. It shows the distributive profile of the tax/transfer regime and how these policies affect the resulting income distribution. Standard method results should in no way be dismissed and do constitute powerful support for the redistribution thesis.

However, it is also clear that there are shortcomings in the standard method. These shortcomings are well-known, but until recently there has not been much that could be done about it since the necessary techniques or data for more complete analyses have been lacking, in particular consistent time-series data.

One limitation in the standard method is in the narrowness of the factors and effects which are considered. Direct effects of transfers and taxes on disposable income are estimated, but all effects on factor income are ignored. This includes changes in economic and social structures in society, policies which work directly on factor income (eg. incomes policies), and indirect second-order tax/transfer effects. Implicitly, the standard method assumes that the distribution of pre-tax/transfer income (factor income) is the distribution “before policies”. This is, of course, a considerable simplification. The factor income distribution itself is not stable and is subject to policy pressures. Taxation

may have work incentive or disincentive effects which could influence the distribution of factor income; the same might be the case for social security benefits, for example if they encourage some people to work less than they would have done in the absence of benefits.

A second limitation is that the standard method is static. It gives cross-section evidence on redistribution at one point in time. In a sense, this is not very meaningful since redistribution must necessarily occur over time. A certain redistributive result at one point in time may be “corrected” by an opposite result later, for example as a result of second-order effects, so that a trend analysis would show only arbitrary fluctuations around a stable long term distribution. Cross-section results may be spurious in the sense that what appears to be redistribution between persons here and now, is in effect the result of redistributions over the life-cycle for the same persons, in which case there may still be no redistribution of life-time income.

Methodological advances have now started to make inroads into the limitations of standard method research. There is a constant movement towards better and more comprehensive data sets, and, related to this, new techniques are being taken into use to get some grip on the long-term dynamics of income redistribution. Where, then, does the redistribution thesis stand in light of evidence from research that goes beyond the standard method?

Marginal vs. global redistribution

One of the difficulties which arise from the static quality of the standard method, is that redistribution is estimated from the profile of the tax/transfer system as a whole. Of course, we do not keep constantly starting afresh with a virgin distribution of income upon which a system of transfers and taxes is imposed. At any point in time, we start from prevailing distributions and policies and then introduce, if we so choose, some policy change. In a dynamic perspective, redistribution is captured more realistically in marginal effects on inequality of marginal policy changes than by estimating, more theoretically, global effects of entire policy systems.

In Britain, the distribution of income followed a trend of equalisation from around 1950 to the mid 1970s. This trend was then broken and the distribution gradually moved to more inequality so that by the mid 1980s, the 1950 distribution had been restored and, towards 1990, had become yet more inegalitarian, a movement towards inequality “unparalleled in recent British history” [Coulter et al. 1993]. This dramatic shift in the distribution of income is a test case for the redistribution thesis: if there is power to generate equality in transfer and tax policy, we would expect also a shift towards inequality to be associated with changes in such policies.

Atkinson has analyzed the movement towards inequality in Britain [Atkinson 1993]. He has pointed to three factors. First, a shift from work in the sense that fewer households are headed by persons in work (down from about 70% in 1970 to less than 60% in 1985) and a smaller proportion of household income is from work (down from more than 80% in 1975 to just over 70% in the mid 1980s). This factor, he finds, accounts for about half of the increase in inequality from 1975 to 1985. In addition, the income differential between the in-work and the not-in-work groups increased, notably after 1985. Second, a rise in earnings inequality among those in work. Around 1975, among full-time workers, the earnings of those in the top decile were about three times

the earnings of those in the bottom decile, whereafter the ratio increased steadily to about 3.4:1 in 1990. Third, the distribution of income among those not in work. During the 1980s, while the value of non-state pensions continued to follow earnings trends, the relative value of state pensions and benefits declined when the basis for upgrading changed from earnings to prices, the result being a relative deterioration in the income position of those depending most heavily on state pensions and benefits.

The story is a complex one with a range of economic, demographic, and political factors contributing to the end result. The explanation is clearly not exclusively political, but policies do play a role, for example for economic development and unemployment. Among the relevant policy factors is that of changing rules in social security benefits. This accounts for a good deal of the increasing inequality among those not in work, and for some of the increasing difference between those in work and those not in work. How much exactly this factor contributes to the total explanation is not clear, but for the present purpose it is sufficient to say that it is significant. The new British trend towards inequality cannot be put down to "automatic" forces of long-term stability in the distribution of income; it is to a significant degree induced by changes in redistributive policies.

