

The effects of taxes and benefits on household income, 1980

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Introduction

During 1980 the Government raised and spent £104 billion. Directly or indirectly, such revenue is raised from households, and the expenditure benefits households. For any one household, payments and benefits will not necessarily be equal; the aim of this article is to determine how the balance varies by income level, and therefore how the Government alters the distribution of income.

It has been possible to carry out this exercise for only 58 per cent of revenue and 46 per cent of expenditure (Table A). The main results of the analysis are:

- (i) Taken together, the taxes and benefits reduce inequality. In 1980 they increased the share of total income going to the bottom fifth of households on the income scale from $\frac{1}{2}$ per cent to 7 per cent, and reduced the share going to the top fifth from 45 per cent to 39 per cent.
- (ii) Between 1976 and 1980 the spread of incomes *before* taxes and benefits widened. This greater inequality was carried through to incomes *after* taxes and benefits. Increased cash benefits over the period tended to reduce income inequality, but reduced direct taxes tended to increase it.
- (iii) Unemployment makes household incomes *before* taxes and benefits more unequally distributed, despite many of the unemployed being in households toward the top of the income scale. Taxes and benefits substantially reduce, but do not eliminate, this increase in inequality.

The detailed results are given in Appendix 3.

The analysis in this article is based on the answers given by the 6,944 households in the Family Expenditure Survey (FES) in 1980. The survey collected information about the compositions of the households and on their incomes, direct taxes and expenditures. No correction for non-response bias in the FES has been made, except that purchases of certain items (notably of alcohol and tobacco) have been adjusted to bring the totals in line with the National Accounts. The analysis starts with each household's *original* income – that is, its pre-tax income from earnings, investments and private pensions. Adding state

pensions and all other state cash benefits yields its *gross* income, and deducting income tax and National Insurance contributions gives its *disposable* income. *Final* income is derived by (a) deducting its payments of local rates, and estimates of payments of other indirect taxes (such as VAT) based on recorded expenditure, and (b) adding imputed benefits from public expenditure on education, health etc. The detailed assumptions used in the estimates are given in Appendix 1.

RESULTS FOR ALL HOUSEHOLDS

There is a wide variation in the size of households' *original* incomes (Table B). In 1980, the tenth of households with the lowest original incomes (the bottom 'decile group') had an average original income in the year of only £10, and the next decile group had an average of only £330. More than one in five households are retired households – defined as those where at least half the total income comes from retired people (Table C). Many such households have little or no original income (their state pensions are counted as cash benefits). Retired households comprise almost 80 per cent of the households in the bottom two decile groups (that is, the bottom fifth, or 'quintile group'). The remaining 20 per cent are other households with no earners in them (mainly single adult and single parent households), and households whose only earners are out of work for all or part of the year, or who have low earnings.

At the other end of the scale, households comprising the top quintile group had an average original income of £14,000 in 1980. Nearly half these households contain three or more adults; and they have, on average, nearly $2\frac{1}{2}$ workers each.

So the wide spread of original incomes springs in part from the numbers of households of different types within the total, the various types being concentrated in different parts of the income distribution. Comparing the spread of original incomes with the spread of *final* incomes (Table B) shows that taxes and benefits make the distribution of income between households much more equal. The different mixes of household types within each quintile group again provide the key to understanding how this happens.

Allocated and unallocated items of government revenue and expenditure, 1980

TABLE A

	Percentage of total revenue		Percentage of total expenditure	
	Allocated	Other	Allocated	Other
Revenue				
Income tax	23	—		
National Insurance contributions	9	5		
Local rates	6	2		
Other taxes on expenditure	20	8		
Other receipts (net)	—	15		
Borrowing requirement	—	12		
Total	58	42		
Expenditure				
Final goods and services			20 ¹	25
Grants to persons in UK			23	1
Subsidies			3 ¹	2
Capital expenditure			—	11
Debt interest			—	11
Other			—	4
Total			46	54

¹ Principally on education, health and housing.

Summary of the effects of taxes and benefits, 1980

TABLE B

	Decile groups of households ranked by original income										Average over all households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Average per household (£ per year)											
Original income	10	330	1,640	3,770	5,250	6,560	7,820	9,260	11,310	17,580	6,350
<i>plus</i> cash benefits	2,040	1,900	1,650	990	680	520	470	430	410	380	950
Gross income	2,050	2,230	3,290	4,760	5,930	7,080	8,290	9,690	11,720	17,960	7,300
<i>less</i> direct taxes	—	10	200	640	1,000	1,330	1,610	1,970	2,470	4,090	1,330
Disposable income	2,040	2,220	3,090	4,130	4,930	5,740	6,680	7,720	9,240	13,870	5,970
<i>less</i> indirect taxes	510	580	880	1,160	1,350	1,480	1,680	1,880	2,200	2,860	1,460
<i>plus</i> benefits in kind	1,040	890	920	1,070	1,160	1,170	1,210	1,240	1,190	1,350	1,120
Final income	2,570	2,530	3,120	4,040	4,740	5,440	6,210	7,070	8,230	12,360	5,630
Percent that are public sector tenants	63	45	37	39	35	30	28	24	18	16	33
Average per household (number)											
Children (i.e. under 16)	0.3	0.2	0.3	0.7	1.0	1.0	1.0	0.9	0.8	0.8	0.7
Adults	1.3	1.5	1.6	1.8	2.0	2.0	2.1	2.3	2.5	2.9	2.0
Retired people	1.0	1.1	0.8	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.4
Economically active people	0.1	0.2	0.6	1.1	1.4	1.6	1.8	2.0	2.2	2.5	1.4

Cash benefits

Most cash benefits are designed to help the *aged*, the *sick and disabled*, and other people on *low incomes* (Table D). Such people are concentrated in the lowest income groups, although some are in households further up the income scale; households in the lowest quintile groups thus receive, on average, the highest amounts from these benefits. Households in the middle and at the top of the income scale contain, on average, more children than those at the bottom (Table B), and hence receive on average more *Child Benefit*. But, in aggregate, cash benefits are much higher for low income than for high income households which is why they play such a large part in reducing income inequality.

The composition of each quintile group of households ranked by original income, 1980

TABLE C

	Quintile group					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
Percentages						
Household type						
1-2 adults retired	78	28	3	1	1	22
1 adult (other)	6	19	11	4	2	8
2 adults (other)	3	21	27	30	27	22
2 adults with children	5	17	45	41	25	27
3 or more adults	3	9	12	23	45	78
1 adult with children	6	7	2	—	—	3
Total	100	100	100	100	100	100

Direct taxes

Direct taxes are assessed mainly on original income. Although retirement pensions are also subject to *income tax*, the personal allowances are large enough to prevent households in the bottom fifth paying much tax. The percentage of gross income paid as income tax rises from 0.3 per cent for the bottom fifth to 18.4 per cent for the top fifth (Table E). The percentage paid as employees' *National Insurance contributions* also generally rises with income, although it falls off for the top fifth. So direct taxes further reduce income inequality.

Average value of cash benefits for each quintile group of households ranked by original income, 1980

TABLE D

	Quintile group					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
£ per household						
Age-related	1,250	800	200	100	100	490
Income-related	480	210	80	60	60	180
Child-related	60	120	230	230	190	160
Other ¹	180	180	90	70	50	110
Total	1,970	1,320	600	450	390	950

¹ Mainly related to sickness and disability

Indirect taxes

The effects of indirect taxes (which are described in the accompanying box) are not so clear-cut. As a proportion of disposable income, households in the middle of the distribution pay the largest amounts of *VAT* and of excise duties on *alcohol*, *petrol* and *vehicles* (Table F). The impacts of these taxes are substantially lighter on the bottom fifth of households and (except for duty on wines and spirits) are slightly lighter on the top fifth.

In contrast, *tobacco* duty and taxes *passed on* by producers in the form of higher prices fall heaviest on the bottom three fifths of households; the proportions of disposable income paid as tobacco duty, in particular, are twice as high for these groups as for the top fifth of households.

Domestic rates, together with water etc. charges, account for successively smaller proportions of disposable income moving up the income scale, although the proportion for the lowest fifth is reduced if rate payments received as part of Supplementary Benefit are excluded (for an explanation of this, see the box).

In total, indirect taxes fall heaviest on households in the second-to-bottom quintile group.

Benefits in kind

The average of all benefits in kind imputed to households increases with income – from £960 for the bottom fifth to £1,270 for the top fifth (Table G). Different patterns

emerge, however, for the individual benefits. For *education*, households have been allocated a share of total expenditure based on the number of pupils and students in the household (students away from home are not counted). As households in the upper half of the income range have, on average, more children than those in the lower half they are credited with a higher average education benefit. Children in the lower income groups are most likely to take school meals, or to have them free of charge; this is why the pattern of benefit *welfare foods* is different to that for education.

Expenditure on *health* services has been allocated between households according to the average cost of each type of service, and the estimated average use by age and sex. Old people tend to use health services much more than the young. This is why households in the bottom fifth, which include a high proportion of retired households, receive an average benefit of £560, compared with an average of £440 received by households in the top fifth.

Direct taxes as a percentage of gross income for each quintile group of households ranked by original income, 1980

TABLE E

	Quintile group					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
Income tax	0.3	8.2	13.7	15.5	18.4	14.7
National Insurance contributions	—	2.2	4.2	4.4	3.7	3.6
Total	0.4	10.4	17.9	19.9	22.1	18.3

The *housing* subsidy is, roughly, the amount by which local authority expenditure on council houses (including loan charges) exceeds income from council house rents (for the details, see Appendix 2). The subsidy has been allocated between public sector tenants. As these tenants are concentrated towards the bottom end of the income scale, it is the lowest quintile groups that are credited with the highest average benefit from the housing subsidy

INDIRECT TAXES

Indirect taxes include VAT and excise duties on petrol, tobacco and alcoholic drink, and a few other items. Households are taken as paying taxes equal to the amounts directly included in the prices of the goods and services they buy. These prices are also assumed to include *some* of producers' payments of the employers' National Insurance contributions and surcharge, non-domestic rates, oil duty etc; households are therefore taken as paying these amounts as 'intermediate' indirect taxes. Local domestic rates (net of rebates) are also counted as an indirect tax, together with water and sewerage charges (which are normally based on rateable values).

Supplementary Benefit (SB)

Supplementary Benefit (SB) tops up a household's income to match a 'needs' total which usually includes rent and rates. It can be argued, at one extreme, that in most cases, a household receiving SB merely passes its rates from one agency to another, and so its effective rates burden is nil. Where ranges have been shown for the burden of rates (and total indirect taxes), the lower end has been calculated by excluding the rates payments of most SB households, and by subtracting corresponding sums from their gross incomes. For each household where the SB received is less than the total rent and rates bill, however, its gross income and rates payment have been reduced by only a proportion of the SB — the proportion that rates represents of rent and rates combined.

(the averages being taken over all households, not just public sector tenants).

The 'other' element of benefits in kind comprises the passenger rail travel subsidy and expenditure on the option mortgage scheme and on life assurance premium tax relief. These tend to benefit people of working age and in the middle and upper parts of the income range.

In total, then, the higher income groups are allocated the highest average benefits from the public expenditure covered in Table G. However, as a proportion of final

Indirect taxes as a percentage of disposable income for each quintile group of households ranked by original income, 1980

TABLE F

	Quintile group					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
Domestic rates (net) ^{1,2}	3.7-6.9	4.9-5.2	3.8-3.9	3.2	2.5	3.3-3.6
VAT	5.4	7.4	7.5	7.4	7.1	7.2
Duty on beer	0.5	0.8	1.0	0.9	0.8	0.8
Duty on wines and spirits	0.7	1.2	1.0	1.2	1.2	1.1
Duty on tobacco	3.1	3.2	2.9	2.3	1.5	2.3
Duty on hydrocarbon oils	0.6	1.2	1.5	1.6	1.4	1.4
Car tax and vehicle excise duty	0.3	0.8	0.8	0.8	0.7	0.8
Other taxes on final goods and services	1.5	1.4	1.3	1.2	1.0	1.2
Intermediate taxes	6.5	7.0	6.6	6.1	5.7	6.2
Total ²	23.0-25.6	28.0-28.3	26.4-26.5	24.7	21.9	24.2-24.4

¹ Net of rate rebates, but including water, etc. charges

² The ranges reflect the alternative treatment of rates—see the box above

income the benefit is largest for the low income groups, which implies that this expenditure contributes to the reduction in income inequality.

