

## **The effects of taxes and benefits on household income, 1979**

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## Introduction

During 1979 the Government raised and spent £85 billion. This article describes how the distribution of income between households was altered by the raising of the taxes, and by cash and other selected benefits. It looks in particular at the impacts on households at different income levels, and on households of different compositions. The principal findings are:

- (i) These taxes and benefits increased the share of total income going to the bottom 20 per cent of households on the income scale from  $\frac{1}{3}$  per cent to 7 per cent.
- (ii) They redistributed income from non-retired adult households to retired households (and, to a lesser extent, from small families to large ones). For example, they raised the average income of retired households from 14 per cent of the average for all households to 49 per cent.
- (iii) Within each household type, cash benefits, income tax and expenditure on the main social services all reduced the inequality of the distribution of income. Indirect taxes (rates and taxes such as VAT) together had the opposite effect.
- (iv) If incomes are scaled down by the number of 'equivalent adults' in each household, the redistributive effects of taxes and benefits appear more marked; on this basis they increased the share of income going to the bottom 20 per cent of households on the income scale from 0.8 per cent to 11 per cent.

The analysis starts with the households' *original incomes*, that is the pre-tax earnings and unearned incomes of their members, but excluding all state pensions and benefits, such as child benefit and unemployment benefit. Adding on these state pensions and benefits gives their *gross incomes*, and then deducting direct taxes gives their *disposable incomes* (roughly, the incomes available to spend). Indirect taxes are then subtracted, and the households' benefits from the other allocated items of government expenditure are added. This gives their *final incomes*.

The main data source for the analysis is the Family Expenditure Survey (FES) for 1979, in which data were

collected on the characteristics of 6,777 households in the United Kingdom, including details of their income and expenditure. (No attempt has been made to correct for response bias, or to reconcile some differences between figures from the FES and other surveys.) The allocations between households of some taxes and benefits (for example, income tax and child benefit) are straightforward. The allocations of other items, such as industrial rates and the housing subsidy, require assumptions as to who effectively pays the tax or receives the benefit; the assumptions used in this article are spelt out at Appendix 1. Other items of government revenue and expenditure have not been allocated between households because there is no clear conceptual or empirical basis for making the necessary assumptions. Table A shows that 59 per cent of revenue and 45 per cent of expenditure has been allocated. The detailed results on which the rest of this article is based are set out in Appendix 3.

## 1. RESULTS FOR ALL HOUSEHOLDS

In Table B households are ranked according to the sizes of their original incomes and then divided into successive tenths (or 'decile groups'). The first row shows how unequally original income was distributed between these groups of households in 1979. Subsequent rows show that taxes and benefits substantially reduced this inequality. The two bottom decile groups (that is, the bottom fifth) averaged £140 original income, for example. They accounted for just  $\frac{1}{3}$  per cent of all original income (Table C). When households are re-ranked by final income, however, the bottom fifth accounted for 7 per cent of all final income and the share of income going to the top fifth was reduced. The Gini coefficient – a measure of the inequality of the distribution of income – showed a correspondingly marked reduction between original and final income (details of the Gini coefficient appear at Appendix 1, paragraph 40).

The following paragraphs explain how taxes and benefits reduced inequality. In part, the results stemmed from the types of household in each slice of the ranking by original income (Table D). In particular, retired households dominated the bottom fifth of the ranking and larger households (especially those with three or more adults) dominated the top fifth.

## Allocated and unallocated items of government revenue and expenditure, 1979

TABLE A

	Percentage of total revenue			Percentage of total expenditure	
	Allocated	Other		Allocated	Other
<b>Revenue</b>			<b>Expenditure</b>		
Income tax .. .. .	24	—	Final goods and services .. .. .	19	25
National insurance contributions .. .. .	9	5	Grants to persons in UK .. .. .	24	1
Local rates .. .. .	5	2	Subsidies .. .. .	3	2
Other taxes on expenditure .. .. .	21	7	Capital expenditure .. .. .	—	12
Other receipts (net) .. .. .	—	12	Debt interest .. .. .	—	10
Borrowing requirement .. .. .	—	14	Other .. .. .	—	4
<b>Total .. .. .</b>	<b>59</b>	<b>41</b>	<b>Total .. .. .</b>	<b>45</b>	<b>55</b>

## Summary of the effects of taxes and benefits, 1979

TABLE B

	Decile groups of households ranked by original income										Average over all households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
<b>Average per household (£ per year)</b>											
Original income	10	270	1,390	3,160	4,380	5,430	6,460	7,670	9,360	14,040	5,220
plus cash benefits	1,720	1,630	1,430	820	530	500	430	370	380	380	820
Gross income	1,730	1,900	2,830	3,980	4,910	5,930	6,880	8,040	9,740	14,420	6,040
less direct taxes	—	20	170	550	850	1,080	1,330	1,570	1,990	3,250	1,080
Disposable income	1,730	1,890	2,660	3,430	4,050	4,850	5,560	6,470	7,750	11,170	4,960
less indirect taxes	380	440	670	880	1,060	1,200	1,340	1,550	1,770	2,320	1,160
plus benefits in kind	780	680	740	870	960	980	960	960	970	1,010	890
Final income	2,120	2,130	2,730	3,420	3,950	4,630	5,190	5,880	6,960	9,860	4,690
Direct taxes as a percentage of gross income	—	1	6	14	17	18	19	20	20	23	18
Indirect taxes as a percentage of disposable income <sup>1</sup>	18-22	22-23	25	26	26	25	24	24	23	21	23
Benefits in kind as a percentage of final income	37	32	27	25	24	21	19	16	14	10	19
Local authority tenants as a percentage of all householders	60	42	35	38	38	29	27	24	19	18	33
<b>Average per household (number)</b>											
Children	0.3	0.1	0.3	0.7	1.0	1.1	1.0	0.9	0.8	0.8	0.7
Adults	1.3	1.5	1.6	1.8	1.9	2.0	2.1	2.3	2.5	3.0	2.0
Retired people	1.0	1.2	0.8	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.4
Workers	0.1	0.1	0.6	1.1	1.4	1.6	1.7	2.0	2.1	2.6	1.3

<sup>1</sup> The ranges reflect different possible treatments of rates — see pages 105-106.

### Cash benefits

Cash benefits were largest, on average, for low income households. The bulk of cash benefits were designed to support people who were not earning. Households in the bottom three decile groups included many who were retired, or who were sick or unemployed at some time during 1979. These households received an average of £1,600 in cash benefits, whereas households in the three top decile groups received an average of £380 (Table B).

Cash benefits, then, clearly reduced the inequality of the distribution of income; in fact the largest change in the share of total income held by each group, and the largest drop in the Gini coefficient, took place between original and gross income (Table C).

### Percentage shares of total household income, 1979

TABLE C

	Percentage in each quantile group of households, re-ranked at each stage			
	Original income	Gross income	Disposable income	Final income
Quintile group				
Bottom fifth	0.5	5.5	6.5	7.1
Next fifth	9	11	12	12
Middle fifth	19	18	18	18
Next fifth	27	25	24	24
Top fifth	45	40	39	38
Total	100	100	100	100
Decile groups				
Bottom tenth	—	2.2	2.6	2.8
Top tenth	27	24	23	22
Gini coefficient (per cent)	45.2	34.9	32.3	31.5

### Direct taxes

Direct taxes are assessed mainly on original income, and so households with the highest original incomes paid, on average, the highest taxes. Moreover, because of the fixed personal tax allowances, higher income households paid

### The composition of each quintile group of households ranked by original income, 1979

TABLE D

	Quintile groups					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
<b>Percentages</b>						
<b>Household type</b>						
1-2 adults retired	81	28	3	1	1	23
1 adult (other)	5	20	13	5	2	9
2 adults (other)	3	20	23	34	25	21
2 adults with children	4	18	48	39	25	27
3 or more adults	2	8	11	20	47	17
1 adult with children	5	6	2	1	—	3
Total	100	100	100	100	100	100

higher proportions of their gross incomes as direct tax (Table B). This meant that direct taxes further increased the share of total income going to the bottom fifth of households (Table C), although the increase was not as great as that due to cash benefits.

### Indirect taxes

The effects of indirect taxes were less clear. These include domestic rates net of rebates (and, for the purpose of this article, water and sewerage charges, which are also based on rateable values in most cases), taxes such as VAT and excise duty on tobacco, and some other duties. They also include items such as employers' national insurance, etc. contributions and industrial rates, which are paid by industry and are assumed to be passed on to households in the form of higher prices. The proportion of disposable income paid as indirect tax declined slightly in the top decile groups (Table B) because these households allocated more of their income to savings, rent, mortgage interest and insurance premiums, which attracted little indirect tax.

There is a conceptual problem in defining the impact of domestic rates on a household whose head received supplementary benefit (SB). Rates would be paid in full by the

householder, and be included in the figures throughout the article, but would have been taken into account in assessing his benefit. It could be argued that his effective rates burden has been overstated to some extent. In several tables ranges have therefore been given for percentages representing rates (and indirect taxes), the lower figures excluding the rates for each SB household, up to the level of benefit received. In Table B, however, this does not alter the conclusion that indirect taxes were heaviest in percentage terms for households in the middle of the distribution.

#### Benefits in kind

Apart from cash benefits, the other main categories of government expenditure which have been allocated to households are those shown in Table E; these are collectively called benefits in kind. The average benefit from *education* and *welfare foods* (mainly school meals and milk) was much higher for households in the top three quintile groups than for those in the bottom two groups. Education benefit has been allocated to people receiving education, and households at the bottom of the distribution have a smaller average number of children than those in the middle, or at the top (Table B). Generally, old people tend to use the *health* service very much more than young people. The concentration of retired people in households in the lowest part of the income distribution (Table B) thus accounted for the high average level of health benefit allocated to the bottom quintile group. (Estimates of the relative cost of providing health care to the old have been increased since last year's article, and this affects comparisons over time – see Appendix 2, paragraph 6).

#### Average amounts received as benefits in kind, 1979: households ranked by original income

TABLE E

	Quintile groups					Average over all households
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
<b>£ per household</b>						
Education	110	260	400	450	440	330
Welfare foods	20	20	30	30	30	20
Health	460	380	390	350	370	390
Housing subsidy <sup>1</sup>	150	120	110	90	80	110
Other	—	20	30	50	80	40
<b>Total</b>	<b>730</b>	<b>800</b>	<b>970</b>	<b>960</b>	<b>990</b>	<b>890</b>

<sup>1</sup> See below.