In a comparison of income inequality trends in five countries during the 1980s, Fritzell found stability in Germany and Canada and a trend towards increasing inequality in Sweden, Britain, and the US [Fritzell 1993]. Changes in redistributive policies are found to contribute to explaining both stability and change. In all five countries, an increase in factor income inequality was observed; in Germany and Canada this was counterbalanced by changes in policies pulling in the opposite direction, hence end stability; in Sweden, Britain and the US, changes in the distribution of factor income carried through to the distribution of disposable income, and changes in redistributive policies added to this effect, rather than, as in the two other countries, neutralising it.

In an earlier study, I made a comparison of income redistribution in Norway and Sweden, using carefully co-ordinated survey data for 1982 [Ringen 1986]. That comparison turned out to have a quasi-experimental flavour: while factor income was identically distributed in both countries, disposable income was more egalitarian in Sweden than in Norway. This suggests that the difference in the end distribution of disposable income is, in this comparison, to be accounted for by political forces which redistribute factor income "afterwards" rather than by economic forces which determine the original distribution of factor income (although some uncertainty about second-order effects on factor income remains).

Taxes and transfers can influence the distribution of disposable income in two ways: there is a *volume* effect through their levels and a *profile* effect through their shape. (By "volume", understand the proportion of total household income coming from direct transfers and the percentage of gross income going to direct taxes. By "profile", understand the distribution of transfer income relative to factor income and the distribution of taxes relative to gross income, i.e., how progressive or regressive they are.) While the level of transfers and taxes was higher in Sweden than in Norway, their profiles were more progressive in the Norwegian system. By cross-simulation – imputing the Norwegian profiles into the Swedish system while keeping levels constant, and the Swedish levels into the Norwegian system while keeping profiles constant – it was demonstrated that the volume effect was more powerful than the profile effect. The

marginal change in the level imputed into the Norwegian system resulted in a greater change in the distribution of disposable income, than did the marginal change of profile imputed into the Swedish system.

Again, the story is complex and a full account is not possible. However, in this comparison, in which there is no difference in factor income distribution and the influences on factor income inequality may in large measure be assumed constant, much of the explanation seems to lie between factor and disposable income, i.e. in transfer and tax redistributions. In addition, it is here established that differences in volume matter in addition to differences in policy profiles.

Structural and redistributive factors

From the mid-1960s to the mid-1980s, Finland experienced what is perhaps the most dramatic case of reduced income inequality in any industrial nation and was transformed in this respect into the most egalitarian of the Nordic countries. During this period, the gini index for the distribution of equivalent disposable income fell from about .32 to about .20. Most of this change occurred during no more than ten years, from 1966 to 1976. Since 1985, the distribution has been stable. [Uusitalo 1989, and personal communication on trends from 1985 to 1992.]

Having established this remarkable trend, Uusitalo has sought to explain the change in inequality in Finland through an analysis which considers three sets of explanatory factors: transfer and tax policies, incomes policies, and structural changes in society. This study covers a long period, observes trends in both factor income and disposable income, takes in the effects of structural change in society, and considers policy effects on the factor-income distribution (incomes policies) along with the effects of transfers and taxes. Second-order effects "back" to factor income would be captured in this analysis, although not identified specifically. Through its richness, this is an exceptionally informative study in respect to both major problems in the standard method, narrowness and the static limitation.

There were important changes in socio-economic structure in Finland during the period, such as in the occupational composition of the work force, the regional pattern of residence, and household size and composition. These structural changes turn out to be of relatively little importance in explaining the change in income inequality. They changed the relative income position of some socio-economic groups, but these changes tended to pull in different directions and to balance each other out. Finland did not become more egalitarian in income terms as a result of Finnish society itself becoming more egalitarian in some structural sense. Rather, income equality was generated without structural pressures pushing systematically in that direction - an important finding in its own right.