Average value of benefits in kind for each quintile group of households ranked by original income, 1980

TABLE G

	Quintile group					Average over all households
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
£ per household						
Education	190	310	510	600	630	450
Welfare foods	20	20	20	20	20	20
Health	560	500	460	430	440	480
Housing subsidy	170	130	120	100	70	120
Other	10	30	50	70	110	50
Total	960	990	1,170	1,220	1,270	1,120

An alternative way of illustrating the extent of income redistribution is given in Table H, which shows how income *shares* are modified by the tax-benefit system. For example, the top fifth of households in the ranking by *original* income receives 45 per cent of all original income. With cash benefits, the share of the top fifth falls to 41 per cent of all *gross* income. At the other end of the scale, the share of the bottom fifth rises from 0.5 per cent to 5.3 per cent. Further, but comparatively smaller, reductions in inequality occur at the stages of *disposable* and *final* income.

Percentage shares of total household income, 1980

TABLE H

	Percentage in each quintile group of households, re-ranked at each stage			
	Original income	Gross income	Disposable income	Final income
Quintile group				
Bottom fifth	0.5	5.3	6.4	6.8
Next fifth	9	11	12	12
Middle fifth	19	18	18	18
Next fifth	27	25	24	24
Top fifth	45	41	39	39
Total	100	100	100	100
Decile group				
Bottom tenth	—	2.1	2.6	2.7
Top tenth	28	25	23	23
Gini coefficient (per cent)	45.9	35.9	33.1	32.3

Though not without its drawbacks, the Gini coefficient is the most widely used single measure of the inequality of the distribution of income (see paragraph 37 of Appendix 1). It takes values between 0 and 100 per cent – the higher values indicating greater inequality. It is dangerous to draw detailed conclusions from the sizes of changes to the Gini coefficient, but the values shown in Table H clearly confirm that cash benefits account for the largest reduction in inequality.

The interpretation of these results should take account of three qualifications. First, more taxes than benefits have been allocated to households, so more significance should

be attached to the broad patterns of redistribution than to the exact figures of gains and losses. Second, the methods used to allocate the taxes and benefits were determined by the availability of data – more refined procedures (for example, that take account of second order effects transferring the impacts to other households) were not practicable. Third, the inclusion of other taxes and benefits might alter the picture.

REDISTRIBUTION WITHIN EACH HOUSEHOLD TYPE

The foregoing section looked at the distribution and redistribution of income between households irrespective of their compositions, or of their needs. As mentioned above, the position of a household in the income ranking depends on its composition as much as on the rates of pay etc. of its members. So, for example, the fact that a household with several adults appears near the top of the income distribution does not necessarily mean that it is relatively 'well off'. The analysis in this section therefore takes account of household composition to give a better idea of how living standards vary, and of how taxes and benefits reduce this variation.

Households are first divided into ten types according to their compositions (Table J). The rankings by income level and the analysis of redistribution can then be repeated for each type separately. (No attempt is made to compare the standards of living of households of different compositions; that would require judgements as to the relative needs of such households.) The ten types comprise two retired types, three types with adults only, and five types containing children. Their exact definitions appear in Appendix 1 (paragraphs 6 to 10).

The distributions of original income within the *retired* household types are very unequal (Table K), with three-quarters of the income going to the top quintile groups. This is because the original income of retired households consists largely of occupational pensions, which are very unequally distributed between retired people (state pensions are counted as cash benefits).

For *non-retired* household types the inequality of the distribution is related to the variation in the number of workers per household. Single adult and single parent households include substantial numbers with no workers, and this is one reason why the distributions of original income are particularly unequal for these types. But even for non-retired household types with two or more adults, the top fifth of households accounts for at least 35 per cent of all original income in each case – largely because of the variation in the number of workers per household. For two-adult households, for example, the top fifth of households average 1.9 workers each and the bottom fifth 1.1 workers each (Table L).

Table K shows that, within each household type, taxes and benefits again reduce income dispersion. The individual components of the tax-benefit system do not all play the same part in this reduction as they played in the all-households analysis, however.

Cash benefits

Age-related benefits to retired households, and *child-related* benefits, are now fairly evenly distributed over the household types concerned (Table M). *Means-tested* benefits are, of course, concentrated in the lowest fifths, as are benefits to the *sick and disabled* (who often have low incomes).

The ten household types, 1980

TABLE J

	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	All households
	Retired	Non-retired	Retired	Non-retired	1 child	2 children	3 or more children	With no children	With children		
Sample numbers	893	567	654	1,502	623	865	360	719	554	207	6,944
Average per household											
Children	—	—	—	—	1.0	2.0	3.3	—	1.6	1.9	0.7
Adults	1.0	1.0	2.0	2.0	2.0	2.0	2.0	3.4	3.5	1.0	2.0
Full-time workers	—	0.7	—	1.3	1.1	1.0	1.0	1.9	2.0	0.3	1.0
Part-time workers	—	0.2	0.1	0.3	0.5	0.6	0.5	0.6	0.8	0.3	0.4
Retired people	1.0	—	1.8	0.2	—	—	—	0.4	0.1	—	0.4
Average original income (£ per year)	560	4,210	1,450	7,990	7,330	8,090	7,380	10,480	10,780	2,690	6,350
Percentage that are public sector tenants	45	31	37	27	24	28	39	35	38	55	33

Percentage shares of income at each stage within each household type, 1980

TABLE K

	Percentage in each quintile group of households, re-ranked at each stage										
	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	
	Retired	Non-retired	Retired	Non-retired	1 child	2 children	3 or more children	With no children	With children		
Original income											
Bottom fifth	—	2	—	6	7	9	5	6	8	—	
Next fifth	—	11	3	14	15	15	14	14	15	3	
Middle fifth	4	19	8	19	19	18	18	19	18	14	
Next fifth	15	27	19	24	23	22	23	24	23	27	
Top fifth	81	41	69	37	36	35	40	36	36	57	
Total	100	100	100	100	100	100	100	100	100	100	100
Gross income											
Bottom fifth	13	7	12	9	10	11	10	10	11	8	
Next fifth	16	13	14	14	15	15	14	15	15	12	
Middle fifth	17	18	16	18	18	18	18	19	18	16	
Next fifth	19	25	20	23	22	22	22	23	22	22	
Top fifth	34	38	38	36	35	34	36	34	34	42	
Total	100	100	100	100	100	100	100	100	100	100	100
Disposable income											
Bottom fifth	14	8	13	10	10	11	11	10	11	9	
Next fifth	16	14	15	15	15	15	15	15	16	13	
Middle fifth	18	18	17	18	19	18	18	19	18	16	
Next fifth	20	24	21	23	22	22	22	23	22	22	
Top fifth	32	36	35	35	34	33	35	33	33	39	
Total	100	100	100	100	100	100	100	100	100	100	100
Final income											
Bottom fifth	12	8	12	10	10	11	12	10	12	9	
Next fifth	17	14	16	15	15	16	16	15	16	15	
Middle fifth	19	18	18	18	19	19	18	18	19	18	
Next fifth	22	24	21	22	22	22	22	23	22	22	
Top fifth	30	36	33	35	33	32	31	33	31	36	
Total	100	100	100	100	100	100	100	100	100	100	100
Gini coefficients (per cent)											
Original income	78	40	68	31	29	25	34	29	28	59	
Gross income	20	31	26	26	25	22	26	24	23	34	
Disposable income	17	28	22	24	23	21	23	22	21	30	
Final income	18	29	20	26	23	20	19	23	20	26	

Average number of workers per household by quintile group of original income within household type, 1980

TABLE L

	Household type ¹					
	1-2 adults retired	1 adult non-retired	2 adults non-retired	2 adults with children	3 or more adults	1 adult with children
Average per household (number)						
Bottom fifth	—	0.6	1.1	1.3	1.6	0.1
Middle three-fifths	—	1.0	1.7	1.6	2.7	0.7
Top fifth	—	1.0	1.9	1.8	3.4	0.9

¹ In tables L to P some of the ten household types have been combined. The 'bottom fifth', for example, of each combination covers the households comprising the bottom fifths of each household type within the combination.

So, in total, as a proportion of gross income much the highest average benefit goes to the lowest fifth within each household type. This means that cash benefits reduce income inequality within each type. The reduction is particularly large for retired households, where cash benefits form a high proportion of gross income.

Direct taxes

For retired households the sums paid as direct taxes are very small, except for the top fifth (Table N). For non-retired types both *income tax* and *National Insurance contributions*, taken as a percentage of gross income, generally increase for successive quintile groups. For the top fifths of household types containing two or more adults, however, the percentage paid as National Insurance contributions is lower than that for the middle income group. This is because of the ceiling on contributions, and the greater proportion of income earned by married women (many of whom pay a lower rate of contribution) and by

the self-employed (who also have a lower rate – and, like the married women, are entitled to fewer benefits). Taken together, direct taxes reduce income inequality within each household type, although by less than do cash benefits.

Indirect taxes

For *retired* households payments of most indirect taxes rise as a proportion of disposable income as income rises (Table P). Only tobacco duty has its largest impact on low income households. So for retired households indirect taxes reduce income inequality.

In contrast, for *non-retired* household types total payments of indirect taxes, taken as a percentage of disposable income, are highest for low income households and lowest for high income households. For most types, this holds for such individual taxes as *domestic rates* and water etc. charges, *VAT*, *tobacco duty*, *intermediate taxes* and, less markedly, *beer duty*. The pattern for rates derives

Cash benefits by quintile group of original income within each household type, 1980

TABLE M

	Household type ¹					
	1-2 adults retired	1 adult non-retired	2 adults non-retired	2 adults with children	3 or more adults	1 adult with children
Average per household (£ per year)						
Age-related						
Bottom fifth	1,550	510	840	90	880	160
Middle three-fifths	1,550	260	160	10	220	190
Top fifth	1,440	50	30	—	90	30
Child-related						
Bottom fifth	—	10	10	450	220	490
Middle three-fifths	—	—	—	420	200	440
Top fifth	—	—	—	420	180	420
Income related						
Bottom fifth	360	540	330	520	680	1,430
Middle three-fifths	210	40	50	40	150	540
Top fifth	30	—	20	20	130	—
Other²						
Bottom fifth	150	150	360	250	520	20
Middle three-fifths	100	40	70	50	140	30
Top fifth	100	10	30	20	40	20
Total cash benefits as a percentage of gross income						
Bottom fifth	100	73	38	30	38	100
Middle three-fifths	82	8	4	7	7	38
Top fifth	31	1	1	3	2	6

¹ See footnote ¹ to Table L

² Mainly related to sickness and disability

Direct taxes as a percentage of gross income by quintile group of original income within each household type, 1980

TABLE N

	Household type ¹					
	1-2 adults retired	1 adult non-retired	2 adults non-retired	2 adults with children	3 or more adults	1 adult with children
(a) Income tax						
Bottom fifth	—	2.3	7.2	7.3	7.3	—
Middle three-fifths	1.2	16.2	15.6	14.4	15.0	3.2
Top fifth	14.6	21.3	19.6	18.6	18.5	13.5
(b) National Insurance contributions						
Bottom fifth	—	0.3	2.2	3.4	2.8	—
Middle three-fifths	—	3.8	4.4	4.5	4.4	1.4
Top fifth	—	4.0	3.5	3.2	3.9	2.3

¹ See footnote¹ to Table L

Indirect taxes as a percentage of disposable income by quintile group of original income within each household type, 1980