The current *housing* subsidy has been allocated between local authority dwellings: for each authority, the 'economic rent' of a dwelling has been deemed to be proportional to its rateable value, and the unrebated rent subtracted from it (see Appendix 1, paragraph 33). This is not the only convention that can be conceived; others could take account of, for example, the notional current loan charges for that dwelling, having regard to when it was built. The average subsidy for a particular group of households (which might include both local authority and private dwellings) would then depend on how the ages (for example) of the local authority dwellings in that group compared with the ages of those in other groups. But an important unequivocal factor in determining the average subsidy is the proportion of households within the group that are local authority tenants. More low income than high income households are local authority tenants, for example (Table B). Under the convention used for this article low income households had

the highest average benefits from the housing subsidy when the average is taken over all households, irrespective of tenure.

Finally, the items comprising the *other* category (passenger rail travel subsidy, expenditure on option mortgages, and life assurance premium relief) all benefited households with adults of working age, and in the middle and upper parts of the income scale.

On average, households with high incomes had higher benefits in kind than households with low incomes. But these benefits represented the highest *proportions* of final income for households with the lowest incomes (Table B), and this means that their effect was to further reduce the inequality of the distribution of income.

The net effect of indirect taxes and benefits in kind was to make final income a shade more equally distributed than disposable income (Table C).

The interpretation of these results should take account of three qualifications. First, more taxes than benefits have been allocated to households (Table A), so the average final income (£4,690) is lower than the average original income (£5,220). Greater significance should therefore be attached to the broad pattern of redistribution than to precise figures of gains and losses – particularly in the middle of the distribution. Second, some of the methods of allocation use assumptions which are not the only ones possible (for example, in respect of the housing subsidy). Third, the allocations mainly reflect only the initial impacts of taxes and benefits. It is not possible in this article to measure the extent to which second order effects transfer the impacts to other households.

## 2. HORIZONTAL REDISTRIBUTION

This section of the article looks at the impacts of taxes and benefits on different types of household, including households with children, and retired households (those in which at least half the gross income was to retired people aged over 59). The exact definitions of the household types shown in Table F are given in Appendix 1, paragraphs 6 to 11.

The first row of Table G shows that the average original incomes of the ten types ranged from £480 for single retired people to £9,260 for households comprising three or more adults. Subsequent rows show how this variation was affected by each stage of redistribution – the range of average final incomes was from £1,830 to £7,980. The most striking change was for retired households, whose average original income was 14 per cent of the overall average but whose average final income was 49 per cent of the overall average (Table H). Taxes and benefits also increased the average incomes of households with one adult and children; of other households with children (relative to those without children); and of households comprising three or more adults (relative to those comprising two adults).

Much the largest item of *original income* in 1979 was earnings, including income from self-employment (Table I). Investment income accounted for only 3 per cent, and another 3 per cent came from occupational pensions and annuities.

Among non-retired households, the *main earners'* earnings were, on average, substantially higher in households with two or more adults than in single adult households; and substantially higher, on average, in households with children than in those without.

## The ten household types, 1979

TABLE F

	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	All households
	Retired	Not retired	Retired	Not retired	1 child	2 children	3 or more children	With no children	With children		
Sample numbers	873	621	668	1,421	604	853	364	640	549	184	6,777
Average per household											
Children	—	—	—	—	1.0	2.0	3.4	—	1.6	1.7	0.7
Adults	1.0	1.0	2.0	2.0	2.0	2.0	2.0	3.4	3.4	1.0	2.0
Full-time workers	—	0.7	—	1.3	1.0	1.1	1.0	2.0	2.1	0.3	1.0
Part-time workers	—	0.2	—	0.4	0.5	0.5	0.5	0.5	0.7	0.3	0.4
Retired people	1.0	—	1.8	0.2	—	—	—	0.4	0.1	—	0.4
Average age of head	74	47	72	49	36	35	36	55	47	35	51
Percentage that are local authority tenants	43	29	37	25	25	26	44	37	39	54	33

## Redistribution of income between household types, 1979

TABLE G

	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	Average over all households
	Retired	Non-retired	Retired	Non-retired	1 child	2 children	3 or more children	With no children	With children		
Average per household (£ per year)											
Original income	480	3,590	1,060	6,500	5,870	6,790	5,980	9,260	8,920	2,270	5,220
plus cash benefits	1,290	360	1,930	440	470	530	970	810	860	1,170	820
Gross income	1,770	3,950	2,990	6,940	6,340	7,320	6,960	10,070	9,780	3,440	6,040
less direct taxes	100	840	210	1,380	1,150	1,370	1,190	2,020	1,790	230	1,080
Disposable income	1,670	3,110	2,780	5,560	5,190	5,950	5,770	8,050	7,990	3,220	4,960
less indirect taxes	340	800	620	1,320	1,250	1,360	1,300	1,910	1,890	710	1,160
plus benefits in kind	510	300	720	420	860	1,270	2,190	1,010	1,880	1,370	890
Final income	1,830	2,610	2,870	4,660	4,810	5,860	6,670	7,150	7,980	3,880	4,690
Taxes as percentages of gross income											
Direct taxes	6	21	7	20	18	19	17	20	18	7	18
Indirect taxes <sup>1</sup>	17-19	20	20-21	19	20	19	19	19	19	19-20	19
Total <sup>1</sup>	23-25	41	27-28	39	38	37	36	39	38	26-27	37
Benefits in kind as a percentage of final income	28	11	25	9	18	22	33	14	24	35	19

<sup>1</sup> The ranges reflect the different possible treatments of rates — see pages 105-106.

However, the variation in average earnings from *other people* was greater. Households with three or more adults had particularly high average figures (they averaged 2½ workers each — Table F), and two adult households with children had relatively low figures (they averaged 1½ workers each — and most of the second workers worked part-time).

The high average figure of 'other' income recorded for households with one adult and children largely comprised allowances from absent husbands.

Generally, then, by far the highest average original income was for households with three or more adults, a substantial proportion being earned by the main earners' spouses and children.

Retired households had the lowest average original incomes, and 60 per cent of the total came from occupational pensions and annuities. Original income was, on average, lower for single retired people than for retired couples because 80 per cent of them were women, who were less likely than men to have incomes from pensions and annuities.

### Cash benefits

The reasons for the variation in the average values of cash benefits shown in Table G can be illustrated by sub-dividing

## Selected ratios of average incomes, at each stage, for particular household types, 1979

TABLE H

	Original income	Gross income	Disposable income	Final income
Non-retired households				
With no children				
3 adults: 2 adults	1.42: 1	1.45: 1	1.45: 1	1.53: 1
2 adults: 1 adult	1.81: 1	1.76: 1	1.79: 1	1.78: 1
With children: with no children				
3 adult households	0.96: 1	0.97: 1	0.99: 1	1.12: 1
2 adult households	0.97: 1	1.00: 1	1.02: 1	1.22: 1
Retired households:				
all households	0.14: 1	0.38: 1	0.43: 1	0.49: 1
1 adult with children:				
all households	0.43: 1	0.57: 1	0.65: 1	0.83: 1

the benefits into four categories, as in Table J (the details appear in Appendix 1). More than half of cash benefits were age-related (retirement and old persons' pensions and widows' pensions), and this explains why retired households had much the largest average figure. Retired households also recorded high income-related benefits (including supplementary pensions). So the average *gross* income of



## Average original income from various sources, for each household type, 1979

TABLE I

	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	All households
	Retired	Not retired	Retired	Not retired	1 child	2 children	3 or more children	With no children	With children		
<b>£ per household</b>											
Earnings											
Main earner	—	3,280	50	4,490	4,950	5,790	5,210	4,860	5,280	1,300	3,620
Other earners	—	—	—	1,640	740	830	640	3,850	3,390	—	1,190
Investments	200	170	300	210	100	100	50	280	90	20	170
Occupational pensions and annuities	260	50	700	130	20	10	—	190	70	20	160
Other	20	90	10	40	70	60	80	70	90	930	80
<b>Total</b>	<b>480</b>	<b>3,590</b>	<b>1,060</b>	<b>6,500</b>	<b>5,870</b>	<b>6,790</b>	<b>5,980</b>	<b>9,260</b>	<b>8,920</b>	<b>2,270</b>	<b>5,220</b>

## Average values of cash benefits for each household type, 1979

TABLE J

	Age-related	Child-related	Income-related	Other	Total
<b>£ per year</b>					
Household type:					
1-2 adults retired	1,280	—	190	90	1,560
1 adult non-retired	210	—	90	60	360
2 adults non-retired	250	—	70	110	430
2 adults with children	20	400	110	70	600
3 or more adults	310	180	190	150	830
1 adult with children	100	360	670	40	1,170
All households	420	150	150	100	820

retired households was 38 per cent of the average for all households, compared with 14 per cent for original income (Table H). Among non-retired households, cash benefits improved the relative average income of households with one adult and children. The relative average incomes of single adult households and other households with children were also increased, but the movements were fairly small.

*Direct taxes*

Direct taxes accounted for 6 per cent of the gross income of retired households but between 17 per cent and 21 per cent for most other types (Table G). So the average *disposable* income of retired households rose to 43 per cent of the average for all households. The only other substantial effect of direct taxes was to further improve the relative average income of households with one adult and children.

*Indirect taxes*

To assess the combined effects of direct and indirect taxes, indirect taxes are expressed as a percentage of gross income in this and the next section, rather than of disposable income.

Indirect taxes averaged close to 20 per cent of gross income for each household type (Table G), and so had little effect on the distribution of income.

Taking direct and indirect taxes together, they were on average, lightest in percentage terms for retired households and for one adult households with children, and heaviest for one adult non-retired households.

*Benefits in kind*

The effects of benefits in kind on the distribution of income between household types hold no surprises (Table K). High average benefits from *education* and *welfare foods* were allocated to households with children, although some households without children had benefit allocated to members still in full-time education. The average *health* benefit allocated to non-retired households was roughly in line with household size, although the high average cost for the elderly resulted in high figures for retired households. If 'economic rents' are assumed to be based on rateable values (see page 106), the largest average benefits from the *housing* subsidy were for single retired adults, single adults with children and large families, these being the household types with the highest proportions living in local authority accommodation (Table F).

## Average values of benefits in kind for each household type, 1979

TABLE K

	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children	All households
	Retired	Not retired	Retired	Not retired	1 child	2 children	3 or more children	With no children	With children		
<b>£ per household</b>											
Education	—	60	—	30	260	640	1,270	390	1,120	770	330
Welfare foods	—	—	—	—	20	60	140	—	70	110	20
Health	380	120	600	260	450	440	580	430	490	270	390
Housing subsidy <sup>1</sup>	120	100	110	90	80	90	170	130	140	190	110
Other	—	20	10	40	50	50	40	60	60	30	40
<b>Total</b>	<b>510</b>	<b>300</b>	<b>720</b>	<b>420</b>	<b>860</b>	<b>1,280</b>	<b>2,190</b>	<b>1,010</b>	<b>1,880</b>	<b>1,370</b>	<b>890</b>

<sup>1</sup> See page 106.