The change in final inequality was a result of changes both in the distribution of factor income and of redistributions of factor income into disposable income, both elements pulling in the direction of equality. The change in the distribution of factor income is attributed in large measure to incomes policies. In a period of "solidaristic wage policy", factor-income inequality was reduced; when this policy was relaxed, factor-income inequality stabilised. Here, there are two additional important findings. First, at no time was a trend of increasing inequality of factor income observed. In a period of strong redistributive pressures, there were in other words not countervailing forces of sufficient strength to undermine redistribution by pulling factor income in the

direction of more inequality. Second, in the period of reduced inequality of factor income, the explanation is not underlying socio-economic change, but instead policy interventions in market processes, in this case in the form of income policy agreements between government and labour market partners. Not only changes in final inequality, therefore, but also in factor-income inequality turn out to be politically induced rather than structurally determined.

Although changes in the distribution of factor income did push final income in the direction of equality, the most important of the explanatory factors considered is transfer and tax policy. Changes in these policies had a strong equalising impact. This effect was at work while factor income inequality was reduced and continued to work after factor-income inequality had stabilised. Redistribution occurred through taxes as well as transfers, between the working and non-working populations, and within the working population. In a decomposition of transfer and tax effects, changes in volume were found to be more important than changes in profile.

This analysis is in terms of general inequality. In a separate study, Uusitalo has replicated the main analysis in terms of poverty rates, and found these to have been reduced in much the same way as general inequality and this reduction to be influenced in much the same way by redistributive policies. Gustafsson has analyzed changes in income inequality and poverty in Sweden over the same period (prior to the shift towards increasing inequality observed by Fritzell) and reached conclusions for Sweden much like those of Uusitalo for Finland [Gustafsson and Uusitalo 1990a, 1990b]. The importance of the volume effect is the same as I found in my comparison of Norway and Sweden.

As with the story of inequality in Britain, the story of equality in Finland is a complex one with a range of forces interacting. Had we studied this story within a standard-method framework, we would have found support for the redistribution thesis. Having studied the story within a broader framework that overcomes the limitations of the standard method, Uusitalo still reaches conclusions which are equally in support of the redistribution thesis.

Life-time redistribution

Equalization of income implies a transfer in favour of those in need. Being in need, however, is not necessarily a permanent situation for persons but may be limited to certain periods of the life course, for example during unemployment or in old age. To the degree that such periods are reasonably predictable, the relevant needs can be accommodated through insurance-type arrangements to which people in some periods make contributions and from which they in other periods draw benefits. Modern welfare state social security systems are in considerable measure insurance-type arrangements, although not necessarily explicitly so [Hills et al. 1993]. If social security systems were perfectly insurance organised, it would all be a matter of inter-person redistribution over the life-cycle with no intra-person redistribution, except what might result from accidental misfortune. If all redistribution were inter-person, there would be no redistribution between persons in life-time income. Standard method results add up the cross-section manifestations of inter- and intra-person over-time redistributions.

Obviously, it is not possible to observe future effects of current policies directly. What has proved possible, however, is to simulate the life-cycle effects implicit in

current policies. In this, no prediction is involved; simulations show only theoretical long-term effects implicit in *present* policies.

Harding has developed a “dynamic micro-simulation model” for this purpose applied to the case of Australia [Harding 1992]. The model simulates the life of a cohort “born” in 1986 through a life span of 95 years with regard to events such as birth, marriage, divorce, death, children leaving home, labour force entry and exit, and so on. The simulations are made year by year over the life-span of the cohort, on the basis of known probabilities from existing statistics and today’s rules in transfers and taxes. A simulation of this kind does not predict what will happen in the future – that obviously depends on future decisions and events – but shows what would happen under a steady-state assumption. The question the study seeks to answer is the following: if the demographic, labour force, income and other characteristics of the population, and all government policies existing in 1986, remained unchanged for 95 years, what would the distribution of income be like at different points in time and what income redistribution would be achieved by government programmes over the life-course of the cohort?

The characteristics and limitations of the study are essentially those of standard redistribution analysis, except for the introduction of the time dimension: the analysis is limited to cash income and to first-order redistribution, income is recorded as equivalent income for persons, only cash transfers are considered. On the tax side, the simulations incorporate the level of income taxes which is needed to finance actual cash transfers. The simulation does not break new ground on the concept of redistribution, but it overcomes the cross-section limitation of standard method research and thereby shows the degree to which cross-section results can be generalised to a life-time perspective.