TABLE P

	Household type ³					
	1-2 adults retired	1 adult non-retired	2 adults non-retired	2 adults with children	3 or more adults	1 adult with children
(a) Domestic rates (net) ²						
Bottom fifth ¹	2.6- 6.9	6.8- 9.0	4.3- 5.0	4.1- 4.9	2.5- 3.6	1.9- 8.8
Middle three-fifths ¹	4.7- 6.6	5.2	3.3- 3.4	3.6	2.6- 2.7	4.7- 6.5
Top fifth	5.9	3.4	2.5	2.9	2.0	4.4
(b) VAT						
Bottom fifth	4.1	7.5	7.7	7.9	8.1	5.3
Middle three-fifths	5.5	6.9	7.4	7.4	8.1	6.5
Top fifth	6.2	6.5	6.8	6.2	7.4	5.2
(c) Duty on beer						
Bottom fifth	0.3	0.7	1.0	1.2	1.1	0.2
Middle three-fifths	0.4	1.1	1.0	0.8	1.2	0.2
Top fifth	0.3	1.0	0.6	0.5	1.0	0.1
(d) Duty on wines and spirits						
Bottom fifth	0.6	0.9	1.1	1.1	1.0	0.5
Middle three-fifths	0.9	1.3	1.3	0.9	1.1	0.7
Top fifth	1.2	1.8	1.4	1.1	1.2	0.4
(e) Duty on tobacco						
Bottom fifth	2.5	3.4	3.9	4.6	4.5	5.2
Middle three-fifths	2.2	2.7	2.4	2.5	2.6	2.6
Top fifth	1.2	1.3	1.1	1.1	1.7	1.1
(f) Duty on hydrocarbon oils						
Bottom fifth	0.4	0.9	1.3	1.4	1.4	0.2
Middle three-fifths	0.7	1.0	1.6	1.5	1.6	0.8
Top fifth	1.0	1.1	1.2	1.2	1.5	1.0
(g) Car tax and vehicle excise duty						
Bottom fifth	0.2	0.4	0.8	0.7	0.8	0.1
Middle three-fifths	0.5	0.7	0.8	0.8	0.8	0.4
Top fifth	0.9	0.8	0.8	0.7	0.7	0.6
(h) Other taxes on final goods and services						
Bottom fifth	1.3	1.6	1.5	1.4	1.3	1.5
Middle three-fifths	1.5	1.3	1.1	1.3	1.1	1.6
Top fifth	1.2	1.0	0.9	1.1	0.9	1.2
(i) Intermediate taxes						
Bottom fifth	5.7	8.3	7.1	7.6	7.4	7.7
Middle three-fifths	6.3	6.3	5.9	6.4	6.6	7.6
Top fifth	5.7	5.2	5.2	5.5	5.7	5.7
(k) Total						
Bottom fifth ¹	18.4-22.0	31.1-32.7	28.8-29.3	30.3-30.9	28.3-29.1	24.1-29.4
Middle three-fifths ¹	23.0-24.5	26.5-26.6	24.9-25.0	25.4	25.9-26.0	25.6-27.0
Top fifth	23.5-23.6	22.1	20.5	20.2	22.0-22.1	19.8

¹ The ranges reflect the possible different treatment of rates — see box on page (99)

² Net of rate rebates but including water, etc. charges

³ See footnote¹ to Table L

from the use of rateable values as the tax base, and the patterns for VAT and intermediate taxes are due to high income households allocating more of their incomes to mortgage payments, life assurance premiums and other forms of saving – which are assumed not to attract tax. Tobacco duty shows the most marked proportionate differential; tobacco consumption per adult is if anything higher in low income households than in high income households.

Duties on *petrol, vehicles and wines and spirits* generally show no marked trend as a proportion of disposable income. Overall, however, indirect taxes increase income inequality within the non-retired household types.

Benefits in kind

Broadly speaking, the benefits from expenditure on *education and health* are fairly evenly distributed between the households within each composition type, although for a variety of reasons low income households tend to have slightly larger benefits. The highest average benefits from *welfare foods* go to households with the lowest incomes because of their higher than average take-up rate of school meals, or the greater proportion getting them free of charge. The average benefit from the *housing* subsidy is also substantially higher for low income households than for high income households within each type, because more of the low income households are public sector tenants. The average value of the 'other' benefits (passenger rail travel subsidy, option mortgage expenditure and life assurance premium tax relief) is much higher for high income than for low income households.

In total, benefits in kind reduce income inequality for each household type. For most non-retired household types this effect more than offsets the effect of indirect taxes, so that final income is more equally distributed between households than disposable income.

TRENDS IN REDISTRIBUTION BETWEEN 1976 AND 1980

Between 1976 and 1980 several important determinants of the pattern of income redistribution changed. There was a rise in national original income in real terms, and some change in its distribution between households; the amounts paid as various taxes, and received as various benefits, changed as proportions of household income; demographic changes included a fall in the number of children and a

rise in the number of pensioners. This section of the article describes the effects of these changes on income redistribution. One determinant – the level of unemployment – is not covered. The effects of unemployment on income distribution and redistribution in 1980 are shown in the next section.

The National Accounts show that, over the country as a whole, household disposable income rose between 1976 and 1980 by more than 90 per cent in cash terms (Table Q). Even after taking account of inflation, household disposable income rose by 16 per cent 'in real terms'. The purchasing power of gross income (on which direct taxes have first to be paid) can thus be said also to have risen by this amount. And although cash benefits represented a larger proportion of gross income in 1980 than in 1976, the national purchasing power of original income, too, grew over the period.

The cash benefits allocated in this article represent 12 per cent of gross household income in 1980 – nearly 1 per cent more than in 1976. The rise in this percentage was due to the introduction over the period of Child Benefit (which is a cash benefit) to replace tax allowances for children (which were not). So the other cash benefits represented roughly the same proportion of gross household income in 1980 as in 1976; and like household income, the total payments of these benefits increased in real terms. A large component of this increase was due to rises in the number of pensioners and in the real values of their pensions.

There was a substantial reduction between 1976 and 1979 in the percentage of gross household income taken as direct tax – from 20.3 per cent to 16.3 per cent. This reduction was caused by lowering the basic rate of income tax from 35 per cent in 1975–76 to 30 per cent in 1979–80; by the introduction of a lower – 25 per cent – band in 1978–79; by an overall increase in the real value of the personal tax allowances (excluding allowances for children), and in spite of the withdrawal of allowances for children; and by employees' National Insurance contributions not keeping up with the rise in earnings. Although the lower band was abolished, and National Insurance contributions were raised, in 1980–81, the direct tax burden on households was still substantially lower in 1980 than in 1976.

Indirect taxes represented a higher percentage of gross household income in 1980 than in 1976 – 16.3 per cent compared with 15.2 per cent. This was mainly due to the increase in the basic rate of VAT in 1979 (the rise in indirect taxes was one reason for the rise in cash benefits, most of which are related to price levels).

As a proportion of household income, public expenditure on education and health fell, in aggregate, between 1976 and 1979, recovering somewhat in 1980. This pattern reflects the trend in the levels of pay for the employees concerned.

So, in summary, there was a real increase, nationally, in the original income of households between 1976 and 1980, an even faster increase in their cash benefits, a large reduction in the proportion paid by households as direct taxes, partly offset by increased payments of indirect taxes, and a small drop in the value of the allocated benefits in kind expressed as a proportion of household income.

The following paragraphs show how these trends combined to modify the pattern of redistribution over the period. The basic sources of data are the Family Expenditure Surveys for 1976, 1978 and 1980. To establish a consistent basis for comparison, some data for 1976 and 1978 have been adjusted. All child support (including the value to each

Incomes, taxes and benefits, 1976 and 1978 to 1980

TABLE Q

	1976	1978	1979	1980
Gross ¹ household income (£ billion)	99.3	128.8	153.3	183.1
Household disposable income (£ billion)	77.0	103.3	124.5	147.9
At 1975 prices (Index numbers, 1975 = 100)	99	106	113	115
Allocated taxes and benefits as percentages of gross household income				
Allocated cash benefits	11.3	12.3	12.1	12.1
Allocated direct taxes	20.3	17.7	16.3	16.4
Allocated indirect taxes	15.2	15.4	16.3	16.3
Allocated benefits in kind	14.5	13.4	13.0	13.7

¹ 'Total household income' in the National Accounts, which is defined similarly to gross income

household of tax allowances for children) is switched to cash benefits in these years, and the value of the tax relief on life assurance premiums is switched to benefits in kind. In both cases, this corresponds to the treatment in 1980. Direct tax payments, cash benefits and benefits in kind in 1976 and 1978 therefore all appear higher in the remainder of this section than actually occurred, though the final income of each household and the overall pattern of redistribution are unaffected.

While national household *original* income rose in real terms between 1976 and 1980, its distribution between households became somewhat more unequal (Table R). The share going to the bottom two fifths of households fell from 10.2 per cent in 1976 to 9.0 per cent in 1980. This was due not only to the rise in the number of pensioner households but also to increases in income inequality within most household types. There was a corresponding increase in the share of total original income going to the top two fifths of households, and particularly to the top tenth.

There was much the same kind of increase in the inequality of the distribution of *final* income between 1976 and 1980. Thus taxes and benefits did not counteract the increase in the spread of original incomes.

This conclusion masks the opposing effects of changes to some of the components of the tax-benefit system (Table S). For the four lowest decile groups, *cash benefits* represented *higher* proportions of gross income in 1980 than in 1976 – partly because of the increased number of pensioners, although the proportions received as child-related, income-related and other benefits also increased for these four groups. But for the top six decile groups cash benefits accounted for *lower* proportions of gross income in 1980 than in 1976. This was partly due to the reduced average number of children per household. This difference in the trend each side of the fourth decile means that the changes to cash benefits offset some of the increase in the spread of original income between 1976 and 1980.

Percentage shares of total household income

TABLE R

	Percentage in each quantile group of households, ranked by original and final incomes					
	1976		1978		1980	
	Original income	Final income	Original income	Final income	Original income	Final income
Quintile group						
Bottom fifth ..	0.8	7.6	0.6	7.2	0.5	6.8
Next fifth ..	9.4	12.8	9.2	12.5	8.5	12.3
Middle fifth ..	18.8	18.1	18.7	17.9	18.6	18.0
Next fifth ..	26.6	24.0	26.7	24.0	26.9	24.1
Top fifth ..	44.4	37.5	44.8	38.4	45.5	38.8
Total ..	100.0	100.0	100.0	100.0	100.0	100.0
Decile group						
Bottom tenth ..	—	3.0	—	2.8	—	2.7
Top tenth ..	26.9	22.2	27.1	22.8	27.7	23.2
Gini coefficient (per cent) ..	44.3	30.2	44.7	31.5	45.9	32.3

Changes to *direct taxes*, in contrast, particularly benefited households in the middle and at the top of the income range, where they reduced gross income by 5 per cent less in 1980 than in 1976; there was a smaller gain at the bottom end, where little tax is paid. The changes to direct taxes therefore increased the spread of income.

The impact of the smaller net increase in *indirect taxes* was heaviest on households below the middle of the income range.

As a percentage of final income, the reduction between 1976 and 1978 in *benefits in kind* was most marked for the middle 60 per cent of households, though by 1980 the 1976 percentages were, by and large, restored for households in the bottom half of this group.

Taxes and benefits as percentages of income by decile group of households ranked by original income, 1976, 1978 and 1980¹

TABLE S

	Decile group										Average over all households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
Cash benefits as a percent of gross income											
1976	99	79	45	19	12	8.2	6.3	5.1	3.7	2.6	13
1978	100	83	46	19	11	8.3	6.6	4.6	3.7	2.4	13
1980	100	85	50	21	11	7.3	5.7	4.4	3.5	2.1	13
Direct taxes as a percent of gross income											
1976	0.1	1.9	10.2	18	22	23	24	26	26	28	23
1978	0.1	0.8	7.7	16	19	20	20	21	22	24	19
1980	0.1	0.7	6.1	13	17	19	19	20	21	23	18
Indirect taxes as a percent of disposable income											
1976	22	22	24	24	25	25	23	23	22	20	23
1978	22	22	24	24	24	23	22	22	21	19	22
1980	25	26	29	28	27	26	25	24	24	21	24
Benefits in kind as a percent of final income											
1976	37	34	30	25	25	24	22	19	15	12	21
1978	37	31	25	22	21	20	18	16	14	11	18
1980	40	35	29	27	24	22	19	17	14	11	20

¹ Adjusted for changes to child benefit, etc. See text.

Gini coefficients for the distributions of original and final income of each household type, 1976, 1978 and 1980

TABLE T

	Original income			Final income		
	1976	1978	1980	1976	1978	1980
Per cent						
Household type						
1 adult retired	73	77	78	16	17	18
1 adult non-retired	40	39	40	26	28	29
2 adults retired	66	66	68	16	19	20
2 adults non-retired	31	30	31	23	23	26
2 adults, 1 child	24	26	29	20	21	23
2 adults, 2 children	23	24	25	19	19	20
2 adults, 3 or more children	29	31	34	18	18	19
3 or more adults	28	27	29	22	22	23
3 or more adults with children	28	28	28	20	20	20
1 adult with children	56	59	59	24	22	26

So, broadly speaking, between 1976 and 1980 the effects of increased cash benefits, which benefited low income households most, were offset by the reduction in direct taxes, which benefited them least.