### The composition of each quintile group of all households ranked by final income, 1979

TABLE L

Percentages	Quintile groups					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
Household type						
1-2 adults retired ..	68	36	7	2	1	23
1 adult (other) ..	21	16	6	2	1	9
2 adults (other) ..	6	26	33	27	13	21
2 adults with children ..	3	15	40	44	33	27
3 or more adults ..	—	2	10	23	51	17
1 adult with children ..	2	5	4	2	1	3
Total ..	100	100	100	100	100	100

Taking benefits in kind as a percentage of final income, the largest average figures were for single adult households with children, retired households, and large families; the smallest were for households comprising non-retired adults (Table G).

Indirect taxes and benefits in kind together improved the relative average income of households with children (Table H). Retired households also further improved their relative incomes.

When all households are ranked by final income (Table L), retired households were concentrated at the bottom of the distribution to almost as great an extent as in the ranking by original income (Table D) – despite the rise in their average income. One and two adult non-retired households dropped down the income scale, while two adult households with children rose to higher quintile groups.

### 3. VERTICAL REDISTRIBUTION

This section analyses the effects of taxes and benefits on the distribution of income *within* each household type. The Gini coefficients in Table M show that retired households, in particular, had very unequal distributions of original income (large proportions having no original income at all, and the top fifths accounting for three quarters of total income). But they had some of the least unequal distributions of final income. Of non-retired household types,

### Percentage shares of income at each stage within each household type, 1979

TABLE M

	Percentages 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	—	7	8	9	6	6	9	—	
Next fifth ..	—	12	3	14	15	15	15	14	15	3	
Middle fifth ..	—	4	19	20	19	18	19	20	19	15	
Next fifth ..	—	16	26	18	23	23	22	25	23	28	
Top fifth ..	—	80	41	71	35	35	38	35	34	54	
Total ..	100	100	100	100	100	100	100	100	100	100	
Gross income											
Bottom fifth ..	13	7	13	10	11	11	11	10	11	10	
Next fifth ..	16	13	15	15	15	15	15	15	16	13	
Middle fifth ..	17	18	16	19	19	18	18	19	19	17	
Next fifth ..	20	24	20	23	22	22	21	23	22	22	
Top fifth ..	34	38	36	33	33	34	35	33	32	38	
Total ..	100	100	100	100	100	100	100	100	100	100	
Disposable income											
Bottom fifth ..	14	9	13	11	12	12	12	10	12	10	
Next fifth ..	16	14	16	15	15	15	15	16	16	14	
Middle fifth ..	18	18	18	19	19	18	18	19	19	17	
Next fifth ..	20	23	21	23	22	22	22	23	22	22	
Top fifth ..	32	36	32	32	32	33	33	32	31	37	
Total ..	100	100	100	100	100	100	100	100	100	100	
Final income											
Bottom fifth ..	12	8	13	10	11	12	13	10	13	10	
Next fifth ..	17	15	16	15	16	16	16	15	16	14	
Middle fifth ..	19	18	19	19	19	18	19	19	19	18	
Next fifth ..	22	23	21	23	22	22	22	23	22	23	
Top fifth ..	30	36	31	33	32	32	30	33	30	35	
Total ..	100	100	100	100	100	100	100	100	100	100	
Gini coefficients (per cent)											
Original income ..	78	39	69	29	26	26	31	28	25	57	
Gross income ..	21	31	23	24	22	23	24	23	21	29	
Disposable income ..	18	28	19	22	21	22	21	22	19	27	
Final income ..	18	28	18	22	21	20	17	22	17	25	

## Characteristics of each fifth of households in the ranking by original income, 1979 2 adult non-retired households

TABLE N

	Number of households									
	2 adults, no children					2 adults with 1 or more children				
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth
Number of workers										
0	23	3	—	2	—	19	1	—	1	1
1	204	137	61	30	35	228	177	138	112	100
2	57	144	224	252	249	118	186	225	251	264
Total households	284	284	285	284	284	365	364	363	364	365
Percentage of earnings from main earner	95	86	74	67	69	95	92	89	86	85

single adult households and those comprising one adult and children had the most unequal distributions of original income (many of these households contained no full-time workers – Table F). These inequalities were again reduced substantially, although the distributions of final income were still more unequal than those of other household types. Taxes and benefits also reduced the inequalities within all the other household types, and particularly for large families.

The position of a non-retired household in the ranking by original income depended largely on the number of workers. Of two adult non-retired households with no children, for example, only 20 per cent of the bottom fifth of householders had two earners (Table N), but this rose to 90 per cent for the top two fifths, where second earners contributed nearly a third of total household earnings. The same basic pattern was true for two adult households with children, although the differences between the quintile groups were not so large.

Investment income also played a part in determining a household's position in the ranking; for nearly every type of non-retired household the top quintile group accounted for more than half the total investment income.

### Cash benefits

Cash benefits played the greatest part in reducing income inequality for both of the retired household types. For each type, this was because cash benefits formed a large proportion of total gross income, and because they were evenly distributed between the households. Cash benefits also played the greatest part in reducing income inequality for non-retired household types. They increased the percentages of income going to the bottom fifths of households by between 2 and 5 per cent, and by 10 per cent for one adult households with children (Table M).

### Direct taxes

Amongst retired households direct taxes represented a low percentage of gross income for all but the top fifth of households. Among non-retired household types the impact of direct taxes was particularly small for the lowest quintile groups – especially for single adults – and particularly large for the top quintile groups (Table P). For each household type there was therefore a further measurable reduction in inequality between gross and disposable income (Table M).

## Percentages of gross income recorded as expended on various items for the top and bottom quintile groups within each household type, 1979

TABLE P

	Percentages						
	Direct taxes	Domestic rates/water charges	Alcohol and tobacco	Food and domestic fuel	Other non-housing goods	Net balance	Total
Quintile groups ranked by gross income within household type							
Bottom fifth of:							
1–2 adults retired	1	5–6	5	52	37	–1	100
1 adult (other)	3	6–7	9	43	47	–9	100
2 adults (other)	11	4	9	36	40	0	100
2 adults with children	11	4	9	39	46	–9	100
3 or more adults	11	3	8	35	43	0	100
1 adult with children	—	1–8	9	51	33	–1	100
Top fifth of:							
1–2 adults retired	16	5	4	24	32	19	100
1 adult (other)	25	2	6	13	36	18	100
2 adults (other)	23	2	5	14	38	18	100
2 adults with children	21	2	4	17	39	17	100
3 or more adults	22	2	7	17	41	11	100
1 adult with children	10	3	2	21	41	23	100

<sup>1</sup> The ranges reflect the different possible treatments of rates – see pages 105–106.



## Direct and indirect taxes as percentages of gross income; by quintile groups within each household type, 1979

TABLE Q

	Percentages									
	1 adult		2 adults		2 adults with children			3 or more adults		1 adult with children
	Retired	Not retired	Retired	Not retired	1 child	2 children	3 or more children	With no children	With children	
<b>(a) Indirect taxes<sup>1</sup></b>										
Bottom fifth	21-22	28-30	23-25	24	27	25	24-25	23	23	23-29
Next fifth	17-20	21	20-21	21	22	21	20	21	20	19-23
Middle fifth	16-20	20	22-23	20	21	19	21	19	20	20-22
Next fifth	17-20	21	22	19	19	19	19	19	18	19
Top fifth	17	18	17	16	16	15	15	17	18	18
<b>(b) Direct plus indirect taxes<sup>1</sup></b>										
Bottom fifth	22-23	31-32	25-26	35	37	38	31-32	34	34	23-29
Next fifth	17-21	37	21-22	38	39	38	35	39	37	20-24
Middle fifth	16-21	42	23-24	39	38	38	38	39	38	26-27
Next fifth	18-21	44	26	40	38	38	36	40	37	27
Top fifth	32	43	34	39	37	36	36	40	39	27

<sup>1</sup> The ranges reflect the different possible treatments of rates - see pages 105-106.

### Indirect taxes

It is well known that low income households spend relatively high proportions of their incomes on food and domestic fuel, which do not attract VAT or excise duties. In 1979, for each household type, the proportion spent on food and fuel was two or three times as great for the bottom quintile group as for the top quintile group (Table P). Despite this, for each household type indirect taxes were heavier in percentage terms for the bottom group than for the top group (Table Q). There were two main reasons for this. First, high income households had already paid out more of their gross income as direct tax (Table P). Second, high income households had a much higher net balance of gross income over expenditure (as defined for the FES); this balance includes savings, life and medical insurance premiums, and housing costs like rent and mortgage interest payments, none of which attract VAT or specific duties. Moreover, the bottom quintile groups spent higher proportions of their gross incomes on both alcohol and tobacco, which attract specific duties, and domestic rates (because these are based on rateable values).

Looking at individual taxes (Table R), tobacco duty, duty on beer, and VAT represented higher proportions of gross income for the bottom quintile groups than for the top groups. The top groups, however, paid higher proportions than the lower groups on wine and spirit duty. Different figures would result if disposable income, or expenditure, were used as the base, of course.

Expressing direct and indirect taxes together as a percentage of gross income (Table Q), for retired households the top quintile groups had the highest percentages, followed by the bottom groups. For other types, the bottom groups had the lowest percentages, but the increases in higher groups were generally small. Indirect taxes thus largely offset the equalising effects of direct taxes.

### Benefits in kind

The various benefits in kind had different effects on the distributions of income within each household type; and they are not easy to tabulate. Broadly speaking, the average

## Indirect taxes (excluding domestic rates) as percentages of gross income; for the top and bottom quintile groups within each household type, 1979

TABLE R

	Duties on hydro-carbon oils	Car tax, VED	Duty on tobacco	Duty on beer	Duty on wines and spirits	VAT and other	Taxes on intermediate production	Total
<b>Percentages</b>								
Quintile groups ranked by gross income within household type								
<b>Bottom fifth of:</b>								
1-2 adults retired	0.7	0.6	2.3	0.5	0.9	6.0	6.7	17.8
1 adult (other)	0.9	0.7	4.4	0.9	0.7	7.5	7.4	22.4
2 adults (other)	1.1	0.8	3.6	1.0	0.8	6.6	6.2	20.1
2 adults with children	1.3	0.8	4.1	0.9	0.8	7.0	6.8	21.5
3 or more adults	1.2	0.7	3.5	0.9	0.8	6.7	6.2	19.9
1 adult with children	0.5	0.2	6.0	0.2	0.6	5.6	7.1	20.2
<b>Top fifth of:</b>								
1-2 adults retired	0.8	0.7	1.3	0.2	1.0	4.4	4.1	12.5
1 adult (other)	0.9	0.5	1.1	0.7	1.7	6.5	3.9	15.2
2 adults (other)	0.9	0.7	1.0	0.6	1.4	5.4	4.0	14.1
2 adults with children	0.9	0.6	1.0	0.4	0.9	5.0	4.4	13.2
3 or more adults	1.0	0.6	1.5	0.9	1.2	5.9	4.6	15.7
1 adult with children	0.7	0.9	1.1	0.2	0.5	6.5	4.8	14.7

figures allocated for *education* and *health* benefit were similar over the various income groups for each household type, and this made the distributions of income more equal. In fact, for a variety of reasons, the low income groups tended to have somewhat higher average values than the high income groups. For example, within the retired household types, the lower income groups contained relatively large numbers of the oldest people, and thus averaged more health benefit than the higher income groups. And student households, with high education benefit, tended to fall in the lower income groups. Under the conventions used for this article (see page 106), the *housing* subsidy was substantially higher for the low income groups than for the high income groups in each household type, because more of the low-income households were in local authority dwellings in each case. The average values of the 'other' benefits (passenger rail travel subsidy, option mortgage expenditure and life assurance premium relief) were much higher for high income than for low income households. In total, however, the effects of benefits in kind on the distributions of income within each household type were to offset the effects of indirect taxes. But final income was demonstrably more equally distributed than disposable income only for large families (Table M).