Main findings: The tax-transfer system in Australia has a profound effect on life-cycle income. This works in two ways. Income is redistributed both over the life-course of persons (from the years of work to the years of retirement) and between persons during their life-courses. On average for males, about 45 per cent of the income tax paid was returned to the same persons at another point in the life-cycle. The remaining 55 per cent was absorbed by inter-person redistribution. The winners in this redistribution are first of all women compared to men. While men on average get less back in transfers than they pay in taxes, women on average break even up to about the age of 60 and then become net winners. When groups defined in terms of life-time standard of living are compared and transfers and taxes are accumulated over the life-course, those with a lower standard of living are the winners and those with a higher standard of living the losers.

In a simulation for Britain, Falkingham et al. [1993] separate inter-person from intra-person lifetime redistribution of cash transfers and taxes (using a model population rather than a cohort). Their conclusions are similar to those of Harding. The British system is found to be redistributive both in the inter-person and intra-person sense. Of all direct transfers received over the life-course, 62 per cent are found to have been paid for by the same persons at various times during the life-course, while 38 per cent represent transfers beyond what the recipients have contributed. The profile of the net benefit across life-time income groups (and of gross benefits and gross taxes for that matter) is progressive: the lower the life-time income, the relatively higher the life-time transfers and the relatively lower the life-time taxes.

Conclusion

Standard method research shows there to be an association between transfers and taxes and the distribution of income. This suggests two recommendations to policy makers. If government wants to modify income inequality, it has a tool for doing that in the system of transfers and taxes. If government wants to reshape transfers or taxes for other reasons than egalitarian idealism, it should not expect to be able to do so without effects for the distribution of income.

Since it is easy to point to shortcomings in the standard method, policy advice based on such results may be considered speculative. Ten years ago, we had only standard method results to go by. New research has, however, gone beyond the standard method in ways which meet objections to it.

It can be argued that the standard method is unrealistic since it considers redistribution as a matter of global rather than marginal effects. I have introduced evidence specifically on marginal effects. It can be argued that the standard method is unrealistic since it ignores the process of income formation "before" transfers and taxes. I have introduced evidence on the interplay between structural and redistributive effects. It can be argued that the standard method is unrealistic since it confuses cross-section and life-cycle effects and fails to distinguish between inter-person and intra-person redistributions. I have introduced evidence from micro-simulations which distinguish between these elements. The evidence that is introduced is not complete, and possibly not representative, in respect to the experience of advanced industrial societies in recent years, but is strategic in respect to well-known shortcomings in the standard method.

It has long been recognised that standard method results tend to exaggerate the redistributive impact of transfers and taxes. Standard method results have therefore not had much credence as to the absolute *magnitude* of redistribution, but considerable claims have been made as to the *existence* of a redistributive effect. The material considered in this essay confirms that the standard method is not a good guide for the magnitude of redistribution, but it does not otherwise undermine what has been learned from standard-method redistribution research. Obviously, a universal generalization that transfers and taxes equalize income would be nonsense, it depends on the transfers and taxes. But a conclusion that transfers and taxes *can* equalize income must now be said to have strong underpinning. To the two firmly established descriptive conclusions, it should be possible to add a third equally established analytic conclusion" that income inequality is associated with tax/transfer policy and that such policies are a factor in accounting for variations in income inequality. As a consequence, the two policy recommendations stand.

In his much quoted article, *The Welfare State in Historical Perspective*, Asa Briggs [1961] defined the welfare state as the deliberate use of politics and administration to modify the play of market forces. Mixed economy democracies have relied heavily on after-the-fact redistributive policies to modify inequality. I think it is a sound hypothesis that democracy is a sufficiently rational system for a policy strategy not to be maintained unless it proves reasonably capable of performing as intended, and that the expected finding should therefore be that tax/transfer redistribution works. This, indeed, is what the evidence shows; at least that there is in a cautious reformist strategy the potential for modifying inequality. The counter-hypothesis is that such policies are superficial and do not penetrate the surface of society to reach the real forces of inequality. If this were the

case, it would represent a devastating verdict not only on the strategy of redistribution but also on the very idea of reform democracy. The experience of redistribution is in favour of the first hypothesis. What has been learned is not in support of the theory that society has no middle ground for commonsense, piecemeal policy reform.

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