In the foregoing analysis, changes to the pattern of household composition (in particular, an increased number of pensioners and fewer children) are confounded with changes to taxes and benefits. In fact, as was hinted above, similar conclusions hold for the ten household types individually (Table T). Using the Gini coefficient, most household types showed an increase in the spread of *original* incomes between 1976 and 1980. No household type showed a reduced spread, although one- and two-adult non-retired households showed no discernible change, and neither did households with three or more adults and children. Only this latter type showed no change at the stage of *final* income, however; for all the other types final income was more unequally distributed in 1980 than in 1976. The different relative impacts on each household type of the changes to cash benefits and to direct taxes explains why the increased inequality was most marked in original income for some household types but in final income for others.

THE EFFECTS OF UNEMPLOYMENT ON INCOME DISTRIBUTION AND REDISTRIBUTION

When unemployment occurs the reduction in annual earnings may be partly offset by Unemployment Benefit and/or Supplementary Benefit; and unemployed heads of household may become eligible for rent and rate rebates. However a large majority of the unemployed suffer drops in their disposable, as well as in their original, annual incomes. This section shows how these reductions in *personal* incomes affected the distribution and redistribution of income between all *households* in 1980.

The first step in this exercise was to identify all the households in the 1980 FES sample which contained people reporting a spell of unemployment in the previous twelve months, and to calculate their original and disposable incomes. These observed incomes were then replaced by *hypothetical* estimates which included the total annual earnings that the unemployed people might have had, had they been in continuous employment. The distributions of incomes including these hypothetical incomes for households reporting some unemployment, together with the actual

incomes of households reporting no unemployment, were then compared with the distributions of actual incomes for all households, as given in the earlier part of the article.

The 6,944 households in the FES sample contained about 1,000 people who recorded a spell of unemployment in the previous twelve months. Most of them reported earnings for another part of that year; in these cases the earnings were used as a basis for inferring earnings during the period of unemployment, and hence for calculating their households' hypothetical *original* incomes for the whole year. 200 of the 1,000, however, recorded no earnings at all in the year (half of them were aged under 21); each of these was assigned hypothetical earnings equal to the average for his or her age/sex group.

The hypothetical *disposable* incomes were derived by also taking account of the consequential increases to direct taxes that the unemployed people would pay in work, and by excluding any cash benefits they actually received as a result of being unemployed - Unemployment Benefit, Supplementary Benefit and rent and rate rebates.

The difference between the distributions of the *hypothetical* and *actual* original incomes depends partly on the proportion of people reporting some unemployment, partly on the size of the loss of the earnings of each unemployed person, and partly on how many of them were in households where other members had incomes of their own. Of the 1,000 sample members reporting a spell of unemployment, 250 were the sole workers in the household (Table U), 400 had spouses who were economically active, and the remaining 350 were sons and daughters of the head of household. 350 of the 1,000 - including a majority of the young unemployed - were actually in households with at least *two* other workers.

Thus, for a majority of people reporting some unemployment in the twelve months, their households' annual original incomes include, as well as any earnings these people had during spells of employment, the earnings of at least one other worker in the household. Many such households are thus near the top of the income distribution; unemployment reduces their share of total income, which then contributes to a *reduction* in inequality. In contrast, the loss of earnings amongst most of the unemployed who

People who are economically active reporting a period of unemployment in the previous twelve months in the Family Expenditure Survey, 1980

TABLE U

	Men	Women	Total
No other economically active person in household	200	50	250
One other economically active person in household			
Unemployed person is head or spouse	150	150	300
Unemployed person is neither head nor spouse	50	50	100
Two or more other economically active people in household			
Unemployed person is head or spouse	50	50	100
Unemployed person is neither head nor spouse	150	100	250
Total reporting a period of unemployment	600	400	1,000

are the sole earners in their households tends to increase inequality. Also, many two-earner households have one of the earners in part-time work, and the loss of the full-time job for any lengthy period is likely to increase inequality.

Because of the differences between the household types in the impacts of unemployment on their income distributions, the comparisons have been carried out for each of seven types separately (Table V). For each type, the actual (recorded) original incomes are distributed somewhat more unequally than the incomes including the hypothetical original incomes of households reporting some unemployment. That is, not surprisingly, unemployment appears to increase the dispersion of original incomes.

The largest differences between these two distributions are for single adult households (for the reasons discussed above) and for households comprising two adults and three or more children. Unemployment is actually much more common among households with three or more adults than among other types; but the increase in the spread of original incomes due to unemployment is not correspondingly higher for these types. The presence of second, or third, workers in many households with at least three adults reduces the effects of unemployment on income inequality within these household types.

The impact of unemployment on the spread of *disposable* incomes seems to be less than its impact on the spread of original incomes, for all household types. Thus increased cash benefits and lower direct taxes substantially reduce, but do not eliminate, the increase in the inequality of the distribution of original income due to unemployment and the loss of earnings.

Unemployment may also result in reduced payments of indirect taxes (through reduced expenditure); and it can mean that people in the household become eligible for free school meals or prescriptions. Although no estimates along these lines have been made in this article, it is therefore likely that there is a further reduction in the impact of unemployment in the spread of incomes at the stage of *final* income.

The effects of unemployment on the distribution of household income across all households, irrespective of composition, is small. Again this is so because many of the households containing unemployed people are in the top half of the income distribution.

There are three qualifications to these results. First, most spells of unemployment are relatively short, and so unemployment has a more marked impact on the spread

Hypothetical and actual incomes¹: percentage shares of original and disposable incomes within each household type, 1980

TABLE V

	Percentages in each quintile group of households, re-ranked at each stage						
	1 adult non-retired	2 adults non-retired	2 adults with children			3 or more adults	
			1 child	2 children	3 or more children	With no children	With children
Percentage of households containing unemployed people	11	12	17	10	18	26	33
Percentage shares of:							
Original income							
(a) Including hypothetical incomes							
Bottom fifth	3.1	6.8	8.4	10.3	7.9	7.0	9.1
Middle three-fifths	58	56	56	55	54	58	56
Top fifth	39	37	35	34	38	35	34
Total	100	100	100	100	100	100	100
(b) Actual incomes							
Bottom fifth	2.1	6.2	7.0	9.5	5.4	6.3	7.7
Middle three-fifths	57	57	57	56	55	58	56
Top fifth	41	37	36	35	40	36	36
Total	100	100	100	100	100	100	100
Disposable income							
(a) Including hypothetical incomes							
Bottom fifth	8.4	10.3	10.8	11.6	11.6	10.7	11.9
Middle three-fifths	56	56	56	56	54	57	56
Top fifth	35	34	33	33	34	32	32
Total	100	100	100	100	100	100	100
(b) Actual incomes							
Bottom fifth	8.1	10.0	10.3	11.4	11.0	10.4	11.4
Middle three-fifths	56	55	56	56	54	57	56
Top fifth	36	35	34	33	35	33	33
Total	100	100	100	100	100	100	100
Gini coefficients (per cent)							
Original income							
(a) Including hypothetical incomes	36.6	29.9	26.7	23.8	29.8	28.0	25.3
(b) Actual incomes	39.7	31.2	29.1	25.1	33.7	29.4	27.9
Disposable income							
(a) Including hypothetical incomes	27.0	23.9	22.1	20.8	22.1	21.5	20.2
(b) Actual incomes	27.9	24.5	23.2	21.4	23.4	22.2	21.1

¹ See text for the definitions.

of *weekly* incomes than on the spread of *annual* incomes shown above. Second, the results have been shown in terms of *household* incomes. The effects of unemployment on the spread of *individual* incomes will depend partly on the extent to which the reduced total household incomes of multi-earner households are redistributed between the household members; but its effect is more marked at the individual level. Third, the assumptions underlying the calculation of the hypothetical incomes are not the only

ones possible; for example, another set of assumptions might include lower than average earnings for those unemployed people with no recorded earnings in the FES; only part of rent and rate rebates being lost in work; and some unemployed people being eligible for Family Income Supplement when in work. Also, no account has been taken of redundancy payments. However, the results in Table V have been found to be reasonably robust to varying assumptions.

APPENDIX 1

Methodology and Definitions

The allocation of government expenditure and its financing

1. There are considerable difficulties in moving from the aggregates of government expenditure and financing published in the *National Income and Expenditure Blue Book* to apportioning taxes and benefits to individual households. We can obtain information about the types of household that receive cash benefits and pay direct taxes through surveys such as the Family Expenditure Survey (FES). From the replies respondents give to questions on their expenditure we can impute their payments of indirect taxes, and from information they supply about such factors as their ages and the number of children in the household we can estimate the average costs of providing them with social services, such as health and education. But there are other kinds of financing, such as corporation tax and government receipts from public corporations, which are not covered in the FES and which are difficult to apportion to individual households. Indeed, most people would probably not think of these as leading to a reduction in their personal incomes. Similarly, there are other items of government expenditure, such as capital expenditure and expenditure on defence and on the maintenance of law and order, for which there is no clear conceptual basis for allocation, or for which we do not in any event have sufficient information to make an allocation.

Family Expenditure Survey

2. The estimates in this article are based mainly on data derived from the FES. The FES is a continuous survey of the expenditure of private households. People living in hotels, lodging houses, and in institutions such as old peoples' homes are excluded. Each adult keeps a full record of payments made during 14 consecutive days and answers questions about hire purchase and other payments. He also gives detailed information, where appropriate, about income (including cash benefits received from the state) and payments of income tax. Information on age, occupation, education received, family composition and housing tenure is also obtained.

3. One of the main purposes of the FES is to yield information on household expenditure patterns to produce the weights used in compiling the index of retail prices. The survey is conducted by the Office of Population Censuses and Surveys on behalf of the Department of Employment who analyse and report on it. The *Family Expenditure Survey Report* for 1980, containing detailed data on household characteristics, income, and expenditure, will be published shortly. Details of the survey method are set out in *Family Expenditure Survey Handbook* by W F F Kemsley, R U Redpath and M Holmes. Both are published by Her Majesty's Stationery Office.

4. The number of households co-operating in the FES in 1980 was 6,944. The response rate was 68 per cent.

5. The available evidence suggests that older households, households where the head is self-employed, those without children and higher income households, are less likely to co-operate than others. And, for example, response in Greater London is noticeably lower than in other areas (see 'Family Expenditure Survey: a study of differential response based on a comparison of the 1971 sample with the census' by W F F Kemsley, *Statistical News* No. 31, November 1975 (HMSO)). It is not practicable at present

to correct for any consequential non-response bias; the results in the article are based on the responses of those households which actually co-operated in the survey. This means that some of the figures differ from those produced by other surveys (see also 'Differential response in the Family Expenditure Survey: the effect on estimates of redistribution of income' by R Harris in *Statistical News* No. 39, November 1977 (HMSO)).

Unit of analysis

6. The basic unit of analysis in the article is the household, and not the family or the individual. A household is defined in the FES as comprising people who live at the same address and who share common catering for at least one meal a day. Spending on many items, particularly on housing, fuel and light and food, is largely joint spending by the members of the household. Without further information or assumptions it is impossible to apportion indirect taxes between individuals or other sub-divisions of households. And it would be far from simple to apportion income, direct taxes and benefits.

7. In classifying the households, adults have been taken as all people aged 16 and over. Most of the 'extra' adults in households with at least three adults are sons or daughters of the head of household rather than retired people.

8. A *retired* household is defined as one in which the combined income of members who are at least 60, and who describe themselves as retired or unoccupied, amounts to at least half the total gross income of the household; or in which the head is over state pension age, and more than three quarters of the household's income consists of national insurance retirement and similar state pensions, or related supplementary benefit.

9. By no means all retired people are in retired households; about one in three households comprising three or more adults contain retired people, for example, and households comprising one retired and one non-retired adult are often classified as non-retired.

10. The sample households have been classified according to their compositions at the time of the interview; it is particularly important to bear this in mind for households comprising one adult with children – it is likely that many of these households changed their composition at some time during 1980.

Income: redistributive stages

11. *Stage one*
Original income *plus* cash benefits = Gross income.
Stage two
Gross income *minus* direct taxes = Disposable income.
Stage three
Disposable income *minus* indirect taxes *plus* other benefits = Income after all taxes and benefits (final income).

