REDISTRIBUTION OF INCOME—NOTES ON SOME PROBLEMS AND PUZZLES

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There are both major philosophical and major econometric questions to be faced in the measurement of inequality of income. The scaling of different sizes and types of families can never be unique and may be a function of real income. However, even subjective guesses may be better than doing nothing. Demographic changes, such as the increase in pensioners with the increase in life expectancy, affects the distribution of income, and it seems desirable to estimate the separate effect of their influence. The extent to which the inequality of incomes is reduced by all taxes and benefits combined has remained remarkably constant in the U.K. over the period for which estimates have been made (1937–1967). The progressive effect of all taxes and benefits combined is largely the result of benefits (in cash and kind). The stability in the degree of inequality of original income is much more difficult to explain. A number of factors which reduce or increase inequality can be identified for further analysis.

SOME ESTIMATION PROBLEMS

1. When measuring inequality of income, how do we relate to each other the incomes of families of different composition or in different circumstances? At what relative levels are the incomes of families of different size (single persons, couples with 0, 1, 2, . . . children), or the incomes of pensioner families and of families of occupied persons, equivalent in the sense that there would then be no inequality? This is similar to the problem which arises in demand analysis of estimating equivalent household scales, i.e. the relative incomes at which different types of household can be said (in some sense) to have the same standard of living. There are difficult econometric problems in estimating such scales. For instance, they may vary with the level of income. How should equivalent household scales take account of the ages as well as the numbers of adults and children in the family? There is also the more basic "philosophical" question: if relative incomes are such that a couple with children would buy goods and services which are worth the same to them as the goods and services bought by the childless couple, is it right to ignore any satisfaction (net of any disadvantages) they derive from having children—remembering, for instance, that in later years children may contribute to the family's income? Thus a household equivalence scale is not necessarily the most appropriate basis for deciding on the level of family allowances. So it is probably also worth estimating the degree of inequality of income reckoning all households on a one-for-one basis.

2. The relative equivalent incomes of pensioners (or retired people) and of families of people at work are a special and more difficult case. Their needs and customary habits and patterns of expenditure may be so different that it may not be possible by empirical demand analysis to obtain a well-fitting equivalence scale; though an analysis confined to a limited range of items,

chosen because they are considered to satisfy very similar needs, might provide rough estimates. These may even be adequate, since moderate variations in the scale would have only a small effect on the final results. Even a scale based on subjective guesses may be much better than doing nothing.

3. The relative numbers of families of different size and type (including pensioners) are liable to change over the years for demographic reasons. Thus the average size of family has gradually declined in the U.K.; and the incomes of larger families, using scale factors, are generally lower than those of smaller families. Also, the average age of marriage (or co-habitation) has been declining. Both these effects would tend to increase inequality before redistribution. Should we have two sets of estimates before and after redistribution, one including these demographic effects, the other standardized so as to eliminate the main effects of demographic changes—the differences indicating the effects of such changes?

4. In the U.K., we have produced weighted averages of the separate Gini coefficients of inequality for each of a given number of family types, applying a constant set of weights to each year's estimates. These estimates measure the (average) degree of vertical inequality (between different levels of income) within each family type. The use of equivalent household scales leads to estimates of "vertical-cum-horizontal" inequality. The difference can perhaps be described as horizontal inequality (including demographic effects unless the same constant set of weights is used in both). Do we want to know the separate effects of demographic changes on both forms of estimate?

5. The distribution of the population by age is gradually changing. As the expectation of life increases, the relative numbers in the older age groups increase, the relative numbers of pensioners also increase and they live longer. The majority of pensioners have incomes which (even after applying equivalent household scale factors) are substantially lower than the average incomes of other people, so that changes in the relative number of pensioners are likely to have a much greater influence than changes in the relative numbers of other age groups. Should an increase in the relative number of pensioners *ceteris paribus* count as an increase in inequality? Presumably it should, though it seems worth trying to estimate the separate effect of this influence. The effects of changes in the relative numbers in other age groups are likely to be fairly small and are possibly not worth estimating separately.

6. Social Security contributions include contributions towards pensions which are eventually paid to the contributor himself and his wife or widow. Should that part of his contribution which he or his wife can be expected, on an actuarial basis, to receive back at a later stage in his life be excluded from estimates of redistribution of income? Or should all contributions paid and pensions received in the current year be counted, on a pay-as-you-go basis, as part of redistribution? The former is rather more difficult to estimate.