The combined effects of horizontal and vertical redistribution are shown in Table S, in which each household is classified according to its ranking both by original and final income. The leading diagonal of this matrix shows the percentages of households in the same quintile group after redistribution as before it, i.e. in these broad terms they were neither better off nor worse off. Over half of households are on this diagonal.

**Households classified by their ranking according to original and final income, 1979**

TABLE S

*cross tabs*

Percentage of all households Quintile groups of households ranked by <i>original</i> income:	Quintile groups of households ranked by <i>final</i> income					Total
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
	Bottom fifth	13	6	1	—	
Next fifth	6	8	4	1	1	20
Middle fifth	1	5	8	5	1	20
Next fifth	—	1	6	9	4	20
Top fifth	—	—	1	5	14	20
Total	20	20	20	20	20	100

**4. INCOME PER EQUIVALENT ADULT**

The first part of this article looked at the way that taxes and benefits redistributed income between households irrespective of household size or composition. The next two parts analysed redistribution between household types and between income levels within each household type. Neither of these approaches permits a comprehensive assessment of the redistribution of income across all households that also takes account of the varying needs of households.

For example, the distribution of final income is less unequal than that of original income (Table B). But the top decile groups of households ranked by original income contain more individuals, on average, than households in

the bottom decile groups. Therefore if households were ranked by original income *per head*, for example, some of the larger households in the top decile groups would drop to lower decile groups, and some smaller households would move up the distribution. The distributions of original income and final income could then be different on the per head basis.

The drawback of the 'per head' measure is that it makes no distinction between the needs of adults and children. And it ignores, for example, the fact that housing costs do not increase in proportion to the size of the household. It is more realistic to standardise by the number of 'equivalent adults' in a household by giving different weights to children, single adults and couples which reflect their relative needs: but estimating appropriate values of such weights is extremely difficult, and no universally agreed weights have yet emerged; the whole area is one of continuing research. This article adopts the weights used by the now disbanded Royal Commission on the Distribution of Income and Wealth in their sixth report. The weights are:

Married couple	.. ..	1.00
Single adult	.. ..	0.61
Child	.. ..	0.27

This article shows the results of using these weights to take account of household composition. All the figures of household incomes, taxes and benefits described as 'adjusted' are expressed per 'equivalent adult'; all those described as 'unadjusted' are expressed per household.

**Percentage shares of total household income on both the unadjusted and adjusted bases, 1979**

TABLE T

	Percentage in each quantile group of households re-ranked at each stage			
	Original income		Final income	
	Unadjusted	Adjusted	Unadjusted	Adjusted
Quintile groups:				
Bottom fifth	0.5	0.8	7.1	10.8
Next fifth	9	10	12	15
Middle fifth	19	18	18	18
Next fifth	27	27	24	22
Top fifth	45	45	38	34
Total	100	100	100	100
Decile groups:				
Bottom tenth	—	—	2.8	4.5
Top tenth	27	27	22	20
Gini coefficient (per cent)	45.2	44.2	31.5	22.8

The spread of original income between quintile groups on the adjusted basis, shown in Table T, was very similar to the spread on the unadjusted basis. There were differences, however, between the two bases in the percentage shares of final income; the shares of the bottom two quintile groups were somewhat higher on the adjusted basis, and the shares of the top groups somewhat lower. The similarity of the distributions of original income on the two bases is the more surprising in that it hides some large differences in the compositions of the corresponding quintile groups (Table U). Small households naturally appeared more frequently at the top of the distribution on the adjusted basis - one and two adult non-retired households, for example, formed two thirds of the households in the top quintile groups, compared with a quarter on the unadjusted basis. Correspondingly, the adjustment shifted households with three or more adults,

### Composition of each quintile group of households ranked by original income on both unadjusted and adjusted bases, 1979

TABLE U

	Unadjusted					Adjusted					Total
	Quintile groups					Quintile groups					
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
<b>Percentages</b>											
Household type:											
1-2 adults retired .. .. .	81	28	3	1	1	79	25	4	3	2	23
1 adult (other) .. .. .	5	20	13	5	2	5	7	5	11	18	9
2 adults (other) .. .. .	3	20	23	34	25	3	11	15	25	50	21
2 adults with children .. .. .	4	18	48	39	25	5	34	47	34	15	27
3 or more adults .. .. .	2	8	11	20	47	3	19	26	26	14	17
1 adult with children .. .. .	5	6	2	1	—	5	4	3	1	1	3
Total .. .. .	100	100	100	100	100	100	100	100	100	100	100

and those with children, down the distribution. The bottom quintile group, however, was still dominated by retired households.

Table V shows that redistribution appeared to be larger on the adjusted basis than on the unadjusted basis. This is explained by the large difference between the two bases in the incidence of cash benefits and benefits in kind, the lower quintile groups doing relatively better on the adjusted basis

in each case. The bottom quintile groups continued to be dominated by the same (retired) households, and their small average size gave them, relatively, even higher cash benefits on an adjusted basis. And large households, which have high cash benefits and benefits in kind even on an adjusted basis, moved down the ranking. The switching had little effect, however, on the proportions of income taken as direct or indirect tax, and so the effects of taxes on the distribution of income were similar on the two bases.

### Redistribution of income between households; unadjusted and adjusted to a per equivalent adult basis, 1979

TABLE V

	Quintile groups of households ranked by original income					Average over all households
	Bottom fifth	Next fifth	Middle fifth	Next fifth	Top fifth	
<b>Average per household (£ per year)</b>						
<b>Unadjusted</b>						
Original income .. .. .	140	2,280	4,900	7,060	11,700	5,220
Cash benefits .. .. .	1,680	1,120	510	400	380	820
Gross income .. .. .	1,820	3,400	5,420	7,460	12,080	6,040
Direct taxes .. .. .	10	360	970	1,450	2,620	1,080
Disposable income .. .. .	1,810	3,040	4,450	6,010	9,460	4,960
Indirect taxes .. .. .	410	770	1,130	1,440	2,040	1,160
Benefits in kind .. .. .	730	800	970	960	990	890
Final income .. .. .	2,130	3,080	4,290	5,530	8,410	4,690
Direct taxes as a percentage of gross income	7	11	18	19	22	18
Indirect taxes as a percentage of disposable income <sup>1</sup> .. .. .	20-23	25	25	24	22	23
Benefits in kind as a percentage of final income	34	26	23	17	12	19
<b>Adjusted to a per equivalent adult basis</b>						
Original income .. .. .	170	1,980	3,760	5,460	9,130	4,100
Cash benefits .. .. .	2,080	1,050	420	320	190	810
Gross income .. .. .	2,250	3,030	4,180	5,770	9,320	4,910
Direct taxes .. .. .	10	300	730	1,140	2,110	860
Disposable income .. .. .	2,240	2,740	3,450	4,630	7,210	4,050
Indirect taxes .. .. .	500	690	870	1,090	1,590	950
Benefits in kind .. .. .	880	820	710	570	450	670
Final income .. .. .	2,610	2,870	3,290	4,110	6,080	3,790
Direct taxes as a percentage of gross income	—	10	17	20	23	17
Indirect taxes as a percentage of disposable income <sup>1</sup> .. .. .	20-22	25	25	24	22	23
Benefits in kind as a percentage of final income	34	29	22	14	7	18

<sup>1</sup> The range reflects the different possible treatments of rates — see pages 105-106.

## 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 respondent keeps a full record of all payments made during 14 consecutive days and answers questions about hire purchase and other payments. Households are also asked in detail about their income from all sources, but there is no systematic linkage of income and expenditure to yield a balanced household budget for any particular period. Every household member aged 16 and over is asked to give detailed information where appropriate about income, including national insurance and other cash benefits received from the state, and payments of income tax. Information on age, occupation, kinds of education being 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 latest report is the *Family Expenditure Survey Report* for 1979. 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 1979 was 6,777. There is some evidence that households who respond to the FES differ from those who do not (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)). The effect of this differential response on the accuracy of the estimates of redistribution is the subject of an article '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). The response rate in 1979 was 68 per cent.

5. The available evidence suggests that older households, households where the head is self-employed, and those without children are less likely to co-operate than others. There are regional variations in response; for example in the Greater London area it is noticeably lower than in other areas. There are also indications that higher income households are less likely to respond. 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.

**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 persons 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. It would not be correct to use the analysis to discuss the impact of taxes and benefits on the incomes of individual members of a household. For example, the original income of an old person living in a household may be out of line with that of the household as a whole. This is also one reason why, for example, unemployment benefit and retirement pensions are received by households whose position in the income distribution would seem to make them ineligible.

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 usually classified as non-retired.

10. 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.

11. 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 1979.

**Income: redistributive stages**12. *Stage one*

Original income *plus* benefits in cash = 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).

13. The starting point of the analysis is *original income*. This is 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 and investment, including occupational pensions, and is based on a concept of normal income around which the FES income questions are structured. Employment income is taken as the last payment received before the interview or, where different, the amount usually received. Allowance is also made for periods of absence from work through sickness and unemployment, and for occasional payments. Income from self-employment is recorded in the FES for a past period. This is adjusted, for each household, using an index of income from self-employment derived from the National Accounts, to bring it up to current levels. In the case of interest, dividends and rent income, the amount received in the twelve months before the interview is taken, unadjusted. Income from occupational pensions is taken as the last payment received.

14. Some income in kind is included, though the coverage of fringe benefits is not comprehensive. 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. The various components of income are converted to estimated normal annual rates.

15. The next stage of the analysis is to show the distribution of *cash benefits* and to add these 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 benefit, 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.

16. 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.

17. Supplementary benefit includes all supplementary allowances where they are separately distinguished by respondents. Income from most 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. Rent rebates and rent allowances are taken as those currently received by households. Figures for rent rebates and rent allowances shown in the National Accounts (and in 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, who would otherwise be eligible for such rebates and allowances.