12. The starting point of the analysis is *original income*. This is the annual income in cash and kind of all members of the household before the deduction of taxes or the addition of any state benefits. It includes income from employment, self-employment, investment and occupational pensions.

Employment income is based on the last payment received before the interview or, where different, the amount usually received. Allowance is made for any periods of absence from work through sickness and unemployment in the preceding twelve months, and for bonuses. Income from self-employment is recorded in the FES for a past period. This is brought up to current levels using an index of income from self-employment derived from the National Accounts. Income from interest, dividends and rent is taken as the amount received in the 12 months before the interview. Income from occupational pensions is based on the last payment received.

13. Households living in rent-free dwellings are each assigned an imputed income based upon the rateable value of the dwelling. This is counted as employment income if the tenancy depends on the job.

14. The next stage of the analysis is to add on *cash benefits* to original income to obtain *gross income*. This is slightly different to the 'gross normal weekly income' used in the FES Report, mainly because it excludes the imputed rent of owner-occupiers. Cash benefits are:

Age-related

Retirement and old persons' pension, Widows' benefit, Christmas bonus for pensioners.

Child-related

Child benefit, Maternity allowance, Maternity grant.

Income-related

Unemployment benefit, Family Income Supplement, Supplementary benefit, Electricity discounts, Rent rebates and rent allowances, Student maintenance awards.

Other cash benefits

War pension, Invalidity pension, Non-contributory invalidity pension, Housewives non-contributory invalidity pension, Invalid care allowance, Attendance allowance, Sickness benefit, Industrial injury disablement benefit, Death grant, other benefits.

15. This division involves some arbitrary allocations (for example, most income-related benefits depend on the number of children in the household), and it differs from classifications used elsewhere. It is adopted in the article purely for the purpose of shedding further light on the redistributive effects of cash benefits.

16. Income from short-term benefits is taken as the product of the last weekly payment and the number of weeks the benefit was received in the 12 months prior to interview. Income from long-term benefits, and from rent rebates and allowances, is based on current rates. The National Accounts (and Table 1 of Appendix 3) include payments made by local authorities to the Department of Health and Social Security in respect of recipients of Supplementary Benefit as 'rent rebates and allowances'. Supplementary Benefit includes all supplementary allowances where they are separately distinguished by respondents.

17. *Direct taxes* are then deducted to give *disposable income*. Direct taxes are:

Income tax

Employees' and self-employed contributions to national insurance and national health services.

18. The estimates are based on the amount deducted from the last payments of employment income and pensions,

and on the amount paid in the last 12 months in respect of income from self-employment, interest, dividends and rent.

19. As original income includes some elements not actually received in cash, disposable income as defined here does not correspond exactly to money available for the household to spend. It does however give an indication of the resources which are available to the household, and which influence spending decisions.

20. The order in which the remaining allocated items are presented is to some extent arbitrary.

21. *Indirect taxes on final consumer goods and services* are:

Local authority rates on dwellings (after rebates)
Duties on beer, wines, spirits, tobacco, oil, betting, etc.
Value added tax (VAT)
Protective (import) duties
Car tax
Motor vehicle duties
Driving licences
Television licences
Stamp duties

22. These taxes are either levied directly on the consumer (for example domestic rates) or are assumed to be fully incident on the consumer. For example, the amount of VAT which is paid by the household is calculated from the household's total expenditure on goods and services subject to VAT.

23. The figures for *domestic rates* include, as well as local authority rates, charges made by water authorities for water, environmental and sewerage services, although these charges to households in England and Wales are no longer counted as general government receipts in the National Accounts. (In Scotland these payments go to the local authorities and are so counted.) As explained in the article, local authority rates are paid in full by most recipients of supplementary benefit, as the supplementary benefit payments they receive include an allowance for this item.

24. VAT and car tax affect the prices of secondhand cars and are therefore assumed to be incident on the purchasers and vendors of such cars. In allocating taxes, expenditures recorded in the FES on alcoholic drink, tobacco, ice cream, soft drinks and confectionery are weighted to allow for the known under-recording of these items in the sample. The true expenditure in each case is assumed to be proportional to the recorded expenditure.

25. The incidence of stamp duty on house purchase on an owner-occupying household has been taken as the product of the hypothetical duty payable on buying the current dwelling (estimated from rateable values) and the probability of a household of that type moving in a given year (estimated from the General Household Survey).

26. *Indirect taxes on intermediate goods and services* are:

Local authority rates on commercial and industrial property
Motor vehicle duties
Duties on hydrocarbon oils
Protective (import) duties
Stamp duties
Employers' contributions to national insurance, the National Health Service, the industrial injuries fund and the redundancy payments scheme
National insurance surcharge

27. These are taxes that fall on goods and services purchased by industry. Only the elements attributable to the production of subsequent goods and services for final consumption by the UK personal sector are allocated in the article, being assumed to be fully shifted to the consumer. Their allocations between different categories of consumers' expenditure are based on the relation between intermediate production and final consumption using input-output techniques.

28. Finally, we add the effects of *benefits in kind* for which there is a reasonable basis for allocation to households, to obtain *final income*. Benefits in kind are:

- State education
- School meals, milk and other welfare foods
- National Health Service
- Housing subsidy
- Rail travel subsidy
- Option mortgage expenditure
- Life assurance premium relief

29. *Education benefit* is estimated by the Department of Education and Science as the cost per pupil or student in special schools, primary, secondary and direct grant schools, universities, and other further education establishments. The value of the benefit attributed to a household depends on the number of people in the household recorded in the FES as receiving each kind of education (students away from home are not counted).

30. The value of *school meals and other welfare foods* is based on their cost to the public authorities. Any payment by the individual households is subtracted to arrive at a net contribution.

31. Each individual in the FES is allocated a benefit from the *National Health Service* according to the estimated average use made of health services by people of the same age and sex, and according to the total cost of providing those services. The benefit from the maternity services is assigned separately to those households receiving maternity grant.

32. In this article public sector tenants are defined to include the tenants of local authorities, New Town Corporations, the Scottish Special Housing Association (SSHA) and the Northern Ireland Housing Executive (NIHE). The total *housing* subsidy includes the excesses of current account expenditures on housing by local authorities over the unrebated rents due; and grants paid to the New Town Corporations, the SSHA, the NIHE and the Housing Corporation. Within Greater London, the rest of England, Wales, Scotland and Northern Ireland each public sector tenant has been allocated a share of the region's total relevant subsidy based on the gross rateable value of his dwelling. The grant to the Housing Corporation has been similarly allocated to housing association tenants in the UK. See Appendix 2 for a discussion of the change to the method of allocating the housing subsidy.

33. The *rail travel subsidies* allocated are those to British Rail and to London Transport railways (the Underground). They are estimated by calculating the ratio of the cost of the subsidy to consumers' expenditure on rail fares. In allocating the British Rail subsidy the total subsidy paid is apportioned between freight and passenger services by the receipts of British Rail for their freight and passenger business, and then a further apportionment between the personal and the business and other sectors is made. This gives the amount of subsidy attributable to rail travel by the personal sector. In allocating the subsidy to London

Transport railways the total subsidy to London Transport is apportioned between tube and bus services by the receipts of these sectors, with an allowance for the use of the Underground for business purposes.

34. *Option mortgages* are those where the building societies (or other bodies) charge a low rate of interest, being compensated for this by payments from central government. The interest payments do not then qualify for tax relief, the scheme being primarily for the benefit of non-taxpayers. The benefit to each household holding an option mortgage is assumed to be in proportion to its last interest payment.

35. Central government makes payments to *life assurance* funds enabling them to reduce their premiums to most policy-holders. The benefit to each household of this expenditure is assumed to be in proportion to its premium payments.

36. It must be emphasised that the analysis in this article provides only a very rough guide to the kinds of household which benefit from government expenditure, and by how much, and to those which finance it. Apart from the fact that large parts of expenditure and receipts are not allocated, the criteria used both to allocate taxes and to value and apportion benefits to individual households could be regarded as too simplistic. For example, the lack of data forces us to assume that the incidence of direct taxes falls on the individual from whose income the tax is deducted. This implies that the benefit of tax relief for mortgage interest, for example, accrues directly to the tax payer rather than to some other party, for example, the vendor of the land. It also implies that the working population is not able to pass the cost of the direct tax back to employers through lower profits, or to consumers through higher prices. And, in allocating indirect taxes we assume that the part of the tax falling on consumers' expenditure is borne by the households which buy the item or the service taxed, whereas in reality the incidence of the tax is spread by pricing policies and probably falls in varying proportions on the producers of a good or service, on their employees, on the buyer, and on the producers and consumers of other goods and services. Another example is that we know only an estimate of the total financial cost of providing benefits such as education, and so we have to treat that cost as if it measured the benefit which accrues to recipients of the service. In fact, the value the recipients themselves place on the service may be very different to the cost of providing it; moreover, there may be households in the community, other than the immediate beneficiaries, who receive a benefit indirectly from the general provision of the service.

Gini coefficient

37. The Gini coefficient is the most widely used summary measure of the degree of inequality in an income distribution. It can most easily be understood by considering a Lorenz curve of the income distribution, i.e. a graph of the cumulative income share against the cumulative household share. The curve representing complete equality of income is thus a diagonal line, as in Diagram A, while complete inequality (with only one recipient of income) is represented by a curve comprising the horizontal axis and the right-hand vertical axis.

38. A more typical Lorenz curve is illustrated in Diagram B. The area between the Lorenz curve and the diagonal line of complete equality, as a proportion of the triangular area between the curves of complete equality and inequality, gives the value of the Gini coefficient. This is the shaded

area in Diagram B. Thus a distribution of perfectly equal incomes has a Gini coefficient of zero; as inequality increases (and the Lorenz curve bellies out), so does the Gini coefficient until, with complete inequality, it reaches its maximum value of 1 (or 100 per cent).

Previous articles

39. This article is the latest in an annual series. Earlier articles covering the years 1957 to 1979 were published in the following issues of *Economic Trends*: November 1962, February 1964, August 1966, February 1968, 1969, 1970,

1971, 1972, November 1972 and 1973, December 1974, February 1976, December 1976, February 1978, January 1979, January 1980 and January 1981. The January 1981 article contains a comprehensive account of the changes in treatment over the years. As far as is practicable with the resources available, the Central Statistical Office will provide on request analyses for 1980 on a basis comparable with those for earlier years. Enquiries should be addressed to D. Westcott, Branch 10, Central Statistical Office, Great George Street, London SW1P 3AQ, Telephone 01-233 8300.

DIAGRAM A

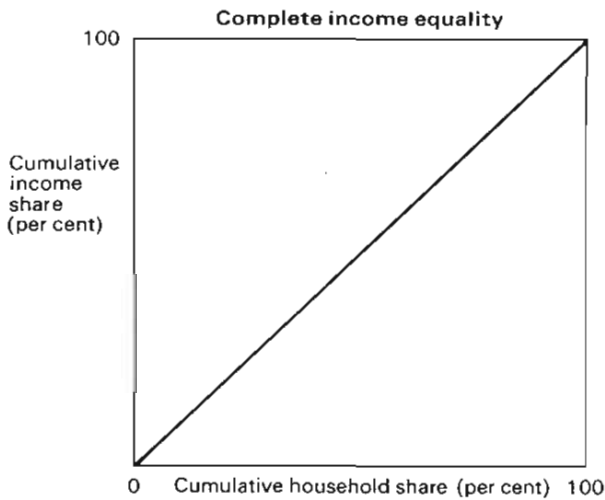
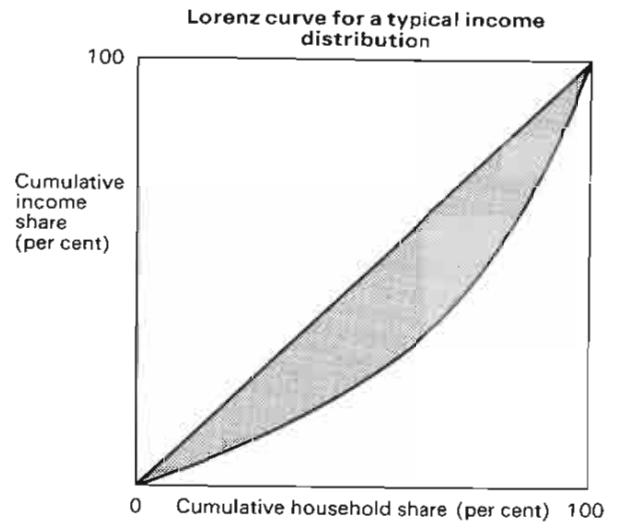


DIAGRAM B



APPENDIX 2

The treatment of housing subsidy

1. The housing revenue account of a typical local authority in 1980 showed expenditure (mainly on loan charges, repairs and management) exceeding revenue from unrebated rents. This deficit was made up from central government funds and from the authority's own Rate Fund, and is included under housing subsidy in the National Accounts. The housing subsidy figure also includes some grants to New Town Corporations, to the Scottish Special Housing Association (SSHA), to the Northern Ireland Housing Executive (NIHE), and to the Housing Corporation.