7. Poverty has declined, partly because of increases in the real value of social service benefits. As a result, people who previously lived with relatives are now able to live in separate households, apparent inequality increases, while average income per equivalent household declines. The extent of redistribution may then decline. These must presumably be regarded as real effects

and, if so, no attempt need be made to exclude them. Yet these effects are the result of improvements in real income. The estimated increase in inequality ought not, therefore, to be greater than the reduction resulting from the initial improvement in real income of the families concerned.

8. As unemployment increases, inequality of original income rises. At the same time, since expenditure on unemployment benefit will increase, the extent of redistribution will increase—but not by as much as the degree of inequality of original income. Separate estimates of these effects would be of some interest.

9. Employees' and self-employed people's contributions to social security are a direct tax on their incomes. But employers' contributions form part of costs and, it is coming to be generally agreed, contribute to prices. They are properly treated therefore as an indirect tax on the commodities produced, paid for by consumers and by foreign buyers of exports. By the same token, their treatment in national income accounts calls for reconsideration.

10. Legislated rent control is equivalent to and should strictly be treated as a tax on the landlord and a subsidy to the tenant, equal to the difference between what the rent would be in a free market and the actual rent paid. To obtain estimates of the free market rents would involve a lot of careful work with the help, say, of estate agents in each locality on the types of dwelling which are affected by the legislation.

11. The appropriate treatment of corporation tax is still being debated. A constant percentage tax does not affect the relation between the net profits of different firms. An all-round increase in prices would, in competitive conditions, restore profit margins to the levels which firms were previously accustomed to expect, and there seems no reason for their expectations suddenly to change. So what is there to stop all firms raising their prices so as largely (if not perhaps entirely) to offset corporation tax? Should it, therefore, properly be regarded as an indirect tax rather than a tax on dividends paid to holders of equity shares?

12. Investment grants (or tax concessions) may have marginal effects in reducing prices, but probably have more effect on the scale of output. They are likely to cause total profits to rise and should partly be regarded, therefore, as a subsidy to income from dividends, interest and rent (on the assumption that the alternative uses of the same expenditure would not increase profits).

13. Capital gains, though not contributing to national income or national capital, none the less form part of personal income. As the tax rates on earned or unearned income are often higher than on capital gains, the expectation of growth in share values is increasingly reckoned as a form of income by prudent investors. As with other transactions, only realized (not accrued) capital gains (net of capital losses) should count as personal income, in the year in which they are realized. If more people tried to realize accrued gains, share prices and hence realized gains would decline. A regular capital gains tax is thus appropriately regarded as a tax on personal income. A special temporary charge (lasting only a year or two) on investment income (which has exceeded 100 per cent in U.K.) can, however, appropriately be regarded as a tax on capital.

14. Note that the effect of any tax or benefit on inequality depends on the order in which taxes and benefits are assumed to be paid or received. Unless a complete order is specified, alternative estimates are obtainable—forwards

from an earlier stage, or backwards from a later stage of the redistribution process. It is sensible to assume (i) that all benefits which are subject to income tax are received before income tax is paid, (ii) that all direct taxes and benefits are paid or received before all indirect taxes and benefits, (iii) that (untaxed) benefits in kind (e.g. education, health services) are received after all direct taxes are paid, (iv) that benefits available to a larger proportion of families are received before those available to a smaller proportion, (v) that indirect taxes on intermediate goods are paid before those on final goods, (vi) that indirect taxes levied on goods which are purchased regularly are paid before those levied on goods which are purchased less regularly. With the help of these rules of thumb (and a few arbitrary decisions in less important cases), complete ordering is possible. Estimates of the effects of a change in any given tax (benefit) at the specified stage should strictly take into account any consequential effects of the change on taxes paid and benefits received at later stages.

Some Puzzling Results

15. The extent to which inequality of incomes is reduced by all taxes and benefits combined has remained remarkably constant in the U.K. over the period for which estimates have been made—1937 (Barna), 1953 (rough estimates), and 1957–1967 (official estimates for most years). Since 1937, perhaps the three principal influences have been the decline in the number of people receiving unemployment benefit (full employment policies), the introduction of family allowances and the expansion of the health services. The last two changes might have been expected to have had more influence than the fall in unemployment; so other factors have presumably been at work. If Government policy resulted in the values of all the main benefits rising in the same proportion as average incomes, the extent of redistribution would remain constant; in general, Government policy has not departed very far from this aim in the post-war years. In the U.K., the effect of all taxes combined is only mildly progressive—progressive income and sur-tax being offset to a large extent by regressive indirect taxes and social security contributions. Thus the progressive effect of all taxes and benefits combined is largely the result of benefits (in cash and kind). So the fact that the extent of redistribution has remained more or less constant during post-war years is not, perhaps, too surprising.