18. *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.

19. The estimates are based on the amount deducted from the last payment in the case of employment income and occupational pensions, and on the amount paid in the last 12 months in the case of income from self-employment, interest, dividends and rent.

20. 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.

21. One of the basic problems of allocating government revenues and expenditures to households is in identifying the ultimate payer or recipient. In some cases, for example corporation tax, this is impracticable or highly controversial and so we prefer not to allocate the items concerned. Even for those we do allocate the criteria used are sometimes questionable. Thus, 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. The analysis implies that the benefit of tax relief, for example for mortgage interest, accrues directly to the tax payer rather than to some other party, for example, the vendor of the land. It also implies that no section of the working population has been able to pass the cost of the direct tax back to employers through lower profits, or to consumers through higher prices. The major taxes not allocated are corporation tax and taxes on capital.

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

23. *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

24. 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.



25. 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.

26. The figures for *domestic rates* include, as well as local authority rates, charges made by water authorities for water 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.

27. *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

28. 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.

29. 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:

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

30. The measure of the benefit of the *National Health Service* to households is the cost of providing the service. That cost is estimated according to the average use made of the service by individuals of different ages and sex. It is then applied to the individuals in the FES in the corresponding age-sex groups. The benefit of the maternity services is assigned separately to those households in receipt of maternity benefit.

31. *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 persons in the household recorded in the FES as receiving each kind of education.

32. 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.

33. In this article local authority tenants are defined to include New Town and Scottish Housing Association tenants, but to exclude tenants of other housing associations. The total *housing subsidy* for local authority tenants is defined as the difference between current account expenditure by public authorities on housing (the sum of the 'economic rents') and the unrebated rents paid by tenants of local authority dwellings. For each local authority dwelling in the sample, the subsidy is derived as the excess of the estimated economic rent over the unrebated rent paid by the tenant. The economic rent of each dwelling is calculated by multiplying the rateable value of that dwelling by the ratio of the total current account expenditure on all dwellings owned by the local authority to the total rateable value of those dwellings. As explained in the article, other conventions in allocating the subsidy are conceivable.

34. Food subsidies, included in previous years, were negligible in 1979 and this item has therefore been omitted. And in line with the practice of earlier years, agricultural subsidies are regarded as contributing to the original income of farmers, and not as being benefits to consumers.

35. 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.

36. A more detailed account of the treatment of subsidies is given in an article, 'The redistributive effect of subsidies on households' in *Economic Trends* No. 289, November 1977.

37. *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.

38. 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 (only those householders recording payments since 1 April 1979 are allocated benefit, this being the date that the scheme started).

39. 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 methods both of allocating taxes and of valuing and apportioning benefits to individual households are subject to error. For example, 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 (for example, health service expenditure lowers the general likelihood of infectious diseases).

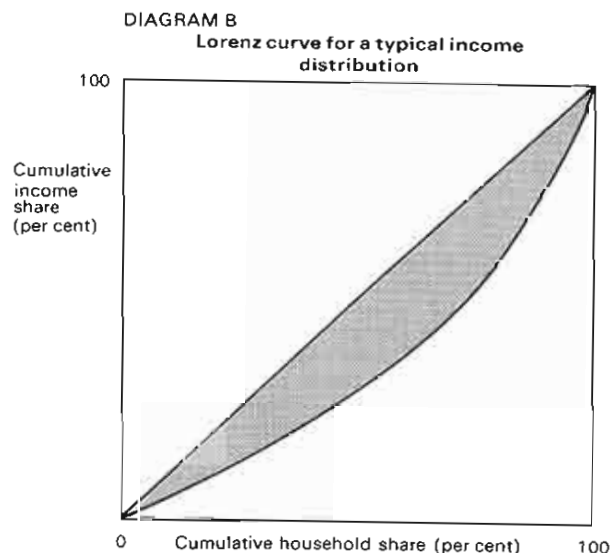
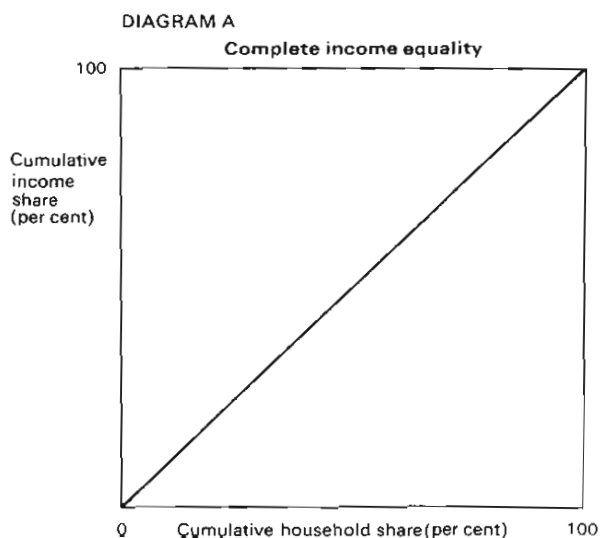
### Gini coefficient

40. 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.

41. 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

42. This article is the latest in an annual series. Earlier articles covering the years 1957 to 1977 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 and January 1980. The December 1974 article contains a comprehensive account of the methods employed and the changes in treatment over the years (updated in Appendix 2 to this article). As far as is practicable with the resources available, the Central Statistical Office will provide on request analyses for 1979 on a basis comparable with those for earlier years. Enquiries should be addressed to D. Westcott, Branch 12, Central Statistical Office, Great George Street, London SW1P 3AQ, Telephone 01-233 8300.



## APPENDIX 2

## Changes in definition and treatment of items since the article published in December 1974

1. The article on the effects of taxes and benefits in 1973 (published in December 1974) contained an Appendix giving changes that had been implemented in the series up to then. This appendix updates that list.

<i>Item</i>	<i>Change</i>	<i>Analysis year for which change made</i>
Food subsidies	Introduced into analysis .. .. .	1974
Income ranges	Quantile basis introduced .. .. .	1976
Rail travel subsidy	Introduced into analysis .. .. .	1977
Rent rebates and allowances	Treated as cash benefits rather than housing subsidies .. .. .	1979
Electricity discounts	Introduced into analysis .. .. .	1979
Option mortgage expenditure	Introduced into analysis .. .. .	1979
Life assurance premium relief	Introduced by government and into analysis ..	1979
Food subsidies	Dropped from analysis (de minimis) .. ..	1979
Imputed rent from owner-occupation	Excluded from income .. .. .	1979
Redundancy fund payments	Dropped from analysis .. .. .	1979
Subsidies	Not identified as a separate economic category	1979
Income from self-employment	Estimates updated to current period .. ..	1979
Student maintenance grants	Treated as cash benefits rather than education benefits .. .. .	1979
Direct taxes	Adjusted for abnormalities in last payment (as income) .. .. .	1979
Car tax and VAT on cars	Introduced as negative for all sales of cars (previously only for trade-ins) .. ..	1979
Health benefit	Refinements made (see text) .. .. .	1979

2. Of the items changed for 1979, the treatment of rent rebates and allowances, student grants and electricity discounts now accords with the National Accounts, where they are included in 'current grants to persons' and hence in total personal income. Benefit from option mortgage expenditure is also included in 'current grants' in the National Accounts but not in total personal income, because this is presented net of interest payments.

3. Perhaps the most important change is the exclusion of owner-occupiers' imputed rents from original, gross, disposable and final incomes, despite its inclusion in the National Accounts. There are good reasons for including this item in the National Accounts, which relate to the internal consistency of the accounts between sectors and over time, and to the general treatment of interest. But it is probable that few owner-occupiers perceive this item as income, let alone have any idea of its size (for National Accounts its size is based on rateable values). It is true, of course, that owner-occupiers do not have to pay any rent, but many have to pay mortgage interest (which has some conceptual parallels to rent).

4. In order to permit a comparison over time, and to show the effects of excluding imputed rent, Table X shows some details on each basis. The effect of excluding imputed rent has been to reduce original income by an average of £282 per household. The only other major effect is to switch some owner-occupiers with low other incomes (mainly retired) from the second and third decile groups into the bottom decile group. An analysis of the later stages of redistribution (not shown) reveals little additional variation caused by the exclusion of imputed rent, although the

average housing subsidy allocated to the bottom quintile group is of course reduced by the presence of more owner-occupiers.

5. The treatment of subsidies has altered slightly. Previously they were included between direct and indirect taxes, and a sub-total calculated that represented disposable income less indirect taxes plus subsidies. In economic theory, subsidies can be thought of as negative taxes, and the net figure indeed is calculated and shown in the National Accounts. In practice, however, the subsidies allocated are dominated by the housing subsidy. Certainly the idea of subtracting this subsidy from indirect taxes has little analytical appeal for this article. Subsidies and other benefits have thus been combined this year, the resulting deletion of the sub-total 'income after all taxes and transfers' allowing room for a greater concentration on gross income.

6. This year the allocation of health service benefit has been refined, based on new figures supplied by the Department of Health and Social Security and using a larger number of age-group bands. This has led to relatively higher allocations being attributed to very young children and to the very old. The most noticeable effect of this on the analyses in the article has been to raise the health benefit to retired households – especially those with one adult, where there is a particularly high proportion of the very old. Because many retired households fall in the lower parts of the income distribution, this new allocation has increased the proportion of health benefit (and consequently of final income) attributed to low income households. Table Y below shows the effects of the new figures on the distribution of health benefit and final income.