2. In previous articles the distribution of the housing subsidy between income groups was calculated by making as good an estimate as possible of the share going to each sample household. For each tenant household of a council, a New Town Corporation, or the SSHA, the local authority in which the tenant lives was identified and an estimate made of the total rent it would need, from all its dwellings, to balance its housing revenue account without recourse to the subsidy. This total was then divided by the total of the gross rateable values of the authority's dwellings, to arrive at an 'economic rent' factor for the authority. The gross rateable value of the sample tenant's dwelling was then multiplied by this factor, and the product - his 'share' of the hypothetical total rent needed - was deemed to be his 'economic rent'. His share of the housing subsidy was then calculated by subtracting from this the actual (unrebated) rent due.

3. Of methods that attempt to calculate the subsidy going to each individual sample household, the above has the merits of taking account of the total rent that would be needed to balance the books, of the pooling of money within each authority, and of the level of rents charged. The conventions underlying it are not the only ones that could be conceived, however. Others could take account of, for example, the notional current loan charge for each dwelling, having regard to when it was built.

4. There are, moreover, practical disadvantages with the method. For a substantial proportion of authorities the housing revenue account data are not available in time, and 'average' factors must be used. And there are practical problems concerning tenants of the Greater London Council, New Town Corporations, the SSHA and the NIHE. On top of this, the method is complex and time-consuming.

5. Experiments were made with a simpler method that does not pretend to assess the exact subsidy going to each individual sample household. For each of the four countries of the United Kingdom (and for Greater London separately), its share of the national housing subsidy (excluding the Housing Corporation element) is divided by the total gross rateable value of its public sector dwellings to arrive at a 'subsidy factor'. For each sample public sector tenant in that country, the gross rateable value of the dwelling is then multiplied by this factor to arrive at an estimate of the average subsidy going to public sector tenants in that country in dwellings with that rateable

value. In other words, the average subsidy, rather than the economic rent, is deemed to be proportional to the gross rateable value; and the pooling unit is taken to be a country (or Greater London), rather than a local authority.

6. Table W compares, for 1979, the results using the simpler experimental method with the published data using the old method. The published average figure of £109 is very close to the more reliable figure of £106, even though it is subject to more sampling variation, to bias from imputing factors for authorities where data were not available, etc. After allowing for this £3 overall difference, the distributions are strikingly similar. This is because the figures are determined by the proportions of households in the various groups that are public sector tenants, as well as by the method of sharing the subsidy between these tenants.

7. In view of this similarity, the new method has been adopted for this article. The payment to the Housing Corporation has also been allocated, separately; the subsidy to each housing association tenant is again deemed to be proportional to the gross rateable value of the dwelling.

The distribution of the housing subsidy calculated by the experimental method of allocation, compared with the published distribution, 1979

TABLE W

	Published allocation	Experimental allocation
£ per household		
Housing subsidy		
Decile groups of households ranked by original income		
Bottom tenth	179	175
2nd tenth	116	115
3rd tenth	115	110
4th tenth	126	121
5th tenth	127	119
6th tenth	98	96
7th tenth	93	96
8th tenth	86	82
9th tenth	74	72
Top tenth	76	71
Household composition type		
1 adult retired	119	120
1 adult non-retired	95	89
2 adults retired	108	102
2 adults non-retired	86	83
2 adults, 1 child	78	77
2 adults, 2 children	89	87
2 adults, 3 or more children	170	165
3 or more adults with no children	129	123
3 or more adults with children	142	135
1 adult with children	195	187
All households	109	106

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General government expenditure in 1980

TABLE 1

	£ million	Percentage of total expenditure
Allocated expenditure		
Allocated cash benefits ¹		
Social security benefits		
National Insurance (contributory)		
Retirement	10,180	9.8
Widows and guardians	640	0.6
Unemployment	1,100	1.1
Sickness	660	0.6
Invalidity	1,190	1.2
Maternity	160	0.2
Disablement	280	0.3
Other	210	0.2
Non-contributory		
Child benefit	2,940	2.8
Supplementary benefit	2,690	2.6
War pension	390	0.4
Other	610	0.6
Student maintenance grants	550	0.5
Rent rebates and rent allowances	640	0.6
Allocated benefits in kind ¹		
Health services	10,830	10.4
Education	10,590	10.2
School meals, milk, welfare foods	510	0.5
Option mortgage scheme	230	0.2
Housing subsidy	2,480	2.4
Rail travel subsidy	370	0.4
	47,260	45.6
Unallocated expenditure		
Other current expenditure on social, environmental and protective services		
Social services		
Social security benefits administration	1,030	1.0
Personal social services	2,020	1.9
Other	40	—
Environmental services		
Housing	120	0.1
Water, sewerage, land drainage and public health	1,000	1.0
Parks, etc.	590	0.6
Miscellaneous local authority services	950	0.9
Libraries, museums, and arts	540	0.5
Protective services		
Police	2,020	1.9
Parliament, courts and prisons	1,100	1.1
Fire services	430	0.4
	9,840	9.5
Capital expenditure on social, environmental and protective services		
Social services	1,460	1.4
Environmental services		
Housing	3,690	3.6
Other	1,340	1.3
Protective services	190	0.2
	6,670	6.5
Other current expenditure		
Defence and external relations	13,330	12.9
Roads, transport and communications	2,170	2.1
Industry, trade, agriculture, research and employment	4,520	4.4
Other	1,970	1.9
	21,990	21.2
Other capital expenditure	4,900	4.7
Debt interest	11,290	10.9
Non-trading capital consumption	1,780	1.7
Total expenditure	103,720	100.0

¹ Including benefits to people not living in private households.Source: *National Income and Expenditure, 1981 edition*, Table 9.4

Financing of general government expenditure in 1980

TABLE 2

	£ million	Percentage of total financing
Allocated financing		
Allocated taxes ¹		
Direct taxes		
Income tax	24,330	23.5
Employees' and self-employed NI contributions	5,610	5.4
Indirect taxes		
Domestic rates (net of rebates)	3,780	3.6
Taxes on final goods and services	17,810	17.2
Taxes on intermediate goods and services	8,350	8.0
	59,880	57.7
Unallocated financing		
Unallocated taxes		
Corporation tax, etc.	6,560	6.3
Taxes on expenditure not allocated to consumers' expenditure	10,860	10.5
Employers' NI contributions not allocated to consumers' expenditure	4,850	4.7
Taxes on capital	1,250	1.2
	23,520	22.7
Other receipts ²	7,380	7.1
Government borrowing requirement	12,940	12.5
Total financing	103,720	100.0

¹ Including taxes paid by people not living in private households.² Receipts of rent, interest, dividends, trading income and miscellaneous transactions (net).Source: *National Income and Expenditure, 1981 edition*, Table 9.1

Average incomes, taxes and benefits, 1980

By decile groups of households ranked by original and disposable incomes

TABLE 3 (a)

	£ per year										Average overall decile groups
	Decile groups										
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
(i) Ranked by original income											
All households											
Decile points (£)		53	761	2,763	4,592	5,928	7,186	8,524	10,074	12,927	
Number of households in the sample	694	695	694	695	694	694	695	694	695	694	6,944
Original income	8	329	1,640	3,774	5,255	6,557	7,821	9,263	11,310	17,578	6,353
Direct benefits in cash											
Age-related	1,134	1,373	1,160	446	260	138	94	104	112	87	491
Child-related	77	38	79	170	225	229	236	214	185	193	165
Income-related	622	329	234	182	91	73	68	50	55	66	177
Other	204	161	175	193	101	80	74	63	55	36	144
Gross income	2,046	2,229	3,289	4,765	5,932	7,077	8,293	9,694	11,717	17,960	7,300
Direct taxes	2	15	202	639	999	1,332	1,609	1,975	2,473	4,088	1,333
Disposable income	2,044	2,215	3,087	4,126	4,933	5,744	6,684	7,719	9,244	13,872	5,967
Domestic rates (net of rebates) ¹	154	141	184	195	206	212	226	236	259	325	214
Taxes on final goods and services	229	287	476	681	812	896	1,040	1,174	1,386	1,780	876
Intermediate taxes	127	150	221	286	335	372	411	472	560	750	368
Benefits in kind											
Education	232	157	217	402	481	534	584	622	599	656	448
National Health Service	557	567	530	467	479	446	431	427	416	469	479
Welfare foods	34	14	20	25	28	22	22	22	16	18	22
Housing subsidy	206	144	131	139	134	115	106	97	73	71	122
Other allocated benefits	7	9	18	38	40	55	63	68	86	132	52
Final income	2,571	2,527	3,123	4,035	4,743	5,436	6,213	7,074	8,229	12,363	5,631
(ii) Ranked by disposable income											
All households											
Decile points (£)		1,891	2,675	3,575	4,562	5,424	6,259	7,232	8,405	10,572	
Number of households in the sample	694	695	694	695	694	694	695	694	695	694	6,944
Original income	212	707	1,948	3,592	5,274	6,444	7,671	9,157	11,159	17,372	6,353
Direct benefits in cash											
Age-related	1,034	1,141	948	611	303	220	224	122	166	138	491
Child-related	17	53	96	176	211	230	214	228	216	205	165
Income-related	290	381	300	210	106	106	108	87	91	90	177
Other	24	90	180	169	143	137	123	98	112	66	114
Gross income	1,577	2,372	3,472	4,758	6,037	7,137	8,341	9,691	11,745	17,870	7,300
Direct taxes	42	109	353	694	1,060	1,301	1,603	1,921	2,383	3,866	1,333
Disposable income	1,535	2,264	3,118	4,064	4,978	5,836	6,738	7,770	9,362	14,004	5,967
Domestic rates (net of rebates) ¹	137	158	177	200	205	212	227	238	261	326	214
Taxes on final goods and services	177	307	485	661	818	912	1,036	1,194	1,399	1,769	876
Intermediate taxes	110	157	213	286	343	368	410	480	567	748	368
Benefits in kind											
Education	78	119	236	369	446	543	602	666	748	676	448
National Health Service	439	521	541	510	478	461	447	441	462	490	479
Welfare foods	7	18	28	31	25	26	25	22	21	21	22
Housing subsidy	132	173	158	145	141	121	107	89	83	68	122
Other allocated benefits	6	11	23	32	47	50	63	71	79	133	52
Final income	1,773	2,483	3,228	4,004	4,748	5,545	6,308	7,147	8,527	12,549	5,631

¹ Together with water, etc. charges.