16. The stability in the degree of inequality of original income is much more difficult to explain. There have been many influences, but the main ones might have been expected to reduce it. Of the special factors which are likely to have affected the degree of inequality of original income (before taxes and benefits) of non-pensioner families in recent years, the following seem the most important.

Special Factors Influencing Inequality of Income

Note: – indicates reduction, + indicates increase in inequality, small effects are shown in brackets, - - indicates negligible effect.

– (a) The war caused substantial and lasting increases in the wages of coal miners and agricultural workers, and a substantial reduction in unemployment. (Affecting only pre-war post-war comparison.)

– (b) Proportion of salary to wage earners has risen.

+ (c) Interaction of (b) with age because of different age-earnings profiles, salaries rising to a maximum at about 50, wages rising up to and declining after 40.

(d) Increased longevity:

(+) (i) interaction with salary-age and wage-age profile (separately);

- - (ii) interaction with (b), with offsetting effects.

(–) (e) Proportion of female labour has risen, probably affecting medium more than low or very high income families, and mainly couples with no or small numbers of children.

(f) Increase in minimum school leaving age to 15, in 1947, and gradual rise in number of children staying at school after age 15, and in the number at university and training colleges:

+ (i) initial reduction in income of families with teenagers, biggest in families with modest incomes (well-to-do families could already afford longer education of children, and children in poorest families still tend to leave at 15).

– (ii) higher earnings of school-leavers, both because of better educational qualifications and because of reduced numbers of 15–18 year olds in the labour market, reflected in higher earnings of juveniles.

+ (g) Age of marriage has declined, and growing numbers of young people live separately from their families, increasing the number of low income small families.

+ (h) Decline in poverty resulting partly from higher benefits, enabling people previously living with relatives to live separately.

- - (j) Reduction in actual age of retirement, offsetting effects among salary and wage-earners.

+ (k) High rates of surtax (above £2,000 till 1961, above £5,000 since) biting on larger numbers and year by year on lower real incomes, tendency for pre-tax incomes to rise to compensate.

+ (l) Inflation, those with fixed incomes or incomes which are reviewed infrequently suffering relatively, e.g. widows with private incomes and certain occupations, mostly relatively low paid workers, such as nurses, shop assistants. (Main effect is on private incomes of pensioners, a separate category, not discussed here.)

(m) Prices and incomes policy—several different effects:

- - (i) policy is perhaps more effective on incomes than prices which are difficult to control (quality changes, new models, etc.);

+ (ii) dividend restraint, 1966 onwards (limiting increases in dividends), temporary loss is made up either in later years, or in capital gains. So its effect, with a time-lag, is probably slightly regressive (even if wages and salaries revert to their previous trends, the temporary loss to wage and salary-earners is not made good later).

(+)? (n) Corporation tax, to the extent that it replaces profits tax, has negligible effect. If yield increases, effect is slightly regressive, since general price level is liable to rise (all profits being reduced *pro rata*, relative competitiveness is unaffected). While real wages fall, real profits can be maintained or would fall less.

17. Some of these factors are demographic—even if they may be partly influenced by secular economic changes; some are social—even if many of these are directly influenced by economic factors; some are specifically economic in character; and some are the interactions of more than one type of influence. Each of these three main types of influence has a very different significance and carries quite different policy implications. To obtain a proper understanding of what has been happening, the analysis needs to be taken much further than has yet been attempted.

18. Turning to longer-term economic influences, the share of profits, interest and dividends in the national income has apparently declined. This itself would reduce inequality of incomes. On the other hand, the increase in earned income of top business executives probably includes an increasing share of what would formerly have been classified as profits; for it is doubtful whether the very high earnings of some managers and directors correspond to relative marginal productivities.

19. Nationalization of large industries (coal, railways, docks, steel), by reducing the scope for the subsequent growth of unearned income, would not reduce but might be expected to moderate the rate of increase in one of the main sources of inequality. But the growth of new fields for private investment, at home and abroad, would negative any such tendency.

20. Because of omissions and inaccuracies, our estimates may obscure some sources of growing inequality. Firstly, capital gains, though contributing to personal income, are omitted from our estimates, and they must have grown fairly rapidly in recent years. Secondly, high rates of income tax bitingon gradually declining real incomes have encouraged a growth in expenses charged to business accounts (legislation to check this tendency has recently been introduced). Thirdly, the extent of evasion and avoidance of tax, though naturally difficult to assess, would be expected to grow in association with the growth in taxable rather than total personal income (as conventionally assumed in national income accounts) and more rapidly therefore than total personal income.

21. All in all—in regard to concepts, tax incidence problems and analysis of data—much remains to be done.

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