## The effect of excluding imputed rent from owner occupation from original income, 1979

TABLE X

	£ per year										
	Decile groups of households ranked by original income										Average over all households
	Bottom	2nd	3rd	4th	5th	6th	7th	8th	9th	Top	
<b>(i) Ranked excluding imputed rent</b>											
Original income .. .. .	6	270	1,394	3,160	4,378	5,431	6,456	7,671	9,364	14,038	5,217
Imputed rent excluded .. .	70	165	216	204	213	293	330	364	423	544	282
Total .. .. .	76	435	1,610	3,364	4,591	5,724	6,786	8,035	9,787	14,582	5,499
Percentage of households which are owner-occupiers .. .. .	21	42	45	44	47	60	64	67	71	75	53
<b>(ii) Re-ranked including imputed rent</b>											
Items other than imputed rent ..	21	289	1,378	3,176	4,373	5,442	6,448	7,664	9,354	14,018	5,217
Imputed rent .. .. .	2	168	242	177	218	269	348	365	449	585	282
Original income .. .. .	23	458	1,620	3,353	4,592	5,711	6,797	8,029	9,803	14,604	5,499
Percentage of households which are owner-occupiers .. .. .	2	50	50	40	47	59	67	68	74	79	53

## The effect on redistribution of refining the allocation of health services benefit, 1979

TABLE Y

	Former allocation	Current allocation
<b>£ per household</b>		
<b>Health benefit</b>		
Quintile groups of households ranked by original income (as Table E):		
Bottom fifth .. .. .	370	460
Next fifth .. .. .	370	380
Middle fifth .. .. .	400	390
Next fifth .. .. .	370	350
Top fifth .. .. .	400	370
Household composition type (as Table K):		
1 adult retired .. .. .	280	380
1 adult non-retired .. .	140	120
2 adults retired .. .. .	520	600
2 adults non-retired .. .	290	260
2 adults, 1 child .. .	440	450
2 adults, 2 children .. .	460	440
2 adults, 3 or more children ..	590	580
3 or more adults with no children ..	460	430
3 or more adults with children ..	530	490
1 adult with children .. .	290	270
All households .. .. .	380	390
<b>Final income</b>		
Decile groups of households ranked by original income (as Table B):		
Bottom tenth .. .. .	2,030	2,120
2nd tenth .. .. .	2,040	2,130
3rd tenth .. .. .	2,710	2,730
4th tenth .. .. .	3,420	3,420
5th tenth .. .. .	3,960	3,950
6th tenth .. .. .	4,640	4,630
7th tenth .. .. .	5,200	5,190
8th tenth .. .. .	5,910	5,880
9th tenth .. .. .	6,990	6,960
Top tenth .. .. .	9,900	9,860
All households .. .. .	4,680	4,690

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## General government expenditure in 1979

TABLE 1

	£ million	Percentage of total expenditure
<b>Allocated expenditure</b>		
Allocated cash benefits <sup>1</sup>		
Social security benefits .. .. .	17,570	20.7
Student maintenance grants .. .. .	1,760	2.1
Rent rebates and rent allowances .. .. .	520	0.6
Electricity discounts .. .. .	30	—
Allocated benefits in kind <sup>1</sup> .. .. .		
Health services .. .. .	8,310	9.8
Education .. .. .	7,170	8.4
School meals, milk, welfare foods .. .. .	540	0.6
Option mortgages .. .. .	170	0.2
Housing subsidy .. .. .	1,970	2.3
Rail travel subsidy .. .. .	320	0.4
	<b>38,370</b>	<b>45.2</b>
<b>Unallocated expenditure</b>		
Other current expenditure on social, environmental and protective services		
Social services		
Social security benefits administration .. .. .	810	1.0
Personal social services .. .. .	1,650	1.9
Other .. .. .	30	—
Environmental services		
Housing .. .. .	100	0.1
Water, sewerage, land drainage and public health .. .. .	830	1.0
Parks, etc .. .. .	460	0.5
Miscellaneous local authority services .. .. .	750	0.9
Libraries, museums, and arts .. .. .	420	0.5
Protective services		
Police .. .. .	1,640	1.9
Parliament, courts and prisons .. .. .	780	0.9
Fire services .. .. .	340	0.4
	<b>7,830</b>	<b>9.2</b>
Capital expenditure on social, environmental and protective services		
Social services .. .. .	1,210	1.4
Environmental services		
Housing .. .. .	3,330	3.9
Other .. .. .	1,150	1.4
Protective services .. .. .	130	0.2
	<b>5,830</b>	<b>6.9</b>
Other current expenditure		
Defence and external relations .. .. .	11,210	13.2
Roads, transport and communications .. .. .	1,840	2.2
Industry, trade, agriculture, research and employment .. .. .	3,610	4.3
Other .. .. .	1,450	1.7
	<b>18,110</b>	<b>21.3</b>
Other capital expenditure .. .. .	4,580	5.4
Debt interest .. .. .	8,830	10.4
Non-trading capital consumption .. .. .	1,360	1.6
<b>Total expenditure</b> .. .. .	<b>84,910</b>	<b>100.0</b>

<sup>1</sup> Including benefits to people not living in private households.Source: *National Income and Expenditure, 1980 edition*, Table 9.4

## Financing of general government expenditure in 1979

TABLE 2

	£ million	Percentage of total financing
<b>Allocated financing</b>		
Allocated taxes <sup>1</sup>		
Direct taxes		
Income tax	20,350	24.0
Employees' and self-employed NI contributions	4,580	5.4
Indirect taxes		
Domestic rates (net of rebates)	2,970	3.5
Taxes on final goods and services	15,220	17.9
Taxes on intermediate goods and services	6,890	8.1
	50,020	58.9
<b>Unallocated financing</b>		
Unallocated taxes		
Corporation tax, etc	4,730	5.6
Taxes on expenditure not allocated to consumers' expenditure	8,230	9.7
Employers' NI contributions not allocated to consumers' expenditure	4,000	4.7
Taxes on capital	1,110	1.3
	18,070	21.3
Other receipts <sup>2</sup>	4,690	5.5
Government borrowing requirement	12,130	14.3
<b>Total financing</b>	84,910	100.0

<sup>1</sup> Including taxes paid by people not living in private households.Source: *National Income and Expenditure, 1980 edition*, Table 9.1<sup>2</sup> Receipts of rent, interest, dividends, trading income and miscellaneous transactions (net).



## Average incomes, taxes and benefits, 1979

By decile groups of original and disposable incomes

TABLE 3

	£ per year										Average over all decile groups
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
<b>(i) Decile groups of original income</b>											
<b>All households</b>											
Deciles	46	608	2,413	3,780	4,923	5,941	7,004	8,398	10,602		
Number of households in the sample	678	677	678	678	677	678	678	678	677	678	6,777
<b>Original income</b>											
Earned income	—	36	668	2,623	4,016	5,102	6,081	7,342	8,951	13,221	4,804
Other income	6	234	726	537	362	329	375	329	413	818	413
Total	6	270	1,394	3,160	4,378	5,431	6,456	7,671	9,364	14,038	5,217
<b>Direct benefits in cash</b>											
Age-related	957	1,231	978	363	186	125	109	84	103	112	425
Child-related	55	26	61	157	201	242	204	198	187	165	150
Income-related	527	263	209	146	73	66	52	35	42	56	147
Other	181	113	186	150	68	64	63	54	45	48	97
Gross income	1,726	1,903	2,828	3,976	4,906	5,927	6,884	8,042	9,742	14,418	6,036
Direct taxes	1	17	167	548	853	1,080	1,328	1,570	1,987	3,246	1,080
<b>Disposable income</b>											
Disposable income	1,725	1,886	2,661	3,428	4,053	4,847	5,556	6,472	7,755	11,172	4,956
Domestic rates (net of rebates)	117	103	139	153	159	173	182	197	210	249	168
Other indirect taxes	265	336	533	723	901	1,024	1,153	1,357	1,557	2,073	992
<b>Benefits in kind</b>											
Education	137	76	209	309	393	414	446	449	451	438	332
National Health Service	437	477	391	378	381	400	355	339	353	381	389
Welfare foods	21	10	16	32	26	33	32	31	28	23	25
Housing subsidy	179	116	115	126	127	98	92	86	74	76	109
Other allocated benefits	4	6	10	23	34	35	38	55	62	95	36
Final income	2,122	2,132	2,731	3,420	3,953	4,630	5,185	5,876	6,955	9,864	4,687
<b>(ii) Decile groups of disposable income</b>											
<b>All households</b>											
Deciles	1,659	2,306	3,015	3,774	4,515	5,253	6,050	7,049	8,783		
Number of households in the sample	678	677	678	678	677	678	678	678	677	678	6,777
<b>Original income</b>											
Earned income	63	277	1,193	2,738	3,847	5,030	5,986	7,129	8,836	12,940	4,804
Other income	119	284	436	432	420	341	330	436	460	871	413
Total	182	561	1,629	3,170	4,267	5,371	6,316	7,565	9,297	13,811	5,217
<b>Direct benefits in cash</b>											
Age-related	874	1,020	850	406	314	175	185	142	126	157	425
Child-related	3	33	67	149	199	226	214	205	206	193	150
Income-related	258	317	228	134	108	96	107	77	60	82	147
Other	43	84	138	153	115	106	115	70	85	62	97
Gross income	1,360	2,016	2,912	4,012	5,003	5,974	6,938	8,059	9,774	14,305	6,036
Direct taxes	48	84	302	623	858	1,099	1,301	1,552	1,958	2,970	1,080
<b>Disposable income</b>											
Disposable income	1,311	1,932	2,610	3,389	4,145	4,875	5,637	6,507	7,816	11,335	4,956
Domestic rates (net of rebates)	100	119	133	153	163	174	185	193	217	246	168
Other indirect taxes	227	328	534	744	894	1,019	1,182	1,316	1,580	2,100	992
<b>Benefits in kind</b>											
Education	38	64	156	274	364	392	479	539	524	492	332
National Health Service	359	426	404	378	418	403	365	357	367	415	389
Welfare foods	—	8	23	29	29	33	34	32	35	28	25
Housing subsidy	115	142	134	128	121	109	99	89	75	80	109
Other allocated benefits	4	6	14	23	31	35	43	52	60	95	36
Final income	1,501	2,131	2,673	3,324	4,051	4,653	5,290	6,068	7,080	10,099	4,687

## Average incomes, taxes and benefits, 1979

By quintile groups of original income within household type

TABLE 4

	£ per year					
	Quintile groups					Average over all quintile groups
	1st	2nd	3rd	4th	5th	
<b>(i) 1 adult retired</b>						
Quintiles						
Number of households in the sample	175	174 <sup>29</sup>	175 <sup>190</sup>	174 <sup>623</sup>	175	873
Original income						
Earned income	—	—	4	16	3	5
Other income	3	—	82	369	1,935	479
Total	4	—	86	385	1,938	484
Direct benefits in cash						
Age-related	1,010	—	1,009	1,059	1,001	1,018
Child-related	—	—	—	—	—	—
Income-related	369	—	255	104	32	226
Other	48	—	58	41	15	42
Gross income	1,430	—	1,409	1,589	2,987	1,770
Direct taxes	—	—	11	39	444	99
Disposable income	1,430	—	1,398	1,551	2,543	1,671
Domestic rates (net of rebates)	113	—	103	94	171	119
Other indirect taxes	171	—	191	232	352	224
Benefits in kind						
Education	—	—	—	—	—	—
National Health Service	407	—	407	365	334	384
Welfare foods	—	—	—	—	—	—
Housing subsidy	160	—	112	117	49	119
Other allocated benefits	2	—	3	3	4	3
Final income	1,714	—	1,626	1,710	2,407	1,834
<b>(ii) 1 adult non-retired</b>						
Quintiles						
Number of households in the sample	124 <sup>1,266</sup>	124 <sup>2,900</sup>	125 <sup>3,942</sup>	124 <sup>5,268</sup>	124	621
Original income						
Earned income	246	1,801	3,253	4,347	6,729	3,275
Other income	189	326	208	208	647	315
Total	435	2,127	3,461	4,555	7,376	3,590
Direct benefits in cash						
Age-related	461	384	110	60	37	210
Child-related	—	—	—	—	—	—
Income-related	374	60	11	1	17	92
Other	172	29	41	28	8	56
Gross income	1,442	2,600	3,623	4,646	7,437	3,949
Direct taxes	34	420	764	1,100	1,876	839
Disposable income	1,408	2,180	2,859	3,545	5,561	3,110
Domestic rates (net of rebates)	105	129	129	145	185	138
Other indirect taxes	321	414	601	805	1,153	659
Benefits in kind						
Education	206	37	12	12	35	60
National Health Service	148	137	110	103	103	120
Welfare foods	—	—	—	—	—	—
Housing subsidy	135	108	92	112	28	95
Other allocated benefits	9	9	30	26	43	23
Final income	1,480	1,929	2,373	2,849	4,431	2,612