Average incomes, taxes and benefits, 1976 and 1978

By decile groups of households ranked by original income

TABLE 3 (b)

	£ per year										Average over all decile groups
	Decile group										
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
(iii) 1976											
All households											
Decile points (£)		60	590	1,765	2,701	3,384	4,045	4,762	5,673	7,129	
Number of households in the sample	720	721	720	720	720	721	720	720	721	720	7,203
Original income	8	284	1,126	2,261	3,056	3,714	4,391	5,212	6,330	9,709	3,609
Direct benefits in cash											
Age-related	681	801	607	254	143	82	73	72	55	62	283
Child-related	12	7	17	38	44	51	48	41	33	35	33
Income-related	365	178	153	87	69	36	30	38	30	38	102
Other	97	91	116	90	59	54	35	29	37	29	64
Gross income	1,162	1,361	2,020	2,732	3,371	3,937	4,577	5,392	6,485	9,874	4,091
Direct taxes	1	24	185	433	652	824	1,017	1,298	1,624	2,633	869
Disposable income	1,161	1,337	1,834	2,298	2,718	3,114	3,559	4,094	4,861	7,241	3,222
Domestic rates (net of rebates) ¹	83	77	97	102	108	117	122	127	138	173	114
Taxes on final goods and services	110	148	239	322	413	469	514	586	656	930	439
Intermediate taxes	63	76	103	131	155	175	196	223	248	359	173
Benefits in kind											
Education	98	103	189	206	264	338	353	361	318	373	260
National Health Service	308	334	284	259	263	250	234	219	202	202	255
Welfare foods	12	7	12	16	17	21	20	22	18	18	16
Housing subsidy	105	72	74	69	90	73	78	66	56	63	75
Other allocated benefits	17	19	24	30	38	41	46	48	49	62	37
Final income	1,444	1,571	1,977	2,322	2,714	3,077	3,460	3,873	4,461	6,497	3,139
(iv) 1978											
All households											
Decile points (£)		40	690	2,184	3,443	4,369	5,260	6,156	7,330	9,409	
Number of households in the sample	703	697	701	699	700	701	700	700	700	700	7,001
Original income	5	299	1,411	2,874	3,921	4,804	5,680	6,740	8,265	12,609	4,660
Direct benefits in cash											
Age-related	838	1,029	800	328	173	134	82	88	72	76	362
Child-related	41	25	46	75	113	121	123	108	100	98	85
Income-related	505	264	188	130	84	68	64	46	45	55	145
Other	171	130	172	105	78	66	83	37	60	40	94
Gross income	1,560	1,746	2,617	3,513	4,369	5,193	6,032	7,019	8,541	12,879	5,347
Direct taxes	1	13	189	525	776	965	1,145	1,437	1,835	3,042	993
Disposable income	1,559	1,734	2,428	2,987	3,593	4,228	4,887	5,582	6,706	9,837	4,354
Domestic rates (net of rebates) ¹	103	97	126	125	143	153	157	170	179	219	147
Taxes on final goods and services	142	176	308	404	487	546	636	725	828	1,094	535
Intermediate taxes	94	107	159	191	232	253	289	328	389	531	257
Benefits in kind											
Education	179	101	177	224	315	358	403	368	419	474	302
National Health Service	352	372	326	276	285	291	283	286	292	327	309
Welfare foods	26	15	19	21	25	26	28	23	22	20	23
Housing subsidy	143	106	95	91	91	89	73	78	74	62	90
Other allocated benefits	3	3	5	12	16	20	22	23	30	39	17
Final income	1,923	1,950	2,457	2,892	3,462	4,060	4,615	5,139	6,147	8,915	4,156

¹ Together with water, etc. charges.

Average incomes, taxes and benefits, 1980

By quintile groups of original income within household type

TABLE 4

	£ per year					Average over all quintile groups
	Quintile group					
	1st	2nd	3rd	4th	5th	
(i) 1 adult retired						
Quintile points (£)	— 37		219	735		
Number of households in the sample	357 ²		179	178	179	893
Original income	5		108	423	2,240	557
Direct benefits in cash						
Age-related	1,234		1,238	1,234	1,210	1,230
Child-related	—		—	—	—	—
Income-related	413		302	111	24	253
Other	51		27	39	17	37
Gross income	1,704		1,676	1,808	3,492	2,078
Direct taxes	—		6	26	446	96
Disposable income	1,704		1,670	1,782	3,045	1,982
Domestic rates (net of rebates) ¹	150		139	123	222	157
Taxes on final goods and services	116		147	188	309	175
Intermediate taxes	92		101	113	174	114
Benefits in kind						
Education	—		—	—	—	—
National Health Service	510		492	447	449	481
Welfare foods	—		—	—	—	—
Housing subsidy	186		149	121	60	140
Other allocated benefits	3		3	4	10	5
Final income	2,046		1,926	1,929	2,859	2,162
(ii) 1 adult non-retired						
Quintile points (£)	113	1,359	3,202	4,614	6,594	113
Number of households in the sample	113	114	113	114	113	567
Original income	446	2,333	3,959	5,608	8,692	4,207
Direct benefits in cash						
Age-related	510	532	152	110	49	271
Child-related	6	—	—	—	—	1
Income-related	544	75	21	12	5	131
Other	150	55	29	36	6	55
Gross income	1,655	2,995	4,161	5,766	8,752	4,665
Direct taxes	43	410	835	1,342	2,214	969
Disposable income	1,612	2,585	3,327	4,424	6,538	3,696
Domestic rates (net of rebates) ¹	145	177	167	192	224	181
Taxes on final goods and services	249	387	536	638	881	538
Intermediate taxes	133	165	208	274	338	224
Benefits in kind						
Education	340	73	45	—	—	91
National Health Service	180	182	144	133	128	153
Welfare foods	—	—	—	—	—	—
Housing subsidy	120	174	123	79	54	110
Other allocated benefits	10	20	27	51	75	37
Final income	1,735	2,305	2,753	3,584	5,351	3,145

¹ Together with water, etc. charges² More than a fifth of these households had no original income, so the bottom group is undefined.

Average incomes, taxes and benefits, 1980

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					Average over all quintile groups
	Quintile group					
	1st	2nd	3rd	4th	5th	
(iii) 2 adults retired						
Quintile points (£)		54	348	910	2,094	
Number of households in the sample	131	131	130	131	131	654
Original income	10	190	597	1,406	5,034	1,449
Direct benefits in cash						
Age-related	1,987	2,007	1,980	1,927	1,742	1,928
Child-related	—	—	—	—	—	—
Income-related	297	219	93	62	47	144
Other	284	168	209	189	214	213
Gross income	2,577	2,583	2,879	3,585	7,037	3,734
Direct taxes	—	8	18	146	1,115	258
Disposable income	2,577	2,575	2,861	3,439	5,922	3,476
Domestic rates (net of rebates) ¹	135	141	151	190	294	183
Taxes on final goods and services	302	334	404	496	778	463
Intermediate taxes	155	170	189	227	340	216
Benefits in kind						
Education	—	—	—	—	13	3
National Health Service	825	799	774	709	702	762
Welfare foods	—	—	—	—	—	—
Housing subsidy	184	159	127	115	26	122
Other allocated benefits	10	11	15	10	12	11
Final income	3,002	2,899	3,033	3,360	5,264	3,512
(iv) 2 adults non-retired						
Quintile points (£)		4,356	6,540	8,518	10,878	
Number of households in the sample	300	301	300	301	300	1,502
Original income	2,480	5,456	7,475	9,569	14,969	7,989
Direct benefits in cash						
Age-related	836	264	134	76	35	269
Child-related	9	7	1	2	4	4
Income-related	329	85	47	12	16	98
Other	358	126	47	44	32	121
Gross income	4,012	5,938	7,704	9,703	15,057	8,482
Direct taxes	376	1,066	1,530	2,091	3,483	1,709
Disposable income	3,636	4,872	6,174	7,613	11,573	6,773
Domestic rates (net of rebates) ¹	180	203	203	222	291	220
Taxes on final goods and services	625	827	968	1,136	1,477	1,007
Intermediate taxes	259	326	358	420	603	393
Benefits in kind						
Education	142	39	22	—	17	44
National Health Service	430	378	298	271	257	327
Welfare foods	—	—	—	—	—	—
Housing subsidy	139	155	117	77	28	103
Other allocated benefits	27	34	56	60	120	59
Final income	3,310	4,122	5,138	6,242	9,625	5,687

¹ Together with water, etc. charges

Average incomes, taxes and benefits, 1980

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year						Average over all quintile groups
	Quintile group						
	1st	2nd	3rd	4th	5th		
(v) 2 adults, 1 child							
Quintile points (£)		4,539	6,209	7,605	9,612		
Number of households in the sample	125	124	125	124	125		623
Original income	2,565	5,351	6,901	8,463	13,348		7,327
Direct benefits in cash							
Age-related	174	10	37	—	13		47
Child-related	285	280	250	253	257		265
Income-related	573	88	57	33	11		153
Other	215	66	16	57	25		76
Gross income	3,811	5,796	7,261	8,805	13,654		7,867
Direct taxes	405	968	1,319	1,767	2,982		1,489
Disposale income	3,406	4,827	5,942	7,038	10,672		6,379
Domestic rates (net of rebates) ¹	182	190	213	218	300		221
Taxes on final goods and services	657	844	910	1,013	1,396		964
Intermediate taxes	273	364	387	401	613		408
Benefits in kind							
Education	305	311	321	413	349		340
National Health Service	597	549	499	429	470		509
Welfare foods	33	11	13	18	14		18
Housing subsidy	185	83	94	64	30		92
Other allocated benefits	61	61	77	61	101		72
Final income	3,475	4,442	5,437	6,391	9,327		5,816
(vi) 2 adults, 2 children							
Quintile points (£)		5,283	6,818	8,098	10,021		
Number of households in the sample	173	173	173	173	173		865
Original income	3,840	6,072	7,447	9,010	14,100		8,094
Direct benefits in cash							
Age-related	41	—	—	—	—		8
Child-related	443	430	429	433	425		432
Income-related	297	17	39	6	11		74
Other	179	53	39	30	15		63
Gross income	4,800	6,571	7,954	9,479	14,550		8,671
Direct taxes	622	1,217	1,460	2,002	3,085		1,677
Disposale income	4,178	5,354	6,495	7,477	11,464		6,994
Domestic rates (net of rebates) ¹	200	225	240	261	332		251
Taxes on final goods and services	795	837	922	1,099	1,298		990
Intermediate taxes	318	354	392	461	608		427
Benefits in kind							
Education	720	751	938	983	1,069		892
National Health Service	612	574	484	499	436		521
Welfare foods	70	36	50	46	37		48
Housing subsidy	201	120	103	88	48		108
Other allocated benefits	32	37	73	82	130		71
Final income	4,501	5,458	6,589	7,336	10,947		6,966

¹ Together with water, etc. charges

Average incomes, taxes and benefits, 1980

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					Average over all quintile groups
	Quintile group					
	1st	2nd	3rd	4th	5th	
(vii) 2 adults, 3 or more children						
Quintile points (£)		4,418	5,961	7,532	9,676	
Number of households in the sample	72	72	72	72	72	360
Original income	1,996	5,119	6,703	8,474	14,815	7,381
Direct benefits in cash						
Age-related	53	27	—	—	—	16
Child-related	743	702	687	678	698	701
Income-related	982	87	22	23	34	230
Other	489	88	67	50	19	143
Gross income	4,262	6,024	7,479	9,224	15,368	8,471
Direct taxes	250	899	1,430	1,726	3,534	1,568
Disposable income	4,012	5,125	6,048	7,499	11,832	6,903
Domestic rates (net of rebates) ¹	187	195	224	242	338	237
Taxes on final goods and services	614	813	971	1,231	1,326	991
Intermediate taxes	281	362	416	513	646	444
Benefits in kind						
Education	1,818	1,655	1,677	1,720	1,585	1,691
National Health Service	811	719	625	640	629	685
Welfare foods	227	129	67	64	64	110
Housing subsidy	256	187	155	139	26	152
Other allocated benefits	29	66	45	73	114	65
Final income	6,071	6,511	7,007	8,147	11,940	7,935
(viii) 3 or more adults with no children						
Quintile points (£)		5,906	9,097	11,304	14,377	
Number of households in the sample	144	144	143	144	144	719
Original income	3,314	7,545	10,093	12,296	18,744	10,479
Direct benefits in cash						
Age-related	1,269	389	309	265	122	471
Child-related	19	38	32	36	47	34
Income-related	589	220	150	88	138	237
Other	418	255	84	78	34	174
Gross income	5,609	8,447	10,668	13,163	19,085	11,395
Direct taxes	579	1,476	2,105	2,787	4,312	2,252
Disposable income	5,029	6,971	8,563	10,376	14,773	9,143
Domestic rates (net of rebates) ¹	185	212	240	258	306	240
Taxes on final goods and services	913	1,191	1,502	1,666	2,181	1,491
Intermediate taxes	367	453	604	662	832	583
Benefits in kind						
Education	538	402	404	365	567	455
National Health Service	750	495	493	493	495	545
Welfare foods	—	2	3	1	2	2
Housing subsidy	145	148	128	136	98	131
Other allocated benefits	40	50	64	87	124	73
Final income	5,038	6,211	7,309	8,871	12,740	8,035