## Average incomes, taxes and benefits, 1979

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					Average over all quintile groups
	Quintile groups					
	1st	2nd	3rd	4th	5th	
<b>(iii) 2 adults retired</b>						
Quintiles	40	228	613	1,509		
Number of households in the sample	134	134	133	133	134	668
Original income						
Earned income	—	6	25	67	175	55
Other income	6	118	394	899	3,594	1,003
Total	7	123	419	966	3,770	1,058
Direct benefits in cash						
Age-related	1,563	1,700	1,715	1,596	1,572	1,629
Child-related	—	—	—	—	2	—
Income-related	325	202	100	66	14	142
Other	256	140	133	200	66	159
Gross income	2,150	2,166	2,368	2,829	5,423	2,988
Direct taxes	4	7	18	94	929	211
Disposable income	2,146	2,158	2,349	2,735	4,494	2,777
Domestic rates (net of rebates)	112	101	107	133	224	135
Other indirect taxes	340	377	451	553	709	486
Benefits in kind						
Education	—	16	—	—	—	3
National Health Service	630	607	657	553	547	599
Welfare foods	—	—	—	—	—	—
Housing subsidy	154	127	122	90	49	108
Other allocated benefits	6	6	10	6	7	7
Final income	2,486	2,435	2,580	2,700	4,164	2,874
<b>(iv) 2 adults non-retired</b>						
Quintiles	3,614	5,617	7,119	8,842		
Number of households in the sample	284	284	285	284	284	1,421
Original income						
Earned income	1,861	4,331	6,108	7,642	10,666	6,122
Other income	279	329	264	293	727	378
Total	2,139	4,660	6,373	7,935	11,394	6,500
Direct benefits in cash						
Age-related	724	295	121	64	49	251
Child-related	7	4	3	1	2	3
Income-related	210	62	51	9	14	69
Other	341	72	76	49	24	112
Gross income	3,420	5,093	6,624	8,058	11,483	6,936
Direct taxes	318	928	1,294	1,723	2,636	1,380
Disposable income	3,102	4,165	5,330	6,336	8,847	5,556
Domestic rates (net of rebates)	140	159	170	187	234	178
Other indirect taxes	674	931	1,171	1,297	1,628	1,140
Benefits in kind						
Education	47	60	26	15	—	30
National Health Service	378	286	234	208	208	263
Welfare foods	—	—	—	—	—	—
Housing subsidy	115	114	84	78	39	86
Other allocated benefits	11	22	37	65	83	43
Final income	2,839	3,557	4,370	5,217	7,315	4,659

## Average incomes, taxes and benefits, 1979

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					Average over all quintile groups
	Quintile groups					
	1st	2nd	3rd	4th	5th	
<b>(v) 2 adults, 1 child</b>						
Quintiles	3,824	5,013	6,032	7,572		
Number of households in the sample	121	121	120	121	121	604
Original income						
Earned income	2,333	4,376	5,365	6,567	9,785	5,685
Other income	167	91	149	128	406	188
Total	2,500	4,467	5,513	6,694	10,191	5,874
Direct benefits in cash						
Age-related	173	—	33	—	—	41
Child-related	249	244	271	223	242	246
Income-related	413	21	34	14	28	102
Other	247	54	56	12	14	77
Gross income	3,581	4,786	5,906	6,944	10,474	6,339
Direct taxes	323	842	1,029	1,375	2,157	1,146
Disposable income	3,258	3,944	4,877	5,569	8,317	5,193
Domestic rates (net of rebates)	143	153	176	195	248	183
Other indirect taxes	731	967	1,084	1,091	1,446	1,064
Benefits in kind						
Education	364	187	222	270	277	264
National Health Service	480	450	497	398	417	448
Welfare foods	34	12	14	21	14	19
Housing subsidy	156	79	86	44	27	78
Other allocated benefits	20	43	49	63	79	51
Final income	3,439	3,594	4,485	5,079	7,438	4,808
<b>(vi) 2 adults, 2 children</b>						
Quintiles	4,357	5,608	6,827	8,535		
Number of households in the sample	171	170	171	170	171	853
Original income						
Earned income	3,057	4,977	6,081	7,436	11,550	6,621
Other income	60	27	127	209	446	174
Total	3,117	5,004	6,208	7,645	11,996	6,795
Direct benefits in cash						
Age-related	49	—	8	—	—	11
Child-related	389	400	395	398	396	395
Income-related	247	47	12	5	5	63
Other	173	46	33	21	20	59
Gross income	3,974	5,498	6,655	8,069	12,417	7,324
Direct taxes	469	962	1,235	1,561	2,637	1,373
Disposable income	3,506	4,536	5,420	6,507	9,780	5,951
Domestic rates (net of rebates)	161	169	190	210	260	198
Other indirect taxes	849	972	1,060	1,320	1,632	1,167
Benefits in kind						
Education	627	513	647	686	708	636
National Health Service	494	501	437	399	364	439
Welfare foods	59	52	48	65	66	58
Housing subsidy	131	115	88	69	43	89
Other allocated benefits	46	37	41	52	88	53
Final income	3,854	4,613	5,433	6,248	9,157	5,862

## Average incomes, taxes and benefits, 1979.

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					
	Quintile groups					Average over all quintile groups
	1st	2nd	3rd	4th	5th	
<b>(vii) 2 adults, 3 or more children</b>						
Quintiles	3,744      5,081      5,995      7,814					
Number of households in the sample	73	73	72	73	73	364
Original income						
Earned income	1,651	4,413	5,508	6,676	10,984	5,847
Other income	88	34	69	78	407	135
Total	1,739	4,447	5,577	6,754	11,392	5,983
Direct benefits in cash						
Age-related	25	—	—	—	—	5
Child-related	710	652	642	621	639	653
Income-related	981	34	80	9	8	223
Other income	327	48	48	24	14	92
Gross income	3,781	5,181	6,347	7,409	12,053	6,956
Direct taxes	183	852	1,038	1,302	2,555	1,186
Disposable income	3,598	4,329	5,309	6,107	9,498	5,769
Domestic rates (net of rebates)	152	167	176	194	253	188
Other indirect taxes	786	882	1,137	1,239	1,497	1,108
Benefits in kind						
Education	1,499	1,238	1,216	1,219	1,174	1,269
National Health Service	629	648	575	509	524	577
Welfare foods	267	107	89	118	99	136
Housing subsidy	264	249	148	122	65	170
Other allocated benefits	20	36	43	32	76	42
Final income	5,338	5,558	6,067	6,676	9,685	6,667
<b>(viii) 3 or more adults with no children</b>						
Quintiles	5,252      7,930      10,197      12,904					
Number of households in the sample	128	128	128	128	128	640
Original income						
Earned income	2,514	6,345	8,583	11,116	15,032	8,718
Other income	475	349	547	317	1,015	541
Total	2,989	6,695	9,129	11,434	16,047	9,259
Direct benefits in cash						
Age-related	1,093	332	358	203	172	432
Child-related	31	33	33	25	25	29
Income-related	527	182	83	96	71	192
Other	375	201	96	49	72	159
Gross income	5,015	7,443	9,698	11,807	16,387	10,070
Direct taxes	483	1,395	1,931	2,502	3,779	2,018
Disposable income	4,532	6,048	7,767	9,304	12,608	8,052
Domestic rates (net of rebates)	139	175	195	212	227	190
Other indirect taxes	959	1,399	1,777	1,965	2,520	1,724
Benefits in kind						
Education	729	346	312	221	315	385
National Health Service	583	389	383	405	414	435
Welfare foods	—	2	3	3	2	2
Housing subsidy	154	159	97	140	95	129
Other allocated benefits	27	39	47	61	112	57
Final income	4,925	5,409	6,637	7,958	10,799	7,146

## Average incomes, taxes and benefits, 1979

By quintile groups of original income within household type

TABLE 4 (continued)

	£ per year					Average over all quintile groups
	Quintile groups					
	1st	2nd	3rd	4th	5th	
<b>(ix) 3 or more adults with children</b>						
Quintiles .. .. .		5,753	7,652	9,138	11,660	
Number of households in the sample .. .. .	110	110	109	110	110	549
Original income .. .. .						
Earned income .. .. .	3,706	6,674	8,206	10,150	14,570	8,662
Other income .. .. .	245	168	186	138	542	256
Total .. .. .	3,951	6,842	8,392	10,288	15,112	8,918
Direct benefits in cash .. .. .						
Age-related .. .. .	341	143	137	47	108	155
Child-related .. .. .	406	372	364	330	348	364
Income-related .. .. .	503	127	102	80	138	190
Other .. .. .	421	95	60	58	118	151
Gross income .. .. .	5,622	7,578	9,055	10,802	15,824	9,778
Direct taxes .. .. .	602	1,252	1,605	2,110	3,364	1,787
Disposable income .. .. .	5,020	6,326	7,450	8,692	12,459	7,991
Domestic rates (net of rebates) .. .. .	162	171	200	194	260	197
Other indirect taxes .. .. .	1,168	1,341	1,554	1,880	2,538	1,696
Benefits in kind .. .. .						
Education .. .. .	1,249	1,248	1,189	981	958	1,125
National Health Service .. .. .	525	475	494	436	536	493
Welfare foods .. .. .	98	85	66	55	45	70
Housing subsidy .. .. .	201	141	156	144	68	142
Other allocated benefits .. .. .	30	44	42	45	117	56
Final income .. .. .	5,794	6,808	7,642	8,278	11,384	7,982
<b>(x) 1 adult with children</b>						
Quintiles .. .. .		27	793	2,524	3,975	
Number of households in the sample .. .. .	37	37	36	37	37	184
Original income .. .. .						
Earned income .. .. .	1	144	1,178	2,220	2,944	1,298
Other income .. .. .	—	159	553	1,000	3,133	971
Total .. .. .	2	303	1,731	3,220	6,077	2,269
Direct benefits in cash .. .. .						
Age-related .. .. .	63	118	161	62	79	96
Child-related .. .. .	360	376	381	337	351	361
Income-related .. .. .	1,469	1,497	273	123	3	675
Other .. .. .	66	15	91	9	21	40
Gross income .. .. .	1,959	2,308	2,637	3,751	6,531	3,442
Direct taxes .. .. .	—	3	124	370	631	226
Disposable income .. .. .	1,959	2,305	2,513	3,381	5,900	3,215
Domestic rates (net of rebates) .. .. .	145	153	126	173	206	161
Other indirect taxes .. .. .	320	393	468	589	960	546
Benefits in kind .. .. .						
Education .. .. .	725	896	803	676	751	770
National Health Service .. .. .	322	312	224	256	249	273
Welfare foods .. .. .	118	172	123	73	64	110
Housing subsidy .. .. .	282	175	275	174	71	195
Other allocated benefits .. .. .	12	16	19	22	67	27
Final income .. .. .	2,953	3,328	3,363	3,821	5,937	3,883