¹ Together with water, etc. charges

Average incomes, taxes and benefits, 1980

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					Average over all quintile groups
	Quintile group					
	1st	2nd	3rd	4th	5th	
(ix) 3 or more adults with children						
Quintile points (£)		6,669	9,016	11,069	14,105	
Number of households in the sample	111	111	110	111	111	554
Original income	4,147	7,976	9,958	12,561	19,251	10,780
Direct benefits in cash						
Age-related	367	93	137	59	48	141
Child-related	476	427	392	395	362	410
Income-related	803	235	111	87	117	271
Other	647	212	119	85	50	223
Gross income	6,439	8,942	10,717	13,187	19,829	11,825
Direct taxes	641	1,516	2,079	2,696	4,392	2,265
Disposable income	5,798	7,427	8,638	10,490	15,437	9,560
Domestic rates (net of rebates) ¹	199	229	234	261	309	246
Taxes on final goods and services	1,052	1,206	1,426	1,695	2,137	1,504
Intermediate taxes	438	506	568	698	889	620
Benefits in kind						
Education	1,916	1,803	1,374	1,446	1,354	1,579
National Health Service	682	569	592	614	597	611
Welfare foods	104	60	35	47	39	57
Housing subsidy	195	150	138	132	114	146
Other allocated benefits	52	62	65	112	141	86
Final income	7,057	8,130	8,614	10,187	14,347	9,669
(x) 1 adult with children						
Quintile points (£)		27	1,035	2,796	4,355	
Number of households in the sample	41	42	41	42	41	207
Original income	2	422	1,844	3,575	7,651	2,692
Direct benefits in cash						
Age-related	163	263	131	178	30	154
Child-related	493	449	474	406	423	449
Income-related	1,427	1,214	332	56	2	607
Other	24	18	23	48	15	26
Gross income	2,109	2,367	2,805	4,263	8,121	3,927
Direct taxes	—	2	105	327	1,279	341
Disposable income	2,109	2,365	2,700	3,936	6,842	3,586
Domestic rates (net of rebates) ¹	186	176	175	233	301	214
Taxes on final goods and services	273	240	366	557	663	420
Intermediate taxes	162	169	218	295	388	246
Benefits in kind						
Education	1,012	1,047	972	925	852	962
National Health Service	402	349	418	289	331	357
Welfare foods	251	173	133	78	62	140
Housing subsidy	326	242	220	144	77	202
Other allocated benefits	11	18	22	23	72	29
Final income	3,492	3,609	3,707	4,309	6,885	4,396

¹ Together with water, etc. charges

Average incomes, taxes and benefits, 1980

By decile groups of households ranked by original income

TABLE 5

Decile points (£)	£ per year										Average over all decile groups
	Decile group										
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
	53	761	2,763	4,592	5,928	7,186	8,524	10,074	12,927		
Original income											
Earnings of main earner	1	47	729	2,917	4,356	5,318	5,981	6,501	7,255	11,124	4,423
Other earnings	—	1	15	166	440	860	1,555	2,393	3,442	5,502	1,437
Occupational pensions, annuities	1	158	494	330	225	156	84	156	154	214	197
Investment income	6	98	298	202	178	182	164	189	367	662	235
Other income	1	25	103	159	56	41	37	24	91	76	61
Total	8	329	1,640	3,774	5,255	6,557	7,821	9,263	11,310	17,578	6,353
Cash benefits											
Child benefit	75	37	75	155	212	220	225	207	181	188	157
Retirement and old persons' pension	1,086	1,319	1,069	370	223	125	73	87	99	78	453
Widows' pension	41	43	83	72	35	12	20	17	12	9	34
Disablement and war disability pension	12	10	7	11	6	3	5	10	5	2	7
Invalidity pension and allowance	107	71	88	86	30	15	6	5	16	4	43
Mobility allowance	7	6	7	11	2	5	8	7	2	2	6
Non-contributory invalidity pension	22	9	7	11	4	7	2	1	1	—	6
Housewives non-contributory invalidity pension	1	1	2	3	2	2	1	1	—	1	2
Invalid care allowance	1	4	1	2	—	—	2	—	—	—	1
Attendance allowance	18	18	15	7	3	9	4	8	1	4	9
Unemployment benefit/TOPS awards	44	29	72	60	39	35	39	25	21	23	39
Sickness Industrial injury benefit	5	11	27	40	43	24	36	24	23	21	25
Industrial injury disablement benefit	13	11	8	16	6	7	7	5	4	2	8
Family income supplement	1	—	4	1	—	2	—	—	—	—	1
Supplementary benefit	524	211	103	73	40	21	22	16	13	15	104
Maternity benefit	2	1	4	12	10	8	10	6	4	4	6
Death grant	1	1	1	—	1	—	—	—	—	—	—
Maternity grant	—	—	1	2	2	2	1	1	—	1	1
Rent rebates and allowances	39	62	30	14	5	4	2	2	1	—	16
Student maintenance grants	14	27	25	33	6	11	4	6	20	28	17
Christmas bonus for pensioners	8	10	9	3	2	1	1	1	1	1	4
Other cash benefits	16	19	12	5	5	7	2	2	3	—	7
Total	2,038	1,900	1,649	991	677	520	472	431	407	382	947
Gross income	2,046	2,229	3,289	4,765	5,932	7,077	8,293	9,694	11,717	17,960	7,300
Direct taxes	2	15	202	639	999	1,332	1,609	1,975	2,473	4,088	1,333
Disposable income	2,044	2,215	3,087	4,126	4,933	5,744	6,684	7,719	9,244	13,872	5,967
Indirect taxes	510	578	881	1,161	1,353	1,479	1,677	1,882	2,205	2,855	1,458
Other allocated benefits	1,036	891	916	1,071	1,162	1,171	1,206	1,236	1,190	1,346	1,122
Final income	2,571	2,527	3,123	4,035	4,743	5,436	6,213	7,075	8,229	12,363	5,631

Average incomes, taxes and benefits, 1980

By decile groups of households ranked by gross income

TABLE 6

	£ per year										Average over all decile groups
	Decile groups										
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
Decile points (£)	1,914	2,786	4,065	5,425	6,564	7,710	8,977	10,542	13,317		
Number of households in the sample	694	695	694	695	694	694	695	694	695	694	6,944
Original income	170	536	1,666	3,711	5,215	6,471	7,765	9,230	11,234	17,536	6,353
Cash benefits											
Age-related	1,045	1,243	1,016	517	303	225	163	92	179	122	491
Child-related	16	56	118	161	215	224	226	229	199	201	165
Income-related	303	401	355	164	126	108	81	71	76	84	177
Other	22	98	234	187	151	118	92	102	82	57	114
Total	1,386	1,798	1,723	1,029	795	675	562	494	536	464	947
Gross income	1,557	2,335	3,390	4,741	6,011	7,146	8,328	9,724	11,770	17,999	7,300
Direct taxes											
Income tax	13	38	172	499	768	999	1,231	1,560	1,954	3,487	1,072
National Insurance contributions	4	7	48	156	233	298	368	418	466	615	261
Disposable income	1,541	2,290	3,170	4,085	5,010	5,849	6,728	7,746	9,350	13,898	5,967
Indirect taxes											
Domestic rates (net of rebates) ¹	136	157	180	197	208	211	228	237	261	325	214
Taxes on final goods and services											
VAT	80	141	220	305	379	436	487	587	697	937	427
Duty on tobacco	34	72	114	133	148	156	169	167	183	180	136
Duty on beer	5	13	24	37	48	59	61	67	87	102	50
Duty on wines	3	4	8	10	13	14	17	24	28	53	17
Duty on spirits	11	14	24	36	40	42	52	75	80	118	49
Duty on hydrocarbon oils	5	15	32	53	72	90	108	121	139	177	81
Car tax	1	1	4	8	10	16	14	19	25	33	13
Vehicle excise duty	3	9	17	26	29	36	40	47	51	62	32
Television licences	15	19	21	22	25	25	26	27	27	28	23
Stamp duty on house purchase	1	2	3	5	7	8	13	14	19	29	10
Protective duties	6	9	13	18	21	24	26	31	35	48	23
Other	3	6	8	10	14	15	17	17	19	23	13
Intermediate taxes											
Commercial and industrial rates	27	40	55	70	84	91	101	118	136	184	91
Employers' NI contributions	59	87	123	159	193	209	233	274	317	435	209
Duty on hydrocarbon oils	13	19	26	32	40	41	45	52	60	81	41
Other	7	11	16	21	26	28	31	37	43	60	28
All indirect taxes	409	618	890	1,144	1,356	1,502	1,667	1,913	2,207	2,877	1,458
Other benefits											
Education	77	130	297	332	507	502	615	692	658	673	448
Welfare foods	7	19	36	26	26	23	25	23	18	19	22
National Health Service	443	566	548	486	487	456	436	435	445	486	479
Housing subsidy	137	167	162	143	140	116	104	92	83	72	122
Rail travel subsidy	2	3	6	9	12	12	15	14	29	45	15
Option mortgage scheme	—	—	6	12	9	18	24	16	15	11	11
Life assurance premium relief	3	5	10	16	20	24	28	34	41	76	26
Total	669	890	1,065	1,023	1,202	1,150	1,248	1,305	1,290	1,382	1,122
Final income	1,801	2,562	3,346	3,965	4,856	5,497	6,309	7,139	8,433	12,404	5,631

¹ Together with water, etc. charges.

Distribution of households co-operating in the Family Expenditure Survey, 1980

By decile groups of households ranked by original, gross, disposable and final incomes

TABLE 7

	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	All households
	Retired	Non-retired	Retired	Non-retired	1 child	2 children	3 or more children	With no children	With children		
Decile groups of original income											
Bottom	392	40	130	21	15	12	18	9	11	46	694
2nd	329	39	237	20	10	2	10	14	3	31	695
3rd	128	115	193	111	35	19	14	25	8	46	694
4th	23	144	42	177	69	66	38	51	36	49	695
5th	11	74	20	189	102	139	64	46	32	17	694
6th	5	73	9	184	106	160	57	51	41	8	694
7th	2	37	4	202	108	163	53	65	57	4	695
8th	1	22	7	219	69	135	42	101	96	2	694
9th	2	18	6	211	60	94	33	155	114	2	695
Top	—	5	6	168	49	75	31	202	156	2	694
Total	893	567	654	1,502	623	865	360	719	554	207	6,944
Decile groups of gross income											
Bottom	565	81	5	13	3	2	1	1	—	23	694
2nd	235	65	265	29	21	8	4	3	—	65	695
3rd	50	120	231	107	44	32	26	25	7	52	694
4th	18	112	69	202	88	78	41	32	21	34	695
5th	12	68	31	203	97	128	60	50	28	17	694
6th	5	55	19	188	104	154	55	60	48	6	694
7th	5	30	10	212	93	152	56	76	58	3	695
8th	—	20	6	199	71	144	47	102	101	4	694
9th	3	13	12	195	56	92	35	160	128	1	695
Top	—	3	6	154	46	75	35	210	163	2	694
Total	893	567	654	1,502	623	865	360	719	554	207	6,944
Decile groups of disposable income											
Bottom	556	85	6	15	5	4	1	1	—	21	694
2nd	246	101	217	32	19	8	3	4	1	64	695
3rd	51	133	236	107	50	26	18	21	3	49	694
4th	18	85	96	202	80	97	43	24	18	32	695
5th	11	70	35	207	103	119	63	43	22	21	694
6th	4	40	25	200	97	152	61	60	46	9	694
7th	4	25	13	216	93	145	56	84	58	1	695
8th	—	17	8	206	71	143	41	105	99	4	694
9th	3	7	11	167	59	92	39	167	147	3	695
Top	—	4	7	150	46	79	35	210	160	3	694
Total	893	567	654	1,502	623	865	360	719	554	207	6,944
Decile groups of final income											
Bottom	423	139	40	45	13	7	2	9	2	14	694
2nd	335	112	129	56	21	6	—	7	—	29	695
3rd	93	115	226	147	50	18	1	15	1	28	694
4th	23	79	135	243	73	56	9	28	2	47	695
5th	8	65	60	228	108	99	20	57	9	40	694
6th	5	21	27	234	100	142	45	71	32	17	694
7th	3	17	14	191	94	149	60	107	45	15	695
8th	1	12	6	141	70	166	82	113	93	10	694
9th	2	4	9	113	59	127	77	149	151	4	695
Top	—	3	8	104	35	95	64	163	219	3	694
Total	893	567	654	1,502	623	865	360	719	554	207	6,944