## Average incomes, taxes and benefits, 1979

By decile groups of original income

TABLE 5

Deciles	£ per year										Average over all decile groups
	Decile groups										
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
Deciles	46	608	2,413	3,780	4,923	5,941	7,004	8,398	10,602		
Original income											
Earnings of main earner	—	35	653	2,505	3,703	4,392	4,933	5,341	6,177	8,435	3,618
Other earnings	—	—	16	118	313	710	1,148	2,002	2,774	4,785	1,187
Occupational pensions, annuities	—	130	444	242	188	122	113	73	123	202	164
Investment income	5	87	206	178	100	139	162	144	188	516	172
Other income	1	17	76	118	74	68	101	112	103	100	77
Total	6	270	1,394	3,160	4,378	5,431	6,456	7,671	9,364	14,038	5,217
Cash benefits											
Child benefit	54	26	59	146	185	224	195	189	178	162	142
Retirement and old persons' pension	914	1,179	909	307	155	97	94	71	90	99	391
Widows' pension	35	41	61	53	30	27	14	12	12	12	30
Disablement and war disability pension	5	6	9	8	5	2	6	7	1	5	5
Invalidity pension and allowance	107	43	93	53	14	16	5	8	13	7	36
Mobility allowance	2	2	5	2	1	1	2	1	—	1	2
Non-contributory invalidity pension	8	4	8	6	2	—	1	3	—	2	3
Housewives non-contributory invalidity pension	—	1	2	3	2	1	2	—	—	1	1
Invalid care allowance	—	—	3	—	—	—	—	—	—	—	—
Attendance allowance	15	12	12	11	8	4	7	5	6	2	8
Unemployment benefit/TOPS awards	15	17	62	36	34	26	22	14	21	22	27
Sickness, industrial injury benefit	8	5	28	52	25	31	30	26	22	24	25
Industrial injury disablement benefit	9	17	14	10	6	5	3	4	2	1	7
Family income supplement	1	—	2	6	1	—	1	—	1	—	1
Supplementary benefit	469	171	82	81	16	31	12	18	11	19	91
Maternity benefit	—	1	1	10	14	15	8	7	9	3	7
Death grant	1	1	1	1	—	—	—	—	—	—	—
Maternity grant	—	—	—	2	2	3	1	1	1	—	1
Electricity discounts	4	3	2	1	—	—	—	—	—	—	1
Rent rebates and allowances	32	58	29	14	4	1	1	—	1	—	14
Student maintenance grants	7	12	32	9	17	7	17	3	9	15	13
Christmas bonus for pensioners	9	11	9	3	1	1	1	1	1	1	4
Other cash benefits	26	22	12	5	6	3	7	—	1	5	9
Total	1,720	1,633	1,434	816	528	496	428	371	378	380	818
Gross income	1,726	1,903	2,828	3,976	4,906	5,927	6,884	8,042	9,742	14,418	6,036
Direct taxes	1	17	167	548	853	1,080	1,328	1,570	1,987	3,246	1,080
Disposable income	1,725	1,886	2,661	3,428	4,053	4,847	5,556	6,472	7,755	11,172	4,956
Indirect taxes	382	439	671	876	1,060	1,197	1,336	1,554	1,768	2,322	1,161
Other allocated benefits	779	685	742	868	961	978	964	959	966	1,014	892
Final income	2,122	2,132	2,731	3,420	3,953	4,630	5,185	5,876	6,955	9,864	4,687

## Average incomes, taxes and benefits, 1979

By decile groups of gross income

TABLE 6

	£ per year										Average over all decile groups
	Decile groups										
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
Deciles .. .. .	1,642	2,362	3,411	4,493	5,474	6,442	7,476	8,771	11,040		
Number of households in the sample	678	677	678	678	677	678	678	678	677	678	6,777
Original income .. .. .	137	422	1,483	3,104	4,302	5,402	6,400	7,591	9,339	13,989	5,217
Cash benefits											
Age-related .. .. .	880	1,103	869	412	270	145	153	134	129	154	425
Child-related .. .. .	4	38	78	153	198	233	214	203	201	175	150
Income-related .. .. .	274	341	234	151	103	77	105	57	54	71	147
Other .. .. .	43	87	196	155	114	104	66	83	67	59	97
Total .. .. .	1,201	1,568	1,377	871	684	559	537	477	450	460	818
Gross income .. .. .	1,338	1,990	2,860	3,974	4,987	5,961	6,937	8,068	9,789	14,448	6,036
Direct taxes											
Income tax .. .. .	9	34	173	415	649	818	1,019	1,246	1,586	2,731	868
National insurance contributions .. .. .	3	6	48	128	190	238	280	324	391	510	212
Disposable income .. .. .	1,327	1,950	2,639	3,432	4,148	4,904	5,638	6,498	7,812	11,208	4,956
Indirect taxes											
Domestic rates (net of rebates) .. .. .	100	120	132	153	166	173	181	195	213	249	168
Taxes on final goods and services											
VAT .. .. .	53	85	140	208	262	308	360	433	497	696	304
Duty on tobacco .. .. .	33	57	97	120	131	140	153	150	165	186	123
Duty on beer .. .. .	6	9	19	35	43	45	58	62	73	104	45
Duty on wines and spirits .. .. .	12	15	29	41	46	55	71	94	114	175	65
Duty on hydrocarbon oils .. .. .	5	13	24	43	56	65	76	87	103	137	61
Car tax and vehicle excise duty .. .. .	4	10	18	29	36	43	47	57	73	82	40
Other .. .. .	20	26	35	41	49	55	61	63	91	86	53
Intermediate taxes											
Commercial and industrial rates .. .. .	22	31	42	57	69	76	86	100	110	151	74
Employers' NI contributions .. .. .	48	68	96	132	158	177	200	236	263	368	175
Duty on hydrocarbon oils .. .. .	10	13	18	23	28	30	33	38	42	56	29
Other .. .. .	6	8	12	17	20	23	26	31	35	50	23
All indirect taxes .. .. .	316	456	662	898	1,065	1,189	1,352	1,547	1,780	2,342	1,161
Other benefits											
Education .. .. .	39	77	173	310	361	441	475	495	483	467	332
Welfare foods .. .. .	1	11	23	32	30	29	34	34	31	26	25
National Health Service .. .. .	362	460	399	384	398	406	367	348	370	399	389
Housing subsidy .. .. .	118	149	134	120	123	105	102	87	75	79	109
Rail travel subsidy .. .. .	2	2	4	7	7	8	11	12	21	34	11
Option mortgage scheme .. .. .	—	1	3	10	14	10	16	18	14	9	10
Life assurance premium relief .. .. .	2	3	6	8	11	15	17	20	26	53	16
Total .. .. .	525	703	741	870	944	1,013	1,022	1,015	1,020	1,067	892
Final income .. .. .	1,535	2,197	2,718	3,403	4,027	4,729	5,308	5,967	7,052	9,933	4,687

## Distribution of households co-operating in the Family Expenditure Survey, 1979

By decile groups of 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		
<b>Decile groups of original income</b>											
Bottom	389	45	138	17	8	7	22	9	2	41	678
2nd	306	32	261	20	8	5	6	11	1	27	677
3rd	132	124	181	109	26	23	11	20	14	38	678
4th	27	149	42	163	75	76	37	40	31	38	678
5th	9	116	14	154	114	134	57	35	28	16	677
6th	4	65	15	159	120	144	82	40	40	9	678
7th	3	49	8	211	99	138	55	49	59	7	678
8th	2	16	2	245	66	142	30	71	101	3	678
9th	1	14	3	202	58	107	32	130	126	4	677
Top	—	11	4	141	30	77	32	235	147	1	678
Total	873	621	668	1,421	604	853	364	640	549	184	6,777
<b>Decile groups of gross income</b>											
Bottom	563	85	8	8	2	1	—	—	—	11	678
2nd	208	72	295	27	12	6	2	1	3	51	677
3rd	55	132	223	115	33	23	24	17	2	54	678
4th	26	125	72	162	87	97	36	29	13	31	678
5th	7	91	28	171	120	123	59	40	23	15	677
6th	7	52	12	177	118	146	72	43	42	9	678
7th	3	32	12	211	88	133	65	57	72	5	678
8th	2	10	10	234	59	141	37	81	102	2	678
9th	2	11	3	192	56	103	36	131	138	5	677
Top	—	11	5	124	29	80	33	241	154	1	678
Total	873	621	668	1,421	604	853	364	640	549	184	6,777
<b>Decile groups of disposable income</b>											
Bottom	561	90	6	8	2	2	—	2	—	7	678
2nd	219	105	253	28	12	4	—	1	2	53	677
3rd	54	150	240	99	32	21	19	13	2	48	678
4th	18	109	78	190	90	100	33	19	10	31	678
5th	10	74	48	171	118	122	61	39	17	17	677
6th	7	45	14	189	111	149	72	45	37	9	678
7th	1	21	12	222	95	126	63	60	73	5	678
8th	2	10	10	227	60	140	43	82	99	5	678
9th	1	8	3	176	50	112	34	148	139	6	677
Top	—	9	4	111	34	77	39	231	170	3	678
Total	873	621	668	1,421	604	853	364	640	549	184	6,777
<b>Decile groups of final income</b>											
Bottom	442	148	31	30	8	6	—	3	—	10	678
2nd	291	137	155	51	18	4	—	2	1	18	677
3rd	93	125	231	134	31	17	1	8	2	36	678
4th	23	98	141	213	88	55	7	22	2	29	678
5th	13	55	53	228	107	102	24	52	11	32	677
6th	7	24	25	224	126	147	29	57	19	20	678
7th	1	17	13	212	82	145	68	72	53	15	678
8th	2	8	13	153	71	152	85	100	88	6	678
9th	1	2	2	101	39	125	92	138	164	13	677
Top	—	7	4	75	34	100	58	186	209	5	678
Total	873	621	668	1,421	604	853	364	640	549	184	6,777

